Archaeology South-East

ASE

POST-EXCAVATION ASSESSMENT AND UPDATED PROJECT DESIGN REPORT

ARCHAEOLOGICAL INVESTIGATIONS AT LAND EAST OF KINGS WARREN, RED LODGE, SUFFOLK

ASE Project No: 160630
Site code: RDL002 & RDL003
Event No: ESF 24526

ASE Report No: 2017294

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Abstract

This report presents the results of an archaeological excavation and watching brief carried out by Archaeology South-East on behalf of CgMs Consulting Ltd, acting for Crest Nicholson (Eastern), at land east of Kings Warren, Red Lodge, Suffolk.

The 8.93ha development area was known to contain the remains of a probable largely ploughed-out prehistoric barrow at its south. This was apparent as an aerial photographic soilmark and as a low rise on the field surface. Geophysical survey in 2013 detected its ring-ditch along with other discrete and linear anomalies, the latter interpreted to define a probable rectilinear enclosure. However, evaluation of previous development phases to the north and west recorded no significant archaeological remains.

Initial evaluation of the south of the development area (Phase A), in 2016, identified a few tentative prehistoric features and recovered mostly-residual worked flint attesting to land use activity of Mesolithic to Early Bronze Age date. The presence of the ring-ditch was confirmed although, interestingly, no diagnostic dating evidence was recovered from its lower fills though later Roman pottery dated its upper fills. Roman pits, ditches and some possible postholes were also found across the evaluated area and particularly in the vicinity of the ring-ditch.

A further area of evaluation (Phase B) was undertaken across 6.93ha immediately to the north of Phase A. Archaeological remains were recorded predominately in its southern half. A small cluster of Early Neolithic pits in the south-east and another of Early Iron Age date towards the centre of Phase B were identified. The remaining features, the majority of which were pits or possible postholes, were undated. Some of these may have in fact been of natural origin.

Targeted upon the positive results of both the geophysical survey and the Phase A evaluation, a c.2ha excavation area was investigated within the south of the site.

These investigations revealed a low incidence of isolated Early Neolithic pits and postholes, and residual artefacts in later features. The full extent of the 45m-diameter ring-ditch was exposed and OSL dating of its lower fills established an Early Bronze Age date for its original construction. Although no evidence for an earthwork mound or bank, or associated burials, was recorded, it is likely that this was the remains of a barrow. Other than a few outlying pits, this probable funerary monument stood in apparent isolation. A low density of Iron Age pits in the Phase B evaluation area attest to a continued low intensity land use, though the recovery of part of an Iron Age ceramic vessel from the ring-ditch attests to it surviving in the landscape as a remnant earthwork.

The majority of excavated remains were of Roman date. A rectilinear enclosure (previously detected by the geophysical survey) was imposed around the ring-ditch remains during the earlier Roman period. The prehistoric ring-ditch was recut and became infilled during the Late Roman period. A small rectangular structure, with painted plaster walls and tile roof, was built immediately to the east of the ring-ditch. Identified as a probable religious shrine, placed 'head and hoof' deposits of pig remains were found in association. Further structured animal bone deposits, pits containing probable votive deposition of artefacts, and layers containing shrine debris and votive material were present elsewhere within the enclosure. Less-obviously associated with the perceived religious function of this site were the further remains of a possible well,

a tile-lined flue-like structure and an adult inhumation, the latter seemingly opportunistically interred in the rectangular enclosure, close to its entrance. However, no use of the recut ring-ditch interior was discerned.

This rural shrine site was abandoned by the end of the Roman period after which there was no evidence for land use prior to the modern period.

The Early Bronze Age ring-ditch and its subsequent appropriation and incorporation into a Roman rural shrine complex is of regional to national importance.

The report is written and structured so as to conform to the standards required of post-excavation analysis work as set out in Management of Research Projects in the Historic Environment (MoRPHE), Project Planning Notes 3 (PPN3): Archaeological Excavation (English Heritage 2008). Analysis of the stratigraphic, finds and environmental material has produced a chronology, and assessed the potential of the site archive to address the original research agenda, as well as assessing the significance of those findings. This has highlighted what further analysis work is required in order to enable suitable dissemination of the findings.

It is judged that the discoveries at land east of Kings Warren are of sufficient interest and significance to merit dissemination via an article in a suitable archaeological journal. Given the regional to national significance of the site, it is proposed that an article is prepared for Britannia.

CONTENTS

TABLES

FIGURES

1.0 INTRODUCTION

1.0.1 Archaeology South-East (ASE) was commissioned by CgMs Consulting Ltd, on behalf of Crest Nicholson (Eastern), to undertake archaeological investigation on Land East of Kings Warren, Red Lodge, Suffolk. The work was carried out in accordance with a brief provided by Suffolk County Council's Historic Archaeology Service (SCCAS), in their capacity as archaeological advisors to the local planning authority.

1.1 Site Location

1.1.1 The village of Red Lodge lies alongside the A11, approximately four miles south-west of Mildenhall and five miles north-east of Newmarket, in Forest Heath District (Figure 1).

1.1.2 The Kings Warren development is located at the north end of the village.

1.1.3 The 8.93 ha development site extends down the eastern periphery of the modern village (TL 7073 7034). It is located on agricultural land and bounded by fields to the north and east, by a footpath to the south and by residential properties and sports fields to the west.

1.1.4 The c.2ha excavation area is located at the south end of the development site.

1.2 Geology and Topography

1.2.1 The underlying geology of the site is mapped by the British Geological Survey (BGS 2017) as Holywell Nodular Chalk and New Pit Chalk Pit formation. There are no superficial deposits.

1.2.2 The site lies on gently sloping land between 23m AOD to the south and 21m AOD to the north.

1.2.3 The entire site was covered by a topsoil layer comprising an agricultural ploughsoil. The site is shown on historic maps as having been used for agriculture since at least 1817. The historic Hundred Acre Farm is located in the approximate middle of the site, within a small tree/hedge bounded enclosure.

1.3 Planning Background

1.3.1 The archaeological excavation was carried out in advance of development of the site. A planning application (Ref: F/2013/0257/HYB) has been submitted to the Forest Heath District Council for the demolition of the Hundred Acre Farm and the construction of dwellings, associated landscaping, drainage and public spaces.

1.3.2 Suffolk County Council Archaeology Service (SCCAS) recommended that an archaeological evaluation be undertaken prior to planning determination. The guidance was based on national planning guidance, the most recent of which is the National Planning Policy Framework (DCLG 2012) which states that:

"No development or preliminary groundworks of any kind shall take place until the applicant has secured the implementation of a programme of archaeological work and recording in accordance with a written scheme of investigation which has been submitted by the applicant, and approved by the planning authority."

1.3.3 Two phases of trial trenching evaluation were carried out in 2016, sampling the majority of the site extents. These were undertaken in accordance with a written scheme of investigation produced by ASE and CgMs (ASE 2016a; 2016b) and approved by SCCAS prior to commencement of fieldwork. The results of this evaluation work have been reported upon separately (ASE 2018).

1.3.4 At the request of the SCCAS monitoring officer, an open area mitigation excavation was subsequently undertaken across the southern end of the site (Figure 2). This work was also carried out in accordance with a written scheme of investigation produced by ASE and CgMs (ASE 2016c) and approved by SCCAS prior to commencement of fieldwork.

1.4 Scope of the project

1.4.1 The fieldwork stages were as follows:

- Open area Excavation: 11 July – 21 October 2016. Area totalling c.2 hectares
- Archaeological monitoring: 05 – 21 October 2016. Observation of test-pits and construction of shallow swale down eastern edge of Phase A

1.4.2 The results of the archaeological mitigation excavation and watching brief are both described and their significance and potential for further analysis, interpretation and dissemination assessed by this Post-Excavation Assessment.

1.4.3 The results of the Phase A and B evaluations, both in and outside the excavation area, are also alluded to where relevant, as are those of the preceding geophysical survey.

1.5 Archaeological methodology

Open area Excavation

1.5.1 ASE adhered to the CIfA *Standard and Guidance for archaeological excavation*, and *Code of Conduct* (CIfA 2013 and 2014a), and to the ALGAO *Standards for Field Archaeology in the East of England* (Gurney 2003) throughout the project. ASE is a Registered Archaeological Organisation with the CIfA.

1.5.2 Located across a majority of Phase A (Figure 2), the c.2ha excavation area was stripped using a 20 tonne tracked mechanical 360° excavator with a flat-bladed bucket, under archaeological supervision. The turf and topsoil were removed, exposing natural geology into which archaeological features were cut. The resultant surfaces were then hand cleaned as necessary and a pre-excavation

plan prepared using Global Positioning System (GS) planning technology in combination with Total Station surveying.

1.5.3 All exposed archaeological features and deposits were recorded and excavated, except obviously modern features and disturbances.

1.5.4 Standard ASE methodologies were employed. All stratigraphy was recorded using the ASE context recording system.

1.5.5 An overall plan related to the site grid and tied in to the Ordnance Survey National Grid was drawn in addition to individual plans showing areas of archaeological interest where required. All features revealed were planned.

1.5.6 Site plans were at 1:20 unless circumstances dictated otherwise. Sections were drawn at 1:10.

1.5.7 Datum levels were taken where appropriate. Sufficient levels were taken to ensure that the relative height of the archaeological/subsoil horizon can be extrapolated across the development area.

1.5.8 Archaeological features and deposits were excavated using hand tools, with the exception of a machine-excavated trench through the centre of the ring-ditch and the excavation of a well, which were the only practical method of excavation. The machine-excavation of archaeologically significant features was agreed with the SCCAS in advance.

1.5.9 With the exception of modern disturbances, normally a minimum 50% of all contained features was excavated. A sample of 10% (or at least a 1m-long segment) of non-structural linear features was excavated.

1.5.10 A full photographic record comprising colour digital images was made. The photographic record aimed to provide an overview of the excavation and the surrounding area. A representative sample of individual feature shots and sections were taken, in addition to working shots and elements of interest (individual features and group shots). The photographic register included: shot number, location of shot, direction of shot and a brief description of the subject photographed.

1.5.11 A metal detector was used on archaeological features prior to excavation and to scan ploughsoil deposits during the machine stripping of the site.

Archaeological Monitoring

1.5.17 To the immediate east of the excavation area four geotechnical test pits (TP1-4) and a shallow swale were excavated alongside the access road. The machining was undertaken using a 360° excavator fitted with a toothless ditching bucket under constant archaeological monitoring. The excavated area measured *c.*5m wide and ran alongside the edge of the access road (Fig. 2).

Finds and Environmental Sampling Strategy

1.5.18 In general, all finds from all features were hand collected. Where large quantities of post-medieval and later finds were present and a feature was not

of intrinsic or group interest, a sample of the finds assemblage was collected sufficient to date and characterise the feature.

1.5.19 Finds were identified, by context number, to a specific deposit or, in the case of topsoil finds, to a specific area of the site.

1.5.20 All finds have been properly processed according to ASE guidelines and the CIfA *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (CIfA 2014b). All pottery and other finds, where appropriate, have been marked with the site code and context number.

1.5.21 Environmental samples were taken from well-stratified, datable deposits that were deemed to have potential for the preservation/survival of ecofactual material. Bulk soil samples (minimum 40 litres or 50% of context) were taken for wet sieving and flotation, and for finds recovery.

1.6 Organisation of the Report

1.6.1 This post-excavation assessment (PXA) and updated project design (UPD) has been prepared in accordance with the guidelines laid out in Management of Research Projects in the Historic Environment (MoRPHE), Project Planning Notes 3 (PPN3): Archaeological Excavation (English Heritage 2008).

1.6.2 The report seeks to place the results from the site within the local archaeological and historical setting; to quantify and summarise the results; to specify their significance and potential, including any capacity to address the original research aims, listing any new research criteria; and to specify what further analysis work is required to enable their final dissemination, and what form the latter should take.

2.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Introduction

2.1.1 This account of the archaeological and historical background to the site derives from information obtained from the Suffolk Historic Environment Record (SHER) and from a desk-based assessment produced by CgMs Consulting (2013a).

2.1.2 The site is located in an area of archaeological interest in which evidence for land use and settlement from the prehistoric to the post-medieval period has been recovered in the surrounding vicinity of the site. The most pertinent sites and findspots alluded to below are located on Figure 1.

2.2 Prehistoric

2.2.1 A microlith of Mesolithic date is recorded from within a possible Bronze Age burial excavated at Chalk Hill round barrow to the northeast of the site (SHER: BTM 004). A flint assemblage consisting of fifty flints recovered from Hundred Acre Field is recorded as having a Mesolithic element (SHER: FRK MISC).

2.2.2 A Neolithic pottery assemblage and associated burnt bone has been recorded from Swales Tumulus, possibly on a buried land surface underlying a Bronze Age burial mound (SHER: WGN 003). A Neolithic scraper is also recorded from the area (SHER: FRK MISC) and a Neolithic axehead has been found to the south (SHER: HGW 015). A possible Neolithic activity site is recorded at Worlington Quarry (SHER: WGN 038).

2.2.3 The Bronze Age is widely represented by known remains within a 1km radius of the site and it is evident that the site lay within a highly developed agricultural and ritual landscape. Remains of Early Bronze Age activity are recorded at Worlington Quarry, to the northeast (SHER: WGN 038), along with more broadly Bronze Age dated pits (SHER: WGN 035 and WGN 047). At an evaluation site off Turnpike Road at Red Lodge recorded features included a Middle Bronze Age pit (RDL 001).

2.2.4 A number of prehistoric barrows of unknown, though possible Bronze Age, date are recorded to the east and southeast of the site (SHER: HGW 001, HGW 002). Further examples are known to the north of the site: a group at Beacon Hill and Chalk Hill (SHER: BTM 004, BTM 013, BTM 027, BTM 028).

2.2.5 Most pertinently, a barrow is recorded within the southern part of the site area (SHER: FRK 008). In 2007 this was thought to have been ploughed down to a surviving height of *c.*0.50m. Aerial photograph analysis has indicated that the form of the barrow ring-ditch survives as a ploughed-down feature, with a number of associated features such as ditches and enclosures being also evident in this part of the site. The site has reportedly been the subject of illegal metal detecting, possibly resulting in the removal of ?Iron Age coins.

2.2.6 No other Iron Age remains or findspots are recorded within a 1km radius of the site.

2.3 Roman

2.3.1 Very few Roman finds are recorded within a 1km radius of the site. A small quantity of Roman pottery has been recorded from Hundred Acre Field as surface finds (SHER: FRK MISC). Approximately 2km north of the site is a slightly dubious record of a Roman villa, from Chalk Hill Quarry (SHER: BTM 026).

2.3.2 There is an oblique reference to Roman finds being discovered during illegal metal detecting within the site (FRK 008).

2.4 Anglo-Saxon and Early Medieval

2.4.1 There are no records of Anglo-Saxon or early medieval remains within a 1km radius of the site. However, there is an oblique reference to Anglo-Saxon finds being discovered during illegal metal detecting on the site.

2.5 Later Medieval, Post-Medieval and Modern

2.5.1 The area in the south of the site, identified as the location of a Bronze Age barrow, is noted in records as being later utilised as a gallows (execution site) in the 13th century (SHER: FRK008).

2.5.2 The first accurate map of the site area is the Ordnance Survey of 1817 (CgMs 2013, fig 2) which shows the site as generally unremarkable agricultural land with a small enclosure (probably the barrow) shown in its south.

2.5.3 Hundred Acre Farm was established by 1881, when the site comprised of agricultural land. Virtually no change has occurred on the site since the late 19th century until the current development.

2.6 Previous Red Lodge Fieldwork

2.6.1 Significant areas of archaeological evaluation have been carried out within the previous phases of the Red Lodge development (Fig. 1) and within the wider Red Lodge vicinity.

2.6.2 The trial trenching evaluation of previous development areas immediately to the west and north of the current site extended across *c.*33ha and comprised more than 300 trenches:

- SHER: ESF 19519 (Hounsell 2003)
- SHER: ESF 19517 (Crank 2003)
- SHER: ESF 19518 (Doyle and McDonald 2005)
- SHER: ESF 21548 (Doyle and Smith 2008)

All were established to be devoid of archaeological remains.

2.6.3 A 2013 geophysical survey (CgMs 2013b; Fig. 3) across c.3.7ha of the Southern Field revealed a large sub-circular anomaly located towards its centre, which was interpreted as representing a ring-ditch. This corresponded with the soilmark / cropmark feature identified from aerial photographs that was identified as the remains of a probable barrow in the Suffolk Historic Environment Record (SHER: FRK 008). The geophysical survey also identified

linear anomalies defining a likely rectilinear ditched enclosure, as well as other discrete and linear features within it and in the ring-ditch interior.

2.6.4 The 2016 evaluation of the southern end of the development area (Phase A) comprised the investigation of 32 trenches across a 3.65ha area (ASE 2018). The recovery of prehistoric worked flints, mostly residual in later deposits, indicated land use activity during the Mesolithic to Early Bronze Age periods. A small quantity of probably earlier Iron Age pottery, also residual, suggested that this prehistoric activity continued. A few prehistoric features were tentatively identified.

2.6.5 The evaluation located below-ground remains relating to the ring-ditch anomaly, in the form of substantial ditch segments 3.2-5.8m wide and 0.9m deep recorded in Trenches 13, 14, 19, 20 and 25. Where excavated, lower fills were devoid of dating evidence, while finds recovered from the upper fills were of mid to late Roman date. Roman features, notably pits and ditches and some possible postholes, were found throughout the site but were concentrated in central and eastern areas, suggesting possible occupation activity in the vicinity of the ring-ditch/barrow. Fragments of roof tile from several of these features were interpreted to the presence of one or more buildings nearby, although no in situ building remains were found. No archaeological remains, other than a modern pit, were found that post-dated the Roman period.

2.6.6 The subsequent Phase B evaluation comprised 55 trenches excavated across the northern 6.93 ha of the site (ASE 2018). Archaeological remains were recorded predominately in the southern half of the site. A small cluster of pits in the south-east contained fragments of Early Neolithic pottery and another series of pits located towards the centre of the Phase B site contained Early Iron Age pottery. The remaining features, the majority of which were pits or possible postholes, were undated. Given the similarity of the fills of several of these features to the natural geology, it is possible that they were natural in origin.

3.0 ORIGINAL RESEARCH AIMS

3.1 The primary aims and objectives

3.1.1 The aims and objectives of the archaeological works were originally set out in the *Written Scheme of Investigation* (ASE 2016a). The trial trenching results (ASE 2016b) characterised the location, extent, character and condition of the archaeological remains and demonstrated that archaeological deposits survived across the site area. The Roman period was well represented, with features of the earlier prehistoric and later dates also present.

3.1.2 The results of the evaluation were identified to contribute to regional research topics relating to settlement, funerary practices and artefact studies for the prehistoric and Roman periods. The results also had potential to contribute to local/regional research topics relating to settlement patterns, environment, landscape development and artefact studies. A number of potential research objectives (RO's) for the further excavation work were therefore identified prior to commencement.

3.2 Site specific research objectives

3.2.1 The identified Research Objectives for the Excavation phase of works were:

RO1: Can the excavation further investigate the archaeological remains of all periods found during the evaluation in order to more fully understand their form, date, function and significance?

RO2: Can the excavation identify any potential Bronze Age activity, particularly associated with the barrow at Hundreds Acres Hill? Does this feature represent Bronze Age ritual or funerary practice? Is there any evidence for an associated mound, as described in the HER? How does this monument relate to the surrounding landscape?

RO3: Can the extent, form and function of the Roman ditch [found in Trench 23] *be better understood? Are there any re-cuts or associated features? Can this feature be understood as part of the wider landscape? Did this feature define the extent of Roman occupation in that area of the site?*

RO4: What role has the topography, geography and geology of the site played in its development during both the prehistoric and Roman periods?

RO5: Is there any evidence for post-Roman activity, particularly relating to the use of the site for execution, as mentioned in the HER?

3.2.2 With reference to 'Research and Archaeology: a framework for the Eastern Counties, 2. Research agenda and strategy' (Brown and Glazebrook 2000) and 'Research and Archaeology Revisited: a revised framework for the East of England' (Medlycott 2011), the excavation aimed to recover evidence to address the following research topics and themes:

Bronze Age

- *Patterns of burial practice need further explanation. This should include the relationship between sites and burial, and the development and use of monuments, including burial mounds as key elements in determining and understanding the landscape* (Medlycott 2011, 20)
- *The reuse of Bronze Age barrow cemeteries* (Medlycott 2011, 17, 43)

Roman

- *The collection of re-deposition of 'ancient' items, particularly Bronze Age metalwork within Roman burial monuments* (Medlycott 2011, 42)
- *The reuse of earlier ritual monuments during the Roman period* (Medlycott 2011, 43)
- *The evidence for change in ritual practices, including the introduction of Christianity, needs reassessing in the light of recent excavations. How many religious sites (temples/shrines/etc.) are known from the region? Synthesis of Roman cemeteries and burial practice is needed* (Medlycott 2011, 48)
- *Can either the finds assemblages or the cemeteries (if these can be located) provide information about Continental contacts?* (Brown and Glazebrook 2000, 21)

4.0 ARCHAEOLOGICAL RESULTS

4.1 Introduction

4.1.1 The results below are presented in ascending chronological order, by broad period (Periods 1-5). The results include and integrate the evaluation data. Individual contexts, referred to thus [***], have been sub-grouped and grouped together during post-excavation analysis. The context descriptions, and their group and landuse are collated in Appendix 1. Features are generally referred to by their group label (G**). In this way, linear features, such as ditches, which may have numerous individual segments and context numbers, are discussed as single entities, and other cut features such as pits and postholes are grouped together by structure, common date and/or type and proximity. A table listing and describing the groups can be found in Appendix 2. Environmental samples are listed within triangular brackets <**>, and registered finds thus: RF<*>. References to text sections within this report are referred to thus (3.7).

4.1.2 The archaeological remains are discussed under provisional date-phased headings determined primarily through assessment of the dateable artefacts, predominantly the pottery, and secondarily through the creation of relative chronologies where stratigraphic relationships and spatial patterning exist.

4.1.3 The period / phase definitions are:

- Period 1: Early Neolithic
- Period 2: Early Bronze Age
- Period 3: Early/Middle Iron Age
- Period 4: Roman
    - Phase 4.1 Early/Mid Roman
    - Phase 4.2 Later Roman
- Period 5: Undated

4.2 Site summary

4.2.1 The surviving features in all areas were found below topsoil and, in some cases, below patchy subsoil (only discerned in a small number of the Phase A evaluation trenches) and cut into natural deposits.

4.2.2 The excavated features consisted of pits, postholes and ditches of generally low complexity. The features were fairly well dispersed across the site with a concentration in the centre and eastern half of the site, mainly comprised of scattered pits and postholes, with linear features bounding them. A further concentration was in the south-west of the site, with sparse isolated features located in between these and those in the centre of the site. The survival of features was generally good, though visible plough scarring on the natural surface indicates that shallow features may have been truncated.

4.2.3 The site was first occupied during the Early Neolithic (Period 1), represented by a number of isolated postholes and pits, some of which are indicative of a structure. Residual artefacts of this date were also found in later contexts.

4.2.4 The Early Bronze Age (Period 2) saw a change in landscape use, dominated by the construction of a substantial ring-ditch enclosure. Other than a few outlying pits, this enclosure stood in apparent isolation.

4.2.5 A small number of isolated Iron Age features (Period 3), the main concentration being a group of three pits in the Phase B evaluation area, attest to a low intensity of Early/Middle Iron Age land use. Part of an Iron Age ceramic vessel in the ring-ditch attests to it surviving in the landscape as a remnant earthwork.

4.2.6 The majority of remains are of Roman date (Period 4), mostly comprising ditches, pits and postholes, but also layers. A rectilinear enclosure was imposed during the earlier Roman period (Phase 4.1), seemingly around the ring-ditch remains. The Prehistoric ring-ditch was re-cut and subsequently infilled during the Late Roman period (Phase 4.2). A small rectangular structure was built immediately to the east of the ring-ditch, and was likely associated with its reuse. Ritual deposits of pig skulls were found in pits associated with the structure. Further structured animal bone deposits, pits containing probable votive deposition of artefacts and layers containing shrine debris and votive material were present elsewhere within the enclosure. No use of the recut ring ditch enclosure is apparent.

4.2.7 A number of recorded features across the excavation area and the Phase B evaluation, which were not dated by artefacts, nor did they exhibit any morphological or spatial characteristics by which they could be assigned to a period. These have been placed within their own Undated period (Period 5).

4.2.8 There is no evidence for later period occupation of the site, with just a small number of modern features scattered across the site. These were not excavated or recorded, but are noted on the plan (Fig. 4).

4.3 Modern and Natural Deposits

4.3.1 An overlying topsoil and/or ploughsoil was recorded in all of the excavation areas and trenches. This generally comprised a friable dark grey brown sandy silt *c.*0.30-40m thick. Subsoil deposits were localised and encountered only in parts of the Phase A area of the site. There was some plough-scarring on the surface of the underlying geological deposit, indicating deep ploughing in the area, as well as shallow furrows likely formed as a result of potato farming.

4.3.2 The underlying natural geological deposit encountered across the site generally consisted of compact yellow-white chalk, with common patches of light yellow-brown sand.

4.4 Period 1: Early Neolithic (c.4000-3300 BC)

4.4.1 The earliest demonstrable utilisation of the site dated to the Early Neolithic period. A generally low density of pits and postholes scattered across the site area, with an apparent concentration in the south-east of the site, is indicative of small scale and transient land use (Fig. 5). A single possible structure, though more likely a pit cluster, could suggest limited or temporary settlement. The site is regarded as being located within a single land use entity, the landscape being presumed to be open and essentially unmanaged at this time.

4.4.2 A group of eight small pits (G36) lies in the south of the excavation area ([1195, 1203, 1206, 1209, 1211, 1218, 1225, 1227]). Perceived to be arranged in a vaguely rectangular to sub-circular shape, with further pit [1243] located a short

distance to the southeast, all are likely related and have been previously speculated to define part of a post-built building. The pits/postholes were all evenly spaced, though of variable shape and size, ranging between 0.89-1.70m x 0.44-1.55m and 0.09-0.54m deep. As these features generally had concave profiles and simple fill sequences that did not contain any suggestion of post-pipes, it is more probably that they represent an arcing cluster of pits - perhaps around a small working area. Two of the pits, [1195] and [1203], contained Early Neolithic pottery, while the position and similarities in shape of the other pits suggests that they are related. Although one of the pits, [1227], contained sherds of Roman pottery, its proximity to a large Roman feature to the east suggests that these could be intrusive.

4.4.3 A group of seven datable pits (G42) were scattered across the area to the southeast of the ring-ditch ([1234, 1283, 1542, 1568, 27/004, 27/008, 30/006]). The pits all contained either pottery and/or struck flints of Early Neolithic date, with a noticeable quantity of flints (40 pieces) being retrieved from pit [1234]. The pits were generally rounded to oval in plan shape, with moderately sloping sides, and contained mid to dark grey-brown silty sand fills. Pit [27/004] was cut by pit [27/008], though the similarity in fills meant that finds could not be clearly separated and the pits are considered likely to be of contemporary date. Soil sample <18> collected from the fill of pit [1233] contained indeterminate charred cereal remains.

4.4.4 A further twenty undated pits (G54) were recorded in the vicinity of G42. All contained single fills of mid to light grey/yellow brown suggestive of natural infilling. Pit [1524] differed in that it contained a significant quantity of charcoal and indications of burning at the base with discolouration of the natural sand. These pits are all thought to be prehistoric based on similarity and proximity to G42 and at least some are likely to have been of a similar Neolithic date.

4.4.5 Two further similar pits (G49) were located at the eastern edge of the excavation area. The adjacent pits were very similar in shape, with [1588] measuring 0.82m x 0.30m, and [1602] measuring 0.82m x 0.43m and both containing dark brownish grey sandy silt fills. The finds from these fills were consistent with an Early Neolithic date, with a small group of flints from [1588] and pottery sherds and flints from [1602] being retrieved. Soil sample <46> collected from the fill of pit [1588] contained several charred cereal caryopsis, including those of wheat and barley, along with wild seed remains. The pits likely had a similar function to those in G42 and 54 to their southwest and may simply constitute outliers of the same cluster.

4.4.6 The western half of the site contained a sparser concentration of material dating from this period. The two shallow features in the northwest of the site (G20) are thought to be utilised natural hollows ([1004, 1020]), with irregular bases and mottled fills. The larger of these, [1020], measured 7.15m x 5.64m x 0.57m and contained Early Neolithic pottery of the Mildenhall tradition as well as worked flint including a fragmentary arrowhead. While its cut shape suggests that this was not a humanly-created feature, it was likely utilised and became infilled during this period. Hollow [1020] extended beyond the edge of excavation, but was probably similar to [1004]. Both could constitute utilised tree throws.

4.4.7 Two small groups of pits were located to the immediate south of G20. Pit [1011] (G26) measured 0.91m x 9.86m x 0.40m and was dated by a blade-like flake

of probable Early Neolithic date recovered from its single fill. To the north of the pit was a group of three shallow pits [1007, 1009, 1084] (G23), none of which contained dating material. The pits measured between 0.49m-0.70m in width and 0.08m-0.16m in depth and contained mid yellow/orange-brown fills. The function of these pits is not clear, and they likely represent isolated activity. Their location in close proximity to Early Neolithic features in this north-west corner of the excavation area suggests they are of similar date.

4.4.8 Toward the south-west of the excavation area were the remains of Neolithic pit G64 ([1140, 1172]). The surviving area of the pit was limited to the eastern part of an undulating cut [1172], which had then been recut by [1140], which contained a large diagnostic pot group of Early Neolithic date at its base. This was substantially truncated by Roman ditch G4, segment [1749] and G2 Roman ditch segment [1138] (Fig. 11, section 1). This had a maximum depth of 0.85m before truncation. Both cuts contained single fills of mid orange brown silty sand with multiple worked flint fragments alongside pottery sherds and animal bone, from cut [1140]. Soil sample <9> collected from this fill [1139] contained no charcoal or charred plant macrofossils.

4.4.9 Further north, within the Phase B evaluation area, three pits [44/006], [44/009] and [45/004] (G67) contained small assemblages of Neolithic pottery. The pits all contained mid greyish brown single fills and measured between 0.90m-1.90m wide and 0.20m-0.63m deep (Fig. 10).

4.4.10 Other pits encountered within Trenches 44 and 56 were all undated but contained similar fills of mid greyish brown and mid orange brown silty sand. This suggests that they could be of similar prehistoric date.

4.4.11 In addition to the above features, there was a significant amount of residual Neolithic material recovered from across the site. This included two axe heads found within later contexts, including a polished axe from the primary fill of Roman ditch [1564] (G8). The incidence of Neolithic worked flint suggests widespread, though low intensity, Neolithic activity in the vicinity.

4.5 Period 2: Early Bronze Age

4.5.1 There was no evidence of continued occupation from the Early Neolithic period into the Bronze Age, suggesting that while the land may well have been utilised in the intervening time, it was not used as a settlement area. Presumably within the context of increasing settled agrarianism and management/modification of the landscape, land use in the Early Bronze Age has a distinctly ritual character. A substantial and extensive ring-ditch enclosure is constructed and is presumed to have dominating the vicinity. While the lack of artefactual evidence recovered from the ring-ditch makes it difficult to define its precise function, the paucity of contemporary features suggests that the surrounding vicinity was deliberately kept clear of intrusive features, though it remains possible that it occupied a clearing in woodland.

4.5.2 The ring-ditch (G11) measured 45m in diameter (35-38m internally) with the ditch itself varying between 2.90-6.20m wide and 0.84-1.80m deep, with its narrowest part being located in the northeast. Where investigated within excavated segments [1268, 1273, 1276, 1281, 1286, 1294, 1362, 1383, 1437,

1661, 1670, 1682, 1690, 1706, 1714, 1722, 1730, 1739, 14/007], the sides of the ditch were moderately steeply sloped, down to a flat base (Fig. 11, sections 3-5; Fig. 12, section 11; Fig. 13, section 14). The upper slopes were found to be splayed in places, which is likely to have been the result of modification and/or erosion at the time of its subsequent re-use in the Roman period.

4.5.3 The excavated ditch segments generally contained around four fills, comprising compacted chalk in light grey and yellow silty sand with occasional flint inclusions, seemingly representing a sequence of natural silting and slumping events. The ring-ditch having been substantially recut in the Roman period, only the lower two or three fills are judged to have been original prehistoric deposits. However, no diagnostic dating evidence was retrieved from these lower fills. Dating of the ring-ditch was obtained by Optically Stimulated Luminescence (OSL) dating of the lower fill [1384] in segment [1383], which indicated a date range of 2200–1600BC (University of Gloucestershire 2017; Appendix 6). A number of fills in segments [1286, 1661, 1690, 1725] contained small quantities of animal bone, including charred sheep/goat in [1692]. Soil samples <59 and 60> collected from lower fill [1727] and upper fill [1717] in ditch segment [1714] contained only rare charcoal and no charred plant macrofossil remains. Soil sample <61> from fill [1729] in segment [1739] contained a small quantity of charcoal, but no plant macrofossils.

4.5.4 A slot machine-excavated on a NNE/SSW orientation across the middle of the ring-ditch enclosure did not reveal any evidence of an associated mound or bank within its interior, though the chalky fills at the ditch base could perhaps have been derived from such an earthwork. No distinctive tip lines were obvious to indicate these entered the ditch from the inside or outside, though their relative bulk/thickness could perhaps be speculated to be due to them deriving from banked material. It nevertheless remains a possibility that a relatively low mound or internal bank had been removed by later activities on site, including post-medieval/modern agriculture. Within the slot across the enclosure interior, only natural chalk with sandy patches was present. Aerial photographic images of the ring-ditch site (e.g. Google Earth) clearly show the chalk natural protruding through, presumably due to the ploughsoil being particularly thin here.

4.5.5 It is evident that the ring-ditch enclosed an apparently circular area of slightly higher natural ground. This higher ground is regular in shape and sloped down away from the outer edge of the ring-ditch, particularly to the north and west. This difference in height was distinct from the surrounding area and, in the absence of any obvious geological explanation, it is speculated that the ring-ditch was deliberately sited upon a natural rise that was itself modified and its peripheries sculpted to emphasise its circularity and prominence in this otherwise relatively flat landscape.

4.5.6 The ring-ditch interior did not contain any archaeological remains, contrary to the suggestion of the geophysical survey (Fig. 3). Whether this was due to a genuine absence of intrusive activity or to the later removal of features and deposits on top of a once higher land surface subsequently truncated by agricultural activity is unknown. The surface of the chalk natural contained numerous irregular orange silty sand patches and a particularly conspicuous, sub-square, yellow/orange sand patch more-or-less at the centre of the enclosure (Fig. 4). On investigation, this was established to be a wholly natural

feature [1432] (G33) – a segment of it was excavated to a depth of c.0.7m without any artefacts or ecofacts being encountered. The 'cut' of this feature became irregular with depth and was filled with a multitude of slightly silty sands showing a distinctly *ad hoc* deposition sequence. Similarly, a number of discrete and seemingly regular-shaped orange sand patches were excavated elsewhere within the ring-ditch interior to check that these were not pits and postholes (G55). All were judged to be of likely natural origin (see 4.9.6).

4.5.7 The significance and function of the ring-ditch as an Early Bronze Age monument is further considered/debated (i.e. barrow versus (?)occupation enclosure) in 6.2 (see Period 2).

4.5.8 Exterior to the ring-ditch enclosure, two small circular pits [1179, 1181] (G50) lay 10m to the west of the ring-ditch and were 3m apart. The northern pit measured 1.20m x 1.10m and was 0.20m deep (Figure 11, section 2), with a single fill containing sherds of Beaker pottery, identified by the decorative pattern of complex stabbed lozenges. The southern pit measured 1.06m x 0.86m and was 0.40m deep; no finds were recovered from this feature but its similarities in form and the lack of other comparable features in the area suggest that it also dates to this period.

4.5.9 No other demonstrably Bronze Age remains were identified either within the excavation area or the evaluated areas to its north. The lack of contemporary features would appear deliberate, presumably indicating the significance of the ring-ditch enclosure at this time, but also its relative isolation.

4.6 Period 3: Iron Age

4.6.1 There is minimal evidence for activity in the Iron Age across the site, with *in situ* remains restricted to a small group of pits located adjacent to Hundred Acre Farm within Trench 64, in Evaluation Phase B. Residual finds were also located across the site. While the ring-ditch is likely to have still been visible at this time, the lack of finds suggest that it had gone out of use, or remained part of a ritualised landscape, with no associated activity.

4.6.2 *In situ* Iron Age remains were limited to three pits [64/003, 64/006, 64/009] (G66) found within Trench 64 and its extended area. The pits all contained multiple fills of mid/dark grey brown sandy silt, had vertical sides and flat bases (Fig. 11, section 6). They measured between 1.21-2.28m wide and 0.30-0.57m deep and all contained Iron Age pottery sherds, including a diagnostic bowl rim in [64/003] and a decorated jar rim in [64/009], and small quantities of animal bone fragments.

4.6.3 Elsewhere, the incidence of Iron Age material was restricted to residual pottery within Roman contexts. However, a quarter of an Iron Age jar was found within the re-cut of the ring-ditch (G12) in segment [1700]. This suggests that although land use activity appears to have been minimal in the general vicinity, the ring-ditch site probably persisted as a remnant feature in the landscape and was possibly visited in this period as it continued to silt up.

4.7 Period 4: Roman

4.7.1 Two broad phases of Roman period land use are defined by the excavated evidence. An extensive rectilinear ditched enclosure was imposed on the landscape in the Early/Mid Roman period (Phase 4.1). The enclosure contained the ring-ditch site – possibly deliberately so – suggesting that it was still a visible entity during this period (as a mound, as a shallow ditch, an elevated point in the landscape?), with its location respected by features of this date. There is no evidence to suggest from the Phase B evaluation or from the various trial-trench evaluations of the wider area (see 2.6) that this was only one part of a more extensive system of fields/enclosures. It is therefore interpreted as a single and un-associated rectangular land entity defined by its own boundary ditch.

4.7.2 The prehistoric ring-ditch remains were recut, demonstrating that the circular enclosure was re-established. While the backfill deposits indicate a later Roman Period for its end of use, the ring-ditch would have been visible in the landscape throughout this period and was possibly recut and maintained at an earlier date. A small structure, possibly a shrine, was constructed to the immediate east of the ring-ditch and was associated with structured deposits of pig and dog remains. Pits, a possible well, a tile-lined flue-like structure and an inhumation burial (the latter apparently inserted in the rectilinear enclosure ditch) constitute contemporary further features, although their relationship to the perceived religious function of this site is less clear.

4.7.3 A significant quantity of features could only be accorded a broadly Roman date. In the absence of meaningful spatial relationships or morphological similarities with more-closely dated remains, these have not been phased, but are described under a general heading of General Roman (Period 4).

Phase 4.1: Early/Mid Roman (AD120-250)

Rectilinear enclosure

4.7.4 During this Early/Mid Roman phase of land use a rectilinear enclosure was imposed. Linear ditches G4/G2, and G5 appear to define the western and southern extents of a large rectangular land entity (Fig. 7). Smaller gully G6 may have formed part of this enclosure boundary, or else constitute a lesser sub-division of the enclosure interior, perhaps along with ditches G7/G8, G9 and G1. On the basis of the geophysical survey results, it appears that the northern third of the enclosure lay beyond the excavated area (Fig. 2) – the continuation of its western perimeter ditch being seemingly missed by evaluation Trenches 2, 10 and 17, and its northern lying within the part of the Phase B area that was not accessible for evaluation. Furthermore, the plotted anomaly interpreted as its eastern extent is unlikely – the apparently coinciding undated ditch recorded in Trench 15 not being identified as a more extensive feature within the excavation area. The east side of the enclosure is therefore presumed to have lain further east, its overall extents being 180m+ east/west and c.150m north/south.

4.7.5 Ditch G4 ([1130, 1150, 1156, 1162, 1749]) ran down the west side of the excavation area, on a NNW/SSE alignment. This boundary ditch was generally

shallow with straight sides and a flat base, measuring 0.90m wide at its widest excavated point and a maximum of 0.60m deep (Fig. 11, section 1). While it continued southward beyond the limit of excavation, its rounded terminal was recorded as segment [1749], where it cut into Neolithic pit G64. The ditch fill did not contain any diagnostic dating evidence, but its western edge was cut by Roman ditch G2 and so G4 is considered a Roman precursor of this perpetuated boundary.

4.7.6 Re-cut ditch G2 ([1024, 1074, 1089, 1128, 1138, 1160, 1191]) was also aligned NNW/SSE and extended beyond the excavation area to both north and south. The ditch gradually became narrower and shallow to the northwest, though this may have been a result of plough truncation. The surviving ditch measured between 1.4-3.50m wide and 0.56-0.97m deep (Fig. 11, section 1). The fills comprised mid grey brown silty sand and contained small quantities of Roman pottery together with flecks of CBM and residual worked flints. The ditch ran on the same alignment as G4, truncating the western edge of the infilled former boundary. G2 would appear to have been a direct replacement of this defunct feature, both lengthening and widening the perpetuated boundary. The ditch is shown on the geophysical survey plot (Fig. 3) to continue northwards before turning east, likely forming the northern boundary of the enclosure.

4.7.7 Ditch G5 (1188, 1193, 1199, 1201, 1216) was aligned ENE/WSW and was truncated by a modern irrigation pipe on its southern edge that ran along the field boundary and edge of excavation. The ditch was 2.75m at its widest point, though the whole profile was not visible due to the pipe truncation and edge of excavation area. Its maximum depth was 0.60m and was generally filled by a single deposit that contained only sparse finds; two sherds from a long-lived Roman jar form (c.100-325AD) were recovered from the fill of segment [1199] and single fragments of Roman CBM from segments [1188] and [1193]. Ditch segment [1216] was truncated by poorly-defined pit G72 [1214], which contained very similar mid brown silty sand fill. While no dating evidence was recovered from the pit, the similarity of their fills suggests that it is contemporary and perhaps formed part of the boundary itself. The ditch continued eastwards, off the trench edge, though the modern truncation meant that it was difficult to further define. The ditch also continued westwards beyond the excavation edge and is postulated to form a junction with perpendicular ditch G4/G2.

4.7.8 A smaller internal boundary was to the east of ditch G5 in the form of far less substantial gully G6 ([1454, 1456, 1465, 1476, 1540, 30/004]). It ran on the same alignment but in a slightly more northerly position. The gully measured 35.17m long and was a maximum of 0.62m wide and 0.37m deep (Fig.12, section 10). Recovered dating evidence was limited to a single sherd of 2nd century samian ware pottery. Although possibly the eastward continuation of the southern enclosure ditch, it is more likely that it was some sort of internal subdivision, perhaps associated with ditch G7/G8 to its north.

4.7.9 Relatively large and rounded pit G45 ([1244]) was located immediately adjacent to west end of gully G6. It measured 3m x 2.20m by 0.47m deep and contained a sequence of three fills of mid to dark grey-brown silty sand, with the upper fills both containing small groups of Roman pottery as well as animal bone, including a near-complete male domestic fowl (cock), a cattle scapulae with evidence of hook hanging and shed deer antler, as well as three iron nails. The gully was also truncated by two pits, G53 ([1452, 1474]). Small pit [1574]

measured 0.55m wide and 0.51m deep, and was cut on its southern side by pit [1452], measuring 1.42m wide and 0.63m deep. Both pits contained single undated fills, but their location along the boundary suggests that they were cut when it was filling but still functioning as a boundary marker. Similarly, pit G45 was probably placed on this boundary too. As such, all three pits are judged to be of probable earlier Roman date.

4.7.10 Gully/ditch G9 ([1353, 1354, 1355, 1371, 1434, 1444, 1373]) only partially exposed along the edge of excavation, most likely defined an internal boundary within the rectilinear enclosure, running on a roughly east/west alignment. The gully was shallow with moderate sloping sides, and measured up to 0.90m wide by 0.29m deep. Towards its exposed eastern extent, posthole [1354] lay along the gully cut, at the point where separate, though clearly related, linear [1373] continues the boundary line eastwards. The fill of the posthole was not distinguishable from that of the gully, so is likely contemporary, possibly indicating the presence of a fence structure along at least part of the boundary.

4.7.11 The full westward course of gully/ditch G9 was not exposed within the excavation area. However, it is postulated that ditch G1 ([1059, 1071]) could in fact constitute the northeast/southwest aligned return of the same boundary. The 10.39m-length of ditch ended in an irregular tapering terminal [1071]. The ditch measured up to 1.80m wide and 0.55m deep and contained a single fill of mid brown sandy silt from which Roman pottery and bone fragments were recovered. It is conjectured that the G1 terminal, along with the northern end of ditch G4, defined a c.57m-wide entrance gap at the northwest corner of an inner sub-enclosure around at least parts of the ring-ditch. It is unestablished as to whether the western end of G1/G9 was later modified when G4 was replaced and extended by G2. While it is conceded that the postulated entrance into the enclosure is unusually wide, it does seem to align well with both the ring-ditch and the later shrine behind it.

4.7.12 At the end of the G1 ditch terminus was pit G22 ([1067]), which contained pottery of a broad 3rd century date as well an annular glass bead (RF<87>) of Late Iron Age or Early Roman type. The features were indistinguishable in plan and contained comparable fills and finds, suggesting that they are contemporary, though it was thought that the ditch may have cut the pit. The pit measured 1.4m wide and 0.19m deep and contained a mid orange-brown sandy fill (Fig. 12, section 8). Soil sample <3> collected from its fill did not contain significant charcoal or charred plant macrofossil remains.

4.7.13 A line of undated postholes G13 ([1026, 1028, 1030, 1032, 1034, 1036, 1038, 1040, 1042]) was located to the southwest of G1 and G22 and may have constituted a structure such as a fenceline, perhaps continuing the boundary across at least part of the 57m-entrance gap described above. The postholes were circular, closely and equally spaced, and measured between 0.15m-0.27m deep.

4.7.14 As previously mentioned, the eastern boundary of the rectilinear enclosure is not readily apparent. However, short north/south aligned ditches G7 and G8 may have once constituted a more extensive boundary, since truncated (note their alignment on pit G53 on the southern G6 boundary line), that defined the east side of the postulated inner sub-enclosure around the ring-ditch. Southern ditch G7 ([1560, 1570, 1640]) was 13.1m long and a maximum 1.1m wide and

0.43m deep. The excavated slots produced pottery of a broadly Roman date, with a coin of later Roman date (AD268-293) being probably intrusive in segment [1640]. A near complete rabbit skeleton was recovered from segment [1560]; it is not clear whether this was contemporary or intrusive in the feature. The northern ditch G8 ([1564, 1582]) was 8.18m long, with slots measuring up to 2.1m wide and 0.82m deep. Its northern terminus [1564] contained diagnostic pottery, along with a 1st–3rd century coin and a flint axe head of Neolithic date. These could suggest a structured deposit at the ditch terminus. Soil sample <44> collected from the terminal fill contained a small quantity of charcoal but no charred plant macrofossil remains.

Features in the enclosure(s)

4.7.15 It is unclear whether the Bronze Age ring-ditch persisted in the Roman period landscape as a remnant earthwork or even as an actively used entity. As described in 4.6.3, the ditch appears to have still been partially open in the Iron Age and may well have continued to accumulate infill deposits during Phase 4.1. However, no diagnostically Early/Mid Roman pottery was recovered from the ditch fills. This said, if indeed surviving as an earthwork into the Roman period, the ring-ditch would have occupied a prominent position within the rectilinear enclosure defined by ditches G1/G9, G2/G4, G5/G6 and perhaps G7/G8. While the ring-ditch enclosure does not appear to have been encroached upon by earlier Roman activity, the interior of the surrounding rectilinear enclosure was occupied by a low density of remains that indicate its use. The majority of these seem to have been located west of the ring-ditch remains or else toward the enclosure peripheries.

4.7.16 Pit G18 ([1122]) was located adjacent to the terminus of ditch G4. The oval cut was 3.19m in length x 2.11m wide and 0.78m deep and contain three fills (Fig. 12, section 7). The bottom fill [1121] contained a complete articulated male dog skeleton that had been placed on the base of the pit on an east/west alignment. Although recovered finds provide only a broad Roman date for the feature, it is interpreted as a structured deposit placed at, and contemporary with, the Phase 4.1 enclosure entrance. Soil sample <8> collected from its fill contained rare charcoal and no charred plant remains.

4.7.17 A probable well or deep pit G14 ([1063]) was located to the west of the ring-ditch. The irregular-shaped feature measured 3.80m east/west by 3.10m north/south. During initial hand-excavation, the fills of the feature were noted to collapse or slump, suggesting the presence of an underlying void. The feature was consequently machine-excavated to a depth of *c.*2m, though its base was not reached. It had steep, almost vertical sides and a sequence of four fills were identified, from which small quantities of mid-2nd/3rd century pottery, animal bone and CBM were recovered. There were no obvious voids or remnants of a lining visible during the machine excavation. The depth of the feature is suggestive of a well or other shaft-like feature.

4.7.18 Two adjacent pits G15 ([1082, 1098]) are suggestive of small-scale activity within the enclosure. Pit [1082] measured 3.1m x 1.5m by 0.49m deep and contained a significant amount of oyster shell within its main fill (Fig. 12, section 9). The immediately adjacent pit [1098] was slightly smaller and shallower, measuring 2.2m x 1.75m by 0.18m, with a mid brown sandy silt fill including pottery and CBM. The pits are likely contemporary, with their charcoally fills

suggesting they were backfilled after use. Both contained pig canines. Bulk soil samples <2> and <8> collected from their fills contained small amounts of charcoal. The pit [1098] sample also contained low quantities of charred cereal remains and that from pit [1082] charred arable weeds.

4.7.19 A small dispersed pit group G44 ([1346, 1348, 1378, 1392, 1396]) lay toward the northern boundary G9; some including dating evidence, others grouped on the basis of location and form. Two pits [1346] and [1378], c.10m apart, contained pottery sherds that may derive from the same vessel. This indicates that both were probably open at the same time.

4.7.20 Irregular-shaped pit G61 ([1628]) was located a short distance to the east of the ring-ditch. The pit fill contained common charcoal, suggestive of backfilling after use. Soil sample <57> yielded charred cereal remains including wheat and barley, and also weeds. Whether incidental or not, this feature underlay the Period 4.2 possible shrine building. Perhaps more significantly, together with the G44 pits, these possibly define an arc of pits mirroring the curvature of the northeast of the ring-ditch.

4.7.21 A cluster of seven postholes G37 ([1375, 1377, 1412, 1414, 1435, 1445, 1538]) were recorded alongside the G9 boundary ditch. While three ([1377, 1412, 1414]) appeared to form a line extending away from the ditch, equally spaced [1375, 1414, and 1445] could be construed to run alongside it.

4.7.22 At the east end of the excavation area was a deposit, G48 ([1677]) formed by an irregular expanse of sandy silt measuring c.37m x 23m, with a maximum depth of 0.42m. The deposit had originally been thought to include a ditch with very ephemeral edges, identified during the evaluation, though full exposure revealed that it was in fact part of a mottled fill of a larger irregular deposit. The deposit contained occasional finds scattered across its area and was likely a gradual accumulation deposit within a natural hollow, as opposed to a cut feature. Only a small quantity of pottery, CBM and shell was retrieved from it. It may be pertinent that this feature lay east of the G7/G8 boundary or subdivision, perhaps being bounded by it, and separated from the activity in the centre of the site area.

Phase 4.2: Later Roman (AD250+)

4.7.23 The later Roman phase of land use activity is focused on the re-cutting and re-establishment of the Bronze Age ring-ditch enclosure (if not in Phase 4.1), with an associated small building of some sophistication constructed alongside. The building, associated with later Roman dated structured deposits of pig and dog remains, is postulated to be a shrine. There is evidence for the perpetuation of the surrounding Phase 4.1 rectilinear enclosure boundary into this later Roman period, though the postulated inner sub-enclosure appears to pass out of use.

Enclosure boundary

4.7.24 The western boundary of the earlier Roman rectilinear enclosure (G2) was recut by a northwest/southeast ditch (G3) which followed the alignment of the earlier boundary. Replacement ditch G3 ([1076, 1077, 1091, 1136, 1143, 1158, 1197, 1668]) measured between 3.20-0.82m wide and 0.17-0.67m deep (Fig. 10, section 1; Fig. 12, section 11), deepening from north to south. This could

have be due to later truncation or changes to ground level. The ditch generally had moderately sloping sides and a flat base, containing a single fill of mid greyish brown silty sand with chalk flecking. Retrieved dating evidence was very sparse, being limited to a coin (SF<20>) dated to AD275-285 and undiagnostic pottery sherds and CBM recovered from the surface of the ditch. A pig canine was retrieved from the fill of ditch segment [1668].

4.7.25 Within the southern excavated segment [1197] of ditch G3 was an articulated human skeleton, [1142]. The skeleton was fully articulated (though the lower legs were inadvertently removed where first encountered within a routine segment excavated across the ditch), and was found face down within the ditch fill, with the head to the north (Fig. 8, photo). Although assigned a nominal grave cut number, [1143], none was actually visible within the ditch fill, suggesting that it constituted an inhumation that had been interred opportunistically or without formal funerary process as the ditch was infilled – though a ritual interment of these human remains cannot be discounted given the wider site context. Two small undiagnostic pottery sherds were found alongside the skeleton, and a coin (RF<20>) dated AD275-285 from the wider segment; though these may not be directly associated. No obvious grave goods were present. Soil samples <10>, <11> and <12> collected from the ditch fill in the vicinity of the skeleton did not contain significant environmental remains.

4.7.26 No evidence for the re-cutting or continued infilling of the southern enclosure ditch G5 was recorded in the later Roman period.

Ring-ditch enclosure reinstatement

4.7.27 The Bronze Age ring-ditch, presumed to have at least survived into the Roman period as a remnant earthwork, was recut during this period – if not in fact in Phase 4.1. This concerted clearance of the entire circumference of the ditch indicates the effective reinstatement of the circular enclosure.

4.7.28 Where investigated, ring-ditch recut G12 ([1046, 1618, 1626, 1678, 1700, 1701, 1704, 1723, 1724, 1737, 1738, 1743-1748]) measured between 2.40m-6.45m in width and 0.69m-1.55m in depth (Fig. 11, sections 3-5; Fig. 12, section 11; Fig. 13, section 14). Its creation appears to have involved the clearance of only the upper portion of the Bronze Age ditch fills and to have retained the original ditch upper edges. The fill deposits were truncated to produce a broad V-shaped recut profile, the ditch being shallowest at the northeast of the enclosure. The subsequent, Phase 4.2, ditch fills contained varying quantities of Late Roman (AD250-325) pottery and CBM. More significantly, a quantity of coins and other metalwork items such as cosmetic tweezers, a bracelet, a brooch and plaque were recovered both by metal-detecting and during hand-excavation. While there was no definitive concentration of metal finds, these items were generally found within the eastern side of the ring-ditch (i.e. in close proximity to Building 1, see below). A single human radius bone was recovered from the uppermost fill in ditch segment [1724] and antler fragments from fills in segments [1626], [1747] and [1704]. Soil samples <23> (fill [1287] in seg. [1700]) and <24> (fill [1291] in seg. [1748]) did not contain significant environmental remains. However, sample <58> (fill [1735] in seg. [1738]) yielded well-preserved hazel charcoal along with indeterminate charred cereal grains and a small quantity of burnt bone.

4.7.29 To the immediate east of the reinstated ring-ditch was a spread of material G62 ([1406, 1470, 1647, 1648, 1659, 1660, 1679, 1680, 1702, 1703]) containing large quantities of pottery, CBM and other finds including nails. Underlying this layer was a post-built structure (Building 1), associated with placed deposits of pig skulls and associated pits.

Building 1 (Fig. 9 and Fig.13, section 14)

4.7.30 Cut by Building 1 structural features and overlain by its floor surfaces, various layers, G60 ([1617, 1624, 1651, 1652, 1689, 1728]), containing occasional Roman finds directly overlay the natural deposit. These were likely deposited as levelling layers, perhaps in a slight hollow in the natural, prior to the construction of the structure. Possibly comprised of redeposited natural, these deposits were generally formed of mid yellowish brown and mid brown silty sand, with inclusions of occasional pottery, bone and CBM. A female pig canine was also retrieved from [1652]. This sequence of layers generally overlay Phase 4.1 pit G61 ([1628]).

4.7.31 Overlying the G60 levelling deposits were fragmentary patches of compacted redeposited chalk G56 ([1601, 1612, 1627]). These were intermittent and truncated by modern ploughing. The chalk was up to 0.10m in thickness and defined a roughly rectangular area. The chalk was cut by later postholes (G10), and likely represents a floor surface preparation either laid prior to building construction or else deposited around the *in situ* postholes. It is unclear if this truncated deposit originally continued around or across the entire building area defined by posthole G10, though it is clearly extended outside of this area, to the east, where it was recorded as L-shaped deposit [1627]. No formal floor surface was identified on top of G60. Whether this had been removed or one was never laid is unknown; overlying deposits appear to have related to disuse and/or demolition of the building.

4.7.32 A group of 10 postholes G10, ([1448, 1450, 1463, 1484, 1486, 1605, 1609, 1621, 1653, 1656, 1725]) were arranged in a roughly rectangular shape, with seven appearing to cut the surrounding chalk deposits G60. The postholes defined a structure measuring *c*.5m north/south by *c*.4.5m east/west – in essence constituting a six- or eight- post structure, with additional and intercutting postholes at the northwest and the west side suggestive of recuts/repairs, or additional supports. The postholes all had steep/vertical sides and flat bases though varied in size, with those located at the four corners and between the north/south lines of the proposed structure being generally larger, and measured between 0.30m-0.75m x 0.05m-0.68m (ave. 0.50m x 0.44m). Postholes [1484] and [1594] each contained a surviving post-pipe. All of the G10 structural features contained similar fills of mid orange-brown silty sand, with one posthole [1484] also containing an upper fill of dark grey brown. Five of the postholes contained pottery fragments, with bulk metalwork and CBM fragments also recovered from excavated fills. Soil sample <32> from the fill of posthole [1450] did not contain significant environmental remains. However, posthole [1484] samples <38> and <39> yielded well-preserved oak charcoal, some fragments with insect holes. Two charred cereals were also recovered from sample <39>. Samples <47> and <48> from posthole [1594], <50> ([1607]), <51> ([1609]) and <54> ([1621]) all yielded burnt bone but no significant environmental remains – except for a single large vetch/ sweet pea / pea seed from <51>. Other sampled postholes [1573] (<49>) and [1615

(<55>) did not contain significant environmental remains.

4.7.33 The rectangular area defined by the G10 postholes was covered by a gravel and silty sand surface G57 ([1534, 1623]). The deposit did not extend beyond the centre of the outer postholes, defining an area of *c.*4.8m x 3.5m, and was almost certainly its internal surfacing. The floor surface covered a further six smaller postholes G72 ([1566, 1573, 1594, 1607, 1611, 1615]) located towards the eastern side Building 1. Two of these ([1566], [1607]) were fairly shallow and contained large quantities of rounded mid grey yellow mortar and CBM (Fig. 9). The deposit [1575] within [1607] consisted of heavily degraded mortar in a circular form placed on a thick Roman tile fragment, while fill [1567] from within posthole [1566] was formed of heavily degraded mortar in a circular form. Both of these deposits are suggestive of a foundation, possibly for a column base. These postholes underlying G57 may have formed a smaller, earlier structure, also of Roman date, which was later overlain by the gravel surface. A further smaller posthole was in alignment with the eastern row of postholes and spaced evenly to the south. It is thought likely to be associated with Building 1, and measured 0.15m x 0.09m.

Features and deposits associated with Building 1

4.7.34 To the immediate west of the postholes comprising Building 1 were two pits G59 (1427, 1431]), both of which contained placed deposits of animal remains. Southern pit [1427] measured 0.45m x 0.60m and 0.21m deep. The upper part of its fill of mid red-brown sandy silt contained the two east-facing pig skulls, with remains of articulated forelegs placed to either side of them – so-called 'head and hoof' deposits (Fig. 9, left of photo). Both skulls appeared to have been truncated or at least compressed; probably in antiquity. Larger elongated pit [1431] to the north measured 1.8m x 1.0m and 0.54m deep. It had moderately steep sides and a flat base and contained a single homogeneous mid red-brown sandy silt fill. Four further pig 'head and hoof' deposits, were found within the pit; again all facing east. Three of these were towards the top of the fill, in a north/south row. Two of these skulls were found with *in situ* coins placed in top of the cranial vault - a heavily worn sestertius of Marcus Aurelius (RF<43>) on skull [1429] and a dupondius of Faustina (RF<49>) on [1522] (Fig 9, photo). Underlying these animal deposits was a fourth skull [1521]. Though it had no associated forelegs or *in situ* coin, it displayed green copper staining on its frontal bone, indicative of the former presence of a placed coin. A further four coins (RF<46, 47, 48, 50>) were recovered from fill [1428] of pit [1431] and were probably associated with the skull deposits. They were found along with fragments of Roman pottery, bone and iron. Canine teeth recovered from all of these placed deposits indicate that all these animals were male. Deposit [1421], an apparent silt layer overlying the G59 pits contained an articulated foreleg on an east/west alignment. This is likely to have indicated the former presence of a further 'head and hoof' deposit that had been largely removed by truncation. Two coins (RF<44, 45>) were also recovered from this deposit. Soil samples <33>, <34>, <35>, <37>, <40> and <42> were all collected from fill [1428] of pit [1427]. Samples <34> and <35> yielded oak charcoal, with <34> also containing ash and elder. Sample <42> yielded charred small vetch/sweet pea seeds. Sample <36> from the fill of pit [1427] did not yield significant environmental remains.

4.7.35 Directly to the north of the 'head and hoof' pits were three further small pits

(G58 ([1416, 1418, 1420]), the southernmost of which cut pit [1431]. These all contained similar single fills of very dark blackish-brown silty sand with common charcoal, CBM and mortar fragments. The pits measured between 0.50-0.55m x 0.60-0.90m and were 0.20-0.26m deep (Fig. 12, section 12). They contained only undiagnostic Roman pottery. The pits were cut through redeposited chalk layer G56) and intruded into the underlying G60 levelling deposit. Given their collective north/south alignment, the G58 and G59 pits are regarded as parts of the same depositional activity associated with the site of Building 1. Soil samples <30> and <31> from pits [1418] and [1420] both yielded yew and oak charcoal fragments, while sample <29> contained charred grass seeds. Both samples <29> and <31> yielded a small quantity of burnt bone.

4.7.36 West of the G58 and G59 pits was a broad, roughly L-shaped, gully/slot G63 ([1369, 1579]), measuring *c.*7.5m long. It had shallow sloping sides and a flat base and an indistinct edge with the G60 levelling deposits below. However, its fills contained significant quantities of painted wall plaster and CBM fragments, including two tegula with attached mortar on both sides, which suggests that this feature became infilled once the building had passed out of use and became ruinous or was demolished. Its function in relation to Building 1 is unclear, although it would appear to mirror the L-shape of G56 chalk deposit [1627] to a certain extent. It is possible that it was a robbed-out structural slot originally containing a wall of wooden construction. With G56, it could be construed to define a rectangular entity, c.10.5 x 8.0m in extent, that incorporated the G10 posthole structure. Soil sample <52> from the debris fill of segment [1579] contained rare charcoal but no charred plant remains.

Building 1 disuse / demolition

4.7.37 Overlying the Building 1 structural features, chalk and gravel floor deposits and ritual pits was a number of different deposits, G25 ([1461, 1523, 1565, 1572, 1577, 1591, 1650]), containing high quantities of painted wall plaster, mortar and CBM fragments. There was also evidence of timbers, with burnt wood [1576] remains to the southwest of the structure, accompanied by 14 nails. These deposits were mainly located on the south and west side of Building 1 and are presumed to have formed after the structure went out of use. These disuse/demolition deposits generally comprised mid grey-brown sandy silts and contained concentrations of finds. They had diffuse horizons with surrounding deposits and were differentiated from one another predominantly by their finds content. All are interpreted as deriving from the decay and likely demolition of Building 1 in the Later Roman period.

4.7.38 The eastern chalk floor deposit [1627] of Building 1 was covered by two thin silt layers (also G25). A dark blackish brown sandy silt [1351] immediately overlay the chalk and contained common pottery, iron nails, CBM and painted wall plaster. It covered whole of the chalk, though was restricted to an area measuring *c.*4.5m x 1.5m. This was in turn covered by a lighter mid red brown sandy silt [1350], which contained similar artefactual debris. There were no relationships between these two deposits and the Building 1 cut features. However, it is probable that they represent disuse accumulation within the derelict building or else over its demolished remains.

Other features and deposits in the rectilinear enclosure

4.7.39 Group G62 encompasses deposits spread *c.*17m north and *c.*4m south of Building 1 and extending west to the edge of the recut ring-ditch ([1647, 1648, 1659, 1660, 1679, 1680, 1702, 1703]), at least some of which seems to have been preserved in a slight hollow [1470]. All contained large quantities of Roman pottery, iron nails, CBM and coins, and overlay the remains of Building 1 – clearly post-dating it. The deposit (G62) had a very indistinct interface with the structural fills and layers of the levelled building. Pig canine teeth collected from layer [1647] likely derived from the underlying G59 placed deposits. The northern deposit was 0.45m at its deepest point and in fact comprised two deposits ([1647, 1648]), a mottled mid brown orange and mid grey brown lower deposit with occasional pottery, and a dark greyish brown silty sand upper fill which contained large quantities of pottery, CBM and bone, along with five coins, a copper plaque and a polished flint axe head. The spread continued south of Building 1, and perhaps indicates the dispersal of material across the wider vicinity of the structure demolition, including artefacts, which may have been ritually deposited within the shrine Building 1 during its period of use. The material may also have been spread by later ploughing to some extent.

4.7.40 Immediately to the north and northeast of the G12 ring-ditch was a shallow but extensive deposit [1303] containing two coins and a cosmetic pestle (RF<35>, <36>, <37>) along with pottery, bone and CBM. The deposit was dark brown sandy silt and up to 0.20m thick and had an indistinct edge with the adjacent ring-ditch, possibly being infilled at the same time. Where [1303] was removed, five postholes and a possible flue, along with two features thought to be natural solution hollows, were exposed (G43). The postholes defined no clear structural shape, though three ([1545], [1557] and [1407]) were consistent in shape with steep sides and flat bases, and contained mid/dark grey-brown sandy silt fills.

4.7.41 The possible flue [1547] measured 2.85m long, 0.56m wide and was 0.22m in depth (Fig. 8 photo). It had steeply sloping straight-cut sides with a very sharp break of slope to a narrow flat base and tapered toward either end. The southern side of the cut was lined with near-complete tegula, placed on edge. It is unclear whether the opposing side was originally similarly lined, but is speculated to have been. The tiles and the remainder of the cut were overlain/filled by a dark grey brown sandy silt fill [1549]. While the tiles showed some sign of burning (or overfiring/vitrification), no scorching of the cut was evident and the fill contained only a low to moderate charcoal component. Retrieved finds comprised only small quantities of worked flint, pottery, fired clay and a single burnt flint. Soil sample <45> collected from the flue fill did not contain significant environmental remains. The tegula bore the same signature mark as those found associated with Building 1, and could perhaps indicate a later reuse of roof tiles from it. The soil sample produced a very small fragment of apparent wall plaster too. No sign of a more extensive structure was identified above/around the tile-lined cut to demonstrate that this was part of an oven or processing/drying floor.

4.7.42 Additional isolated Late Roman features were found within the eastern half of the site. Pit G65 ([1584]) was in the northeast of the site adjacent to spread G48. The pit measured 1.28 x 1.0m and was 0.11m deep. It contained a single fill of dark grey silty sand, containing common diagnostic pottery sherds of Late

Roman date, along with an iron ox goad (RF<94>). The feature was cut into an area of slightly mottled yellow and mid brown sand [1583], containing occasional potsherds. The deposit was very shallow, and had no clear edge. It is thought to be disturbed natural, with finds introduced by ploughing and bioturbation.

4.7.43 Towards the south of the site was a large irregular-shaped feature thought at the time of excavation to be a possible quarry pit (G35) that was subsequently cut by pit G34. The original G35 quarry cut ([1262 / 1300]) measured 15.9m x 12.04m and was up to 0.80m deep (Fig. 12, section 13) . The feature contained two fills, both containing mixed Roman pottery sherds including a sherd of possible shelly ware, suggestive of a post-AD250 date.

4.7.44 Large circular pit G34 ([1259 / 1326]) was cut into the centre of the infilled quarry. This pit measured 4.68m x 5.0m and was between 0.69-0.88m in depth, with concave sloping sides and a flat base (Fig. 12, section 13). It contained two fills; a basal fill of mottled mid grey/orange-brown and an upper fill of dark grey-brown silty sand containing common pottery, with some diagnostic sherds suggesting a Late Roman date. The surface of the upper fills of both G34 and G35 was metal-detected prior to excavation due to a prevalence of metal finds. This produced five coins, with the latest dated AD364-378. The separate cuts were not visible in plan prior to excavation, but the dates of finds suggest that these coins are likely to have originated from G34 as opposed to the earlier quarry feature.

4.7.45 As well as discrete cut features there was a deposit G47 ([1295 / 1329 / 1330]) adjacent to, and on the south of the ring-ditch and containing material dating to this phase and likely formed at this time. It comprised two slight hollows containing deposits of light brown and mid grey brown sandy silt. The deposits may have been formed gradually as silting within these hollows. Pottery, CBM, animal bone, and a fragment of quernstone were retrieved, along with a quantity of residual worked flints.

General Roman (Period 4)

4.7.46 A quantity of remains can only be assigned a broad Roman date and are not readily assigned to a specific phase due to their lack of meaningful spatial patterning. Those encountered within the excavation area are shown on Figure 7. Broadly Roman features outside the excavation area were particularly scattered and low in quantity, suggesting that the wider vicinity of the landscape around the ring-ditch was largely devoid of activity in this period. There was no evidence of Roman activity found in the Evaluation Phase B area.

4.7.47 Pit G19 ([1174]) was a roughly rectangular feature located west of the ring-ditch. The pit measured 1.0m x 0.42m by 0.15m deep and contained a single fill [1173] in which was a near-complete cow skeleton. Although poorly dated, it could be construed to have been purposely positioned between the ring-ditch and the Phase 1 enclosure entrance and was almost certainly a structured deposit.

4.7.48 Again located within the west of the rectilinear Roman enclosure, intercutting pit cluster G38 comprised five features ([1145, 1147, 1164, 1166, 1168]). Their excavation produced only a single tegula fragment. These features were all

shallow and likely broadly contemporary, thought their function is unclear.

4.7.49 Four isolated pits G24 ([1022, 1113, 1118, 1125]) were scattered across the western half of the excavation area, all containing undiagnostic pottery sherds of general Roman date. The pits measured between 0.72-1.07m long 0.68-1.32m wide and up to 0.26m in depth. All contained single fills of dark grey brown silty sand. Pits [1022] and [1118] contained significant quantities of animal bone. The fills of pits [1022] and [1113] were bulk soil sampled (<4 and 7>). Both contained small quantities of charcoal, but frequent charred plant macrofossil remains, including cereals, arable weeds and wild grasses. While these pits cannot be readily be assigned to a specific site phase, their proximity to dated Phase 4.1 pits is suggestive that they are likely to have been contemporary. However, it is noted that mortar/plaster was retrieved from pit [1022], which might indicate a later Roman date.

4.7.50 Further Roman pits G46 ([1183, 1185]) were located adjacent to the southern enclosure boundary ditch G5. Pit [1185] contained a small quantity of broadly Roman pottery, and animal bone, within a single fill of mid brown silty clay. The adjacent pit [1183], contained no dating, but its adjacent location and similarities in fill suggests that it is contemporary.

4.7.51 A small group of features G28 ([1630, 1632, 1634, 1636, 1638, 1645) lay to the east of ditches G7 and G8. An oval spread [1649] measuring 4.0m x 4.70m x 0.20m seemingly overlay feature [1645]. Both this layer and the fill of pit [1645] comprised mid-dark grey-brown silty sand, and included Roman pottery. In close proximity were three small pits, two of which ([1630], [1638]) cut a small gully/elongated pit [1632/1636], which measured 2.3m in length and 0.57m wide. A small amount of undiagnostic sherds were recovered from these features. Pit [1634] contained a quantity of animal bone. A near-complete rabbit skeleton was recovered from layer/spread [1649]; its integrity is unclear.

4.8 Undated Features

4.8.1 Several features across the site in the evaluation trenches (Figure 2) remain undated either by artefactual evidence, morphological characteristics or stratigraphic proximity to other datable features. These have been placed in separate groups based on feature type and location and have not been allocated to a specific period. They are nevertheless valid archaeological features, and most likely from either Periods 2 or 4.

4.8.2 Three groups of postholes were located in the west of the site, with the groups differentiated primarily by location. Eight postholes G16 ([1012, 1014, 1016, 1054, 1057, 1065, 1069, 1176]) were scattered across the northwest of the excavation area, and did not appear to form any possible structures. The postholes measured between 0.22m-0.46m x 0.11m-0.20m and all contained single, undated fills.

4.8.3 Three postholes G30 ([1044, 1048, 1050]) to the south of G16 formed a small cluster. They were all slightly square in plan and measured between 0.48m-0.50m in width and 0.18m-0.23m in depth. The single fills consisted of mid orange-brown sandy silt with no finds. A further three isolated postholes/pits G32 ([1078, 1131, 1152]) were in the southwest of the site. They were all circular in plan, with two having steep straight sides ([1078], [1152]) and [1131]

being shallow with gradually sloping sides and a flat base. The features measured between 0.35m-0.58m wide and up to 0.45m in depth, with all having single fills of mid grey brown silty sand, with the exception of [1078], which also had a basal fill of mid reddish brown.

4.8.4 Further isolated postholes/pits G52 ([1506, 1508, 1515, 1517, 1519]) with no clear alignments or associations were found in the southeast corner of the excavation area. The three postholes were all comparable in terms of form, being oval with gradually sloping sides. They measured between 0.35m-0.65m x 0.13m-0.18m, contained single fills of mid grey brown silty sand and were associated in a rough line. The other two features from the group ([1506] and [1508]) were slightly to the east and contained darker fills containing moderate concentrations of charcoal, though no dating material.

4.8.5 Isolated posthole G51 ([1587]) was located at the east end of the excavation area. The posthole was near-circular, with steep straight sides and a U-shaped base, measuring 0.36m x 0.30m by 0.35m deep. It contained a light grey fill comprising of common chalk within a sandy matrix from which no dating evidence was retrieved.

4.8.6 Eight undated pits present within the southwest of the excavation area are divided into two distinct groups based on form and fill types. Pits G17 ([1086, 1096, 1100, 1106, 1108, 1124]), were generally oval in shape with shallow sides and irregular bases. They all contained similar fills of sterile mid reddish brown silty sand. The irregular nature of the features is suggestive that they may be the result of rooting or animal burrows. The adjacent two pits G27 ([1102, 1104]), were circular with moderate concave sides, and contained mid grey brown sandy silt, with fragments of charcoal and flints. None of the pits contained any dating evidence.

4.8.7 Eight of the evaluation trenches (44, 49, 51, 53, 56, 58, 61, 69, 90, 91) contained investigated features from which no dating evidence was retrieved G68, G69 and G70. These were generally scattered across the evaluation area, with at least some very possibly being a result of natural activity. All of the features were cut directly into natural deposits and overlain by ploughsoil.

4.8.8 A small isolated pit G31 ([1154]) in the southern half of the site was irregular in plan with irregular sides. Its single fill was mottled with charcoally sand and redeposited chalk though no dating. The feature was cut into natural deposits and overlain by ploughsoil, and likely represents an isolated activity.

4.9 Probable natural features

4.9.1 A group of twenty-nine apparent postholes/pits (G55) were located within the centre of the ring-ditch. The features were roughly circular in plan and all contained the same compact fill of orange brown sandy clay. The features measured between 0.17m-0.60m wide and up to 0.38m in depth, though most were 0.20m-0.35m in width. The majority had straight vertical sides and a flat or u-shaped base. None contained finds. Although located toward the centre of the ring-ditch interior, the sterile sandy clay fills were very similar to clearly natural features and mottling apparent in the surface of the natural chalk and it is likely at all were naturally formed.

4.9.2 Two groups of possible postholes (G39, G40) were identified immediately to the south and southeast of the ring-ditch. G39 consisted of eight postholes [1239, 1241 1248, 1250, 1254, 1256, 1264], seven of which formed a northwest/southeast line. While the area surrounding them was clear of similar features, the postholes all contained the same sterile compact orange brown sandy clay fill as the G55 'features' within the ring-ditch interior, and are also thought likely to be natural in origin. G40 comprised isolated small features [1275, 1364, 1366, 1368, 1382] along the south of the ring-ditch, measuring between 0.24m-0.65m wide and up to 0.40m in depth. The features had very similar characteristics to those of G55 and are also thought to be natural in origin.

4.9.3 Six possible postholes G41 ([1305, 1307, 1309, 1311, 1313, 1315]) were located to the immediate north of the ring-ditch. Three of these were seemingly evenly spaced and aligned along the outside of the ring-ditch. The postholes all contained single fills of mid reddish brown sandy silt with no finds. These are likely to be natural solution features as seen in the centre of the ring-ditch (G55).

4.9.4 Three areas across the excavation area were investigated due to the presence of surface finds or due to their seemingly-regular shape in plan. All were identified as geological features due to the irregular nature of the feature edges and base, and mottled sandy nature of the fills. Deposit G29 ([1094]) within the northeast of the site measured *c.*19m x *c.*30m and consisted of two fills, a lower fill of mid brownish yellow silty sand, and an upper fill of mid yellowish brown silty sand. Six potsherds were recovered from the upper fill as well as pot fragments recovered during evaluation, where the feature was not excavated. The finds are judged to be intrusive.

4.9.5 Similar deposit G21 (1110, 1116, 1134]) was identified in the southwest of the site, adjacent to ditch G4. Three slots were excavated into the deposit revealing irregular sides and base. The deposit was 0.71m at its deepest, with two diffuse fills in slot [1110], and single fills of mid brown sandy silt in slots [1116] and [1134]. Small quantities of pottery were recovered from the upper fills, which are thought to be intrusive. The feature is judged to be a natural occurrence, possibly a result of solifluction.

4.9.6 Within the centre of the G12 ring-ditch interior was a roughly sub-square deposit G33 ([1432]) measuring *c.*7.10m x *c.*6.20m and 0.70m in depth, with convex sides and an irregular base. The feature contained a heavily mottled sterile fill of sand, comprised predominantly of dark reddish brown silty sand, with irregular deposits of yellow brown, and grey brown sand. While centrally located the deposit is likely natural, with no indication of human action.

4.9.7 To the north of the excavation area, Phase B evaluation Trenches 49, 51, 53, and 58 all contained small discrete features investigated as possible postholes G69. They were all circular in shape with straight sides and U-shaped bases. They generally had fills of mid/light orange brown sandy silt, with diffuse relationship with the surrounding natural. It is thought that these features are likely a result of rooting or bioturbation.

4.9.8 Trenches 61, 69, 90 and 91 contained pit features of oval shape with mid/light brown sandy silt fills G68. There were no finds from within the features and they are thought to represent natural activity such as rooting or burrowing.

Monitored area

4.10.1 Four test pits (TP1-4) were excavated to the east of the access road to evaluate the depth of natural deposits in advance of later landscaping (Fig. 2). The test pits each measured approximately 3.2m wide and up to 0.40m deep. Monitoring established that they contained only ploughsoil directly overlying natural strata.

4.10.2 The area was later stripped of topsoil down to natural deposits, with no archaeological remains being found to be present.

5.0 FINDS AND ENVIRONMENTAL ASSESSMENTS

5.1 Summary

5.1.1 A large assemblage of finds was recovered during the various phases of evaluation and excavation on land to east of Kings Warren. All finds were washed and dried or air-dried as appropriate. They were subsequently quantified by count and weight and were bagged by material and context. All finds have been packed and stored following CIfA guidelines (2014). Bulk finds are quantified in Appendix 3 and registered finds in Appendix 4. Information on the conservation of the registered finds is detailed in section 5.18.

5.2 **Flintwork** by Karine Le Hégarat

5.2.1 A total of 851 pieces of struck flint weighing 7999g were recovered from the evaluation and excavation (Table 1). A small quantity of burnt unworked flint fragments weighing 1549g was also recovered (Table 4). The material was hand collected and also subsequently retrieved from bulk soil samples. The greater part of the flint assemblage comprises material of a Neolithic to Early Bronze Age date. This is based on technological grounds and the presence of diagnostic pieces. Some of this material was found in-situ, but a large proportion was found re-deposited in later Roman contexts or within currently unphased contexts. A small Mesolithic component was also recovered, and a few pieces may also belong to the late prehistoric period. This report characterises the nature of the flint assemblage and assesses its potential for further detailed analyses.

Category	Flakes*	Blades, Bladelets, Blade-like flakes	Chips	Irregular waste	Cores	Retouched forms	Total	%
Period 1	109	49	1	-	2	2	163	19.2%
Period 2	37	3	-	1	-	-	41	4.8%
Period 4	386	65	-	15	17	13	496	58.3%
Undated	120	22	-	3	3	3	151	17.7%
Total	652	139	1	19	22	18	851	
%	*76.6%*	*16.3%*	*0.1%*	*2.2%*	*2.6%*	*2.1%*		*100.0%*

Table 1: Summary quantification of the struck flint by provisional phase / period (fragments of burnt unworked flint are not included) - (* includes a thinning flake)

Methodology

5.2.2 The pieces of struck flint were individually examined and classified using standard set of codes and morphological descriptions (Butler 2005; Ford 1987; Inizan *et al* 1999). Basic technological details as well as further information regarding the condition of the artefacts (evidence of burning or breakage, degree of cortication and degree of edge damage) were recorded. Dating was attempted when possible. The assemblage was catalogued directly onto a Microsoft Excel spreadsheet. The fragments of hand-collected burnt unworked flint were rinsed, scanned for worked pieces and quantified by piece and by

weight. The burnt unworked flint from the sample residues were scanned for worked material and quantified by weight.

Raw material

5.2.3 Overall, the raw material selected was a good flaking quality flint. Almost two thirds of the pieces (64.74% of the total assemblage, n=551) were re-corticated pale milky blue or white. While a few groups were entirely re-corticated, the majority displayed only partial surface colouration. For the most part a mid to dark grey (to almost black) flint was recorded. But a translucent light brown flint was also occasionally noted. The flint was mainly fine grained with no frost or thermal fractures. The outer surface was usually a stained chalky cortex of variable thickness, measuring up to 6mm but most frequently thinner (less than 2mm). The bedrock geology consists of chalk of the Holywell Nodular Chalk and New Pit Chalk Formations (BGS 2017), and the chalk derived flint could have been collected locally from secondary surface deposits or from exposed beds in the chalk. The translucent light brown flint displayed a greyish slightly pitted cortex (examples in contexts [1652], [1624] and [1650]). The later could be of a riverine origin.

Condition

5.2.4 The condition of the flints varies, but for the most part the pieces exhibit slight to moderate edge damage. This suggests that the material was only subject to negligible post-depositional disturbance. The pieces may have been exposed for some time prior to burial, or they may have been subject to some disturbance, but nothing indicates repeated re-depositions. As noted above a large quantity of flints were re-corticated to varying degrees (some heavily). Although it is unwise to automatically correlate the degree of re-cortication with the age of the flint, in a few instances a connection was observed between the proportion of re-corticated pieces and the possibility that the flints were found in-situ. This is the case for example for geological feature [1020] GP20 and pit [1140] GP64 both dated to phase 1.1 and for the primary and secondary fills of ring-ditch GP11 dated to phase 2.1. The material from these geological and archaeological features was almost entirely re-corticated. The flints from the fills of the recut ring-ditch (GP12) were also for the most part re-corticated (93.78%, n=181), suggesting that they may have derived from the earlier ditch fills of Early Bronze Age date. Nonetheless the presence of unrecorticated material could indicate some mixing. In total, 24 pieces of struck flint were burnt and 240 pieces were recorded as broken.

Provenance

5.2.5 The pieces of worked flint were spread across the excavation area with the greater part coming from the centre of the site (77.43% of the total flint assemblage, n=659). In total, 163 pieces (or 19.15% of the total flint assemblage) came from two geological features, nine pits and a tree hole currently dated to phase 1.1 (Table 2). Forty-one pieces came from the primary and secondary fills of ring-ditch GP11, which has been C14 dated to the Early Bronze Age. But a large proportion of the assemblage (58.28%, n=496 pieces) came from contexts currently dated to the Roman period. These pieces are clearly re-deposited, but it seems that the majority have only been subject to negligible disturbance and, based on their condition and technical appearance,

the majority form a coherent group of probable Neolithic to Early Bronze Age date. Overlaps exist between methods of production of flintwork dated to these periods, and once mixed or in small quantities it is often difficult to date them precisely. However, it is likely that some groups are more reminiscent of Early Neolithic technology, and others are more reminiscent of Middle Neolithic / Early Bronze Age technology. A further 151 pieces representing 17.74% of the total flint assemblage came from 25 contexts which are currently undated.

The lithic assemblage

5.2.6 The majority of the flintwork reflects activities ranging from the Early Neolithic to the Early Bronze Age. This is based on the presence of diagnostic pieces, on technological grounds and on the association with ceramic / or with well-dated contexts. A small Mesolithic and late prehistoric (Middle-Late Bronze Age) component is also likely to be present. The features dated to Period 1 and the ring-ditch will be looked at separately from the rest of the assemblage.

Categories	**Period 1**	**Period 2**	**Period 4**	**Unphased**	**Total**
Flake	108	37	386	120	651
Blade	22	1	16	9	48
Bladelet	7	-	13	2	22
Blade-like flake	20	2	36	11	69
Thinning flake	1	-	-	-	1
Irregular waste	-	1	15	3	19
Chip	1	-	-	-	1
Single platform blade core	-	-	2	-	2
Other blade core	-	-	1	-	1
Single platform flake core	-	-	1	-	1
Multiplatform flake core	1	-	6	2	9
Core on a flake	-	-	1	-	1
Unclassifiable/fragmentary core	1	-	6	1	8
End scraper	-	-	4	1	5
Side scraper	-	-	1	1	2
Thumbnail scraper	-	-	1	-	1
Piercer / borer	-	-	1	1	2
Serrated flake	-	-	1	-	1
Fragmentary leaf arrowhead	1	-	-	-	1
Polished axe	-	-	2	-	2
Retouched flake	-	-	1	-	1
Unclassifiable retouch/misc. Retouch	1	-	2	-	3
Total	163	41	496	151	851
%	19.2%	4.8%	58.3%	17.7%	100.0%

Table 2: the flint assemblage by category types

Features dated to Period 1

5.2.7 A total of 163 pieces of struck flint were recovered from 12 features currently dated to Period 1 (Table 2). The features located within the excavation area consist of two geological features (GP20), nine pits and a tree hole (GPs 26, 42, 49, 54 and 64). The majority of the pieces came from three features; pit [1234] fill [1233] (60 pieces), pit [1140] fill [1139] (46 pieces) and geological feature [1020], fill [1018] (31 pieces).The remaining features produced less than eight pieces each. Pits [1234] and [1140] and geological feature [1020] are associated with Early Neolithic pottery of Mildenhall tradition. The flintwork recovered from these 12 features is technologically coherent, and it is likely to be contemporary with the pottery. It is still interesting to note that while all the flints from geological feature [1020] and pit [1140] were re-corticated, a fair proportion of the pieces from pit [1234] remain free from surface discolouration. The assemblage comprises mainly débitage waste including 109 flakes (one of which is a thinning flake), seven bladelets, 22 blades, 20 blade-like flakes and a chip. The blade element (bladelets, blades and blade-like flakes) represents 30.81% of the débitage, a percentage that suggests Early Neolithic material (Ford 1987, 79, table 2). The pieces are products of a systematic reduction strategy. They were competently produced with a large proportion displaying the use of a soft hammer and platform preparation.

5.2.8 Two cores were recovered; a core fragment from G49 pit [1602] and a multiplatform flake core from G54 tree hole [1232]. The later (98g) was used to remove thin flakes and blade-like flakes. Two modified pieces were present; a miscellaneous retouched piece from pit [1234] and a fragmentary arrowhead from geological feature [1020]. The fragment is likely to represent the tip of a leaf arrowhead). It is too small to define exactly which type it is, but the shape suggests a large leaf arrowhead (such as a type 1A, Green 1980, 69). Some refits may be present within the material from [1233], [1139] and [1018].

Ring-ditch GP11 / GP12

5.2.9 The primary and secondary fills (G11) of the ring-ditch were dated to the Early Bronze Age through OSL dating. The ditch was subsequently reused, and the upper fills, in recut G12), were dated to the Late Roman period. Although the flintwork from G12 is mixed with Roman material, it is in fact similar to the material from the lower fills. It is characteristic of a Middle Neolithic to Early Bronze Age flake based industry, and for the most part it is likely to represent re-deposited Early Bronze Age material associated with the initial use of the ditch.

5.2.10 No diagnostic pieces were present, and débitage was best represented. The flakes dominated this latter category (201 pieces), which is expected in Early Bronze Age assemblages (Table 3). However, the assemblage from G11 differs slightly from the assemblage from G12. While the blade elements in the lower fills (G11) represents only 7.31% of the débitage, in the upper fills it represents 9.47% of the débitage. The small blade element in the lower fill is close to Ford's suggestion (of fewer than 7%) for Bronze Age flintwork (Ford 1987, 79, table 2). This suggests that the material is likely to be contemporary with the early use of the ring-ditch. The slightly higher blade component in the upper fills confirms a small amount of mixing - not with later Middle / Late Bronze Age material but instead with earlier Neolithic material that was possibly present on

the surface. Slight difference between the fills was also noted in regards to the degree of re-cortication (see above).

Category	**Flakes**	**Blades, Bladelets, Blade-like flakes**	**Irregular waste**	**Cores**	**Retouched forms**	**Total**	**%**
Period 2: ring-ditch (G11)	37	3	1	-	-	41	*17.5*
Phase 4.2: ring-ditch (G12)	164	18	8	1	2	193	*82.5*
Total	201	21	9	1	2	234	*100.0*
%	*85.9*	*9.0*	*3.8*	*0.4*	*0.9*	*100.00*	

Table 3: summary of the struck flint from the ring-ditch (G11 and G12)

5.2.11 Despite the expected slight mixing in the upper fills, the overall assemblage is certainly consistent with a Middle / Late Neolithic to Early Bronze Age industry. The majority of the flakes were small with thin flake scars on the dorsal face. A mixed hammer mode was present, although it seems that the use of a hard hammer percussor was preferred. Platforms were mostly plain and unprepared, but a few were narrow and carefully abraded. A single core fragment was found from upper fill [1265], and only two modified pieces were recovered; an end scraper from ditch fill [1442] (G12) and a miscellaneous retouched piece from fill [1386] (G12). The end scraper made on a flake with a trimmed platform and thin flake scars on the dorsal surface is likely to belong to the Neolithic / Early Bronze Age.

The remaining assemblage

5.2.12 A total of 454 pieces came from Roman or undated features and deposits. This figure excludes G12 because it has already been described above. Almost half the pieces came from various layers (topsoil, subsoil, demolition deposits, sealing deposits and levelling deposits). This suggests that the majority of this material has likely been subject to some degree of mixing. Pieces of débitage dominate, and this group comprises 342 flakes, 69 bladelets, blades and blade-like flakes and 10 pieces of irregular waste. Although flakes are the dominant type, the proportion of blade elements is still important providing 16.38% of the débitage component. This suggests that some Mesolithic / Early Neolithic flintwork is present. For example, a nice 80mm long blade was retrieved from Late Roman levelling deposit [1652]. Nonetheless, based on technological grounds, the majority of the pieces are reminiscent of Middle Neolithic to Early Bronze Age flintwork.

5.2.13 The core category comprises two single platform blade cores, a single platform flake core, nine multiplatform flake cores, six fragmentary cores and a core on a flake. A large proportion of these cores and core fragments were used to remove thin flakes and platform preparation was occasionally recorded. They can be broadly placed within the Neolithic and Early Bronze Age periods.

5.2.14 Fourteen modified pieces were present including seven scrapers, two piercers, a serrated piece, two polished axes, a retouched flake and a miscellaneous retouched piece. The serrated piece from Late Roman levelling layer [1652] (GP60) is made on a flake and displays abraded serrations on the right side. It is likely to be Early Neolithic. The polished axe from the primary fill [1563] of Early/Mid Roman ditch terminus [1564] (G8) can be definitely assigned to a Neolithic date. This 'standard' Neolithic axe weighs 139g. It is finely polished on the entire surface. A flake has been removed from the butt end which displays traces of rust marks. The second polished axe is different. It came from Late Roman layer [1647] (G62) - a spread to the immediate north of possible shrine Structure 1. Thinner than the first axe, it weights 75g, and its shape appears to copy the shape of early copper axes. These types of axes appeared at the end of the Neolithic period. The scrapers consisted of four end scrapers, two side scrapers and a thumbnail scraper. It is difficult to date scrapers precisely, but thumbnail scrapers are often found in Early Bronze Age contexts. Some of the other scrapers are finely made, and they are likely to be Neolithic / Early Bronze Age. One of the two piercers, from G12 ring-ditch recut [14/007], was made on a flake which may have been selected because of its unusual appearance. It displayed a white fossil (possibly representing a cross-section of a sponge) on both surfaces. It is likely to belong to the Neolithic or Early Bronze Age.

5.2.15 A small quantity of unworked burnt flint (1549g) was recovered from 30 numbered contexts. The greater part came from features and deposits dated to the Roman period (Table 4). The majority of the fragments were small, and had only been lightly burnt to a mid-grey and pinkish colour.

Period	**Weight (g)**	**%**
Period 1	82	5.29%
Period 2	90	5.81%
Period 4	1010	65.20%
Undated	367	23.69%
Total	*1549*	*100.00%*

Table 4: summary of the burnt unworked flint

5.3 **Prehistoric Pottery** by Anna Doherty

5.3.1 A modest assemblage of prehistoric pottery was recovered during evaluation and excavation at the site, comprising 362 sherds, weighing 2.75 kg, from an estimated 220 vessels. This assemblage belongs predominantly to the Early Neolithic Mildenhall/Plain Bowl tradition. There are also a few sherds of probable Late Neolithic/Early Bronze Age Beaker and a slightly larger component of *c.* Early Iron Age pottery which appears to be mostly residual in Roman deposits. An approximate quantification of the assemblage by period is provided in Table 5; although there is some overlap in fabric types in all three periods and some of the undiagnostic bodysherds were therefore slightly uncertainly dated.

Methodology

5.3.2 The pottery was examined using a x20 binocular microscope. Fabrics were defined according to a site-specific type-series formulated using the guidelines of the Prehistoric Ceramics Research Group (PCRG 2010). It was quantified by sherd count, weight and estimated vessel number (ENV). The quantification cited in this report includes all hand-collected pottery; material recovered from the residues of environmental samples generally comprised very fragmentary sherds. It was only quantified in detail if it occurred in an undated context, if it was a diagnostic feature sherd or added a significant quantity of pottery to that collected by hand from the same context.

Period	**Ceramic tradition**	**Sherds**	**Weight (g)**	**ENV**
Early Neolithic	Mildenhall/Plain Bowl	255	1424	168
Late Neolithic/Early Bronze Age	Beaker	3	23	3
c. Early Iron Age	-	104	1304	49
Total		*362*	*2751*	*220*

Table 5: Quantification of pottery by date/ceramic tradition, regardless of stratigraphic period

Site-specific fabric definitions

FLIN1 Moderate to common flint, mostly of 0.5-2.5mm, with very occasional examples up to 4mm. The flint is sometimes very noticeably unevenly distributed on surfaces. The clay matrix appears fairly quartz free at x20 magnification but rare coarse grains can occur

FLIN2 Moderate to common flint, mostly of 0.5-5mm. The flint is sometimes very noticeably unevenly distributed on surfaces. The clay matrix appears fairly quartz free at x20 magnification but rare coarse grains can occur

FLQU1 Sparse, moderately-sorted flint of 0.5-2mm in a silty matrix with moderate individually-discernible quartz grains of 0.2-0.5mm

FLQU2 Sparse, moderately-sorted flint of 0.5-3mm in a silty matrix with moderate individually-discernible quartz grains of 0.2-0.5mm

FLQU3 Sparse, well-sorted flint of 0.5-1mm in a silty matrix with moderate individually-discernible quartz grains of 0.2-0.5mm

FLQU4 Moderate, ill-sorted flint of 0.5-4mm in a matrix with common quartz of 0.2-0.5 (or rarely up to 0.8mm). Often with a low-fired, laminar texture

FLQU5 Sparse, moderately-sorted flint of 0.5-2.5mm in a matrix with common quartz of 0.2-0.5 (or rarely up to 0.8mm). Often with a low-fired, laminar texture.

FLQU6 Moderate to common, ill-sorted flint of 0.5-5mm in a matrix with common quartz of 0.2-0.5 (or rarely up to 0.8mm). Often with a low-fired, laminar texture

FLQU7 Moderate to common, moderately-sorted flint of 0.5-2.5mm in a matrix with common quartz of 0.2-0.5 (or rarely up to 0.8mm). Often with a low-fired, laminar texture

FLQU8 Sparse, ill-sorted flint of 0.5-7mm in a matrix with common quartz of 0.2-0.5 (or rarely up to 0.8mm). Often with a low-fired, laminar texture. Flint is often more visible on one surface than on the other.

QUAR1 A silty matrix with moderate individually-discernible quartz grains of 0.2-0.5mm; very rare flint of <1mm may occur.

QUFL1 A silty matrix with moderate individually-discernible quartz grains of 0.2-0.5mm and very rare flint of 0.5-2.5mm

QUOR1 A silty matrix with moderate individually-discernible quartz grains of 0.2-0.5mm and sparse fine linear voids of 0.5-2mm in length, derived from burnt out organic material.

Early Neolithic

5.3.3 Most of the Early Neolithic pottery was considered well-stratified in pits belonging to Period 1; however, most of these features contained fewer than 10 sherds. One large but fairly fragmented group of 158 sherds, weighing 723g, was noted in pit [1140], whilst a few others, including possible geological feature [1020] and pits [1234] and [44/009], contained small groups including one or two feature sherds.

5.3.4 Early Neolithic fabrics are quantified in Table 6. All of the Early Neolithic pottery is flint-tempered but there is quite a wide range of variation in the size, frequency and sorting of inclusions. A small number of Early Neolithic sherds have non-sandy matrixes (fabrics FLIN1 and FLIN2) but the majority contain coarse quartz. About half of the assemblage is made up by moderately coarse fabrics with flint inclusions of less than c.3mm. Many of these (e.g. FLQU1, FLQU2 and FLQU3) contain fairly sparse frequencies of flint. Of these, FLQU1 and FLQU2 could be relatively well-fired, sometimes making them difficult to distinguish from Iron Age wares. Other similar ware types had more common quantities of moderately-sorted flint (e.g. FLIN1 and FLQU7) and one fabric type (QUFL1) contained only very rare flint.

Fabric	**Sherds**	**Weight (g)**	**ENV**
FLIN1	3	18	3
FLIN2	2	4	2
FLQU1	1	6	1
FLQU2	2	2	2
FLQU4	62	516	38
FLQU5	89	224	47
FLQU6	22	167	14
FLQU7	35	109	35
FLQU8	26	339	13
QUFL1	13	39	13
Total	*255*	*1424*	*168*

Table 6: Quantification of Early Neolithic fabrics

5.3.5 The other half of the flint-tempered fabrics are coarse or very coarse with ill-sorted inclusions of up to 5mm (FLIN2, FLQU4 and FLQU6) or even up to 7mm

in the case of the coarsest fabric type, FLQU8. These fabrics varied in the frequency of flint but most tended to contain moderate or common quantities.

5.3.6 Only a small number of diagnostic feature sherds were recorded and many of these are partial rim profiles which cannot be identified to form type with much certainty. Most of the rimsherds have a necked profile with a simple everted/out-turning rim and one or two of these have a more pronounced and strongly out-turning or rolled rim. This form type is very typical of the Mildenhall-style East Anglian Plain Bowl tradition. Several smaller rims appear to come from forms with plain profiles and simple or slightly beaded rims. Two examples were noted of low cordons on gentle body carinations, one of these possible from the same vessel as one of the necked rimsherds. No decoration was noted in the assemblage.

?Beaker

5.3.7 Three probable sherds of Beaker pottery were recorded. Only one of these was considered well-stratified in a Period 2 (Early Bronze Age) feature, pit [1181]. All three sherds are in sandy flint-tempered wares which are very similar to those identified in Early Neolithic groups (FLQU5 and FLQU7). The sherds could be identified as Beaker because of their decorative techniques, including a sherd with complex comb-stabbed lozenges (from [1181]), another with horizontal rows of comb-stabbing/barbed-wire decoration and a third with possible “crow’s feet” paired fingernail impressions.

Iron Age

5.3.8 Very little Iron Age pottery was noted in the main excavation area and all of it was considered residual. It is possibly worth noting a small concertation from various interventions through the ring-ditch recut, G12. Although all of this material was directly stratified with Roman pottery, in one case, in ring-ditch recut [1700], very large sherds comprising about quarter of an Iron Age jar were deposited. The majority of the Iron Age pottery from the site came from a group of pits in evaluation Trench 64, to the north of the main excavation area. These likely represent *in situ* material.

5.3.9 As in the Early Neolithic period, a lot of the fabrics are fairly sparsely flint-tempered wares with quartz-rich matrixes (Table 7: FLQU1, FLQU2, FLQU3, FLQU5 and FLQU6). Some of these are difficult to distinguish definitively from some Early Neolithic fabrics but, generally speaking, they are better fired and, where they appear together in groups, they tend to lack the coarser or very ill-sorted fabrics which are a characteristic of the earlier period. A few examples of quartz-rich fabric types, lacking flint-temper were also noted (QUAR1 and QUOR1).

Fabric	Sherds	Weight (g)	ENV
FLQU1	25	298	15
FLQU2	25	507	12
FLQU3	37	322	9
FLQU5	1	4	1
FLQU6	2	135	1

QUAR1	13	37	10
QUOR1	1	1	1
Total	*104*	*1304*	*49*

Table 7: Quantification of Iron Age pottery fabrics

5.3.10 A small number of diagnostic feature sherds from this period are present. As already noted, a large portion of a necked jar with a rounded shoulder was recovered from ring-ditch re-cut [1700]; a fine ware bowl with a long flaring/everted rim was recorded in pit [64/003]; and a jar with a bipartite profile and flattened/expanded rim with very light finger-tipping was noted in pit [64/009]. A single example of finger-tipped decoration on a shoulder sherd was also found during the Phase A evaluation of the ring-ditch recut G12 [14/007].

5.3.11 Because the Iron Age assemblage is small and largely poorly stratified it is difficult to date with precision; however the dominance of flint-tempered wares and the limited range of forms probably suggest a broadly Early Iron Age date; it is possible however, that some of this material could belong to the beginning of the Middle Iron Age.

5.4 Roman Pottery by Isa Benedetti-Whitton with Anna Doherty

5.4.1 A fairly large assemblage of Roman pottery, comprising 2443 sherds weighing 31kg (ENV: 1994), was collected during the evaluation and subsequent excavation at Red Lodge. In terms of fabrics and forms recovered, the assemblage is of similar character to other Suffolk groups, being composed mainly of unsourced local coarsewares.

5.4.2 As a site that appears to be of religious importance, there is a distinct lack of vessels with ritual functions or obviously deposited as part of votive offerings. However, there is a large quantity of bowls and dishes in comparison with the usually more ubiquitous jar forms, which does make the pottery assemblage unusual and worthy of further investigation. Due to the dominance of locally produced coarse wares there is not a large quantity of material offering precise dates. However, regionally traded fabrics and the few continental imports do provide some parameters and these in conjunction with form types suggest a period of Roman land use activity from the 2nd to 4th centuries AD.

Methodology

5.4.3 The pottery was examined using a x20 binocular microscope. It was quantified by sherd count, weight, estimated vessel number (ENV) and estimated vessel equivalent (EVE) on pro forma records and in an Excel spreadsheet. Surface decoration and/or condition was noted where appropriate.

5.4.4 The main fabric series referred to was a the unpublished Pakenham fabric series commonly used for other sites in Suffolk (e.g. Blagg *et al* 2004; Bales 2004) which is largely based on the Chelmsford/Essex typology (Going 1987). Where there was no relevant fabric code in the Suffolk typologies the appropriate code from the National Roman Fabric Reference Collection (NRFRC) fabrics (Tomber and Dore 1998) was used. NRFRC collection codes are marked with an asterisk in Table 8, below.

5.4.5 Form types were identified primarily using Going's Chelmsford type series but, where appropriate, site- or fabric-specific codes were used; for example, vessels in Horningsea fabrics were identified using the draft version of the forthcoming typology for the industry (Evans *et al* forthcoming), and Nene Valley wares and Camulodunum type dishes were classified using the appropriate type series (Perrin 1999; Hawkes and Hull 1947).

The dating evidence

5.4.6 At this stage of reporting some Roman features have only been broadly assigned to Period 4. Within Period 4, two broadly dated stratigraphic phases have been identified; an earlier Roman (4.1) and a later Roman (4.2) phase. There was not a drastic difference between the assemblages assigned to the earlier and later periods, although Phase 4.2 features did produce a larger quantity of pottery in a greater range of fabrics, and approximately double both the sherd count and weight of Phase 4.1 material.

5.4.7 A very small quantity of material could be conclusively dated to the 1st century AD, including two grog-tempered sherds, a fragment of south Gaulish samian ware and two Gallo-Belgic influenced platter forms; however all of these were residual in later Roman pottery groups (predominantly found in contexts belonging to Phase 4.2). The majority of the Phase 4.1 assemblage is made up by coarse ware fabrics which are not very closely datable, but many contexts assigned to this phase clearly post-date *c.*AD120/150, based on the presence of central or east Gaulish samian ware and dish/bowl forms influenced by the black burnished ware tradition. This phase does, however, contain a handful of sherds dating to the late 1st-early 2nd century AD, usually stratified alongside slightly later material. These include a Dragendorff 18/31 bowl in Les Martres-de-Veyre samian, a C16 bowl in Verulamium region white ware, and a few cordoned, necked (G19) jars broadly influenced by Gallo-Belgic traditions.

5.4.8 Phase 4.2 deposits also produced some definitive later Roman material; for example a range of regionally-traded fabrics, mostly Nene Valley wares but also late Roman shelly wares, Hadham and Oxfordshire wares. Despite the recovery of a number of later 4th century coins, sometimes in direct association with ceramic groups, there was fairly limited evidence that the pottery belonged to this very late Roman period. There are a few isolated examples of probable later 4th century fabrics/forms, including Oxfordshire red-slipped and Swanpool mortaria, but most contexts in Phase 4.2 have been assigned a later 3rd/earlier 4th century spot-date based on the relatively low levels of late Roman regionally-traded wares and the very frequent occurrence of characteristically 3rd century B2/B4 black-burnished style dishes which slightly outnumber the more typical late 3rd-4th century B6 form. Given the lack of clear domestic features within the excavation area, it seems likely that the pottery had been brought to the site from settlement areas nearby. The slight disparity in the dating of the ceramic assemblage and some of the coins may suggest that the latest features were filled with domestic material from older middens.

Fabrics

5.4.9 Although a large number of fabrics were identified – listed below in Table 8 – most of these are reduced coarse wares from unknown sources. Reduced wares account for 80% of the total sherd count and 75% of the total assemblage

weight (ENV: 1644). The bulk of the material was in black and grey surfaced micaceous wares, although non-micaceous black surfaced wares and a fairly large quantity of Horningsea sherds were also present. Black surface wares are often associated with the earlier, 'Romanising' period of Roman occupation. In this instance, although there are one or two examples of early cordoned necked jars, most of the diagnostic forms associated with the black surfaced wares appear influenced by the black burnished ware tradition, which are 2nd to 4th century forms.

5.4.10 Within the reduced coarse wares too, were a small number of black burnished ware BB2 sherds. These can be dated from the early 2nd – mid 3rd century AD, and were recovered from both Phase 4.1 and 4.2 dated contexts. The reduced coarse wares also included fragments of Nene Valley grey ware (NVG), Hadham wares (HAB; HAR) and Horningsea sherds (HOG; HOGB). Significantly more Horningsea ware was found than the NVG or HAB/HAR, which is unhelpful as Horningsea has the broadest production date from the late 1st – 3rd centuries AD.

5.4.11 Coarse oxidised examples from the same regions were also present, and included Hadham red wares (HAX) and Nene Valley white and parchment wares (NVW; NVP), as well as small quantities of Colchester buff (COLB), Oxfordshire and Verulamium white wares (OXF WH; VRW). Some fragments were tentatively identified as Swanpool white-slipped ware (SWN WS) based on visual comparison with a reference example from a Lincolnshire site, although the current site is slightly outside the normal area of distribution radius of this fabric type. The oxidised fabrics are variable in terms of their dating; both VRW and COLB potentially dating as early as the 1st century, whilst the Oxfordshire and Hadham wares date to the 3rd or 4th centuries, and the SWN WS even later from the mid-4th/5th century. As with the reduced coarse wares, the number of regionally produced oxidised wares was fairly insignificant compared to the much larger quantity of unsourced material.

Fabric code	Fabric description	Sherd count	ENV	Weight (g)
Unoxidised coarse wares				
BB2	Black burnished ware 2	9	7	140
BSW	Black surfaced ware	155	125	1821
GMB	Grey micaceous wares (black-surfaced)	285	239	3321
GMG	Grey micaceous wares (grey-surfaced)	615	511	6945
GROG	Grog-tempered wares (Belgic)	2	2	18
GX	Micaceous sandy grey wares	387	349	3713
HAB	Hadham black surfaces wares	2	2	44
HAR	Hadham grey wares	3	2	74
HOG	Horningsea grey wares	271	233	4329
HOGB	Horningsea grey wares (black surfaced)	79	68	952
LSH	Late shell-tempered wares	41	35	316
NVG	Nene Valley grey ware	10	9	151
SH	Unspecified shell tempered	94	55	1019
ESH	Early shell-tempered wares	3	1	53

Fabric code	Fabric description	Sherd count	ENV	Weight (g)
STOR	Storage jar fabrics	10	6	387
Subtotal:		*1966*	*1644*	*23283*
Oxidised coarse wares				
BUF	Miscellaneous buff wares	70	42	726
COLB	Colchester buff wares	31	18	362
GMO	Grey micaceous wares buff-oxidised	46	40	573
HAX	Hadham red wares	48	34	512
OXF WH*	Oxfordshire white ware	2	2	216
NVP	Nene Valley parchment ware	13	1	102
NVW	Nene Valley white ware	7	5	179
RX	Miscellaneous red coarse ware	65	48	275
VRW	Verulamium region white ware	2	2	48
WX	Miscellaneous white wares	1	1	8
Subtotal:		*285*	*193*	*3001*
White-slipped wares				
SWN WS*	Swanpool White-slipped ware	3	3	70
UCC	Unspecified colour coated wares	9	9	117
WC	Miscellaneous white colour-coated wares	1	1	8
WSO	White-slipped oxidised wares	5	4	99
Subtotal:		*18*	*17*	*294*
Local fine wares				
GRF	Grey fine wares	28	18	191
RF	Miscellaneous red fine ware	2	1	2
Subtotal:		*30*	*19*	*193*
Romano-British colour coated wares				
COLC	Colchester colour-coated wares	4	1	9
NVC	Nene Valley colour-coated wares	53	49	675
OXRC	Oxfordshire red colour coated	4	4	78
GC	Miscellaneous colour-coated grey wares	4	2	26
Subtotal:		*65*	*56*	*788*
Samian wares				
SACG	Central Gaulish samian (Lezoux)	47	40	877
SAEG	East Gaulish samian	11	8	171
SASG	South Gaulish samian (La Graufesenque)	1	1	23
SAMV	Central Gaulish samian (Les Martres)	2	1	23
Subtotal:		*61*	*50*	*1094*
Other imported colour-coated wares				
MOSL	Trier black-slipped wares 'Moselkeramik'	2	2	3
NAF RS*	North African Red-slipped ware	1	1	8
Subtotal:		*3*	*3*	*11*
Amphorae				

Fabric code	Fabric description	Sherd count	ENV	Weight (g)
BAT AM*	Baetician amphora	15	12	2311
Subtotal:		*15*	*12*	*2311*
Total:		*2443*	*1994*	*30,975g*
*National Roman Fabric Reference Collection (NRFRC) fabric code				

Table 8: Pottery fabric descriptions and quantification

5.4.12 Fine wares, including samian, made up only a very small proportion of the assemblage, collectively only accounting for 89 sherds weighing 1285g (ENV 68). The samian is generally of mid-2nd/3rd century date, although as samian was a high-status product that may have been retained over several generations it is not a particularly precise dating tool. Both the fine grey and red wares were of unsourced, probably local, manufacture and therefore could be of any Roman date, although a few earlier Roman forms including 1st or 2nd century Gallo-Belgic platters and a poppyhead beaker made from these unsourced fabrics were also present.

5.4.13 There were several different types of colour-coated wares, most of which were identifiable regional types: Colchester, Nene valley and Oxfordshire colour-coated wares (COLC; NVC; OXRC). A few fragments of imported colour coated ware were also present (MOSL; NAF RS). Collectively these wares support a mid-late Roman date for the assemblage, with most of the colour coated wares dating to the 3rd century or later.

Forms

5.4.14 Approximately 330 vessels across the whole assemblage could be identified to a particular form type, the comparative quantities of which are shown below in Table 9. At most rural sites, jars make up the majority of form types identified. At Red Lodge, however, although there are a large quantity of jar forms, there is an even greater quantity of dish forms, which if taken in conjunction with the bowl forms make up nearly 47% of the identifiable forms, whilst jars make up <40%.

5.4.15 There were a range of dishes present, mainly in fabric GMG, although dishes in HOG and unspecified grey wares were also common. The most represented types included black-burnished related forms like Going B1, B3, B4 and B6. B1 dishes were in production from AD 80-400, but B3 and B4 forms only enter the record from the earlier/mid 2nd century, falling out of use c.AD 260, and B6 forms start even later c.AD 250-400. Bowl types included Going C1.2, C16 4.1 and C18, the former two of which date c.AD 70/100 – 130, whilst C18 dates much later c.AD 200-400. Both dish and bowl forms suggest similar date ranges, although the latter were far less numerous with only one sherd of each identifiable bowl form found.

5.4.16 Although not the dominant form, jar sherds still make up a large percentage of identifiable forms, and exhibited even greater diversity in form than the dishes/bowls, with at least fourteen of Going's form types identified. The most common amongst these, represented by ten or more diagnostic sherds, were G20, G23 and G24, with G24 sherds being the most numerous. G20 jars are

associated with the early Roman period, c.AD 40-130, but both G23 and G24 remain popular for much of the Roman period from AD 100-400

5.4.17 As with the non-samian dishes, the bulk of the jars were in GMG, but Horningsea-specific forms were also in evidence. Amongst these, Horningsea J10 jars were most common (Evans forthcoming), although J1, J3 and J9 examples were also identified. Horningsea forms lack a published typology, but the draft version places the majority of J10 forms in the Hadrianic-Antonine period, and would therefore suggest that the Horningsea ware, like much of the rest of the material, is of c. 2nd century date (ibid).

5.4.18 Other forms, such as beakers, mortaria and amphorae, were present but not in great quantities. Beakers sherds were predominantly in grey wares GMG, GRF and GX, although there were a small quantity of NVC sherds also. With the exception of globular beaker sherds (H1) which typically date AD 40-100, most of the identifiable beaker types were of 3rd century forms or later, and not represented by more than one identifiable sherd per form which somewhat limits the dating value of the beaker sherds.

5.4.19 The amphorae were all of Baetian origin; the mortarium more varied with sherds in Nene Valley white ware (NVW), Swanpool white slipped ware (SWN WS), both Oxfordshire red-coated and white ware (OXRC; OXW) as well as an unsourced white slipped ware (WSO). Two sherds could be associated with particular forms, the OXW sherd coming from a D3.4 mortarium and the WSO sherd coming from a D14. Both of these are Late Roman types, with the D14 dating no earlier than c.AD 260, and the D3.4 even later, c.AD 360-420.

Form type	Sherd count	ENV	Weight (g)
Amphora	15	12	2311
Beaker	27	12	286
Cup	8	6	125
Dish	204	166	4455
Flagon	15	7	205
Jar	167	105	2740
Lid	10	9	104
Mortarium	13	11	531
Platter	5	2	42
Total	*464*	*330*	*10799*

Table 9: Pottery forms by sherd count, estimated vessel number and weight

Samian ware forms and stamps

5.4.20 Many of the identifiable dish and bowl forms were samian ware, which was not found in large quantities on site, representing only 2.5% of sherd count and 3.5% of the total weight, but the bulk of the samian sherds could be identified as dishes in the Dragendorff 18/31 range. Eight fragments of the same Dragendorff 30 bowl were also found, and small quantities of cup forms Dragendorff 33.

5.4.21 Partially complete stamps were found on three fragments, one of which was abraded to the point of illegibility and there was a single example of a graffito (see Table 10). Lettering survived to a greater extent on the other three fragments, and it may be possible to associate these sherds with particular workshops during the analysis stage.

Context	Fabric	Form	Stamp/graffito
1001	SACG	DR 18/31	Partial but abraded stamp
1302	?NAF RS	?dish	Graffito reads [VAR].
1647	SACG	? DR 33	Half stamp: ?ICTEM […]
1647	SACG	DR18/31	Half stamp: ?IANUAR […]

Table 10: Details of stamps and graffiti

Patterns of deposition

5.4.22 The pottery was not concentrated in any one particular region of the site, and although a number of contexts produced a relatively high sherd count (50+), very few contexts produced groups weighing more than 400g. Very few groups contained multiple fragments of the same vessels, and for the entire assemblage the EVE was fairly low, with only a single complete rim recovered from feature [1650].

5.4.23 The features that produced the greatest quantities of pottery in terms of weight were pit [1326] (69 sherds weighing 732g), destruction debris spread [1470] (203 sherds weighing 1620g), and ring-ditch recut [1700] (55 sherds weighing 1023g). Apart from the amount of pottery found in these features, there was nothing particularly notable about the material recovered.

5.5 Post-Roman Pottery by Paul Blinkhorn

5.5.1 The post-Roman pottery assemblage comprised nine sherds with a total weight of 182g. It is all late medieval or early post-medieval. The following fabric types were noted:

GRE: Glazed Red Earthenware, 16th – 19th century (Wade-Martins 1983).
LMT: Late Medieval Ware, 1400 – 1550 (Anderson et. al 1996).
MB: Midland Blackwares, 1580-1700 (Brears 1969).

5.5.2 The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 11. All of the pottery was found as intrusive elements in contexts phased to the Roman period (Period 4), mostly from the surfaces of the excavated ring-ditch segments. The range of fabric types is typical of site in the region.

5.5.3 The sherds of GRE are all from large bowls, a common product of the tradition. Two rimsherds were noted, one in context [1212], and the other in [1330]. They appear to be from the same vessel, but do not join. The fragment of MB and one of the fragments of LMT are from drinking vessels, which is again typical of the traditions in question.

	LMT		GRE		MB		Date
Context	No	Wt	No	Wt	No	Wt	
1212			1	40			16thC
1291					1	3	L16thC
1330			4	65			16thC
1442	2	65	1	9			16thC
Total	*2*	*65*	*6*	*114*	*1*	*3*	

Table 11: Pottery occurrence by number and weight (in g) of sherds per context by fabric type

5.6 Ceramic Building Material by Isa Benedetti-Whitton

5.6.1 A fairly large assemblage of 1483 pieces of ceramic building material (CBM) weighing 126,202g (126kg) was collected during the evaluation and excavation at Red Lodge. The vast bulk of this material was recovered during the excavation, although the same fabrics and forms were present across both assemblages. Due to the quantity and better preservation of the excavated material, this will form the foci of the following assessment. Comparative quantities and weights of material collected from both stages of work are shown in Table 12.

CBM type	Count	% of total	Weight (g)	% of total
Material from evaluation				
Imbrex	12	0.8	962	0.8
Tegula	6	0.4	1271	1.0
Spall	15	1.0	99	0.1
Sub-total	33	2.3%	2332g	1.9%
Material from excavation				
Tegula	588	40.6	78760	63.6
Imbrex	518	35.7	33137	26.8
Mortar	44	3.0	6399	5.2
?tegula	16	1.1	759	0.6
?Imbrex	11	0.8	510	0.4
?Roman brick	7	0.5	738	0.6
Box flue	6	0.4	921	0.7
?offcuts	3	0.2	151	0.1
?mortar	1	0.1	5	0.0
Spall	256	17.7	2490	2.0
Total	*1450*	*100.0%*	*123,870g*	*100.0%*

Table 12: Quantification of CBM

Methodology

5.6.2 All the material was quantified by form, weight and fabric and recorded on standard recording forms. This information was then entered into a digital Excel spreadsheet. Fabric descriptions were developed with the aid of a x20 binocular microscope and usimg the following conventions: frequency of inclusions as sparse, moderate, common or abundant; the size of inclusions as fine (up to

0.25mm), medium (up to 0.25 and 0.5mm), coarse (0.5-1.0mm) and very coarse (larger than 1.0mm). Fabric samples and items of interest have been retained.

Summary of fabrics and forms

5.6.3 The Red Lodge assemblage was catalogued using a Roman fabric series previously established and used for two large Roman CBM assemblages from Essex: Dovehouse Field, Cressing Temple, and Maltings Lane, Witham (Benedetti-Whitton in prep a & b). This approach was limited by an absence of fabric samples available for direct comparison, but the written descriptions are detailed and were developed by the same author as the current assessment, and as the Red Lodge assemblage was made up of only two distinct fabric types the lack of physical fabric samples was not a significant issue.

5.6.4 The CBM from Red Lodge was generally very well preserved and included a number of nearly complete tegulae, although in some instances these had fractured since deposition. Although some tile pieces were vitrified or reduced or in a condition that did not enable fabric identification, across the approximately 112,598g of CBM that could be classified by fabric there was an almost 50/50 split between the two fabric groups: 56,223g of R1-fabrics, and 56,375g of R4B. R1 as a fabric group includes variations of the dense, orange fabric that is particularly characteristic of Roman CBM; R4B is a very coarse quartz-rich fabric, which also frequently had silty white or calcareous inclusions (Table 13).

5.6.5 Without fabric samples it was difficult to identify exactly which of the R1 types was prevalent across the Red Lodge assemblage, but examples of fabrics similar to all three (R1A, R1B, and R1C) were noted. The other main fabric type was the very distinctive R4B, which bears a striking resemblance to Cambridgeshire Horningsea pottery fabrics. Whilst it is not common for Roman pottery kilns to also manufacture CBM, there are known fabric types from which both pottery and CBM are made, including the Horningsea industries (Evans and Macauley, forthcoming), 'pink grog tempered wares' from Towcester, Northamptonshire (Mills 2015, 582), and shell-tempered wares from Harrold, Bedforshire (Slowikowski and Dawson 1993; Unger 2009).

GROUP R1 – Dense orange fabric with slightly gritty and micaceous quality due to fine quartz/shell. Variable quantities of medium to very coarse mixed quartz (opaque, rose, grey) and oxides; occasionally calcareous material.
R1A - Red-orange and slightly micaceous fabric with fine quartz and shell giving a slightly gritty texture. Sparse-to-moderate mixed opaque, rose and grey quartz up to 1mm. Sparse coarse and very coarse iron oxides. (Cressing R1; Maltings T1; Crescent Rd R1)
R1B - R1A but with moderate-common unsorted quartz (<1mm) and sparse very coarse oxides up to 2mm. Occasionally with very coarse pebble pieces up to 15mm. (Cressing R1A; Maltings T1A; Crescent Rd R2)
R1C – R1A with much more common-abundant inclusions: moderate medium-very coarse calcareous material and speckle; moderate medium quartz and fine quartz; sparse coarse iron-rich or siltstone deposits. (Crescent Rd R5)
GROUP R4 – Coarse looking fabrics with common-abundant sugary, sub-rounded and angular quartz.
R4A - Abundant medium and coarse 'sugary' quartz and sparse very coarse quartz and oxides. (Cressing R5)

R4B - Coarser version of R4A with common very coarse quartz up to 3mm; very coarse burnt flint and sparse pale/white silty deposits. Horningsea industry fabric? (Cressing R5A)

Table 13: Roman fabric descriptions for Essex and surrounding regions: Groups R1 and R4

5.6.6 Sharing a common source with pottery kilns theoretically provides tighter dating parameters for CBM made from the same raw materials, although with the clear limitation that there is no way of assessing whether the CBM found at a particular site has been recycled or not. The reuse of CBM became more common during the latter decades of Roman Britain as many ceramic industries became obsolete, for example at Cirencester many of the roof tiles are believed to have been re-used (McWhirr and Viner 1978, 371), whilst in London the same downturn is believed to have been responsible for the growth and popularity of new industries, for instance the Harrold kilns (Unger 2009).

5.6.7 A thorough consideration of the Horningsea industries and their relationship to tile production is yet to be published (Evans and Macauley, forthcoming), but there is general consensus that Horningsea wares, and therefore 'Horningsea'-type CBM, were most widely distributed from the early 2nd century until the 4th century (Newton and Peachy 2012; Bales 2004, 37; Gibson and Lucas 2002, 115-16). As a product, CBM is known to have been transported long distances, despite its weight and bulk (e.g. Finlay *et al* 2012), but it would stand to reason that where available the most local suppliers were used and if the CBM from Red Lodge can be more firmly linked with a Horningsea kiln it would provide evidence of this.

5.6.8 Apart from this apparent link with a pottery industry, there are two further interesting aspects to the CBM assemblage from Red Lodge. The first of these is apparent on several examples of tegulae made from the Horningsea (R4B) fabric, including the intact and fragmented tegulae from G63 gully [1613] associated with Building 1. This and further incomplete examples from [1549] and [1061] all have the same signature mark present on the lower edge of the tegula - two sharply angled finger sweeps in an upside-down V-shape. This mark was only present on tile made in the Horningsea-type fabric, suggesting that it is a mark – possibly relating to a tallying system – associated with the tile kiln using this particular fabric type.

5.6.9 The other noteworthy feature of this assemblage is the prevalence of roofing tile, both tegula and imbrex, but an apparent paucity of Roman bricks. Roman bricks are essentially thick tiles, generally measuring 35-50mm whereas tegula are more in the region of 20-30mm, and are often only distinguishable from the flat parts of tegulae because of their comparative thickness. However, although a few pieces of CBM from Red Lodge have tentatively been identified as fragments of Roman brick, the vast bulk of the CBM recovered from Red Lodge were either imbrex or tegula pieces in one of only two fabric types, those of the dense, orange, R1 type, and those in the coarse R4B/Horningsea fabric.

5.6.10 The tile made from the two different fabric types also demonstrated clear differences in form, with those made from the Horningsea-type fabric being noticeably thicker and less fired than R1 tiles. It was also common for the Horiningsea CBM to have a coarse moulding sand primarily made up of sub-rounded pieces of chalk or some other calcareous material, although there was

a distinct group within the R4B tiles that did not have this type of moulding material, instead showing only a layer of coarse and mostly translucent moulding sand. This same group was thinner and generally slightly reduced therefore paler in colour. Examples of this group were limited to CBM collected from Building 1 destruction debris layers [1577], [1659] and [1679].

5.6.11 A large number of tegula in both fabrics had complete flange profiles, and occasionally too both upper and lower cutaways in evidence. Where present, flanges were classified according to the typology developed for Elms Farm (Major and Tyrell 2015, Figure 719), but in many instances there was not a single profile type that exactly matched, and so several fall between two flange types, particularly those in R1 fabrics. Amongst the Horningsea tegulae, however, there was a definite trend of [very similar] flange types 4 and 6, with twenty-one type 4's identified and fifteen flange 6's.

5.6.12 A further four flanges were recorded as being somewhere between 4 and 6, which are already very similar, as were those recorded as flange 9. Based on the variability apparent along the flange of a complete tegula, it is ultimately possible that the slightly variations of flange type simply represent a single flange broken in different places. As it remains unclear what purpose different flange types actually served, it is possible that creating a sharp and distinct flange was not a priority for tile manufacturers.

CBM by phase and land use

5.6.13 The vast bulk of the CBM from Red Lodge came from securely Roman-dated features. Some fragments of tegula and imbrex were recovered from lower fills of the Early Bronze Age ring-ditch, but these are clearly intrusive pieces. A small quantity of CBM (ten fragments) was also recovered from features that could only be dated as generally Roman (Phase 4.0), but far greater amounts could be attributed to either the early Roman (Phase 4.1) or later Roman (Phase 4.2) periods.

Phase 4.1

5.6.14 Earlier Roman features did not produce a great quantity of CBM, with 102 fragments weighing a total of 7344g. These were recovered mainly from three pits: [1082] and [1098] (G15) in the southwest of the excavation area; and [1244], a pit at the west end of east-west running gully [1454]. Both fabric types were represented even in these earliest deposits, suggesting both tile types were used coevally, from approximately the start of the second century, using the Horningsea ware as an indication of dating.

5.6.15 The only other feature that produced any significant amount of CBM was possible well [1063] (G14). This well was not excavated in full, but a number of tegula and imbrex fragments were recovered from the upper fill [1060] and also lowest-exposed fill [1111], which was not completely excavated. The tegula fragments from [1111] were much more intact than those found in the uppermost fill, although not to the extent that they appear to be part of structured deposition; though wells are often a preferred location for such ritual deposits (Cool and Richardson 2013, 192).

Phase 4.2

5.6.16 A far greater quantity of CBM was found in later Roman features: 883 pieces weighing 68,608g. Nearly half of this material – 31,749g – was collected from demolition spread G62 ([1406, 1470, 1647, 1648, 1659, 1660, 1679, 1680, 1702, 1703]) to the north of Building 1, and it does seem possible that at least some amount of this CBM would have originally made up the roof of this building. Whilst wattle and daub structures with thatched roofs were more common in rural locations, and often leave only ephemeral traces of their existence, the significant quantity of painted wall plaster found in close proximity to the CBM would suggest they came from the same status building, which if affluent enough to afford rich wall paintings could also afford a tiled roof.

5.6.17 A fairly large amount of imbrex and tegula fragments weighing a total of 12,904g was also collected from fills within the recut of the ring-ditch (G12). These fragments were generally in good condition, which would suggest the tile in the ring-ditch may represent the primary deposition of further roof demolition debris from the destruction of Building 1.

5.6.18 The only phased CBM that appears to have been found *in situ* came from a CBM-lined 'flue' [1547] (G43) to the north of the ring-ditch. There is no evidence of this flue originating from a structure, and it is possible that this flue or drainage channel was a later addition to site using recycled roof tiles. The tegulae recovered from this feature were generally in reasonably good condition, including some co-joining fragments and a piece of Horningsea-type tegula with the upside-down 'V' signature mark. The tile collected from the flue were all tegula fragments and predominantly made from the Horningsea type fabric, with the exception of some very fragmentary and chipped pieces of R1. Two of the Horningsea tegula displayed nail holes.

5.6.19 The isolation of this flue or channel feature make it difficult to interpret. Similar CBM lined channels have been found elsewehere, for instance cutting through the walls of Snodland Roman Villa, and have tentatively been identified as either a flue leading from an external furnace or a drainage channel, although there is insufficient evidence to firmly support either function (Dawkes 2015, 15). Some of the tegula pieces from [1547] appeared slightly burnt, although whether this was as a consequence of proximity to a furnace or as a result of initial misfiring cannot be known. Only a few miscellaneous other finds were recovered from the flue fill, which are not further indicative of use.

5.6.20 Two complete tegula [1613] were recovered from within [1579] (G63), one fully intact and another broken into four co-joining parts. Both were Horningsea fabric tegulae, with similar flange profiles (flange 6) – although both showed the flange variation that can exist even across the length of the flanges on a single tile – and both had the upside-down V-shaped signature mark that can be associated with tegulae made from the Horningsea fabric. These tegulae were found face down and attached together from above by a thick layer of lime mortar.

5.7 **Painted Wall Plaster** by Isa Benedetti-Whitton

5.7.1 An unusually large and well-preserved assemblage of Roman painted and plain wall plaster was collected from thirteen contexts at Red Lodge, comprising approximately 1468 fragments weighing 48.6kg. A further *c.*6kg of loose backing mortar (*'arracio'*) was also catalogued. Much of the painted wall plaster came from deposits and destruction debris that have been dated to the early Roman/later Roman periods (Phases 4.1/4.2).

5.7.2 The largest quantity of wall plaster (>30kg) was recovered from [1578], a large deposit of collapsed or demolished wall plaster infilling structural gully/slot [1579] (G63). Significant quantities of between 4-6kg were also collected from slot [1369], also part of the structural gully/slot, and from further destruction debris deposits [1523] and [1565] (G25). Enough paint survived for the wall plaster to be classified according to proposed decorative motifs, even where fragments did not directly co-join with one another. Table 14 shows the respective quantities and weights of the various potential and definitive schematic elements present on the wall plaster collected.

Methodology

5.7.3 All the material was quantified by proposed type of painting, colour, weight and mortar backing type and recorded on standard recording forms. This information was then entered into a Excel spreadsheet. Schematic identifications were based on the current consensus regarding wall division in Roman Britain as described by Potter and Johns (1992, 113), as well as more basic characteristics such as whether the plaster fragment displayed a solid block of colour, the edge of a coloured panel or border, or some other element of decorative embellishment. The latter of these characteristics – if well-preserved – enabled the painted plaster to be further sub-categorised as being a fragment of dado, upper frieze, or the main decorative area that would exist between the dado and – if present – upper frieze.

Form/decoration type	Count	% of total	Weight (g)	% of total
Plain white plaster	569	38.8	10426	21.5
Border/edge of coloured area	240	16.3	8764	18.1
Single colour block	237	16.1	7802	16.1
Decorative element	183	12.5	4030	8.3
?Upper frieze	119	8.1	12778	26.3
Unknown	55	3.7	2725	5.6
?Dado	39	2.7	1514	3.1
Decorative panel	26	1.8	513	1.1
Total:	*1468*	*100%*	*48,552g*	*100%*

Table 14: List of decorative elements indicated by wall plaster fragments

5.7.4 The value of quantification by fragment count is of limited value in regards to painted plaster and the mortar backing onto which it is applied. Although it can provide some indication of how well an assemblage has survived (i.e. the greater the weight per fragment the better the preservation), by its nature painted wall plaster is a very fragile artefact type, and even if all due care is taken prior to conservation it will almost certainly be subject to further breakage,

thus distorting any effort to precisely quantify an assemblage by count. Much of the backing mortar that was collected alongside the plastered fragments was highly fragmented, and for this reason was not subject to precise quantification, but calculated on an average weight per count based on a representative sample of 100-120 pieces.

The painted wall plaster: an overview

5.7.5 The painted wall plaster will be referred to in the following report as wall painting or fresco, the latter term being one widely used in current literature even if the wall paintings referred to may not technically be frescos. Since the discovery of these paintings in antiquity it has been assumed that the majority of wall paintings were composed as 'fresco', whereby paint is applied to damp plaster, creating a bond between plaster and paint. This method was described by Vitruvius in *de Architectura* (Book VII, chapter 3) as creating a vibrant and durable finish. More recently a number of Greek and Italian 'frescos' have been sampled and analysed for organic binders that are used in 'tempera' painting (Cuni 2016). Several have come back positive for various binders including egg white and wax, which would suggest that those paintings previous described as fresco are not, in fact, technically fresco, but as this remains the most commonly used term and there is no evidence as yet to suggest these are not true frescos the term will continue to be used.

5.7.6 Although the quantity and preservation of the wall plaster gathered from Red Lodge is excellent, ultimately its study as part of broader decorative fashion is limited, as is frequently the case, by the fragmented and partial nature of the plaster fragments. However, a cursory attempt to reconstruct certain decorative elements during the assessment stage was not fruitless, and at least nine groups of associated fragments were identified, each of which provide some allusion to the makeup of the wall (Table 15). It should be noted, however, that fresco was often subject to renovation, in which case a fresh layer of mortar and plaster would be applied to the existing decoration and painted over. There is evidence of this taking place at Red Lodge, and therefore it is possible that different fragments may have resulted from different periods of decoration rather than all comprising one coherent scheme.

5.7.7 Roman murals in both Britain and elsewhere are typically composed of framed areas, usually in rich and contrasting colours. The divided panels often incorporate a centrally placed panel within which is featured further decoration (e.g. Group F). Some more abstract painted swirls and possible concentric shapes are most likely to represent dado decoration (the lowest section of wall) whilst some of those fragments grouped together as Group D appear to illustrate a design of pediments and other architectural features of a type that tend to exist in the upper frieze portion of fresco, with the exception of the so-called 'second style' of Roman wall paintings where the entire extent of the wall is made up of distinctive *trompe d'oeil* architectural landscapes.

Group A	17 pieces	Co-joining fragments: corner of a pink and purple colour-strip border, adjacent to a thin pale purple vertical line.
Group B	57 pieces	Collection of plain plaster fragments with thin pale purple lines (straight and curving) and possible partial and abraded dot and flower decoration.
Group C	5 pieces	Single fragment when excavated; purple swirl on white background with adjacent to edge of purple area/border. Possible dado fragments.
Group D	159 pieces	Group of decorative and border fragments, all in same colour scheme of burgundy, pink and purple against white. Includes fragments with painted pediments, and some areas of cross-hatching. Possible upper frieze.
Group E	17 pieces	Fragments showing an area of white plaster decorated with a loose purple spiral.
Group F	32 pieces	A group of associated fragments, some of which fit together, to form the edge of an ochre panel border, edged with a thin purple line, with a small embellishment on the corner.
Group G	3 pieces	Co-joining fragments. Peach coloured vertical band and adjacent thin pale purple line similar to group B fragments.
Group H	18 pieces	White plaster decorated with 2-tone green arcs, lines and dots against white. Some fragments show similar patterns to Group B fragments.
Group I	4 pieces	Foliage and dot decoration in red on white background.

Table 15: List of associated groups of plaster fragments that share common decoration

5.7.8 The decorative elements – as much as they can be reassembled – appear to conform to the designs most typical of the 'third' or 'fourth' styles of Roman wall painting, all of which have been found in 1st century or earlier structures in Pompeii and the immediately surrounding areas that were both destroyed and preserved by the eruption of Vesuvis in AD 79. The ongoing and widespread popularity of these schematics is evidenced by sites that either still have wall plaster *in situ*, or have produced wall plaster that could successfully be reassembled; for example the frescos from 21 Lime Street (MOLA 2016) and Winchester Palace (Mackenna and Ling 1991; Yule 1989).

Land use and phasing

5.7.9 Of the entire painted wall plaster assemblage, only fifty-six fragments weighing 2392g were collected from phased features, all of which represent destruction debris or other types of refuse deposit dating to the Late Roman period. Most of the phased plaster was recovered from Late Roman pit [1420] (G58), but none of the plaster from this feature appeared to share any stylistic features that would suggest it came from the same area of wall. All of the better surviving plaster that could be grouped together based on common motifs came from contexts belonging to context groups 25 and 63, both of which appear to relate to the demolition of Building 1 (Table 16).

Stylistic group	**Land use group**	**Contexts**
A, C, D, E	63	[1578]
B, I	25	[1523]
B, F, G, H	25	[1565]

Table 16: Decorative groups by land use / context

5.7.10 A number of fragments from feature G25 displayed very similar patterns – although in different colours – which could indicate they once belonged to the same decorative scheme. For example, those fragments classified stylistically as 'Group B', recovered from contexts [1523] and [1565], were made up of a collection of fragments decorated with thin purple lines, some of which appear to divide the white background into separate panels, whilst others form the central decoration of these panels, taking the form of thin and curving lines (?stems) with a range of foliage-esque details attached. Group H fragments included fragments that were directly parallel to examples from Group B, except the lines and ?flowers were in green, and another very small group of red ?foliage against a white background was collected from [1523].

5.7.11 Much of the block colour fragments with shades of burgundy, pink and purple came from [1578], as did the best preserved and most substantial fragments of wall plaster which portray architectural features in similar colour tones but which most likely make up the upper frieze of the decorative scheme (Group D). These fragments are different in character to the more sparsely decorated white panels of groups B, H and I, but Roman fresco – particularly that belonging to the 'fourth style' – are often made up of many eclectic elements, and therefore these fragments could easily be different elements within the wall decoration of a single room.

5.7.12 Unfortunately, the way the plaster collapsed or was discarded following the demolition of the structure does not enable it to be pieced together coherently or associated with particular walls, even to the extent of establishing whether the material came from the interior or outside of the building. Several domestic structures in Pompeii where the frescos survive *in situ* (e.g. the House of Menander and the House of the Dioscuri) have exterior walls that were also richly-decorated, and so it is possible that the plaster recovered represents panels from both interior and exterior wall surfaces. Some further consideration of this may be productive as and when the form and construction of the shrine building is better understood.

5.8 Fired Clay by Trista Clifford

5.8.1 A small assemblage of 20 fragments weighing a total of 152.6g was recovered from three contexts. The assemblage was rapidly assessed for any diagnostic features; fabrics were distinguished using a x10 magnification hand lens. The assemblage has been recorded digitally on an excel spreadsheet for the site archive.

5.8.2 The assemblage is low fired and in poor, abraded condition. It is largely made up of fragments in a chalky fabric with sparse to moderate shelly inclusions. The most diagnostic fragments are from context [1553] which contained four fragments which exhibit a smoothed flat surface and a single fragment with a possible wattle impression. The remaining pieces from the surface of the area north of the ring-ditch [1303] and fill [1549] of underlying flue [1547] (G43) are undiagnostic of form or function.

5.9 Glass

5.9.1 A single fragment of Roman glass (RF<96>; weight 0.4g) was recovered from context [14/005] within ring-ditch recut G12. It comprises a colourless, bubbly

shard from near the rim, probably from a cup or beaker. The fragment displays three parallel wheel-cuts along one break, suggesting this was a figure-cut vessel. Figure-cut vessels generally date to the 4th century (Price and Cottam 1998, 36).

5.10 Geological Material by Luke Barber

5.10.1 The excavations recovered 68 pieces of stone, weighing 47,256g, from 25 individually numbered contexts. These totals consist entirely of hand-collected material (no stone being recovered from the residues). None of the stone has currently been allocated a Registered Finds (RF) number despite there being a number of worked pieces. The assemblage has been fully listed on geological record sheets by provisional stone type for the archive, with the resultant information used to create an Excel spreadsheet as part of the current assessment. Many of the main stone types have variations (such as colour or coarseness) that have been kept separate for the moment until confirmation of all the identifications. Although these variations may simply represent different beds within the same exposure, they have been separated to facilitate any detailed sourcing studies that may be undertaken in the future. The assemblage is characterised in Table 17 by provisional type and site period.

Period: **Provisional type (incl archive code)**	***Unphased***	**2 Early Bronze Age**	**4 Roman (general)**	**4.1 Early/Mid Roman**	**4.2 Late Roman**
Number of contexts	7	1	2	4	11
Probably available from bedrock or glacial/alluvial deposits in Suffolk					
8c Fossiliferous limestone					1/4740g Q
9a Chalk	2/4306g				
10b Downland flint	2/630g				
12c Bunter sandstone				1/44g	2/144g
12d Light grey (?Yorkshire) fine sandstone	1/540g				1/32g
12e Fine yellow-brown (?Yorkshire) sandstone	1/622g				2/530g
13b Fine brown (?Yorkshire) sandstone					1/132g
13f Iron-rich sandstone				2/1164g	
13g Ferruginous sandstone				2/102g	
22d Quartzite (pale brown)	1/1120g				
22e Quartzite (grey/red-pink)					1/116g
22f Quartzite (buff)					7/3088g
22g Quartzite (purple)	1/536g				1/444g
A Sarsen-type sandstone	2/340g		1/676g		1/1002g
B Non-calcareous streaked sandstone				1/6014g	1/768g
C Oolitic limestone					1/152g
D Upper Greensand	1/4g				2/324g
E Coarse ? quartzite					1/1164g
F White sandstone (bleached)					1/1510g
G Fine (?Yorkshire) sandstone	1/1182g				
H Igneous/basalt?	1/3074g				
I Medium (?Yorkshire) sandstone			1/3992g		1/816g
J Grey Septaria?					1/880g
K Igneous/Dolerite	1/156g				

Non-local imported by man					
4a German lava		11/186g Q			
5a Hertfordshire Puddingstone	1/872g Q				
14b Millstone Grit (grey/pink coarse)				1/206g Q	
14e Millstone Grit (green/yellow coarse)	2/964g Q				1/832g Q
14g Millstone Grit (pale grey coarse)					2/2294g Q
14h Millstone Grit (occ large clasts)					2/1558g Q
Total	*18/14,346g*	*11/186g*	*2/4668g*	*7/7530g*	*30/20,526g*

Table 17: Summary of stone assemblage (presence of: Q = quern)

Period 2: Early Bronze Age

5.10.2 The only stone from phased Bronze Age deposits consists of 11 small amorphous fragments (186g) of German lava quern from G11 ring-ditch segment [1276] (fill [1697]). The material is clearly intrusive in this deposit and, considering the other periods represented, is more likely to be of Early Roman date.

Period 4: Romano-British (general)

5.10.3 The only stone from deposits dated as broadly Roman consists of cobble/boulder fragments undoubtedly moved to the area by natural geological processes (the Sarsen-type cobble has a natural glacial polish on its raised areas). Beyond some heat damage to the sandstone there is no signs of modification at the hand of man.

Phase 4.1: Early Roman

5.10.4 This Early Roman site phase produced a further assemblage of cobble and boulder fragments that are likely to have been naturally transported to the area by natural processes. Most appear to have originated from the East Midlands and Yorkshire suggesting they derive from glacial till. Beyond burning, none have been modified. The single piece of Millstone Grit (14b) is from a rotary quern and has notable wear on both upper and lower face suggesting it has been reused after breakage (hollow fill [1295], G47). Millstone Grit querns are more common in the later Roman period suggesting this may belong to the end of the period, or may be intrusive. Considering the quantity of early/mid Roman contexts on site the absence of German lava quern fragments (with the exception being the intrusive pieces noted above) is really quite marked. It would certainly suggest no/little milling was being undertaken within the enclosed area at this time.

Phase 4.2: Late Roman

5.10.5 This period produced the single largest group of stone (30 pieces weighing over 20.5kg). As with previous periods, the bulk of the assemblage is composed of cobble and boulder fragments from till deposits, with origins to the north, from Lincolnshire upward. With the exception of a few that show signs of having been burnt, none have any use-wear or deliberate modification by the hand of man. This period did however produce six pieces of quern. The earliest was recovered from levelling deposit [1728] (G60) under Building 1. This consists

of a saddle quern fragment in a hard fossiliferous limestone. The stone is not a common one for querns so one may view the piece as a general grinding stone that has utilised a conveniently shaped boulder from the till deposits. The surviving fragment is from the tapering terminal of the 75mm thick boulder where there is a distinct elongated area of dished wear on the upper face. The piece could easily be pre-Roman; however, it may be contemporary if it were indeed a conveniently selected stone for the general grinding of various foodstuffs.

5.10.6 The other quern fragments are more typical of the Late Roman period – being composed entirely of Millstone Grit examples. On the whole the fragments are small with few morphological features. Lower stone fragments were recovered from enclosure ditch [1197] (G3) and G12 recut ring-ditch segment [1704] (54mm and 70mm+ respectively). The 362g fragment from layer [1647] (G62) is amorphous, but the same deposit produced a 42mm thick example with wear (re-use) on both upper and lower faces and part of a 95mm thick lower stone (1932g) from a probable millstone with dressed grinding face. The re-use of such stones is not uncommon but is always of interest. Certainly during this period milling appears to have been a common activity at the site. This is perhaps at odds with the perceived increasingly conspicuous ritual/religious nature of the enclosure in the late Roman period.

Currently unphased

5.10.7 The 18 pieces of stone that are from currently unphased deposits (Table 17) are dominated by unmodified material from the glacial till deposits. The group contains quern from only two deposits – three pieces of Millstone Grit quern (39-40mm thick) from Building 1 demolition debris layer [1577] and a fragment from a Puddingstone quern, likely to be of Late Iron Age to early/mid Roman date, from structural gully/slot [1579] (fill [1619], G63).

5.11 Metallurgical Remains by Luke Barber

5.11.1 The archaeological work recovered just 820g of material classified as slag, from 37 individually numbered contexts. Of this total, 490g (a single piece) was collected by hand – the remaining material being derived from one of 40 bulk soil residues collected. The latter was not quantified by count due to the small nature of the material. All of this was recovered from the magnetic fraction of the residues. The whole assemblage was fully listed on pro forma for archive, with the resultant data being used to create an Excel spreadsheet of the information. The weight of the residue material is slightly higher than the true weight as 1g was the minimum entry on the Excel spreadsheet, even though many deposits produced under 1g.

5.11.2 Virtually all of the material from the environmental residues consists of ‘magnetic fines’ – granules of burnt clay, ferruginous siltstone and sandstone which have had their magnetism enhanced through burning. In many of these residues these ‘fines’ had been well rolled/polished and some are so spherical they are likely to be iron-stained ooliths from degraded limestones, probably originating in Lincolnshire. All such spheres were carefully inspected under x20 magnification and were duly discounted as being spheroidal hammerscale: the complete absence of the more common hammerscale flakes and calcareous

nature of the spheres confirming this conclusion. As such most of the samples produced no evidence of metalworking within the excavation area.

5.11.3 The only material not classified as normal magnetic fines was recovered from Period 2.1 ring-ditch segment [1739]. Here, the magnetic residue also included <1g of very large flexible flakes to 8mm. These appear to be intrusive pieces of modern magnetised sheathing, perhaps from a fence-post; their flexibility certainly rules them out as hammerscale.

5.11.4 The only definite slag from the site consists of the hand-collected piece from Late Roman destruction layer [1647] (G62). This consists of a classic forge bottom of dense grey but aerated slag with a concave-convex profile that measures some 90mm in diameter and 45mm thick (in profile). This single piece demonstrates some iron smithing activity, but it is a notably isolated find. Even if there were a collection bias on site, the magnetic fractions of the residues should, to a certain extent, counter it. However, the fact that the magnetic residues from 26 different Roman contexts failed to produce any hammerscale shows smithing was not practised anywhere near the excavated area.

5.12 **Bulk Metalwork** by Trista Clifford

5.12.1 A small bulk metalwork assemblage of 160 objects weighing 1144g were recovered from 49 individual contexts. The assemblage consists predominantly of iron nails; four plate fragments were also recovered. The assemblage is in good overall condition; just over 50% of the nails were recovered complete.

5.12.2 The nails were recorded on pro forma sheets for archive and the information entered on to an Excel spreadsheet. A typology for the site was devised based on the head shape. Four head types were recorded: Headless (Manning type 5), circular/oval and square/rectangular flat heads (Manning type 1b) and 'diamond' shaped (Manning type 2; 1985, 134-5). Tacks of Manning type 7 (1985, 135) were also noted.

5.12.3 General-purpose nails with flat, circular heads predominate (n=46), followed by general purpose nails with square/rectangular heads and heavy duty nails with circular heads (n=14 and 13 nails respectively). Eight tacks were recovered.

5.13 **Human Bone** by Dr Paola Ponce

5.13.1 The remains of a single articulated skeleton, [1142], were found in the upper fill of G3 ditch [1158], buried in an extended position, orientated north to south, with the head located at the north. The body was facing down (prone) with the face angled east and the arms extended at the sides. No visible grave cut was observed and the fill from the grave was undistinguishable from the rest of the ditch fill, thus suggesting that the body was possibly dumped or thrown in. The ditch in which the skeleton appeared was assigned to later Roman stratigraphic Phase (4.2).

5.13.2 In addition to the above, context [1688], the upper fill of G12 recut ring-ditch segment [1724] dated to the Late Roman period, produced a small fragment of disarticulated unsided radius. The diaphyseal fragment that measured 3.5cm could have belonged to a gracile adult individual but in the absence of the

proximal or distal epiphyses of the bone, it is difficult to confirm. As no further information can be obtained from this disarticulated radial fragment, the remainder of this report will focus on the above-mentioned skeleton [1142].

Methodology

5.13.3 The initial analysis consisted of preparing an inventory of all bones present, assessing sex and age, stature, and diagnosing any evidence of pathological conditions present. The methods used to estimate sex were based on the observation of dimorphic traits of the pelvis and skull following the standards proposed by Buikstra and Ubelaker (1994). Age-at-death was established using standard osteological techniques using a combination of all methods available. These included the morphological changes observed in the pelvis such as the pubic symphysis (Brooks and Suchey 1990), and the auricular surface (Lovejoy *et al* 1985). The teeth were observed for their degree of development and eruption (Ubelaker 1989) and for their dental wear (Brothwell 1981).

5.13.4 In preparation for the calculation of stature, the length of complete available long bones were recorded during the assessment.

5.13.5 Assessment and diagnosis of the basic nature of gross pathology was carried out on the skeleton. This analysis was carried out following the diagnostic criteria described in Aufderheide and Rodríguez-Martín (1998), Ortner (2003), and Barnes (2012), with supplementary references as required.

Results

5.13.6 The bones of skeleton [1142] were in a fairly good state of preservation and the degree of completeness was very good (>75%).

5.13.7 The preliminary results on the assessment of the biological sex and age suggests that the remains are those of an adult individual, probably a male. Further analysis will allow more accurate age estimates based on the presence of the auricular surface and the pubic symphysis of the pelvis. In line with this, osteometrical analysis based on discriminant functions taken on the femoral heads and the width of the glenoid cavity of the scapula will be needed in order to confirm the sex of the individual.

5.13.8 With regards to the estimation of stature, this will be calculated from the measurement of the well-preserved right femur.

5.13.9 Finally, in relation to pathologies, it was noted that skeleton [1142] had evidence of being affected by degenerative joint disease, dental disease and trauma.

5.14 **Animal Bone** by Hayley Forsyth-Magee

5.14.1 The excavations produced a moderate assemblage of animal bone containing 2,483 fragments from 119 contexts. The majority of the assemblage is dominated by mammal bone, with pigs being the most abundant species of the main domesticates. Wild taxa are also present, as are small quantities of bird, rodentia, insectivoria and fish remains. Provisional dating indicates that the majority of the assemblage derives from the Roman period, with a dominance

of Late Roman (Phase 4.2) activity from pit and ring-ditch fills. Moderate quantities of faunal remains were recovered from general Roman (Period 4) and Early/Middle Roman (Phase 4.1) contexts. Small quantities of faunal remains were also recovered from Late Mesolithic-Early Neolithic (Period 1) contexts as well as Early Bronze Age (Period 2) contexts.

Methodology

5.14.2 The assemblage has been recorded onto an Excel spreadsheet in accordance with the zoning system outlined by Serjeantson (1996). Where possible bone fragments have been identified to species and the skeletal element, part and proportion, represented. Specimens that could not be confidently identified to taxa, such as long-bone and vertebrae fragments, have been recorded according to their size and categorised as 'Large', 'Medium' or 'Small' mammal. In order to distinguish between the bones and teeth of sheep and goats a number of identification criteria were used including those outlined by Boessneck (1969), Boessneck *et al* (1964), Halstead et al (2002), Hillson (1995), Kratochvil (1969), Payne (1969, 1985), Prummel and Frisch (1986) and Schmid (1972). A small number of sheep have been positively identified within the assemblage, there is no evidence of goat, although it may be possible that a small goat population was present on the site.

5.14.3 The identification of deer has been undertaken with reference to Lister (1996), where identifications have not been possible specimens have been categorised as Deer. The identification criteria of rabbit and hare specimens has been undertaken with reference to Callou (1997). The identification of domestic fowl has been undertaken with reference to the criteria outlined by Tomek and Bocheński (2009), and Serjeantson and Cohen (1996). Small mammal remains have been separated into rodent categories with reference to Lawrence and Brown (1974). A small number of fish vertebrae are present within the assemblage, due to preservation levels these remains have not been identified further to species.

5.14.4 Age at death data has been collected for each specimen where observable. Tooth eruption and wear has been recorded from mandibular dentition with two or more teeth in-situ, according to Grant (1982) for cattle, sheep/goat and pig, and Levine (1982) for horse. The state of epiphyseal bone fusion has been recorded as fused, unfused and fusing. Mammalian metrical data has been taken in accordance with Von den Driesch (1976) and avian metrical data has been recorded using Cohen and Serjeantson (1996). Specimens have then been studied for signs of butchery, burning, gnawing and pathology. The location and direction of butchery marks on the bones has been recorded. Burnt bone has been recorded as charred or calcified.

The Assemblage

5.14.5 The assemblage contains 2,483 fragments weighing approximately 16290g, of which 2,044 fragments have been identified to taxa (Table 18). The majority of the assemblage has been retrieved through hand-collection, with a small amount of faunal remains recovered through whole earth samples. The majority of the specimens are in a moderate-poor state of preservation with some signs of surface erosion and weathering evident, particularly from faunal remains

recovered from the Late Mesolithic-Early Neolithic (Period 1.1), the Early Bronze Age (2.1), and remains from undated/unphased contexts.

5.14.6 It is possible that the bones exhibiting taphonomic erosion may have been left exposed to the elements before being buried, or they may have been re-deposited. Bones in moderate condition may have been buried soon after deposition. Taphonomic processes in the burial environment may also have played a role in preservation levels. A small quantity of complete post-cranial bones are present within the assemblage.

Period		No. of Frags	NISP	Preservation		
				Good	Moderate	Poor
1	Late Mesolithic-Early Neolithic	23	23	-	35%	65%
2	Early Bronze Age	112	87	-	25%	75%
3	Iron Age	44	16	-	75%	25%
4	General Roman	433	382	11%	88%	1%
4.1	Early-Middle Roman	388	311	31%	54%	15%
4.2	Late Roman	1126	934	10%	60%	30%
ud	Undated and Un-phased	357	291	2%	35%	63%
	Total	*2483*	*2044*			

Table 18: Total number of fragments, NISP (Number of Identifiable Specimens) count and percentage preservation based on the NISP

5.14.7 A range of taxa have been identified including domestic and wild fauna (Table 19). Of the main domesticates pigs dominate the assemblage, followed by cattle and sheep/goat. Moderate quantities of dog and horse are also present within the assemblage, with domestic fowl present in smaller quantities. The Number of Identified Specimen (NISP) data in Table 19 has been skewed by the presence of a number of pig special deposit associated bone groups (ABG). High quantities of medium mammal and large mammal bone fragments were present due to the levels of preservation and taphonomic burial processes. Wild taxa are present in smaller quantities and are represented predominantly by rabbit, followed by small mammals including rodentia and insectivoria. Deer, birds and fish are also present.

	Period						
Taxa	**1**	**2**	**3**	**4**	**4.1**	**4.2**	**UD**
Cattle		2	1	207	10	16	11
Sheep					3	1	
Sheep/goat		35	2	1	30	76	34
Pig			1	3	30	337	20
Horse			1	1	41	10	20
Dog				87			
Deer					1	7	
Deer?							1
Large Mammal	17	29	4	2	27	136	49
Medium Mammal	2	21	7	59	105	279	147
Small Mammal					1	4	2
Rabbit				21	27	59	
Bird	4					1	
Chicken					32	1	
Fish				1		2	
Rodent/Insectivoria					4	5	5

Hedgehog							2
Total	**23**	**87**	**16**	**382**	**311**	**934**	**291**

Table 19: the total number of fragments, NISP (Number of Identifiable Specimens) count by Taxa and Period

Late Mesolithic-Early Neolithic (Period 1)

5.14.8 The Late Mesolithic-Early Neolithic assemblage (Period 1) contains a small quantity of 23 identifiable faunal remains recovered from three pit fill contexts; [1139], [1226] and [1598]. Taxa that have been identified include large mammal long bone fragments and dentition, medium mammal rib fragments and a fragment of bird synsacrum. No evidence of butchery, burning, gnawing, non-metric traits or pathology was observed. No ageable mandibles or measurable bones were recorded and no fusion data was available for analysis.

Early Bronze Age (Period 2)

5.14.9 The Early Bronze Age assemblage (Period 2) contains a small quantity of 87 identifiable faunal remains recovered from four ring-ditch fill contexts; [1284], [1663], [1692] and [1729]. Taxa that have been identified include sheep/goat, large mammal, medium mammal and cattle and contains both meat and non-meat bearing bones. A small number of faunal remains from ring-ditch fill [1692] exhibited signs of charring including bones and teeth from sheep/goat and medium mammals. No evidence of butchery, gnawing, non-metric traits or pathology was observed. No ageable mandibles or measureable bones were recorded. Limited fusion data was available for analysis.

Iron Age (Period 3)

5.14.10 The Iron Age assemblage (Period 3) contains a small quantity of 16 identifiable faunal remains recovered from four pit contexts [64/004], [64/005], [64/006] and [64/007]. The taxa identified includes sheep/goat, cattle, pig, horse, medium and large mammals. Analysis of element representation indicates that meat and non-meat bearing bones are present within this assemblage. No butchery, burning, gnawing, non-metric traits or pathology was observed. No ageable mandibles or measurable bones were recorded. No fusion data was available for analysis, all bones were fragmentary.

General Roman (Period 4)

5.14.11 The general Roman dated assemblage (Period 4) contains a moderate quantity of 382 identifiable faunal remains recovered from eight contexts. The majority of the remains have been retrieved from pit fills [1021], [1117], [1119], [1121], [1184], [1635], an animal burial [1173] and a deposit fill [1649]. Taxa that have been identified include cattle, dog, rabbit, pig, sheep/goat, horse and fish. Cattle from animal burial [1173] and dog bones from pit fill [1121], as well as multiple rabbit remains from deposit fill [1649] dominate the assemblage due to the presence of these animals as near complete associated bone group (ABG) deposits (Hill 1995; Morris 2008; Morris 2010; Morris 2011). Medium and large mammal fragments are also present within the assemblage.

5.14.12 Evidence of sexual dimorphism could be observed in the male dog ABG deposit from pit fill [1121] with the presence of a baculum (*os penis*). Whole earth samples <4>, <7> and <8> produced a small amount of faunal material

consisting mainly of medium mammal long bone and rib fragments, as well as pig dentition and a fish vertebrae. Charred and calcified faunal bone was recovered from samples <4> and <7>, no burnt bone was recovered from the hand-collected material.

5.14.13 Pathology was observed in a single dog humerus from the ABG deposit from pit fill [1121]. Two ageable mandibles from the same animal, cattle ABG animal burial [1173], were recorded. Fusion data suggests that both adult and juvenile animals are present. No evidence of butchery, gnawing or non-metric traits were observed and no measurable bones were recorded.

Early-Middle Roman (Period 4.1)

5.14.14 The Early-Middle Roman assemblage (Period 4.1) produced a moderate assemblage of 311 faunal remains from nineteen contexts, the majority of which originate from pit fills and ditch terminus fills. Smaller quantities of faunal remains have been retrieved from fills of a possible well and ditches. Fragments of horse bones and dentition dominate the assemblage in this period, followed by domestic fowl, sheep/goat, pig and rabbit. The remaining taxa identified includes small numbers of cattle, sheep, deer, small mammal, rodentia and insectivoria. Medium and large mammal bone fragments are present in greater quantities due to the level of fragmentation and taphonomic processes.

5.14.15 Three whole earth samples <2>, <6> and <57> retrieved from pit fills produced a small collection of pig, sheep/goat, rodentia, insectivoria, medium and large mammal fragments of bones and dentition. A small quantity of these remains from the three samples were charred. Charred and calcined burnt bone was also recovered from hand-collected contexts ditch terminus [1561] and pit [1629] and included medium mammal post-cranial elements.

5.14.16 Sexual dimorphism was observed in two domestic fowl tarso-metatarsii from pit [1245] and [1246] with the presence of ‘cockspurs’. Three male and one female pig canines were recovered from pits [1097] and [1081]. A fragment of naturally shed deer antler was recovered from pit [1245].

5.14.17 The assemblage contains both meat and non-meat bearing bones. Evidence of butchery is present on two cattle scapula from pits [1245] and [1246]. The scapula from context [1246] exhibited signs of multiple chops to the base of the scapular spine. The cattle scapula from context [1245] exhibited signs of classic Roman butchery with a hook hanging hole punctured through the blade.

5.14.18 Two Associated Bone Groups, (ABG’s) (Hill, 1995; Morris, 2008; 2010; 2011), were recovered from the assemblage. The taxa identified includes a near complete rabbit from ditch terminus [1561] and a near complete male domestic fowl from pit [1246].

5.14.19 From the limited fusion data available the majority of the assemblage contains adult remains, a small number of juveniles are represented. Eight ageable mandibles and six measurable bones were recorded. No gnawing, non-metric traits or pathology was observed.

Late Roman (Period 4.2)

5.14.20 The Late Roman assemblage (Period 4.2) produced the largest assemblage of identified faunal remains with 934 fragments from sixty contexts. The majority of the remains have been retrieved from pit features, with smaller quantities recovered from ring ditch, destruction debris, ditches, post-holes, layers, spreads and deposits.

5.14.21 Of the main domesticates, pig remains dominate the assemblage considerably, followed by sheep/goat and cattle in much smaller quantities. The remainder of the assemblage contained other domesticates including horse and domestic fowl. Wild taxa are represented by rabbit, deer, small mammals, rodents, fish and birds. Identifiable medium and large mammals are present in moderate numbers due to the levels of fragmentation and taphonomic processes.

5.14.22 Analysis of element representation indicates that meat and non-meat bearing bones are present within this assemblage. Butchered taxa includes four medium mammal and two sheep/goat post-cranial elements with chop and cut marks, as well as two pig cranial and post-cranial elements.

5.14.23 Twenty-six pig canines; twenty-three male from [1426], [1428], [1429], [1430], [1442] [1521], [1522] and [1647] and three female from [1647], [1652] and [1669] were present within the assemblage – all with evidence of wear. In total there are twelve male and three female pigs represented from these twenty-six canines. Over half of the pig canines were recovered from Associated Bone Group deposits, all of which are male. From the wild fauna, a small number of antler fragments were recovered from ring-ditch contexts [1265], [1386] and [1442].

5.14.24 Seven Associated Bone Groups (ABG's) (Hill, 1995; Morris, 2008; 2010; 2011) are included in the Late Roman assemblage. The taxa identified includes six groups of pig remains recovered from pits [1425], [1426], [1429], [1430], [1521] and [1522]. These ABG's each contained a pig skull as well as the forelimbs and hindlimbs of each animal arranged in a deliberate pattern. Two of these special deposits [1429] and [1522] had deliberately-placed Roman coins on the frontal bone of the skull; special deposit [1521] exhibited signs of copper staining from a possible coin on its frontal bone. A further articulated pig leg in layer [1421] might constitute the truncated remains of a seventh.

5.14.25 Burnt faunal bone was recovered from two hand-collected contexts, pit [1324] and destruction debris [1406], and includes a small quantity of large and medium mammal long bone fragments and medium mammal rib fragments. Six whole earth samples produced a small quantity of burnt faunal bones from ring-ditch, pit and flue fill deposits, consisting mainly of medium mammal post-cranial and cranial elements.

5.14.26 Gnawing by canid was observed in a single sheep/goat tibia distal fragment from destruction debris [1647]. Pathological lesions have been observed in eight pig post-cranial elements from pits [1522], [1428] and [1430] and includes osteophyte proliferation, periosteal reaction and fractures. A single horse metatarsal from context [1406] showed evidence of possible joint disease.

5.14.27 Fifteen ageable mandibles and fifteen measurable bones and teeth were recorded. Analysis of the fusion data available shows that both adults and juvenile individuals are present within this phase. No evidence of non-metric traits were observed.

Undated & Unphased

5.14.28 The currently undated and unphased assemblage contains 291 identifiable faunal remains retrieved from 19 contexts including unstratified contexts. The taxa identified includes sheep/goat, pig, cattle, horse, deer, rodents and insectivoria. Large, medium and small mammals were also present. Analysis of element representation indicates that meat and non-meat bearing bones are present within this assemblage. Single medium mammal long bone fragments from contexts [1351] and [1578] exhibited signs of charring, as did a medium mammal skull fragment from context [1650]. No butchery, gnawing, non-metric traits or pathology was observed. No ageable mandibles or measurable bones were recorded. From the limited fusion data available both adult and juvenile remains were present within the assemblage.

Discussion

5.14.29 The faunal assemblage from the Red Lodge site is dominated by bones from Late Roman features and deposits (Period 4.2). Moderate quantities of bone were also recovered from the General Roman (Period 4) and Early-Middle Roman (Period 4.1) assemblages. The Late Mesolithic-Early Neolithic (Period 1.1) and the Early Bronze Age (Period 2.1) contained much smaller assemblages of faunal remains.

5.14.30 Further analysis of the faunal remains is necessary to determine the function of this site and its importance within the Roman landscape of the local and wider area. The special deposits, dominance of pig remains and the limited amount of observable butchery evidence suggests that the Roman enclosure at Red Lodge apparently functioned as a religious focus in the Late Roman period, and probably earlier. However, in the Early Roman phases the enclosure may have had at least a partially domestic aspect, as suggested by the deposition of moderate quantities of domestic and wild faunal remains along with some evidence of butchery.

5.14.31 The dominance of the three main domesticates changes considerably over time within the allotted Roman periods. Cattle dominate the general Roman period, sheep/goat and pig remains dominate the Early-Middle Roman period and pig remains significantly dominate the Late Roman period. The presence of associated bone group deposits has skewed the assemblage count somewhat; the presence of which requires further analysis to determine the purpose of these animal burials (Hill 1995; Morris 1998; 2008; 2011) at Red Lodge.

5.14.32 The Late Roman pig associated bone group/special deposit assemblage is of particular interest, and the nature of these special deposits suggests ritual practice (Groot 2008). A similar collection of pig associated bone group remains deposited in the same fashion with a scatter of coins was discovered at the nearby site of Liberty Village, RAF Lakenheath, Eriswell (Craven 2012). Several

Roman porcine ABG special deposits were placed in the upper fills of a ring-ditch, with coins dating to the 2nd to early 4th Century.

5.15 **Burnt Bone** by Dr Paola Ponce

5.15.1 A small amount of burnt bone was recovered from the fills of twelve individual contexts, of which four come from pits (fills [1081], [1097], [1117], and [1629]), four from post-holes ([1593], [1606], [1608], and [1620]), two from the G12 recut ring-ditch ([1291] and [1735]), one the fill of the G8 ditch terminus [1563], and one from G60 levelling deposit, [1652]. All of these features are of Roman date.

Methodology

5.15.2 The burnt bone was retrieved from the excavated fills in bulk soil samples that underwent flotation and processing for environmental remains (<2>, <6>, <7>, <24>, <44>, <48>, <50>, <51>, <54>, <57>, <58>). Burnt bone was also hand-collected during the excavation of context [1652].

5.15.3 Bone fragments were collected and subjected to careful recording and separated in sieve fractions of 2-4mm, 4-8mm and >8mm. The total weight of the burnt bone assemblage was established and the assemblage then examined to record the degree of fragmentation and fragment colour.

Bone fragmentation and weight of burnt materials

5.15.4 The total amount of bone recovered from the contexts analysed was 3.51g (Table 20). All bone fractions were represented, but none were identifiable as human or animal bone. No demographic data or no evident pathology was observed.

Context	**Weight (grams)**			
	2-4mm	4-8mm	>8mm	Total
1081 <2>	0.01	-	-	0.01
1097 <6>	0.24	-	-	0.24
1117 <7>	0.49	-	-	0.49
1291 <24>	0.08	-	-	0.08
1563 <44>	0.01	-	-	0.01
1593 <48>	0.01	0.05	-	0.06
1606 <50>	0.01	-	-	0.01
1608 <51>	0.01	-	-	0.01
1620 <54>	0.35	0.07	-	0.42
1629 <57>	1.25	-	-	1.25
1652	-	-	0.78	0.78
1735 <58>	0.15	-	-	0.15
Total	*2.61*	*0.12*	*0.78*	*3.51*

Table 20: total amount of bone according to size

Bone colour

5.15.5 With regards to the degree of oxidation of the organic component of bone, it was noted that 30% of the assemblage was fully oxidised white which suggests a highly efficient burning process at temperatures above *c*.600˚ C). Another 30% showed a combination of grey and blue hues, suggesting an incompletely

oxidising process (at temperatures up to *c*.600˚ C). The remaining 40% of bone was brown/orange (or unburnt).

5.16 Marine Molluscs by David Dunkin

5.16.1 The excavation at Red Lodge, Suffolk produced 45 contexts containing marine shell with a total weight of 5.754kg. Preliminary analysis indicates that the total assemblage by weight is comprised of *c.*99%+ oyster remains (*Ostrea edulis*). Traces of two other species were identified: common mussel (*Mytilus edulis*) and common whelk (*Buccinum undatum*) – in contexts [1021], [1081], [1417] and [1592]. Only four contexts assemblages contained more than 300g of marine shell by weight (Table 21). Of the remaining 41 contexts just three contexts weigh between 100-300g. Therefore 38 out of 45 contexts contained <100g by weight of marine mollusc.

Context	Weight	Species	Period
1081	2.602kg	Oyster; trace Mussel; trace Common Whelk	Early-Mid Roman
1577	372g	Oyster	Late Roman
1578	307g	Oyster	Late Roman
1647	950g	Oyster	Late Roman

Table 21: Summary of marine molluscs by context and weight > 300g

5.16.2 It is unlikely that further work will identify other species. Oyster therefore dominates the assemblage. Furthermore, only two contexts produced a significant quantity of oyster shell. Fill [1081] of Phase 4.1 pit [1082] comprises 53 left valves and 55 right valves. Phase 4.2 destruction deposit [1647] comprises 25 left valves and 28 right valves.

5.17 Registered Finds by Trista Clifford

5.17.1 A moderately large assemblage of 95 objects was assigned registered finds numbers on site (Appendix 4). The assemblage is largely made up of copper alloy coins of Roman date, as well as a small number of objects of iron and copper alloy of Late Iron Age to Roman date. The overall condition of the assemblage is good. The lithic implements, nails, ceramic vessel and tegula accorded registered finds numbers on site are included in their respective specialist reports. Individual objects are discussed by functional category below. Several worked stone objects were identified during assessment of the bulk stone; these are reported on in section 5.10, above.

Objects of personal adornment

5.17.2 Seven items of personal adornment were recovered. A probable iron bow brooch fragment, RF<16>, was recovered from the upper fill of pit [1324] (G34). The fragment comprises a circular sectioned bow, terminating in a worn break, with the stump of one of the wings at the head, probably an early Colchester brooch although not enough remains to ascertain the exact type. Fill [1291] in G12 recut ring-ditch segment [1748] contained a small copper alloy Colchester brooch with white metal coating and knurled decoration on the bow and external chord (RF<34>). Pit fill [1066] (G22) contained half of a large translucent mid

blue annular glass bead, decorated with opaque white spiral decoration (RF<87>). This is a Late Iron Age or Early Roman type similar to Guido's class 7a 'Celtic whorl' type (Guido 1978).

5.17.3 Two copper alloy hairpins (RF<66, 68>) were recovered which are of similar distinctive form. The shafts are very thin in section with heads decorated with reel/reel mouldings. These are possibly 1st to 2nd century forms although both are broken so assessment of length, a diagnostic feature for dating of Roman hairpins, cannot be made. However, they both derive from Late Roman deposits – RF<66> from levelling layer [1652] (G60) under Building 1 and RF<68> from destruction debris layer [1650] (G25). Lastly, copper alloy bracelet fragments (RF<32>) came from upper fill [1277] of recut ring-ditch segment [1700] (G12) and a probable bracelet terminal (RF<23>) from [1212] the surface of this same feature. These are probably 3-4th century in date.

Toilet, surgical or pharmaceutical objects

5.17.4 This category includes a Late Iron Age or Roman copper alloy lunate cosmetic pestle, RF<37> found within spread [1303] (G43) to the north of the ring-ditch, and a complete pair of tweezers from upper fill [1713] in recut ring-ditch segment [1723] (G12). Cosmetic pestles are an indigenous form of toilet set which have an association with fertility, sometimes used as religious offerings (Jackson 2011, 266).

Household utensils and furniture

5.17.5 Two objects fall within this category. Pit fill [1066] (G22) contained an iron object which could possibly be part of a padlock case (RF<7>). A white metal coated copper alloy spoon bowl fragment, RF<67>, came from fill [1694] of recut ring-ditch segment [1700] (G12). This is probably from a spoon with a pear shaped or mandolin shaped bowl and is Roman in date.

Tools

5.17.6 Tools include an iron knife blade, RF<84>, with mineral preserved organics on the surfaces from Building 1 associated pit fill [1419] (G58) and a small punch, RF<92>, recovered from spread [1303] (G43) to the north of the ring-ditch, which is similar to an example in the British Museum catalogue (Manning 1985, A24). A second possible punch or awl came from the terminus segment [1562] of the G8 ditch.

Fixtures and fittings

5.17.7 Rings made in both copper alloy and iron were recovered from three contexts – RF<21> from [1212], <53> from fill [1571] of the G7 ditch, and <60> from fill [1692 of G11 ring-ditch segment [1690]. The latter is possibly intrusive in this earlier phase of the ditch. In addition, probable iron binding strip RF<91> was recovered from layer/spread [1303].

Objects associated with religion

5.17.8 Two pieces from a copper alloy plaque decorated with incised lines to resemble a leaf (RF<19>), similar to gold and silver examples from Baldock (Jackson:

TAR 2002, no.27, pages 38-43), were recovered from context [1177], a number issued for surface finds probably originating from fill [1324], of pit [1326] (G34).

Objects associated with agriculture and animal husbandry

5.17.9 Three complete iron oxgoads were recovered, including one example which retains the nails used to attach it to a wooden haft (RF<94>, pit fill [1585] G65). The others come from fill [1177] of G34 pit [1326] (RF<14>) and G17 fill [1095] of G17 pit [1096] (RF<95>). These all are Roman but not closely dateable in themselves.

Transport

5.17.10 The loop from a copper alloy strap mounted skirted terret (RF<33>) was recovered unstratified in the east of the excavation area. This class of terret appears in the archaeological record during the second half of the 1st century AD, continuing until the 2nd century. This type of harness fitting is associated with chariots.

Objects of uncertain function

5.17.11 A small number of objects remain unidentified. Further x-radiography is unlikely to illuminate their function.

Coins

5.17.12 A modest assemblage of 51 coins was recovered, ranging in date from the 1st to 4th century AD (Appendix 4). Approximately a third of the assemblage was recovered by metal-detecting of topsoil and the top *c.*0.15m of fill from stratified features. The assemblage derives from a range of contexts including fills of the ring-ditch, deposits underlying Building 1 and as components of structured deposits in pits associated with it. Just under half the assemblage is made up of 4th century issues, with 3rd century radiates comprising almost one third. First and second century issues are few and often very worn, indicating that they had been in circulation for some time before deposition.

5.17.13 The assemblage includes notable finds of a sestertius of Marcus Aurelius (RF<43>) and dupondius/as of Faustina (RF<49>) placed as votive deposits on the heads of two pigs/boars as part of an unusual ritual deposit; there is also evidence in the form of copper staining that coins were placed on at least one other pig skull (see 5.14). It is probable given the nature of the features that other coins may also prove to have been intentionally deposited. For example, G60 levelling layer [1728], which underlies Building 1, contained three 2nd century coins. The deliberate placement of coins in within building foundations is well documented in the Roman period.

5.18 Conservation by Dr Elena Baldi

5.18.1 This report aims to meet the requirement to produce a stable site archive, as set out in MoRPHE (English Heritage 2006). This involved x-radiography, a condition assessment and stabilisation and packaging of the finds.

5.18.2 The condition of the various classes of material is summarised and indicator of unusual preservation noted. The potential of the assemblage for further analysis and research is discussed and recommendations made for further investigative conservation and long-term storage.

Overview of methodology

5.18.3 The bulk metal finds and wall plaster were washed and dried or air dried as appropriate, subsequently quantified by count and weight and bagged by material and context. All finds were packed and stored following CIfA guidelines (2014).

5.18.4 The registered finds were washed, air dried, assessed and cleaned by a conservator as appropriate to the material requirements. Objects have been packed appropriately in line with CIfA guidelines. All objects were assigned a unique registered find number (RF<1> to RF <96>) and recorded based on material, object type and date. A summary the objects potentially requiring conservation is presented in Table 22.

Material	**Quantity**
Iron (bulk)	157 pieces, 1,276 g
Lead (bulk)	1 piece, 2 g
Plaster (bulk)	845 pieces, 17,516 g
Iron RF	22 (RF 3-7; 12-17; 30; 53; 71-73; 84; 91-95)
Glass RF	1 (RF 87)
Copper alloy RF	15 (RF 19, 21, 23, 31, 32, 33, 34, 37, 60, 61, 63, 66, 67, 68, 69, 86)
Silver alloy RF	1 (RF 67)
Coins	50 (RF 1-2, 8-11, 18, 20, 22, 24-29, 35-36, 38-51, 54-55, 57-59, 62, 64-65, 70, 74-82, 85, 90, 96

Table 22: Summary of objects potentially requiring conservation

5.18.5 All bulk metals and metal registered finds were x-rayed, following the HE guidelines (2006). The finds were transported to Fishbourne Roman Villa facilities and processed using a Faxitron 110kV Inspection Cabinet, Model 43855B. The total number of plates developed is 13 (Plates nos. 385-397, 418). The objects were exposed to different voltage x-rays, ranging from 85 to 110 Kv; the time of exposure also varied from 90 to 150 seconds. Overall the conservation work was undertaken in accordance with with professional guidelines and standards such as described by the Institute of Conservation (ICON 2014).

5.18.6 Each object was photographed before, occasionally during, and after treatment. All the work was undertaken at the Portslade office, with a 20x and x40 magnifying microscope, allowing assessment, cleaning and stabilisation of the finds.

Condition assessment

Bulk metalwork

5.18.6 The bulk iron work consisted almost entirely of nails, most of which were complete. The nails were generally covered with a thin layer of corrosion products that did not prevent identification or measurements; however, the nails

from contexts [1533], [1357], [1482] and [1655] were heavily encrusted, with silt and small stone inclusions as well as a layer of orange/brown corrosion products. X-radiography showed that the majority of the objects, particularly the nails, have fairly strong cores and are only mineralised on the surface.

5.18.7 A single piece of lead is in generally good condition, though covered with a thin layer of light grey corrosion products on the surface.

Roman Painted Wall Plaster

5.18.8 A large number of fragments of painted wall plaster were recovered from the site. The overall condition of this material varied, with variable thinkness of soil adhering to the painted surface: some pieces appeared well preserved and others very fragmented and fragile. In some cases, the backing mortar was coming apart from the upper painted coat; when this happened, the pieces were kept together for specialist's analysis, but not adhered with an adhesive.

Glass

5.18.9 Registered find RF <87> is large annular glass bead. It is incomplete and one fragment had become separated from the main body. There is a clear dotted whirl pattern/design on the surface.

Iron registered finds

5.18.10 Twenty-two iron objects are recorded as registered finds. Overall they appear mineralised, but do not show signs of fragmentation. Radiography shows that the iron objects generally have quite a thick and strong radiopaque core. Object RF <84>, a small knife blade, might have evidence of a maker's mark on the tang/handle.

Copper alloy registered finds

5.18.11 A total of 15 copper alloy objects were recovered from the excavation (excluding coins). All were in fair condition, generally covered with a thin layer of silt overlying widespread mid-green corrosion crusts. Overall, most of the objects also showed signs of superficial active corrosion, including bronze disease, that appeared as pitting on RF <32>, <60> and <61>; localised on the back of RF <33>, and widespread throughout the surface of the object and on the edges on RF <19> and <31>. Radiography was carried out on all copper alloy registered finds, showing that most objects have quite a thick and strong radiopaque core; however decorative strips RF <63> and <86> have a very thin, pitted and weak core. Other details revealed by the radiography include a clear decorative pattern, evident on the surface of RF <19> and evidence of possible tinning or silvering of the surface of RF <34>.

Silver

5.18.12 Object RF <67> is likely to be part of the bowl of a spoon. The object is covered with light silty soil and some corrosion products on the back of the bowl; pitting of the oxidised surface was visible inside the bowl.

Coins

5.18.13 A total of 51 coins were recovered from the excavation, two of which were produced with an alloy that was high in silver content (RF <46> and <67>). The coins differ in condition; however all are covered with a thin layer of silty soil overlying copper corrosion products that vary from mid-green to light green, an indication of active corrosion; this is particularly evident on at least 20 coins.

5.18.14 The coins were x-rayed to help the coin specialist and conservator in the recognition of features that could aid the identification and consolidative cleaning of the coin. Good results were obtained with the smaller *nummi*; however, radiography did not suffice for full interpretation because legends and portraiture features are often illegible.

Stabilisation

Glass

5.18.15 The two conjoining parts of RF <87> were adhered with HMG Cellulose Nitrate. No superficial consolidation was carried out as the object appears stable.

Painted Wall Plaster

5.18.16 Before cleaning could start, a small area of each pigment or shade was tested with different solvents: ethanol, industrial methylated spirit and water, to identify which would be the most suitable cleaning method and to test whether the paint was soluble. Testing proved that the pigments were not soluble and that cleaning could be executed with water.

5.18.17 Cleaning of the surfaces was carried out mainly with wet soft sponges and brushes, often under a x20 binocular microscope. The soil attached to the fragments was very sandy and it was removed from the painted surfaces quite easily. Because of the fragility of some pieces, the lower part was immersed in a water bath for only a few seconds, which allowed for almost complete removal of the sand, without weakening the structure of the underlying mortar. After cleaning the pieces were left to air dry.

Iron

5.18.18 No chemical stabilisation was undertaken on the iron material, since it appeared to be completely mineralised, and is therefore not at high a risk of chemical deterioration in the near future, providing it is kept in low humidity conditions (Scott and Eggert 2009).

Copper alloy

5.18.19 All copper alloy finds were first examined under a x20 binocular microscope. Soil and corrosion accretions were lifted in order to expose the original surface, exposing surface details, technical features or the possibility of mineral preserved organic materials. These actions were carried out manually, with scalpel or bamboo sticks, and when necessary, a mixture of water and ethanol was applied to the surface.

5.18.20 All the copper alloy finds were stabilised chemically with 5% Benzotriazole (BTA) in acetone (Scott 2002) and the application of a protective coating of 5% Paraloid B44 in acetone, in order to prevent active corrosion developing while the material is stored. This coating is also necessary to retain the BTA on the surface of the copper alloy and ensure health and safety when handling the material in the future.

Coins

5.18.21 Particular care was taken in the cleaning and stabilisation of the coins, paying attention to the small features and letters that are so important for identification. This was greatly aided by the radiography carried out before the cleaning process. The same mechanical procedures used for the copper alloys were also employed for the cleaning and stabilisation of the coins.

Packaging and long term storage:

5.18.22 All items were packed according to CIfA (2014) guidelines. Each object was inserted in a single write-on-panel polythene bag marked on the outside with indelible marker, as well as a Tyvek® label inside the bag and a Jiffy Foam® cut-out to protect the finds. In case of more fragile objects, including reconstructed ironwork, the finds were inserted in crystal boxes, within a Plastazote® cut out.

5.18.23 Each bag was then placed in a Stewart box marked on the outside with site code and material type. The boxes were packed with silica gel bags and an indicator strip, with finds stored in numerical order. All of the iron objects were boxed separately from the other metal finds, since they require a lower RH level, below 15%, which allows them to remain stable in storage. Other metals, that require storage below 35% RH, were stored together, again in numerical order.

5.18.24 Special packaging was made for the plaster fragments. Correx® sheets were cut and shaped into trays. These were lined with bubble wrap, and the plaster fragments were laid inside, maintaining a subdivision by context and following the specialist's grouping. The extra bubble wrap was used to cover the pieces for further protection. Correx® cut-out sheets were used for contexts which had only a few fragments of plaster. The trays were measured to fit thin ASE cardboard boxes: two trays fit in each box.

5.19 Environmental Samples by Stacey Adams

5.19.1 Sixty-one bulk soil samples were collected during excavations at Red Lodge for the recovery of environmental remains such as plant macrofossils, wood charcoal, faunal remains and Mollusca, as well as to assist finds recovery. The majority of the samples were taken from Late Roman features including the re-cut ring-ditch, a posthole building, a flue structure and pig skull burial pits, as well as ditches and pits. Samples were also taken from Early Neolithic pits, an Early Bronze Age ring-ditch and Early/ Mid-Roman pits and a ditch. A Late Roman destruction layer was also sampled. The following report assesses the preservation of the charred plant macrofossils and wood charcoal and their

potential to inform on the diet, arable economy and local environment of the site as well as fuel selection and use.

Methodology

5.19.2 The bulk samples, ranging from 5 to 40L in volume, were processed by flotation, in their entirety, using a 500µm mesh for the heavy residue and a 250µm mesh for the retention of the flot before being air dried. The residues were passed through 8, 4 and 2mm sieves and each fraction sorted for environmental and artefactual remains (Appendix 5a). Artefacts recovered from the samples were distributed to specialists, and are incorporated in the relevant sections of this volume where they add further information to the existing finds assemblage. The flots were scanned under a stereozoom microscope at 7-45x magnifications and their contents recorded (Appendix 5b). Where necessary, flots were subsampled and 100ml of the volume scanned. Provisional identification of the charred remains was based on observations of gross morphology and surface cell structure. Quantification was based on approximate number of individuals. Nomenclature follows Stace (1997) for wild plants and Zohary and Hopf (1994) for cereals.

5.19.3 Charcoal fragments were fractured by hand along three planes (transverse, radial and tangential) according to standardised procedures (Gale and Cutler 2000; Hather 2000).Specimens were viewed under a stereozoom microscope for initial grouping, and an incident light microscope at magnifications up to 500x to facilitate identification of the woody taxa present. Taxonomic identifications were assigned by comparing suites of anatomical characteristics visible with those documented in reference atlases (Schoch *et al* 2004; Hather 2000; Schweingruber 1990). Identifications were given to species where possible, however genera, family or group names have been given where anatomical differences between taxa are insufficient to permit satisfactory identification. Ten fragments were submitted for identification from sample <31> from pit [1420] as it contained >3g of charcoal from the >4mm fraction of the heavy residue. Ten charcoal fragments from charcoal-rich flots (samples <30>, <32>, <38>, <39> and <58>) were submitted for assessment as well as those from the pig skull pits (samples <34>, <35> and <36>) as these were deemed interpretively significant. Quantification and taxonomic identifications of charcoal are recorded in Appendix 5a and nomenclature follows Stace (1997).

Results

Period 1 Early Neolithic
Samples <9> fill [1139] of pit [1140], <17> fill [1219] of pit [1218], <18> fill [1233] of pit [1234] and <46> fill [1589] of pit [1588].

5.19.4 Four samples were processed from a series of Early Neolithic pits. The heavy residues from the samples contained small amounts of flint, fire-cracked flint and pot as well as magnetic material. Possible industrial material was recovered from pit [1218], whilst pit [1140] contained occasional land snail shells. Charcoal fragments were present within the residues of all the pits, excluding that of [1140], although not in sufficient numbers to be submitted for assessment.

5.19.5 The flots contained between 5 and 90% of uncharred material including modern roots and recent seeds of goosefoots (Chenopodiaceae) and blackberry (*Rubus* sp.). Charcoal fragments were occasional within the Early Neolithic pits and pit [1140] contained frequent land snail shells including a number of burrowing molluscs (*Ceciloides*).

Charred Plant Macrofossils

5.19.6 Pits [1129] and [1140] contained no charred plant macrofossils. A small number of indeterminate cereal grains were present in pit [1234]. Pit [1588] contained several cereal caryopsis including that of wheat (*Triticum* sp.) and barley (*Hordeum* sp.) as well as a number of indeterminate grains. Preservation of the cereal remains was poor. Charred wild seeds were frequent within pit [1588] with fat hen (*Chenopodium album*) and common knotgrass (*Polygonum aviculare*) present, the preservation of which was moderate. The internal core of several knotgrass (Polygonaceae) seeds were also identified within pit [1588].

Period 2 Early Bronze Age
Samples <59> fill [1717] and <60> fill [1727] of ditch seg [1714] and <61> fill [1729] of ditch seg [1739].

5.19.7 Three samples were processed from fills of the original Early Bronze Age cut of the ring-ditch enclosure (G11). The heavy residues contained small quantities of fire-cracked flint and magnetic material. Sample <59> from ring-ditch cut [1714] contained possible worked flint whilst small quantities of charcoal were recovered from ring-ditch cut [1739].

5.19.8 The small flots from the Early Bronze Age samples contained between 20 and 80% uncharred material. Charcoal fragments were rare in samples <59> and <60> from ring-ditch cut [1714] and more common in cut [1739]. Land snail shells were present and particularly abundant in sample <59>. No charred plant macrofossils were identified within the Early Bronze Age flots.

Period 4 General Roman
Samples <4> fill [1021] of pit [1022], <7> fill [1112] of pit [1113] and <8> fill [1121] of pit [1122].

5.19.9 Three of the processed samples were dated to the general Roman period, all of which derive from pit features. The heavy residues from the samples contained fire-cracked flint, rare pot fragments and magnetic material. Possible mortar/ plaster was recovered from pit [1022]. Environmental material recovered from the residues included small quantities of charcoal as well as frequent animal bone and teeth. Pit [1022] contained fragments of burnt bone as well as marine mollusc shell. Land snail shells were present within all of the general Roman pits in small numbers.

5.19.10 The flots from the general Roman samples contained between 5 and 60% uncharred material of modern roots and recent seeds of fumitory (*Fumaria* `sp.), blackberry (*Rubus* sp.), dead-nettle (*Lamium* sp.), stitchwort (*Stellaria* sp.), red valerian (*Centhranthus robur*) and false oat-grass (*Arrhenatherum elatius*) as well as goosefoots and bread wheat (*Triticum aestivum*) rachis.

Land snail shells were abundant within the pits, including burrowing molluscs, and several small mammal bones were recorded.

Charred Plant Macrofossils

5.19.11 No charred plant macrofossils were identified within pit [1122] whilst pits [1022] and [1113] contained frequent charred plant material. The cereal caryopses in pit [1022] were indeterminate due to poor preservation. The cereal remains within pit [1113] were similarly poorly preserved although several were identifiable to genus-level. Both wheat and barley were identified within the pit as well as a single hulled wheat grain, indicated by the preservation of the glume impressions upon the seed coat. A single emmer/ spelt (*T. dicoccum/ spelta*) wheat glume base was recorded within the flot, securing the identification of hulled wheat within the assemblage.

5.19.12 Arable weeds were frequent within pit [1022] and occasional in pit [1113], the preservation of which was moderate with a number identifiable to species-level. Corn gromwell (*Lithospermum arvense*) is associated with the cultivation of chalky soils (Salisbury 1961) whilst fat hen (*Chenopodium album*) is a common nitrophilous weed indicating nutrient-rich soils (Carruthers 1995). Nipplewort (*Lapsana communis*) is a common garden weed but can also occur as an impurity in grass or clover seed (Streeter *et al* 2009; Salisbury 1961). Common arable weeds of knotgrass, docks (*Rumex* sp.) dead-nettle, hawksbeard (*Crepis* sp.) and clover-types (*Trifolium*-type) were also present as well as sedges (*Carex* sp.) bartsias/ eyebrights (*Euphrasia*/ *Odontites*) and stitchwort/ campions (*Stellaria*/ *Silene*). Seeds of wild grasses (Poaceae) and those of the mustard (Brassicaceae) and goosefoot families were also identified.

Period 4.1 Early/ Mid Roman
Samples <2> fill [1081] of pit [1082], <6> fill [1097] of pit [1098], <44> fill [1563] of ditch [1564] and <57> fill [1629] of pit [1628].

5.19.13 The heavy residues from the Early/ Mid Roman samples contained pot, flint, fire-cracked flint, glass and magnetic material. Iron and possible copper objects were recovered from pit [1082] and ditch terminus [1564]. Animal bone and teeth were frequent within the residues as well as small amounts of burnt bone. Marine molluscs were recovered from pit [1082] and ditch terminus [1561]. Land snail shells and charcoal fragments were present within all of the Early/ Mid Roman features, albeit in small numbers.

5.19.14 The flots from the Early/ Mid Roman features contained between 20 and 50% uncharred material of modern roots and twigs as well as recent seeds of false oat-grass, fumitory, blackberry, knotgrass, goosefoots and common chickweed (*Stellaria media*). Uncharred bread wheat rachis and elder (*Sambucus nigra*) seed capsules were also recorded. Land snail shells, including burrowing molluscs were abundant in pits [1082] and [1098]. The flot from pit [1082] contained small mammal bones and chalk inclusions were abundant.

Charred Plant Macrofossils

5.19.15 Charred plant macrofossils were recovered from all of the Early/ Mid Roman features, excluding that of the ditch terminus [1561]. Cereal caryopsis of hulled wheat and barley were identified in pit [1628] as well as several indeterminate

grains whilst a single wheat grain and indeterminate cereals were noted within pit [1098]. Overall preservation of the cereal remains was poor. A single moderately-preserved vetch/ sweet-pea (*Vicia/ Lathyrus*) was recorded within pit [1628] and likely derives from a cultivated variety due to its large size.

5.19.16 Pit [1082] contained charred arable weeds of knotweed/ sedge (*Polygonum/ Eleocharis*) and goosefoots whilst the weeds within pit [1098] consisted of clover-types, docks and wild grasses. Weeds within pit [1628] were more abundant and varied and included docks, small vetches/ sweet-pea, common knotgrass, sedges, annual meadow grass (*Poa annua*) and clover types. Seeds of nitrogen-loving fat hen and cruciferous vegetables (*Brassica* sp.) were also recorded. Preservation of the arable weeds was moderate with many identifiable to genus or species-level.

Period 4.2 Late Roman

Samples <3> [1066], <10> [SK1142], <11> [SK1142], <12> [SK1141], <23> [1287], <24> [1291], <29> [1415], <30> [1417], <31> [1419], <32> [1449], <34> [1431], <35> [1428], <36> [1424], <37> [1428], <38> [1482], <39> [1483], <40> [1428], <42> [1428], <45> [1549], <47> [1592], <48> [1593], <49> [1574], <50> [1606], <51> [1608], <52> [1578], <54> [1620], <55> [1614] and <58> [1735].

5.19.17 Twenty-seven samples were processed from Late Roman features including pits, a flue, a posthole building (G10), an inhumation burial [1143] and pig skull burial pits (G59), as well as the Late Roman recut of the ring-ditch (G12). The heavy residues contained fragments of pot, ceramic building material, iron objects, flint, fired clay, fire-cracked flint and magnetic material. Fragments of plaster were recovered from pit [1418], posthole [1450] and flue [1547] and mortar was present in postholes [1573] and [1607]. A single coin was recovered from sample <37> associated with pig 'head and hoof' pit [1431].

5.19.18 Environmental material was recovered in the form of animal bone and teeth, charcoal and land snail shells from the majority of samples. Land snail shells were particularly abundant in pit [1067], the post-packing from posthole [1484] and the post-pipe from posthole [1594]; the latter two also contained marine mollusc shell. Samples <10> and <11> from inhumation burial [SK1142] contained frequent quantities of human bone, and burnt bone was recovered from ring-ditch re-cuts [1738] and [1748], pits [1416] and [1420], postholes [1607], [1609] and [1621] as well as from the post-packing of posthole [1594].

Charred Plant Macrofossils

5.19.19 Charred plant macrofossils were rare within the Late Roman samples and, where present, were largely poorly preserved. Ring-ditch re-cut [1738] contained indeterminate cereal grains whilst both the post-pipe and post-packing samples from posthole [1484] each contained two cereal culm nodes. Weed seeds were present in the form of small wild grasses within pit [1416] and small vetches/ sweet pea seeds in sample <42> from pig skull burial pit [1428]. A large vetch/ sweet pea/ pea (*Vicia/ Lathyrus/ Pisum*) seed was present within posthole [1609]. No other charred plant macrofossils were recorded from the Late Roman features.

Charcoal

5.19.20 The preservation of the charcoal from the Late Roman features was largely good with little or no distortion. Fragments from posthole [1450] were affected by chalk crustations and one fragment from sample <34> of pig skull burial pit [1431] was indeterminate due to acute thermal degradation. Insect holes and radial cracks were recorded on a number of fragments; the latter is a feature that has been associated with the burning of damp wood (Keepax 1988: 32).

Posthole Structure (G10)
Samples <32> fill [1449] of posthole [1450], <38> post-pipe [1482] and <39> fill [1483] in posthole [1484].

5.19.21 The well-preserved charcoal fragments identified from the posthole structure derive from the post pipe [1482] and post-packing [1483] of posthole [1484] and posthole [1450], all of which were of large branch or stem wood of oak (*Quercus* sp.). One fragment from the post packing [1483] was affected by insect holes and all of the oak fragments from posthole [1450] contained chalk crustations possibly occurring after burial due to the calcareous nature of the soil.

Ring-ditch Re-cut (G12)
Sample <58> fill [1735] in segment [1738].

5.19.22 The charcoal fragments from the Late Roman ring-ditch segment [1738] were all of hazel (*Corylus avellana*) and were well preserved. Six of the fragments derived from round wood of small branches and/ or twigs, one of which was affected by an insect hole.

Pits (G58)
Samples <30> fill [1417] in pit [1418] and <31> fill [1419] in pit [1420].

5.19.23 Yew (*Taxus baccata*) and oak were the only taxa identified within these pits, with yew being the most frequent. The fragments were well-preserved with only one of the oak fragments distorted by post-depositional sediment in pit [1420]. Post-depositional sediment is often attributed to the changing water table after burial.

Pig Skull Burial Pits (G59)
Samples <34> and <35> fill [1428] in pit [1431] and <36> fill [1424] in pit [1427].

5.19.24 The majority of the charcoal from the pig skull burial pits was of oak with the fragments from samples <35>and <36> exclusively of that taxon. The charcoal from these samples was exceptionally well-preserved. Sample <34> was predominantly recorded as oak with one fragment indistinguishable between oak and sweet chestnut (*Castanea sativa*) due to the absence of multiseriate rays in the tangential section. Single fragments of ash (*Fraxinus excelsior*) and elder (*Sambucus* sp.) were also identified in sample <34>.

Destruction layer
Sample <52> layer [1578].

5.19.25 Destruction layer [1578] contained frequent plaster, mortar and magnetic material as well as small quantities of flint, fire-cracked flint, pot and iron. Charcoal fragments and land sail shells were present but infrequent.

5.19.26 The flot from the destruction layer [1578] contained 10% uncharred material of modern seeds of pine (*Pinus* sp.), goosefoots, raspberry (*Rubus idaeus*) and common chickweed. Charcoal fragments were occasional and land snail shells, including burrowing molluscs, were abundant. No charred plant macrofossils were identified from the destruction layer.

6.0 POTENTIAL & SIGNIFICANCE OF RESULTS

6.1 Realisation of the original research aims

6.1.1 The original research objectives (ROs) are stated in section 3 above and are discussed here in the light of the excavation results:

RO1 Can the excavation further investigate the archaeological remains of all periods found during the evaluation in order to more fully understand their form, date, function and significance?

The area excavation, targeted upon the ring-ditch and other surrounding remains found by evaluation within the south of the site, exposed a greater number and range of archaeological features and deposits and retrieved relatively substantial assemblages of artefacts from them. The recorded remains evidence multiphase land use spanning the Early Neolithic to late Roman periods over a sufficiently large extent to facilitate a reasonable degree of interpretation and understanding of the use and development of the landscape and of the function of its component features.

RO2 Can the excavation identify any potential Bronze Age activity, particularly associated with the barrow at Hundreds Acres Hill? Does this feature represent Bronze Age ritual or funerary practice? Is there any evidence for an associated mound, as described in the HER?

In fully-exposing and further investigating the ring-ditch, the excavation has increased understanding of form and significance of this feature in its landscape over time. Its Bronze Age date has been established by scientific dating methods though its function is still somewhat ambiguous. No burials were found in association with this monument or obvious remains of an internal mound identified. Indeed no demonstrably Bronze Age features or finds have been found that either relate to the ring-ditch or to land use in the surrounding vicinity. However, the ring-ditch looks like that of a barrow monument and comparison with other Bronze Age barrows within the region may add weight to this interpretation. Although central feature [1432] (G33) has been judged to be of natural origin, such comparative research might provide examples that alter this view.

It is possible, though perhaps less likely, that the ring-ditch had an alternative ritual function not associated with burial, or indeed with any depositional activity. The lack of cultural material within the ditch fill and surrounding features elsewhere on the site suggests that the ring-ditch was cleared/maintained during its active use, with the area surrounding the ditch also kept clear of intrusive/depositional activity. This is perhaps indicative of a ritualised landscape focused upon this monument.

Whether this suspected ritual activity took place in association with an occupying mound or in fact within the interior of a circular enclosure, the latter perhaps defined by a low internal bank, is unclear. The site of the ring-ditch evidently utilised a localised rise in the natural geological deposit and it appears that its immediate vicinity may have been purposefully landscaped to form a more pronounced and regular platform for the monument.

Whatever its original form and function, it is evident that the ring-ditch endured in the landscape for a protracted period of time, seemingly attracting incidental deposition in the Iron Age and its reuse in the Roman period. This itself may suggest that after the ditch became mostly or wholly infilled, the monument remained conspicuous in the landscape because it included an earthwork mound that survived to some extent at least as late as the Roman period.

RO3 Can the extent, form and function of the Roman ditch be better understood? Did this feature define the extent of Roman occupation in that area of the site?

The Roman ditch initially found in Trench 23 and speculated, on the evidence of the geophysical survey plot, to be part of a rectilinear enclosure has been further exposed and recorded. It has been confirmed that it forms the western boundary of a large rectangular Roman enclosure, with the southern boundary and smaller internal boundaries also recorded that may have formed an inner sub-enclosure. The northern extent, as identified by the geophysical survey results, lies in an area that could not be trenched in the Phase B evaluation. The enclosure appears to be of Earlier Roman origin and is positioned to have been purposely constructed around the surviving remnants of the Bronze Age ring-ditch. Although evidence for the occupation/use of the rectilinear enclosure is sparse, various structured deposits of animal carcasses, including one of a dog in a pit located at its possible western entrance, suggests that it had a religious/ritual function in the earlier Roman period. However, there is no indication that the ring-ditch itself was actively used or modified during this period.

Although the southern and internal boundary ditches were not obviously maintained into the Late Roman period, the western ditch was recut twice and an inhumation burial inserted into it. Whether effectively enclosed or not by this time, the religious/ritual function of this site clearly continued. A building was constructed by the 3rd/4th century to the immediate east of the ring-ditch and may have coincided with its concerted re-cutting. Despite the reinstatement of the ring-ditch, presumably as a circular enclosure, there is no indication of its active use in this Late Roman period, other than eventual infilling. However, the associated building is interpreted as a small rural shrine. Some of a number of the small pits in or alongside this building contained clear ritual ‘head and hoof’ deposits comprising male pigs.

This ritual activity appears to be restricted to the confines of rectilinear enclosure throughout the Roman period. No Roman remains have been identified outside this enclosed area in any of the evaluation trenches to the north and west. Further research on Roman reuse of prehistoric monuments and enclosures and on Roman ritual enclosures in Suffolk and further afield may enhance our understanding of this land use.

RO4 What role has the topography, geography and geology of the site played in its development during both the prehistoric and Roman periods?

A modest rise in the natural geology has clearly been focused upon in this otherwise flat landscape and utilised, potentially as a site of religious or ritual activity from the Early Bronze Age onwards. As previously noted, this natural chalk elevation is suspected to have been modified to regularlise and accentuate its prominence.

The Bronze Age ring-ditch was clearly positioned in relation to this natural landscape feature, neatly enclosing it. There is little information regarding the nature of the surrounding land environment at this time. However, the absence of identified Bronze Age and later prehistoric remains within the extensive areas of previous trial trench evaluation to the north and west indicates that this was a largely open and seemingly unfarmed landscape. It is possible that it was instead covered with woodland, perhaps with the elevated site and its ring-ditch monument occupying a clearing.

The elevated site and its ring-ditch clearly persist in the landscape beyond the Early Bronze Age, surviving as a conspicuous, presumably remnant, earthwork feature into the Roman period. The surrounding vicinity, as again evidenced by trial-trenching results, is devoid of Roman settlement and agriculture and may still be woodland. However, the Bronze Age ring-ditch site and its elevated site clearly become the focus for Roman period ritual activity – this location presumably retaining an isolated, perhaps mystical and hidden, character and even a folk memory, that is appropriated and adapted.

RO5 Is there any evidence for post-Roman activity, particularly relating to the use of the site for execution, as mentioned in the HER?

Minimal evidence for post-Roman activity has been recorded and relates to modern agricultural land use. There is no indication of the ring-ditch site having been utilised as a gallows as mentioned in the HER. It is possible that this could have been a relatively simple structure with little below ground impact, no post-pits of post-Roman date have been found either on the high ground within the ring-ditch or in the surrounding vicinity.

6.2 Significance and potential of the individual datasets

6.2.1 Stratigraphic

Early Neolithic (Period 1)

The Early Neolithic (Period 1) evidence consists of a number of scattered pits and hollows (G20, G26, G42, G49, G64) along with a possible structure (G36). The evidence is not suggestive of concerted settlement, with the possible post-built structure regarded as a temporary, possibly seasonal, structure at best. Further consideration of the interpretation of G36, either as a structure or (more probably) simply a pit cluster, will be needed. The scattered nature of the datable features suggests intermittent activity across the landscape, with no tangible land use. A large number of the features within this period were undated (e.g. G54), though based on form and placement are likely to belong within this period. The Early Neolithic features are concentrated in the southeast of the site, and it is possible that this indicates an area of more intensive activity. It is worth noting that a number of finds of this date including a flint axe head were found within later contexts. These suggest a residual nature of deposits across the site, some of which were possibly treated with significance and perhaps purposefully deposited. The recorded remains have a low significance and have little potential to inform upon the nature of land use at this time, lacking sufficient diagnostic artefacts and environmental remains,

though investigations into the reuse of Neolithic artefacts may shed further light on their symbolism and importance in later periods.

Early Bronze Age (Period 2)

Activity on site during this period was dominated by the ring-ditch (G11) in the centre of the site, with two adjacent pits (G50). There was a noticeable lack of datable material from this period, limited to three sherds of Beaker pottery and 41 flints, many of which were residual within later contexts. The function of the ring-ditch remains uncertain. While it is noted as a possible barrow in the HER record, there were no obvious indications that the ring-ditch interior had originally been occupied by a mound or burials; nor were satellite burials found in its vicinity. Further analysis of the nature of the ring-ditch fills may reveal indications of the former presence of a mound or bank, and scientific-dating confirmation of its Early Bronze Age date allows comparison with contemporary monuments elsewhere – both funerary and non-funerary.

On balance, it is more likely that this ring-ditch constitutes the remains of an Early Bronze Age barrow, though further analytical and research work will be needed to add weight to this. Clearly, the proportions of the ring-ditch itself suggest a very substantial and imposing monument. With an internal diameter of 35–38m it is at the top end of the scale for prehistoric barrows – the larger of the two barrows at Liberty Village, Lakenheath is c.30m diameter internally, but its ring-ditch is of similar proportion (SCCAS 2012, 86). Central feature [1432] (G33) is currently interpreted as being of natural origin, but it is conceded that the relatively regular shape of the cut might hint that it is instead archaeological, with its sand fill not being conducive to the survival of bone – hence the absence of human remains within it. Alternatively, one or more interments could have been located on the ground surface with a mound built over them. Comparison with other regional barrow examples might provide clarification of this.

It is possible that the ring-ditch had a different ritual function, perhaps instead being an enclosure within which non-funerary activities were undertaken. While there was no clear entrance gap in the ring-ditch providing access into the circular enclosure, the narrowness of the northeast part of the ditch is possibly indicative of an informal point of access. The Red Lodge ring-ditch interior compares with Late Bronze Age occupation enclosures at Mucking North Ring (Bond 1988; 38m diameter) and perhaps Springfield Lyons (Brown and Medlycott 2013; 53m diameter), though as well as their separation in time, the absence of one or more obvious entranceways must be conceded as a likely indication that it did not have a similar settlement function. It will be instructive to further compare the Red Lodge ring-ditch with other prehistoric examples from the region – if only to demonstrate/confirm its large size. It is evidently one of a number of other possible, as yet undated, barrows and ring-ditches in the area and is likely to be only one component of a wider ritualised landscape. It will be important to further understand the function of this monument in its contemporary landscape in order to appreciate the significance and meaning of its later reuse.

Early/Middle Iron Age (Period 3)

The evidence for Iron Age land use is very sparse and limited to three pits (G66) within the evaluation area to the north and a deposit of pottery within the earlier ring-ditch. While the pits contain small quantities of diagnostic material they provide little indication of the wider land use and environment. The Iron Age pottery vessel remains in the ring-ditch need further consideration as either a deliberate or incidental inclusion in the relict earthwork. This would appear to evidence the survival of at least some remnant of the Bronze Age monument and is therefore an important part of the narrative of the enduring presence, and possibly the significance, of the monument into the Roman period. Similar examples of seemingly casual use or visitation (for ritual or venerable purposes?) are recorded elsewhere and provide some useful comparisons (e.g. Old Hall Boreham, Germany 2014)

Roman (Period 4)

Roman period land use appears to be almost entirely of a ritual nature. The site is provisionally interpreted as that of a rural shrine and, as such, has considerable local to regional, possibly national, significance. Its earlier Roman creation, evidenced by the imposition of a rectilinear enclosure around the former Bronze Age ring-ditch, signals the appropriation of the prehistoric monument and its incorporation into contemporary religious or ritual belief/practise. The absence of any substantive remains of a wider Roman period enclosed landscape in either the Area B evaluation or the wider evaluated area of Red Lodge/Kings Warren (350+ trenches across 40ha) would seem to substantiate the interpretation of the rectilinear enclosure as a distinct and isolated/unassociated land entity defined by a ditch – probably a religious precinct or *temenos*.

All Roman remains were found within the enclosure and so may be assumed to be associated with this religious function that appears to span the period, perhaps intensifying or at least becoming more archaeologically conspicuous, in the Late Roman. However, the nature of use within the northern part of the enclosure (in the unevaluated part of Area B) remains poorly understood.

The function of the prehistoric ring-ditch in relation to the surrounding religious focus is not clear. Although the recut ditch evidently became infilled during the Late Roman period, it has not been established when it was reinstated. It would be useful to review the evidence, given that it might be reasonable to assume that the ring-ditch was recut when the rectangular enclosed was constructed – perhaps being actively cleaned out / maintained in the intervening period. No Roman features encroached upon the ring-ditch and it may be the case that it was maintained as a defined but otherwise clear area/enclosure/platform – possibly one in/on which rituals were carried out that have left no tangible below-ground remains. However, if the original prehistoric monument had included a mound that survived into the Roman period any such occupying features could conceivably have been removed when the mound was later levelled. Roman period (and later) reuse of prehistoric sites and specific monuments is a relatively well known phenomenon, including barrow sites and enclosures. Research and comparison of the Red Lodge site with other such sites both regionally (e.g. Haddenham, Cambs, Evans and Hodder 2006; Ardleigh, Essex, Brown 1999) and nationally (e.g. Slonk Hill, East Sussex;

Hartridge 1978) (and perhaps internationally) is likely to provide increased insights and understanding as to its reuse and appropriation.

There is an overall low incidence of features and deposits occupying the Roman enclosure / precinct; however, almost all appear to contain artefacts or represent structures related to its religious function. These conspicuous animal remains (cow, dog, pig and chicken) and artefact assemblages (coins, jewellery, prehistoric axes, etc.) are highly significant and their further analysis and refining of dating has considerable potential for the study of the nature of the religious/ritual activities undertaken at this site. Of greatest importance to this is the remains of Building 1, interpreted as a small shrine deliberately placed alongside the recut ring-ditch enclosure (and perhaps the remains of a mound inside it). Further analysis of the evidently elaborately constructed and embellished structure (tiled roof, plastered and painted walls) and its associated pits containing highly structured ritual deposits has the potential to contribute crucial insights into the forms and intentions of religious and ritual practice carried out. Comparison with other excavated buildings interpreted as shrines will be instructive (e.g. Great Dunmow, Wickenden 1988; Lackford, Rachael Abraham pers. Comm.). The various layers and spreads, some possibly relating to use of the site and others to disuse and dereliction/demolition of the shrine itself, contain very significant artefact assemblages that have the potential to inform on the use and discard of votive objects/materials and on the eventual demise of the religious focus through spatial and temporal analyses. There is a huge wealth of comparative data from numerous religious sites, both in site reports (e.g. Hockwold, Gurney 1986) and in synthetic studies (e.g. Rudling 2008; Smith 2001).

The ‘head and hoof’ burials deposits, with their associated placed coins are the most obvious expression of votive deposition. The choice of coins appears significant as they appear to have been generally of an earlier date than other coins within the area, perhaps implying use of possible heirlooms/curated objects – or else objects bearing appropriate or auspicious imagery. Although relatively rare phenomena, variants on this ‘head and hoof’ type of structured deposit have been found elsewhere and there is potential to undertake comparative research in order to better understand this practise. Interestingly, the nearest known examples are pig deposits found at the Liberty Village site at RAF Lakenheath, Eriswell (Craven 2012), only c.5 miles to the north, and at Lackford (Rachael Abraham pers. Comm.) a similar distance to the west. Other ‘head and hoof’ deposits, both sheep and cow, have been found at Snow’s Farm, Haddenham, Cambs (Evans and Hodder 2006) indicating that this practice was not restricted to pig. However, general use of pig in votive animal deposits is prevalent at Chanctonbury Ring in Sussex (Rudling 2001) and also observed at other temple complexes in southern Britain.

Inhumation [1142] requires further study in order to establish whether or not it is indeed contemporary with the Roman enclosure ditch and to explore its significance in relation to the shrine site and the religious/votive activities undertaken at it. Comparison with prone burials elsewhere in the region, particularly where found at Roman religious sites, will likely be instructive.

Other Roman period features within the religious enclosure that lack obvious ritual deposition, such as various pits, well [1063] and tile-lined flue [1547] require further analysis to determine their nature and function in relation to the

religious site. The dating of the flue-like structure in relating to that of the shrine would be useful to clarify. Comparison with other ritual sites should clarify whether similar types of features occur elsewhere.

The geographical/topographical context of the shrine site will benefit consideration. While it seems that the religious complex probably sat in isolation in its landscape, it is not clear whether or not this was wooded or clear in the Roman period. Research into the Breckland development should help clarify this. Consideration of the site's proximity to water and to communication routes may also be informative.

Post-Roman

Tangible land use activity at this site appears to have ceased on the abandonment of the religious focus. There is no Anglo-Saxon or Medieval evidence for the subsequent occupation of the landscape. The few recorded late post-medieval/modern remains relate to agricultural activity and have no significance or further potential to contribute to the understanding of landscape development and use. As such, the suggestion that the possible prehistoric barrow/ring-ditch was later a gallows site used for execution has not been substantiated. No demonstrably medieval/post-medieval features were found within the ring-ditch interior – though if located on a former mound, these could have since been removed. Although perhaps unlikely, it remains possible that the prone inhumation in Roman ditch G5 is in fact a later insertion and is related to this late use of the site. Radiocarbon dating analysis of these remains should clarify this.

6.2.2 Flintwork

Significance

The assemblage is of local significance, providing evidence for prehistoric presence in this landscape.

Mesolithic - It is difficult to assign individual pieces of struck flint to either the Late Mesolithic or the Early Neolithic because both periods are represented by pieces which are the products of the blade-orientated industry. No diagnostic Mesolithic material such as microlithics or microburins were recovered, but it is likely that a small amount of bladelets and blades (*c.*20) belong to the Late Mesolithic period. They were found re-deposited in contexts associated with Early Neolithic pottery, as well as in Early Bronze Age or Roman contexts, or from unstratified deposits.

Early Neolithic - Around 20% of the assemblage was found from 12 features currently dated to Period 1 (Early Neolithic). Three of these features, all associated with Early Neolithic ceramic of Mildenhall tradition, produced moderate amount of flints (pit [1234], pit [1140] and geological feature [1020]). The flintwork is coherent and characteristic of Early Neolithic industry. A fragmentary leaf arrowhead in geological feature [1020] can be confidently assigned to this date. On the basis of technological and morphological grounds and the presence of a typologically diagnostic tool, the material indicates an Early Neolithic date, and it is likely to be contemporary with the ceramic and the features. A small refitting exercise may reveal some knapping refits or conjoins.

Middle / Late Neolithic - Early Bronze Age - The bulk of the assemblage from the site comprises distinct flake-based material typical of a Middle / Late Neolithic to Early Bronze Age date. Given that no Middle or Late Neolithic features were found and given that a ring-ditch was dated by OSL dating to the Early Bronze Age it is possible that the majority of the flintwork is actually contemporary with this Early Bronze Age occupation of the site. The majority of this material was found re-deposited in later Roman contexts or within currently unphased contexts. But a small assemblage came from the lower Early Bronze Age fills of ring-ditch G11. This assemblage is coherent and likely to be contemporary with the primary and secondary fills of the ditch.

With the presence of cores and various types of tools, the assemblage seems to represent a variety of flint-using activities. It adds to the already known evidence for prehistoric activity in the vicinity of the site (DBA 2013). Flints from the Mesolithic to the Bronze Age have often been recorded as stray finds, and the *in-situ* Early Neolithic and Early Bronze Age groups are certainly an important addition.

Although several types of tools were recovered, the overall quantity of tools was small, representing only 2.12% of the total flint assemblage. The proportion of tools recovered from the twelve Early Neolithic features is even smaller (1.22% of the assemblage, n=2). These low proportions are at odds with the presence of a permanent settlement (although one may be present in the wider vicinity of the site).

Two tools stands out from the assemblage; the polished axes from Early/Middle Roman ditch terminus [1564] GP8, and Late Roman layer [1647] GP62, the latter a spread to the immediate north of Building 1. The first axe is a typical Neolithic polished axe. The second is less common. It displays a thin profile and its shape appears to copy the shape of early copper axes. Both axes are well made, and it is unlikely that they were used for tree felling. While the first more standard axe was found throughout the entire Neolithic period, the second appeared towards the end of the Neolithic period. While possibly representing Prehistoric artefacts purposefully collected and redeposited in the Roman period, they could also indicate that the ritualistic role the site played during the Roman period may have originated during the Late Neolithic or Early Bronze Age.

The small amount of burnt unworked flint recovered from the site has little significance. No concentrations were found, and overall the fragments were only slightly burnt. This indicates that no activities involving the creation/use of significant quantities of burnt flint were carried out. The small amount of burnt flint may simply be remnants of domestic or natural fires.

Potential

The assemblage has the potential to increase our understanding of the chronology of occupation of the site. The material from the well-stratified deposits (from the Early Neolithic features and the Early Bronze Age ring-ditch fills) has already been described. While many Neolithic sites in the area consist of monuments, other sites including pit groups are under-represented in the NMP/HER dataset (Medlycott 2011, 14), and although no further technological

analysis is proposed, a refitting exercise for the material from the three flint-rich Early Neolithic features would likely be productive. The remaining material does not warrant further analysis because of the potential mixing of the flintwork.

The presence of the two polished axes is interesting. It is possible that during the Roman period the polished axes were collected and brought to the site to be used as votive offerings. It seems that axes (amongst other objects such as fossils) were used as ingredients in Romano-Celtic religious and/or spiritual beliefs (Oakley 1965, 118). They may have been recognised as old objects and treated as ritual objects, or they may have been associated with some kind of superstition (Adkins and Adkins 1985, 69); Cape (2010, 315) speaks about "venerable objects". At Southborough, near Tunbridge Wells, a cremation burial within an Iron Age bowl was associated with an echinoid and a fragment of a Neolithic axe, and fragments of polished implements have been recorded at several Roman temple sites (Oakley 1965, 118; Adkins and Adkins 1985). In Lancing, West Sussex, three Neolithic axes were found outside the temple (Frere 1940, 169). A small polished axe and several fragments of polished tools were found at the Farley Heath temple, in Surrey (Goodchild 1938, 23). Another polished axe of grey chert was recovered from the destruction layer of the Roman temple (Adkins & Adkins 1985, 72). In Essex, at least 41 Palaeolithic axes were found at Ivy Chimneys, Witham, mostly in shallow cobbled depressions associated with the Roman temple (Turner and Wymer 1999, 107). On the Continent, axes are frequently found in 'Gallo-Roman' contexts. For example, the Temple des Essarts at Grand-Couronne (Normandy) produced a hoard comprising three Palaeolithic hand axes, 47 Neolithic polished axes and approximately 35 fragments of polished implements (in association with fossils and other material). At La Mare-du-Puits in Oissel (also in Normandy) the temple produced 20 polished axes and 22 echinoid fossils (Ferris 2012).

Both polished axes could have reached the site during the Roman period. They could have been collected elsewhere, and then intentionally deposited. But it is also possible that they were deposited at the site in the Neolithic / Early Bronze Age period. The axes are finely made, and it is likely that they were manufactured to be used as some kind of offerings. This opens the possibility that during the Roman period the site was recognised as being an earlier "sacred or religious" site and that it was selected for that reason. This practice is quite common. For instance, the Early Bronze Age barrow at Lower Beedings (West Sussex) was used during the Roman period. A total of 156 Roman coins, a small piece of decorated jet, some beads and some pottery including Samian ware were buried in the centre of the mound (Beckensall 1967, 20).

The assemblage has the potential to inform on the value that polished axes may have been invested with during the Roman period. Or it may even inform on the role that the site would have played in the Late Neolithic / Early Bronze Age. Consideration of the likely origin/provenance and distribution of such axes will likely inform understanding of this.

The assemblage of burnt unworked flint is very small. It has no potential to inform understanding of the use of burnt flint at the site.

6.2.3 Prehistoric Pottery

The Early Neolithic pottery represents a small but well-stratified assemblage with some diagnostic material. Although Early Neolithic pottery is relatively more common in Eastern England than elsewhere, the current assemblage has some local significance and would be worth publishing.

Because the assemblage contains only one large group there is limited potential for further analysis. The publication report will be largely based on the above text; however, some brief additional research will be undertaken, making comparisons with other local assemblages, particularly in terms of patterns of fragmentation and the relative frequency of decoration in assemblages from pit clusters.

The Beaker and Iron Age pottery is of lower significance because these are very small and largely poorly-stratified assemblages. There is no potential for further work on this material.

6.2.4 Roman Pottery

Significance

The pottery assemblage from Red Lodge is of value in terms of adding to the current knowledge regarding what might constitute a typical assemblage in Suffolk. The prevalence of locally produced coarse and micaceous wares is reflected within the assemblages collected from other Suffolk sites, including those as far away as Hacheston, near the Suffolk coast, and Mildenhall, which is less than 10km to the north of the Red Lodge site. Excavations at these sites noted the trend for locally produced but unsourced micaceous coarse-wares, as well as pottery that could be attached to local and regional kilns (Blagg et al 2004, 162; Bales 2004, 3). Comparatively, only very small quantities of continental imports such as samian are present, which is also noted in reference to the pottery assemblage from Castle Hill in Cambridgeshire (Hull and Pullinger 2000, 141).

Unlike the Hachston and Mildenall sites, however, Red Lodge had a clear ritual purpose. Amongst the pottery assemblage though, there are no vessels with apparent ritual function and no obvious structured deposition of pottery. It has, as stated above, far more in common in terms of fabric ranges present at non-religious sites than, for example, the pottery recovered from the shrine deposit at Castle Hill, in which there was a clear bias towards drinking vessels, including some complete beakers (Hull and Pullinger 2000, 144).

The main unusual element about the Red Lodge pottery is the very high proportion of dishes and bowls in contrast to jars. Dish and bowl sherds made up 44% of identifiable fragments compared to jars which made up only 36%. The prevalence of dish/bowl fragments in terms of weight is even more apparent; 41.3% in comparison to 25.4% of jar sherds. This trend can to some extent be explained by the fact that the quantity of dishes and bowls found on sites increases following AD120 as the production of coarse ware vessels imitating black burnished ware also rises.

However, when compared to other rural sites where quantities of jar and dish/bowls have been considered side by side (e.g. Evans 2001, 30, Figure 8), although there is an apparent increase in dish/bowl sherds in later phases at the same sites, there are never a greater number of dish/bowl sherds than there is of jar sherds. The bowl/dish sherds fall into one of two categories; most of the samian wares are dishes and bowls, and would have been used in dining contexts, but the bulk of the dishes and bowls are made in coarse ware fabrics and most probably were used for cooking. This apparent bias towards dish/bowls does made the pottery assemblage of more significance regionally than it otherwise may have been.

Potential

As the Red Lodge pottery assemblage is not particularly unusual in regional terms it is of limited potential for further work. Most of the further work prior to publication will relate to the apparent bias towards dishes and bowls, and reviewing the material in terms of phasing and land-use. Some consideration of the presence of an apparently domestic assemblage at an otherwise ritual/religious site would be useful.

6.2.5 Post-Roman Pottery

The post-Roman pottery is a very small assemblage, which is considered entirely intrusive. It is therefore of limited significance and has no potential for further analysis.

6.2.6 Ceramic Building Material

Significance

The Red Lodge CBM is significant on at least a regional level, as an assemblage which appears to demonstrate the common use of a particular fabric by both Horningsea pottery kilns and also CBM kilns. The presence of the upside-down V-shaped signature mark that also appears to exclusively appear on the tegulae made from the Horningsea fabric is of particular importance as it could help associate tegulae with these kilns even in the absence of a Horningsea fabric for comparison. If the relationship between the CBM and Horningsea pottery kilns can be established, then this provides more specific dating parameters that the CBM can be dated to.

The size of the assemblage and the prevalence of tegulae and imbrices would suggest the building at Red Lodge had a tiled roof, which is fairly rare for rural buildings in Roman Britain with the exception of villas or *mansios*. However, the painted wall plaster recovered from this structure indicates it was of high status and therefore a tiled roof would not be an unexpected feature of such a building. The large spreads and deposits of tile found in the immediate and further vicinity of Building 1 represent the primary demolition debris of this building and its roof.

Potential

Although the CBM from Red Lodge represents a valuable assemblage, it has limited potential for further work as a standalone assemblage. There are other sites in the area that have produced very small quantities of similar sounding

CBM fabrics, but because of the very small size of these assemblages they are not even sufficient to demonstrate a local distribution network in which Red Lodge could be considered.

It will be important to further consider the assemblage following the release of the forthcoming Horningsea publication (Evans and Macaulay, forthcoming) in advance of this site's publication, as there is a paucity of relevant literature, which may serve to identify potential research questions that the Red Lodge CBM could help answer.

6.2.7 Painted Wall Plaster

Significance

The size and preservation of the painted wall plaster assemblage make it significant on at least a regional level. The highly fragile nature of painted wall plaster as an artefact group makes it particularly susceptible to damage or complete disintegration, and so finding an assemblage of this size which survives to the extent where many distinct stylistic elements can be identified is rare, and generally only collapsed walls from urban centres such as London have provided comparable examples.

As well as the level of preservation, few painted wall plaster assemblages of any size from Suffolk have been published, though it is understood that other sites with such material have been recorded (e.g. Lackford; Rachael Abraham pers. Com.). The Red Lodge assemblage is therefore very significant on a county level, and as a reference collection for further discoveries both within Suffolk and further afield. Architectural designs are considered to be rare in Britain (Goffin, undated), and therefore the architectural features of the Red Lodge wall paintings are significant in terms of the frescos found thus far in Roman Britain, and demonstrate the level of skill and associated expense that these frescos would have required.

The Red Lodge structure almost certainly functioned as a shrine of some sort. There have been efforts to map the functions of rooms in Roman villas and domestic structures, both by 'mapping' the space inside (Hiller and Hanson 1989) or by analysing the themes and social intention present in the imagery (Elsner 2007; Platt 2002). However, generally it has proved difficult to link particular styles of the wall-painting with that room's purpose. There are some general trends, however, in that larger scale figural imagery tend to be found religious and public spaces, both in Italy and Roman Britain (e.g. the Villa of the Mysteries frieze; Lullingstone Villa; Theseus in the Basilica of Herculaneum). As a building of probable religious function it may have been expected that the wall painting would be more illustrative of that building's ritual purpose rather than following the fashions more typical in domestic homes.

Roman wall painting outside Italy remains an under-researched field although it is slowly being added to. For instance, there is now compelling evidence to indicate that painters would travel across areas of Britain and replicate the designs that were popular during that period (e.g. Lime Street, London and Maltings Lane, Essex). It may be that the decorative nature of the wall paintings is not a reflection of the activities that took place here but instead a

demonstration of a painter's stock motifs. Equally it is possible that unlike the previously cited examples, there was no desire to follow the apparent Roman convention regarding a particular type of wall painting for a particular type of space. Further research into frescos recovered from other ritual spaces in Britain to assess whether the trend of religious/public paintings being more figural actually applies to Romano-British practice is suggested in further tasks, below.

Potential

The potential of the Red Lodge wall paintings is two-fold. As a reference collection they provide comparative material for other known assemblages of wall plaster, and also future assemblages both in terms of the stylistic elements of the wall paintings, but also the chemical composition of the paints which may provide clues as to the workshop responsible for creating the paintings. Clear similarities between frescos found at 21 Lime Street by MOLA (2016) and wall plaster recovered from Maltings Lane in Witham, Essex (Benedetti-Whitton, in prep c) indicate common motifs present in different Roman buildings within the area of London and the south-east, potentially created by a common workshop or simply reflecting the most popular fashion at the time.

No such directly comparable parallels have yet been found for the Red Lodge fresco, but conducting pigment analysis (e.g. through Scanning Electron Microscopy (SEM)) would provide information about the range of pigments that were used at Red Lodge, which could then be compared to other sites in Britain where similar analysis has been conducted. This could provide a basis for further study regarding the trends in pigment use over time, or even if such trends can be evidenced outside London.

Other forms of pigment analysis, for example Fourier Transform Infrared Spectroscopy (FTIR) can identify the presence of any organic binders present within the paint. This would indicate the method of wall painting – i.e. true fresco or one of various types of tempera painting – and add to the current discourse (e.g. Cuní 2016) about what the prevalent form of wall painting was, at least here, and whether fresco was as ubiquitous as has been generally accepted.

6.2.8 Fired Clay

The assemblage is small, abraded and predominantly undiagnostic. It therefore has no significance regarding site interpretation. A small number of pieces with flat surface and one with a wattle impression suggests a structural use however; the sample is not large enough to have potential for further analysis.

6.2.9 Glass

Only a single piece of Roman glass was recovered from the site and is therefore of limited significance. It does, however, contribute to the dating evidence for the site. Such figure-cut vessels are relatively uncommon, although the fact that no figure or scene has survived reduces the potential of the shard.

6.2.10 Geological Material

Overall the assemblage is dominated by pieces that almost certainly arrived in the general area through natural processes. Most of these show no signs of having been modified at the hand of man. As such, this material has little or no significance.

Quern stones totally dominate the worked assemblage. The earliest appear to have been sourced locally and there is a notable lack of German lava in the Early Roman period, which is in itself of interest. Millstone Grit dominates the Late Roman assemblage as is typical for the region, and a trait often noted in Essex. The querns would appear todemonstrate some reliance on arable cultivation/flour production as part of the Late Roman economy and subsistence of this vicinity. The re-use of broken querns for sharpening and grinding is also well known, but new examples are always worth publishing as is the presence of the probable re-used millstone fragment. The presence of these pieces at a predominantly religious site is worthy of some further consideration.

The geological material from the site is not considered to hold significant potential for further detailed analysis though some checking of the identifications/possible sources of the unworked material would be useful.

6.2.11 Metallurgical Remains

The site produced virtually no slag. There is evidence for some negligible iron smithing in the Late Roman period, but this was obviously a considerable distance from the excavated area. Such working was quite common on rural sites of the period – if anything more slag would be expected in a background scatter. However, its sparsity is perhaps understandable given the site's function as a religious/ritual focus. As such the slag is not considered to hold any potential for further analysis

6.2.12 Bulk Metalwork

The bulk metalwork assemblage is small and made up of known Roman nail types that have been recorded in detail for the site archive. While the presence of several nail types suggests a number of different functional uses, including structural and possibly decorative functions, no significant groups were identified during assessment therefore potential for further analysis is limited.

6.2.13 Human Bone

Skeleton [1142] is the only inhumation recorded on site. It was an isolated find of an individual buried prone with no grave furniture or coffin. Instead of being buried in a formal cemetery, this individual appears to have been thrown in an existing ditch at some distance from the major structures and features found on site. The minimal effort placed in disposing of his body, may be a sign of haste or carelessness (Philpott 1991). The skeleton has potential for further research. As noted in the results section, age and sex, and stature can all be estimated more accurately following further osteometrical analysis. Stature calculation is an important indication of the health and wellbeing of individuals and this could be used for comparison with other Roman individuals.

In terms of disease, distribution patterns of osteoarthritis according to joints affected can be described as well as compared with spinal joint diseases reported by others (Roberts and Cox 2003). Similar research analysis could be undertaken with regards of dental disease and trauma.

6.2.14 Animal Bone

Significance

The Late Mesolithic/Early Neolithic (Period 1), Early Bronze Age (Period 2) and Early/Middle Iron Age (Period 3) produced small faunal assemblages that are of minor local significance only. The undated and unphased assemblage would only be worth analyzing further if reliable dating could be applied to phase the faunal material.

The Roman assemblages of the general Roman (Period 4), Early/Middle Roman (Period 4.1) and Late Roman (Period 4.2) periods are of regional to national significance. Analysed as a collective, these assemblages are nationally significant as they give an insight into ritual use of animal remains, and possibly indirectly husbandry exploitation, and changes over time at the site.

Although the assemblage size and preservation levels are moderate, valuable zooarchaeological data has been recorded that can be utilised for statistical analysis (NISP, MNI, MNE counts). Analysis of the species present, element representation, butchery, metrical analysis, sexual dimorphism, pathologies and age at death will give an insight into animal husbandry and exploitation practices.

The dominance of the three main domesticates changes considerably over time within the allotted Roman periods. Cattle dominate the general Roman period, sheep/goat and pig remains dominate the Early-Middle Roman period and pig remains significantly dominate the Late Roman period. Analysis of the species by element and group level may highlight changes in function of the site over time. The occurrence of associated bone group deposits has skewed the assemblage count somewhat, the presence of which requires further analysis to determine the purpose of these animal burials (Hill 1995; Morris 1998; 2008; 2011) at Red Lodge, in comparison to similar/relevant sites elsewhere in England and Europe.

The Late Roman pig associated bone group/special deposit assemblage is of particular interest and significance, the nature of these special deposits suggesting ritual practice (Groot 2008). A similar collection of pig associated bone group remains deposited in the same fashion with a scatter of coins was discovered at the nearby site of Liberty Village, RAF Lakenheath, Eriswell (Craven 2012) where several Roman porcine ABG special deposits were placed in the upper fills of a ring-ditch, with coins dating to the 2nd to early 4th Century.

Romano-British temple sites such as Chanctonbury Ring in Sussex produced large quantities of pig bones Rudling (2001) suggests that this may indicate an association with a cult of the boar. Quantities of pig bones have also been

recovered from sites at Hayling Island, Walbrook and Carrawburgh Mithraic eastern cult shrines (King 2005). Gallic temples such as Gournay-Sur-Aronde and Bennecourt show a dominance of pig remains at the inner enclosures and temple structures (King 2005) and suggests that Red Lodge may have a cultural link to Gaul. Two Roman temple sites in the Netherlands, Elst and Emple were dominated by pig bones in the late 2nd – early 3rd Century (Groot 2008). Pigs and cattle remains are dominant in military and urban sites being a staple of the Roman army diet (King 2005). The dominance of pig remains at these temple sites could suggest ritual activity by soldiers. This could suggest that the site of Red Lodge may have housed a Mithraic or other Romano-British temple possibly utilised by Roman military personnel in the Late Roman period at this site.

The limited presence of wild taxa suggests that these resources were not overly exploited and the Roman diet was not supplemented by deer, rodentia, insectivoria, birds or fish. Rabbit remains were also recovered from several Roman contexts, and include associated bone group deposits as well as single specimens. Rabbits in Roman Britain are often found to be intrusive rather than Roman in date and only a small number of sites have confirmed the presence of rabbits in Roman contexts using Carbon 14 dating as at the Roman villa at Latimer, Buckinghamshire, Lynford in Norfolk, and Beddingham Roman villa in East Sussex (Sykes and Curl 2010). Further analysis of the rabbit remains from Roman contexts may also determine whether these animals were imported directly from Europe, or were bred in Britain (ibid)

Potential

Further analysis of the Late Mesolithic-Early Neolithic (Period 1.1), Early Bronze Age (Period 2.1) and Early/Middle Iron Age (Period 3.1) assemblages is not recommended due to the limited size of these collections.

The Roman assemblages have the potential to provide valuable information for this period. The assemblages of the general Roman, early-middle Roman and later Roman periods are moderate in size, as is the state of preservation, making the faunal remains suitable for further analysis. Chronological analysis of the taxa present, both domestic and wild, can be compared to sites in the surrounding areas to highlight animal husbandry practices and identify the functions of the assemblage at Red Lodge as a consumption, production, distribution or religious site.

Radiocarbon dating of a selection of faunal remains from the ABG deposits is recommended to better date the assemblage and better relate the faunal remains to the associated finds, in particular the coins from the unusual pig special deposits from the Late Roman assemblage. In particular, a selection of the associated bone group deposits are recommended for radiocarbon dating analysis; they are secure deposits and the dating of these remains may have an impact on the interpretations of the faunal material. The rabbit remains from Roman contexts may also warrant radiocarbon analysis if their contexts are judged to be secure.

Further analysis of the associated bone group (ABG) deposits will provide an insight into their function. Those of the general Roman and Early-Middle Roman periods are quite clearly different in terms of animal selection and treatment of

the buried animal to that of the pig associated bone group deposits of the Late Roman period. Analysis of the taxa; domestic or wild, the features in which they are deposited, the completeness of each ABG and the period they are from, as well as evidence of butchery, pathologies and associated finds should give increased insight into the roles of associated bone groups at Red Lodge.

The assemblage provides a good amount of data that can be analysed to create statistical analyses including NISP, MNI and MNE counts to provide insight into the presence and absence of each species, as well as the level of abundance and relative importance. This data is of value in analysing potential chronological differences and may further highlight which elements are lacking from the assemblage, particularly with regards to evidence of butchery or consumption within the Roman religious focus.

Mammalian metrical data has the potential to identify breeds, where possible. Further analysis of palaeopathologies, sexual dimorphism and butchery data have the potential to give insight into animal husbandry practices such as breeding, kill patterns, etc. Further analysis of element distribution and element representation of the three main domesticates can highlight the functions of the site across the Roman phases. Assemblage analysis at feature and group level may give an indication as to whether it represents domestic consumption, ritual use (sacrificial offerings or ritual feasting?), or a mixture of both.

Analysis of the sex, metrical and age at death data has the potential to provide further information as to the exploitation and function of the main domesticates. This would possibly give an indication if animals were bred on site, or were transported and traded from local settlements. Analysis of the presence and absence of wild taxa would likely provide further dietary information to determine whether these resources were exploited regularly or utilised as a supplement to the main domesticates.

6.2.15 Burnt Bone

The information obtained from the small and very fragmentary assemblage of burnt bone is of little significance due to the small size of the assemblage, degree of fragmentation and lack of demographic information derived from the material. As no human or animal fragments were positively identified, the results obtained hold no potential for further study.

6.2.16 Marine Molluscs

The spot dates indicate that the preliminary dating of the 45 contexts containing marine molluscs lie within the Roman period with a chronological spread extending from the Early/Mid Roman to the Late Roman period. One context [1692] is provisionally dated to the Early Bronze Age and this comprises a right valve of oyster weighing 7g. However, this context is the basal fill of an EBA ring-ditch, which was re-cut in the Roman period. The upper fills of the re-cut ring-ditch are dated to the Late Roman period which suggests, though does not prove, that the oyster valve in context [1692] might be intrusive.

The overall small quantities of the oyster resource from Red Lodge probably reflects the inland status of this site. The Suffolk/Essex coastal area c.45-55 miles to the east contains a number of suitable estuarine areas for the existence

of oyster colonies. There is no doubt that the oyster remains from the site represent a secondary food resource and this is commonly found in Roman contexts.

While there is no potential for further analytical study of this shell assemblage, its significance within the context of the Roman religious focus is worthy of some consideration. Is this evidence of domestic consumption or perhaps of ritual feasting/offerings?

6.2.17 Registered Finds

The registered finds assemblage is relatively small and would appear at first glance to be rather typical for a rural Roman assemblage, comprising finds within the usual range of functional categories. Evidence for votive objects apart from coins is limited, but does include a distinctive leaf plaque. Other objects such as hairpins and bracelet fragments are broken, often interpreted as a ritual act of 'killing' prior to deposition, and the few fittings recovered could derive from caskets or furniture for religious use.

Given the unusual nature of many of the recorded the features, indicating the site as a focus for religious activity, the size of the metalwork assemblage is unusually small. Shrine or temple sites usually produce coins numbering in the hundreds and one might expect the range of objects to be wider. This paucity may be due to the site having been previously metal-detected, although one functional category absent from the assemblage is textile equipment, which would not have been removed in this manner as very few finds in this category would have been made of metal. Comparison with the finds from the area recorded on the Portable Antiquities Scheme database may help ascertain to what extent metal detecting has affected the recovery of finds and would be useful as a comparative dataset.

The coin assemblage not only provides TPQ dating for features but also has the potential to shed light on the nature of activity, particularly religious activity, occurring throughout the Roman phases. The application of Reecian period analysis would enable the coin profile to be analysed against local and national profiles. The reuse of prehistoric earthworks as religious foci during the Roman period is a widespread phenomenon therefore comparisons can also be made to the artefact assemblages from similar sites such as Slonk Hill (Hartridge 1978) and Money Mound (Beckensall 1913) and other more local shrine or temple sites; there may be differences in the profiles of more classically 'Romanised' religious complexes. Intra-site analysis may identify spatial or chronological patterns of deposition, elucidating the nature of site activity and how it functioned as a religious centre in the later Roman period.

Animal burial of the type recovered at Red Lodge is rarified in the published archaeological literature and the choice of coins accompanying the pig burials may be significant in terms of their association with particular deities or symbolic attributes; research into this will help to interpret the religious beliefs held by the site's occupants. It is possible that the pig burials represent the following of a 'boar cult' similar to the one postulated at Chanctonbury (Rudling 2001) where huge numbers of pig skull fragments were associated with a Roman temple imposed upon the Bronze Age hillfort. The singular nature of the

evidence for this ritual/ cult activity means that the registered finds assemblage is of regional, if not national significance.

6.2.18 Conservation

In addition to some necessary further cleaning and stabilisation, conservation has the potential to contribute to further analysis of a number of objects and material classes.

Radiography carried out on the iron objects seems to suggest evidence of a maker's mark on iron blade, RF <84>. Further radiography or cleaning of the small specific area could enable the identification of the mark.

The removal of soil and corrosion products on RF <34> revealed that, although the brooch appears to have been made in an alloy of copper, there is a clear and widespread presence of silvery metal on the surface, particularly on the front. Parallels from other sites in England suggest that these types of brooches were only produced in alloys of copper and were perhaps tinned but not made of silver. Further investigation by portable X-ray fluorescence (XRF) could identify which metal was utilised for the production of this brooch and its possible tinning. It may also reveal whether the tinning/silvering was applied by mixing it with mercury, creating an amalgam. It is also possible that the object is made from a copper alloy with a high tin content, which would lower the melting point of the alloy and give a strong shine on the finished product. This could be further investigated using Scanning Electron Microscopy (SEM).

The wall plaster was painted with at least six different pigments that range from different shades of red, yellow, green, white and purple. Scanning Electron Microscopy (SEM), would provide information about the range of pigments, with results that may allow regional or national comparisons to be made. Fourier Transform Infrared Spectroscopy (FTIR) might also reveal which organic binder was used when mixing the pigments, which could allow identification of specific decorative techniques (e.g. *fresco* vs *tempera*).

6.2.19 Environmental Samples

Significance

Period 1.1 Early Neolithic

Charred Plant Macrofossils

The large frequencies of small arable weeds within pit [1588] appear to be a by-product of sieving after winnowing (van der Veen 1992). The small assemblage from this phase of occupation may be highly significant considering the early date given to the features. It is possible that the charred plant macrofossils are intrusive from later activity and more solid scientific dating may be required to determine their significance.

Period 2.1 Early Bronze Age

The Early Bronze Age samples do not contain charred plant macrofossils or sufficient charcoal to be of significance.

Period 4.0 General Roman

Charred Plant Macrofossils

The charred plant macrofossils from the General Roman samples possibly represent a by-product of fine-sieving after winnowing due to the small nature of the arable weeds and rare cereal grains. The presence of glume wheat during this period is unsurprising as spelt (*Triticum spelta*) was the predominant cereal crop in southern England during the Roman period (Letts 1998, 27) and the grains likely derive from this variety. The arable weeds suggest the cereal crop was cultivated on nutrient-rich calcareous soils; soils of which would have been available locally on the Holywell Nodular and New Pit chalk formations.

Period 4.1 Early/ Mid Roman

Charred Plant Macrofossils

The hulled wheat and barley grains identified within the Early/ Mid Roman features are common finds in the period and the quantity is suggestive of small-scale cereal production. The large vetch/ sweet pea recovered suggests the cultivation of legumes on nitrophilous soils, indicated by the presence of fat hen amongst the arable weeds.

Period 4.2 Late Roman

Charred Plant Macrofossils

The almost complete absence of cereal remains from the Late Roman features at Red Lodge indicates the potential absence of cereal production in this period, perhaps in relation to increasing religious activity on the site. The occasional cereal grain or culm node may have been brought to the site as fuel. The large vetch/ sweet pea indicates the possible cultivation of legumes, although this may not have occurred on-site. It is likely that the wild grasses and small legumes became charred along with the fuel wood.

Charcoal

The taxa identified within the charcoal assemblage at Red Lodge indicate the exploitation of a local oak woodland as well as hedgerows and scrubland indicated by hazel and elder, although elder also grows close to areas of occupation (Schoch *et al* 1988). Yew and ash are strong ecological indicators of calcareous soils (Huntley 2010; Rodwell 1991; Polunin and Walters 1985) and would have been widely available on the local Holywell Nodular and New Pit chalk formations. Initial assessment of the charcoal from the Late Roman features appears to show a certain level of discrepancy between the taxa within the various features. Large branch or stem wood of oak is dominant in the posthole samples from the posthole building suggesting that it may be the burnt remains of the structural timbers themselves. The hazel small branch or twig wood within ring-ditch re-cut [1538] likely represents discarded fuel indicating that the occupants were exploiting hedgerows or scrubland. The small frequencies of oak, ash and elder charcoal from the pig skull burial pits may represent ritual burning activity associated with the burials. The remains of yew within adjacent pits [1418] and [1420] may represent ritualistic burning of the

wood as it has long been associated with mystery and symbolism (Uzquiano *et al* 2015, 230).

Unphased

The unphased sample does not contain charred plant macrofossils or sufficient charcoal to be of significance.

Potential

Charred Plant Macrofossils

Little data is readily available regarding early agriculture in Suffolk and the charred plant macrofossils from the Late Mesolithic/ Early Neolithic phase at Red Lodge have the potential to contribute to the dataset in southeast England. It is fundamental that secure scientific dating is required to determine if the assemblage is intrusive. Data from Early Neolithic sites in the southeast largely derives from submerged coastal sites, although comparison data is available from excavations associated with the expansion of Stansted Airport (Murphy 2004) just across the border.

The Early/Middle and General Roman samples have some potential to inform on the arable economy of the vicinity of the site and the wide variety of arable weeds may provide data on crop husbandry regimes and the cultivation environment. It would be beneficial if some of the pits could be more securely dated to the earlier or later Roman occupation and these can perhaps be compared to local sites at Soham (Vitolo 2017; Summers 2015) across the border in Cambridgeshire. The presence of this material within the enclosure of the earlier Roman religious focus requires some further consideration.

The charred plant macrofossils from the Late Roman features do not have the potential to inform on the diet or arable economy of the site due to their paucity, similarly the absence of archaeobotanical material from the Early Bronze Age and Unphased samples are uninformative.

Charcoal

The discrepancies in charcoal taxa variety across the site in the Late Roman occupation has the potential to inform on fuel selection and use. Oak may have been selected for structural timber and fuel whilst hazel, ash and elder were also exploited as fuel. Yew may have been burnt ritualistically, fitting with the ritual nature of the site. The wood taxa present contribute to reconstructing the local environment and understanding the exploitation of natural resources. Few contemporary charcoal assemblages exist in Suffolk (Medlycott 2011) to compare to Red Lodge, although a more in depth bibliographic search during analysis may provide useful comparative sites.

7.0 ANALYSIS AND PUBLICATION PROJECT

7.1 Revised Research Agenda: Aims and Objectives

7.1.1 This section combines those original research aims that the site archive has the potential to address with any new research aims identified in the assessment process by stratigraphic, finds and environmental specialists to produce a set of revised research aims that will form the basis of any future research agenda for the project. Original research aims (OR's) are referred to where there is any synthesis of subject matter to form a new set of revised research aims (RRA's) posed as questions below, in broad chronological order.

RRA1: Can the form and function of the Early Bronze Age ring-ditch be determined? Is it the remains of a barrow or an enclosure? Do the flint axes found in Roman deposits, originate from the site and perhaps relate to its earliest ritual use, or are they later imported?

RRA2: Can the nature of the Earlier Iron Age landscape and environment be discerned? In what state does the earlier ring-ditch survive in this landscape?

RRA3: Can the date and form of the earliest phase of the Roman religious focus be determined? How long does the Roman enclosure persist? Can the dating of the internal features and deposits (particularly the Period 4 general dated) be refined. When is the prehistoric ring-ditch recut?

RRA4: Is the use of the enclosure and the deposition of cultural material in its features of a wholly religious nature, or is there a domestic or agricultural aspect?

RRA5: Can the chronology, form and extent of the Building 1 shrine be refined and details of its construction and decoration be reconstructed? Are the votive 'head and hoof' pits inside or outside this structure?

RRA6: What do the various structured animal bone deposits within the religious enclosure inform regarding religious/ritual practices and belief. Can their dating be refined – potentially by scientific dating? Do these deposits differ across the enclosure or change over time and why?

RRA7: Does the temporal and spatial study of the distribution of artefacts (coins, votives and others) deriving from features and deposits within the religious enclosure inform the understanding of the nature of religious/ritual practices and belief. Do these differ across the enclosure or change over time and why? Are some seemingly mundane artefacts invested with added significance/symbolism in this religious context?

RRA8: Can the types or names of deities be inferred from the artefacts for which any particular votive significance/affiliation or symbolism can be discerned? What does this inform about the nature of religious belief and practice at this site?

RRA9: To what extent does this Roman religious site conform to perceived patterns of form, function and belief/practise identified at other rural temple / shrine sites? Is it a local cult centre rather than a Roman temple?

RRA10: Can the chronology and nature of the disuse and abandonment/demolition of the shrine and the wider religious site be determined? Is this commensurate with the infilling of the recut ring-ditch?

7.1.2 With reference to 'Research and Archaeology: a framework for the Eastern Counties, 2. Research agenda and strategy' (Brown and Glazebrook 2000) and 'Research and Archaeology Revisited: a revised framework for the East of England' (Medlycott 2011), the site data set and, specifically, the identified Revised Research Aims have the potential to contribute to the following themes and areas of research:

- The evidence for change in ritual practices …needs re-assessing in the light of recent excavations. How many religious sites (temples/shrines, *etc.*) are known from the region? (Medlycott 2011, 48)

- Structured deposition is now accepted as being a widespread phenomenon. There is however a need to classify the different forms this takes and critically interpret their meaning. (Medlycott 2011, 48)

7.3 Analysis and Final Archive reporting

The further analysis and reporting work required to produce the final archive/research report is identified below. Resources required to achieve this are subsequently summarised in Table 15.

This will include more detailed consideration of finds in relation to the features from which they derive, in order to identify and interpret depositional traits/practices indicative of function. Features and finds assemblages will also be compared to, and parallels sought from, other sites in the locality, wider region and possibly beyond.

Further work will also be undertaken to understand the site and place it in its wider archaeological and landscape context (regional and, where pertinent, national). This will include the broader geographic/topographic context.

7.3.1 Stratigraphic Method Statement

This post-excavation assessment and updated project design has established a group structure and basic landuse model for the site. It has provided a landuse led chronological framework for the analysis and reporting of the site. Review and further refinement of dating and phasing will be undertaken where possible (esp broadly dated Period 4 and undated Period 5 features and deposits), with scientific dating carried out as necessary.

After completion of specialist analysis as may be required, an integrated period-driven narrative of the site sequence will be prepared. This will draw on specialist information in order to fully address the revised research aims. The narrative will include relevant selection of period/phase plans, sections, photographs and finds illustrations.

The narrative results will then be compared with other sites in the East of England region, and beyond where appropriate, of similar characteristics and of a similar date, with the intention of enhancing understanding of the site and providing a wider landscape model for the identified periods of landuse activity.

The stratigraphic tasks are:

Task 1: Review and revision of feature dating, phasing and landuse

Task 2: Carry out research into EBA monuments and their reuse, Roman rural religious sites, structured deposition with reference to local/regional/national comparanda, Roman prone burials

Task 3: Research geographic, topographic and landscape context of the site

Task 4: Stratigraphic analysis & reporting, to include consideration of finds assemblages in relation to features, etc. Production of period-driven narrative text for final archive report.

7.3.2 Finds Method Statement

Specialist analysis reports will be prepared, requiring the following tasks:

Task 5: Flintwork

- Refitting exercise on the Early Neolithic flint from pit fills [1233] and [1139], and geological feature fill [1018]
  Identifying similarly dated assemblages from the region
- Identifying sites (in the region or further afield) with similar axe(s) to the axe from layer [1647], and identifying Roman religious / sacred sites (in the region or further afield) with polished axes
- Describing the polished axes and producing a final archive report text based on the above data as well as additional information obtained from new contextual information. Notes on how the material compares to other lithic assemblages found in the area should be added, as a small discussion on the axes

Task 6: Prehistoric Pottery

- Research and comparison with other local assemblages
- Writing of final archive report text

Task 7: Roman Pottery

- Standardise form identifications in regard to distinguishing dishes and bowls and get precise figures on the comparative numbers of coarse ware compared to fine ware examples
- Further research to find comparable sites in terms of absence of ritual vessels and the unusual prevalence of dish and bowl forms
- Identification of samian stamps
- Write final archive report text, incorporating any new stratigraphic data

Task 8: Ceramic Building Material

A specialist analysis report will be prepared, requiring the following tasks:

- Further research on Horningsea kilns in order to better date the CBM and provide some background to local industries and trade
- Further consider linkages between shrine structure CBM and material from other features, esp. from tile-lined flue [1547]
- Write final archive report text and integrate new research

Task 9: Painted Wall Plaster

A specialist analysis report will be prepared and necessitate the following tasks:

- Selection of pigments for sampling
- Research into wall paintings recovered from ritual or public buildings in the UK for comparison
- Write subsequent pigment and design implication publication report
- Write final archive report

Task 10: Geological Material

The stone has been fully listed for the archive as part of the current assessment. Some additional further work is proposed in an attempt to identify some of the stone types and their sources. The results of this will be used to update the archive report, together along with the final site phasing data. Following this some comparative work on the querns will be done on East Anglian sites to set the group in a wider context. Particular attention will be given to establishing a parallel and/or tighter chronology for the possible saddle quern and millstone fragments.

- Stone identifications (includes consultation fee for local geologist)
- Update archive with final stone ids and site phasing
- Parallels for querns/millstone

Task 11: Human Bone

An analysis report will be prepared involving the following tasks:

- Further osteometrical analysis
- Report writing/comparison with other case studies

Task 12: Animal Bone

A specialist analysis report will be prepared involving the following tasks:

- Analysis of data: NISP, MNE & MNI counts for faunal remains 1.5 days
- Analysis of Associated Bone Group deposits 2 days
- Analysis of data: metrical analyses of all faunal remains 1.5 days
- Analysis of data: statistical analyses 1 day
- Analysis of data: age data analyses 1 day
- Analysis of data: butchery 1 day
- Analysis of data: pathology 1 day

- Interpretation following C14 analysis 1 day
- Comparison with local sites 6 days
- Production of written report 4 days
- External specialist C14 analysis (c.4 selected ABGs) Fees

Task 13: Marine Molluscs

It is proposed that just two contexts: [1081]/[1647] should be targeted for a full analysis of age differentiation, distortion, levels of infestation and statistical analysis of left and right valves (already complete) for the oyster

- Analysis and reporting for final archive report

Task 14: Registered Finds

An analysis report will be prepared, requiring the following tasks:

- Coins:
  - Finalise identifications and coin list 3 days
  - Reece period analysis 3 days
  - Research and literature search 3 days
  - Write final archive report 3 days

- Other objects:
  - Research further parallels for votive objects 2 days
  - Gather and analyse PAS data 2 days
  - Catalogue and write final archive report 4 days

Task 15: Other artefact assemblages

The following assemblages are not recommended for further analytical work. Relevant information in the assessments produced for this PXA will be integrated into the site narrative.

- Post-Roman pottery
- Fired clay
- Bulk metalwork
- Metallurgical remains
- Glass
- Burnt Bone

7.3.3 Conservation Method Statement

Task 16: Conservation

The following further conservation tasks have been identified:

- Cleaning and chemical stabilisation of all copper alloy objects, coins and silver (66 objects in total), in order to prevent further decay and to assist with the overall identification and dating of the coins. Reconstruction of RF <68>.

- Further cleaning of the surfaces of the painted wall plaster is deemed necessary to remove soil and salts that could inflict physical damage to the surface and structure of the objects, as well as reveal the underlying decorative features, patterns and pigments.

- Reconstruction of the two bead fragments forming RF <87>. 0.5 days

- Further radiography and cleaning of iron knife RF <84> to allow identification of possible maker's mark on the iron blade, RF <84>. 0.5 days

- Further investigation by portable X-ray fluorescence (XRF) and scanning electron microscopy (SEM of copper alloy brooch RF <34>, which has evidence of possible tinning or silvering on the surfaces, to identify the metal used and to understand technological processes involved in its manufacture
  - Sampling 0.5 days
  - Laboratory analysis and report writing (external) 2 days

- Scanning electron microscopy (SEM) and Fourier transform infrared spectroscopy (FTIR) of painted wall plaster to identify the range of pigments and organic binders and to understand technological processes (e.g. *fresco* vs *tempera)*
  - Sampling 2 days
  - Laboratory analysis and report writing (external) 5 days

7.3.4 Environmental Samples Method Statement

Task 17: environmental analysis

Charred Plant Macrofossils

It is recommended that further work be carried out on the charred plant macrofossils from Late Mesolithic/ Early Neolithic pits [1234] and [1588] (samples <18> and <46>). It is possible that the charcoal fragments from the pits could be assessed for their potential for radiocarbon dating. General Roman pits [1022] and [1113] (samples <4> and <7>) are recommended for further work as well as the Early/ Mid Roman flot from pit [1628] (sample <57>). The results from which should be compared to the assessment results from other samples across the site to understand the distribution of archaeobotanical material. Identifications of the arable weeds should be taken as far as possible in order to inform on the arable economy. An analysis report should be produced comparing the assemblage to local contemporary sites.

- Sorting, identifications and data entry 2.5 days
- Visit to a reference collection 1 day
- Refining of identifications, quantifications and data entry 0.5 days
- Literature consultation and report production 1.5 days

Charcoal

Charcoal from pit [1420] (sample <31>) is recommended for analysis as it contains >3g of charcoal from the >4mm fraction of the heavy residue. Flots

contained frequent (***) or abundant (****) charcoal are also recommended for analysis. This includes pit [1418] (sample <30>), posthole [1450] (sample <32>), the post-pipe and post packing of posthole [1484] (samples <38> and <39>) and ring-ditch re-cut [1738] (sample <58>). These samples have the potential to inform on wood selection for fuel and timber as well as for possible ritualistic uses. One hundred fragments from each of the samples should be submitted for identification, this number is based on the minimum number of fragments principle for temperate regions proposed by Asouti and Austin (2005). A subsequent report should analyse and discuss the results and compare it with contemporary sites within the region.

- Wood charcoal IDs from 6 samples & data entry 3 days
- Literature consultation and report production 1.5 days

7.3.5 Radiocarbon dating analysis

Tasks 18 & 19: Radiocarbon dating

A number of deposits have been identified for which radiocarbon dating determination would be advantageous. The majority are Period 4 associated bone groups (ABGs), some of which are not currently sub-phased. These comprise six pig deposits ([1425, 1426, 1429, 1430, 1521, 1522]), two rabbits ([1561, 1649]), dog [1121], cow [1173] and chicken [1276]. In addition, carbonised material from Early Neolithic pits [1234] and [1588] are proposed.

- Selection of suitable samples from the ABGs
- Packing and dispatch of samples
- Radiocarbon dating of approx. 8 samples (external: SUERC) selected from:
    - Cow in pit [1174]
    - Rabbit in layer [1649], OR in ditch fill [1561]
    - Human skelly [1142]
    - Dog in [1121]
    - Cock in [1276]
    - Pigs – select 2 or 3 of: [1425, 1426, 1429, 1430, 1521, 1522]
    - Flue [1547]
    - Shrine structure – perhaps 1 construction and 1 disuse/destruction?
    - Early Neolithic pits [1234] and [1588]

7.3.6 Graphics method statement

Tasks 20 & 21: Stratigraphic drawings
Figure illustrations prepared for the PXA will be reviewed and revised, and additional detailed plans produced for inclusion in the final archive report.

- Review/revision of land use and phase plans. Selection of accompanying photo images. 1 day
- Production of report graphics/maps/plans/sections 3 days

Task 22: Artefact drawings
Selected finds drawings to be produced for inclusion in the archive report.

- Worked flint – 6 pieces
- Prehistoric pottery – *c.* 5 Neolithic sherds
- Roman pottery – 30 sherds
- CBM – max. 5 tile photos
- Wall plaster - photos?

- Worked stone – 2 frags
- RFs - Illustration of c25-30 objects is required
- Animal bone – photos?
- Finds drawing production

Total: 8 days

7.4 Publication report production

7.4.1 Preliminary Publication Synopsis

It is suggested that the results of the excavation should be published in an article to be published in *Britannia*. The article would summarise the results of the excavation, drawing upon the content of the final archive report analyses and focussing on the Early Bronze Age and Roman ritual use of the site, and would seek to address the themes stated in the revised research agenda above (7.1).

The article would be presented using the following suggested structure:

- Introduction
- Natural geology, topography and environment
- Early Bronze Age ring-ditch
- Roman religious site
- Specialist sections
- Discussion and conclusions
- Bibliography

7.4.2 Tasks for publication

Publication texts will be drawn from the analyses for the final archive report. The following tasks comprise both production of texts and selection/preparation for report figure production.

Task 32: stratigraphic reporting

- Write draft stratigraphic text, including site description and discussion, etc.

5 days

Task 33: Worked flint

- Describing the polished axes and producing a final report text based on the above data as well as additional information obtained from new contextual information. Notes on how the material compares to other lithic assemblages found in the area to be added, as a small discussion on the axes

Task 34: Prehistoric pottery

A brief publication report will be prepared on the Early Neolithic assemblage. The Beaker and Iron Age assemblages are less significant and can be excluded from further specialist reporting. It is recommended that a few sentences should be added to the stratigraphic narratives summarising the ceramic evidence form these periods. The Early Neolithic pottery report will be largely based on the above text but will include some further reading and comparison with other local assemblages

- Write publication report text

- Selection of illustrations 0.5 days

Task 35: Roman pottery

- Production of publication report text
- Selection of illustrations 4.0 days

Task 36: CBM

- Production of publication report text
- Selection of illustrations 1.5 days

Task 37: Wall plaster

- Production of publication report text
- Selection of illustrations/photos 2 days

Task 38: Worked stone

- Production of publication report text
- Selection of illustrations/photos 0.5 days

Task 39: Human bone

- Production of publication report text 0.5 days

Task 40: Animal bone

- Production of publication report text 4 days

Task 41: Registered finds

- Production of publication report text
- Selection of illustrations/photos 4.5 days

Task 42: Other misc. finds

- Production of summary publication report text and/or integration of PXA text 0.5 days

Task 43: Environmental

- Production of publication report text & tables (for plant macro and charcoal) 2 days

Task 44: Plan & section figures

- Approx. 10 plan and section figures to be produced for publication, most adapted from final archive report drawings. 3 days

Task 45: Finds figures for publication

Much of the basic drawing work will have been done for the final archive report. Publication selection to be made, paging-up, etc.

- Worked flint – 6 pieces
- Prehistoric pottery – c. 5 Neolithic sherds
- Roman pottery – 30 sherds
- CBM – max. 5 tile photos
- Wall plaster - photos?
- Worked stone – 2 frags

- RFs - Illustration of c25-30 objects is required
- Animal bone – photos? 5 days

Task	Description of task	Days	Staff
Stratigraphic analysis tasks			
1	Review & revision of dating, phasing, landuse	4	AF
2	Research EBA monuments, Roman rural religious sites, structured deposition, prone burials	5	AF
3	Research geographic/topographic/landscape context	2	AF
4	Stratigraphic analysis & reporting, inc. consideration of finds assemblages in relation to features, etc. Produce narrative text.	10	AF
Finds analysis tasks			
5	Worked & burnt flint, inc. research on axe origins & distrib	6	KH
6	Prehistoric pottery – analysis, research, cataloguing and reporting	2	AD
7	Roman pottery – analysis, research, cataloguing and reporting	5	IBW
8	CBM - analysis, research, cataloguing and reporting	3	IBW
9	Painted wall plaster - analysis, research, cataloguing and reporting	4.5	IBW
	Painted wall plaster – external specialist	Fee	
10	Geological material – Research and reporting	1.5	LB
11	Human skeletal remains – analysis, data input, research, reporting	1.5	PP
12	Animal bone – analysis, research and reporting	20	HFM
13	Marine molluscs – analysis and reporting	0.5	DD
14	Registered finds – coins - analysis, cataloguing and reporting	12	TC
	Registered finds – other RFs - analysis, cataloguing and reporting	7	TC
15	Other Misc finds reporting	1	var
Conservation tasks			
16	Conservation – in-house	4	EB
	Conservation – SEM FITR analysis - external specialist	7	-
Environmental analysis tasks			
17	Charred plant macrofossil - analysis, research and reporting	5	MV
	Charcoal - analysis, research and reporting	4.5	MV
Radiocarbon dating			
18	Selection, prep & dispatch of samples	1	var
19	Radiocarbon dating of approx. 8 samples	Fee	SUERC
Graphics tasks			
20	Review/revise land-use and period plans & select photos	1	AF
21	Produce report graphics, maps, plans and sections	3	AL
22	Finds illustration	8	JR
23	Checking of report graphics (maps, plans and sections, finds)	0.5	AF
Final archive reporting tasks			
24	Collate strat and finds/enviro texts & figures	1	AF
25	Checking/editing specialist reports & assimilate info into strat rep	2	AF
26	Write final discussion & conclusion texts	2	AF
27	Copy edit of collated final archive report	2	MA
28	Amendments following copy edit	1	AF
Archiving			
29	Collation & checking of site and research archive	1	AF
30	Prep & ordering of archive to CCC standards	1	tba
31	Archive deposition at county depository	0.5	tba
Publication report production – *Britannia* article			
32	Write draft strat text, inc discussion, etc.	5	AF
33	Worked flint text	0.5	KH
34	Prehistoric pottery text	0.5	AD
35	Roman pottery text	4	IBW
36	CBM text	1.5	IBW
37	Painted plaster text	2	IBW
38	Worked stone text	0.5	LB
39	Human bone	0.5	PP
40	Animal bone	4	HFM
41	Registered finds	4.5	TC

42	Other misc. finds	0.5	var
43	Environmental	2	MV
44	Selection & production of site plan & section figures	3	AL
45	Selection & production of finds figures	5	JR
46	Collate & check article	1	AF
47	Copy edit of publication text, to journal guidelines	1	MA
48	Corrections following copy edit, & issue to journal editor	1	AF
Project management tasks			
49	General project management	2	MA
50	Proof reading and editing	2	MA/AF
51	Print page costs	Fee	

Table 23: Summary of tasks for analysis phase

MA = Mark Atkinson (Project Manager, ASE)

AF = Angus Forshaw (Project Archaeologist, ASE)

DD = David Dunkin (External specialist, matine molluscs)

EB = Elena Baldi (Conservator, ASE)

LB = Luke Barber (External specialist, geological material)

TC = Trista Clifford (Registered finds specialist, ASE)

AD = Anna Doherty (Pottery specialist, ASE)

IBW = Isa Benedetti-Whitton (Pottery specialist, ASE)

KH = Karine Le Hegarat (Lithics specialist, ASE)

AL = Andrew Lewsey (Graphics, ASE)

HFM = Hayley Forsyth-Magee (Animal bone specialist, ASE)

PP = Paola Ponce (Human bone specialist, ASE)

JR = Justin Russell (Graphics, ASE)

MV = Mariangela Vitolo (Environmental specialist, ASE)

var = various ASE staff

7.5 Programme

7.5.1 The Final Archive report will be completed within 18 months of the approval of the PXA and UPD by SCCAS.

7.5.2 The publication article draft will be completed within 9 months of the completion and submission of the Final Archive report.

7.6 Artefacts and Archive Deposition

7.6.1 The site archive is currently held at the offices of ASE. Following completion of all post-excavation work, including any publication work, the site archive will be deposited with the Suffolk County Council archaeological depository at Bury St Edmunds.

7.6.2 Table 24 quantifies the contents of the site archive.

Type	Description	Eval. Quantity	Excav. Quantity
Context sheets	Individual context sheets	74	748
Section sheets	A2 drawing film sheets 1:10 A3 drawing film sheets 1:10 A4 drawing film sheets 1:10	2 0 3	15 7 62
Trench sheets	Eval trench description sheets	55	n/a
Photographs	Digital images	236	1081
Environmental sample sheets	Individual sample sheets	4	61
Context register	Context register sheets	n/a	23
Environmental sample register	Environmental sample register sheets	1	4
Photographic register	Photograph register sheets	6	32
Drawing register	Section and plan register sheets	1	7
Small finds register	Small finds register sheets	1	1

Table 24: Site archive quantification

7.6.3 The artefactual and environmental archive currently comprises 40 boxes, prior to rationalisation.

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Appendix 1: Context Register

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1001	Layer	Ploughsoil		1		
1002	Layer	Natural		2		
1003	Fill	Fill, single	1004	3	20	1
1004	Cut	Pit	1004	3	20	1
1005	Fill	Fill, single	1005	4	20	1
1006	Fill	Fill, single	1007	5	23	1
1007	Cut	Pit	1007	5	23	1
1008	Fill	Fill, single	1009	6	23	1
1009	Cut	Pit	1009	6	23	1
1010	Fill	Fill, single	1011	7	26	1
1011	Cut	Pit	1011	7	26	1
1012	Cut	Posthole	1012	8	16	5
1013	Fill	Fill, single	1012	8	16	5
1014	Cut	Posthole	1014	9	16	5
1015	Fill	Fill, single	1014	9	16	5
1016	Cut	Posthole	1016	10	16	5
1017	Fill	Fill, single	1016	10	16	5
1018	Fill	Fill, upper	1020	11	20	1
1019	Fill	Fill, basal	1020	12	20	1
1020	Cut	Geological feature	1020	12	20	1
1021	Fill	Fill, single	1022	13	24	4
1022	Cut	Pit	1022	13	24	4
1023	Fill	Fill, single	1024	14	2	4.1
1024	Cut	Ditch, boundary	1024	15	2	4.1
1025	Fill	Fill, single	1026	16	13	4.1
1026	Cut	Posthole	1026	16	13	4.1
1027	Fill	Fill, single	1028	17	13	4.1
1028	Cut	Posthole	1028	17	13	4.1
1029	Fill	Post-pipe	1030	18	13	4.1
1030	Cut	Posthole	1030	19	13	4.1
1031	Fill	Fill, single	1032	103	13	4.1
1032	Cut	Posthole	1032	103	13	4.1
1033	Fill	Fill, single	1034	20	13	4.1
1034	Cut	Posthole	1034	20	13	4.1
1035	Fill	Fill, single	1036	21	13	4.1
1036	Cut	Posthole	1036	21	13	4.1
1037	Fill	Fill, single	1038	22	13	4.1
1038	Cut	Posthole	1038	22	13	4.1
1039	Fill	Fill, single	1040	23	13	4.1
1040	Cut	Posthole	1040	23	13	4.1

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1041	Fill	Fill, single	1042	24	13	4.1
1042	Cut	Posthole	1042	24	13	4.1
1043	Fill	Fill, single	1044	25	30	4.1
1044	Cut	Pit	1044	25	30	4.1
1045	Fill	Fill				4
1046	Cut	Ditch, ring	1046	212	12	4.2
1047	Fill	Fill, single	1048	26	30	5
1048	Cut	Pit	1048	26	30	5
1049	Fill	Fill, single	1050	27	30	5
1050	Cut	Pit	1050	27	30	5
1051	Fill	Fill, single	1052	28		5
1052	Cut	Posthole	1052	28		5
1053	Fill	Fill, single	1054	29	16	5
1054	Cut	Pit	1054	29	16	5
1055	Fill	Fill	1030	18	13	4.1
1056	Fill	Fill, single	1057	30	16	5
1057	Cut	Posthole	1057	30	16	5
1058	Fill	Fill, single	1059	31	1	4.1
1059	Cut	Ditch, boundary	1059	32	1	4.1
1060	Fill	Fill, upper	1063	33	14	4.1
1061	Fill	Fill	1063	33	14	4.1
1062	Fill	Fill	1063	33	14	4.1
1063	Cut	Well	1063	34	14	4.1
1064	Fill	Fill, single	1065	104	16	5
1065	Cut	Posthole	1065	104	16	5
1066	Fill	Fill, single	1067	35	22	4.2
1067	Cut	Pit	1067	35	22	4.2
1068	Fill	Fill, single	1069	36	16	5
1069	Cut	Posthole	1069	36	16	5
1070	Fill	Fill, single	1071	37	1	4.1
1071	Cut	Ditch terminus	1071	38	1	4.1
1072	Fill	Fill, single	1074	105	2	4.1
1073	Fill	Fill, single	1076	39	3	4.2
1074	Cut	Ditch, boundary	1074	106	2	4.1
1075	Fill	Fill, single	1077	107	3	4.2
1076	Cut	Ditch, boundary	1076	40	3	4.2
1077	Cut	Ditch, boundary	1077	108	3	4.2
1078	Cut	Posthole	1078	41	32	4
1079	Fill	Fill, basal	1078	41	32	4
1080	Fill	Fill, upper	1078	42	32	4
1081	Fill	Fill, secondary	1082	43	15	4.1
1082	Cut	Pit	1082	44	15	4.1

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1083	Fill	Fill, single	1084	45	23	1
1084	Cut	Pit	1084	45	23	1
1085	Fill	Fill, basal	1082	44	15	4.1
1086	Cut	Pit	1086	46	17	4
1087	Fill	Fill, single	1086	46	17	4
1088	Fill	Fill, single	1089	47	2	4.1
1089	Cut	Ditch, boundary	1089	48	2	4.1
1090	Fill	Fill, single	1091	109	3	4.2
1091	Cut	Ditch, boundary	1091	110	3	4.2
1092	Fill	Fill, upper	1094	49	29	4
1093	Fill	Fill, secondary	1094	50	29	4
1094	Cut	Geological feature	1094	50	29	4
1095	Fill	Fill, single	1096	51	17	4
1096	Cut	Hollow	1096	51	17	4
1097	Fill	Fill, single	1098	52	15	4.1
1098	Cut	Pit	1098	52	15	4.1
1099	Fill	Fill, single	1100	53	17	4
1100	Cut	Pit	1100	53	17	4
1101	Fill	Fill, single	1102	54	27	4
1102	Cut	Pit	1102	54	27	4
1103	Fill	Fill, single	1104	55	27	4
1104	Cut	Pit	1104	55	27	4
1105	Fill	Fill, single	1106	56	17	4
1106	Cut	Pit	1106	56	17	4
1107	Fill	Fill, single	1108	57	17	4
1108	Cut	Geological feature	1108	57	17	4
1109	Fill	Fill	1110	58	21	4
1110	Cut	Geological feature	1110	59	21	4
1111	Fill	Fill	1063	33	14	4.1
1112	Fill	Fill, single	1113	60	24	4
1113	Cut	Pit	1113	60	24	4
1114	Fill	Fill, primary	1110	59	21	4
1115	Fill	Fill, single	1116	61	21	4
1116	Cut	Geological feature	1116	61	21	4
1117	Fill	Fill, single	1118	62	24	4
1118	Cut	Pit	1118	62	24	4
1119	Fill	Fill, upper	1122	63	18	4.1
1120	Fill	Fill, secondary	1122	63	18	4.1
1121	Fill	Fill, primary	1122	64	18	4.1
1122	Cut	Pit	1122	64	18	4.1
1123	Fill	Fill, single	1124	65	17	4
1124	Cut	Geological feature	1124	65	17	4

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1125	Cut	Pit	1125	66	24	4
1126	Fill	Fill, single	1125	66	24	4
1127	Fill	Fill, single	1128	67	2	4.1
1128	Cut	Ditch, boundary	1128	68	2	4.1
1129	Fill	Fill, single	1130	111	4	4.1
1130	Cut	Ditch, boundary	1130	112	4	4.1
1131	Cut	Pit	1131	69	32	4
1132	Fill	Fill, single	1131	69	32	4
1133	Fill	Fill	1134	70	21	4
1134	Cut	Geological feature	1134	70	21	4
1135	Fill	Fill, single	1136	71	3	4.2
1136	Cut	Ditch, boundary	1136	72	3	4.2
1137	Fill	Fill, single	1138	113	2	4.1
1138	Cut	Ditch, boundary	1138	114	2	4.1
1139	Fill	Fill, single	1140	73	64	1
1140	Cut	Pit	1140	74	64	1
1141	Fill	Fill	1143	115	3	4.2
1142	Skeleton	Inhumation, extended	1143	115	3	4.2
1143	Cut	Grave cut (nominal)	1143	115	3	4.2
1144	Fill	Fill, single	1145	75	38	4
1145	Cut	Pit	1145	75	38	4
1146	Fill	Fill, single	1147	76	38	4
1147	Cut	Pit	1147	76	38	4
1148	Fill	Fill, upper	1150	77	4	4.1
1149	Fill	Fill, basal	1150	77	4	4.1
1150	Cut	Ditch	1150	78	4	4.1
1151	Fill	Fill, single	1152	79	32	4
1152	Cut	Posthole	1152	79	32	4
1153	Fill	Fill, single	1154	80	31	
1154	Cut	Pit	1154	81	31	
1155	Fill	Fill, single	1156	82	4	4.1
1156	Cut	Ditch	1156	83	4	4.1
1157	Fill	Fill, single	1158	116	3	4.2
1158	Cut	Ditch, boundary	1158	117	3	4.2
1159	Fill	Fill, single	1160	84	2	4.1
1160	Cut	Ditch, boundary	1160	85	2	4.1
1161	Fill	Fill, single	1162	118	4	4.1
1162	Cut	Ditch, boundary	1162	119	4	4.1
1163	Fill	Fill, single	1164	86	38	4
1164	Cut	Pit	1164	86	38	4
1165	Fill	Fill, single	1166	87	38	4
1166	Cut	Pit	1166	87	38	4

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1167	Fill	Fill, single	1168	88	38	4
1168	Cut	Posthole	1168	88	38	4
1169	Fill	Fill, single	1162	89	4	4.1
1170	Void					
1171	Fill	Fill, single	1172	120	64	1
1172	Cut	Pit	1172	121	64	1
1173	Fill	Backfill	1174	91	19	4
1174	Cut	Grave cut	1174	91	19	4
1175	Fill	Fill, single	1176	92	16	4
1176	Cut	Posthole	1176	92	16	4
1177	Fill	Fill/cleaning layer	1326	204	34	4.2
1178	Fill	Fill, single	1179	93	50	2
1179	Cut	Pit	1179	93	50	2
1180	Fill	Fill, single	1181	94	50	2
1181	Cut	Pit	1181	94	50	2
1182	Fill	Fill, single	1183	95	46	4
1183	Cut	Pit	1183	99	46	4
1184	Fill	Fill, single	1185	96	46	4
1185	Cut	Pit	1185	96	46	4
1186	Fill	Fill, secondary	1188	97	5	4.1
1187	Fill	Fill, primary	1188	98	5	4.1
1188	Cut	Ditch, boundary	1188	98	5	4.1
1189	Fill	Fill, primary	1183	99	46	4
1190	Fill	Fill, primary	1191	100	2	4.1
1191	Cut	Ditch, boundary	1191	101	2	4.1
1192	Fill	Fill, single	1193	122	5	4.1
1193	Cut	Ditch, boundary	1193	123	5	4.1
1194	Fill	Fill, single	1195	102	36	1
1195	Cut	Pit	1195	102	36	1
1196	Fill	Fill, single	1197	124	3	4.2
1197	Cut	Ditch, boundary	1197	125	3	4.2
1198	Fill	Fill, single	1199	126	5	4.1
1199	Cut	Ditch, boundary	1199	127	5	4.1
1200	Fill	Fill, single	1201	128	5	4.1
1201	Cut	Ditch, boundary	1201	129	5	4.1
1202	Fill	Fill, single	1203	130	36	1
1203	Cut	Pit	1203	130	36	1
1204	Fill	Fill, upper	1206	131	36	1
1205	Fill	Fill, basal	1206	131	36	1
1206	Cut	Pit	1206	132	36	1
1207	Fill	Fill, upper	1209	133	36	1
1208	Fill	Fill, basal	1209	133	36	1

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1209	Cut	Pit	1209	134	36	1
1210	Fill	Fill, single	1211	135	36	1
1211	Cut	Pit	1211	135	36	1
1212	Fill	Fill, upper			12	4.2
1213	Fill	Fill, single	1214	136	5	4.1
1214	Cut	Pit	1214	136	72	4.1
1215	Fill	Fill, single	1216	137	5	4.1
1216	Cut	Ditch	1216	138	5	4.1
1217	Fill	Fill	1218	139	36	1
1218	Cut	Pit	1218	139	36	1
1219	Fill	Fill	1218	140	36	1
1220	Fill	Fill, upper	1218	140	36	1
1221	Deposit	Fill				
1222	Fill	Fill, single	1223	141	54	1
1223	Cut	Pit	1223	141	54	1
1224	Fill	Fill, single	1225	142	36	1
1225	Cut	Posthole	1225	142	36	1
1226	Fill	Fill, single	1227	143	36	1
1227	Cut	Pit	1227	143	36	1
1228	Fill	Fill, upper	1230	144	54	1
1229	Fill	Fill	1230	144	54	1
1230	Cut	Pit	1230	145	54	1
1231	Fill	Fill, single	1232	146	54	1
1232	Cut	Tree throw	1232	146	54	1
1233	Fill	Fill, single	1234	147	42	1
1234	Cut	Pit	1234	147	42	1
1235	Cut	Pit	1235	148	54	1
1236	Fill	Fill, upper	1235	149	54	1
1237	Fill	Fill, basal	1235	148	54	1
1238	Fill	Fill, single	1239	150	39	4
1239	Cut	Posthole	1239	150	39	4
1240	Fill	Fill, single	1241	151	39	4
1241	Cut	Posthole	1241	151	39	4
1242	Fill	Fill, single	1243	152	36	1
1243	Cut	Pit	1243	152	36	1
1244	Cut	Pit	1244	153	45	4.1
1245	Fill	Fill, upper	1244	154	45	4.1
1246	Fill	Fill, secondary	1244	154	45	4.1
1247	Fill	Fill, single	1248	155	39	4
1248	Cut	Posthole	1248	155	39	4
1249	Fill	Fill, single	1250	156	39	4
1250	Cut	Posthole	1250	156	39	4

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1251	Fill	Fill, single	1252	157	39	4
1252	Cut	Posthole	1252	157	39	4
1253	Fill	Fill, single	1254	158	39	4
1254	Cut	Posthole	1254	158	39	4
1255	Fill	Fill, single	1256	159	39	4
1256	Cut	Posthole	1256	159	39	4
1257	Fill	Fill, basal	1244	153	45	4.1
1258	Fill	Fill, basal	1259	160	34	4.2
1259	Cut	Pit	1259	160	34	4.2
1260	Fill	Fill, basal	1262	161	35	4.2
1261	Fill	Fill, upper	1262	162	35	4.2
1262	Cut	Pit, quarry	1262	161	35	4.2
1263	Fill	Fill, single	1264	163	39	4
1264	Cut	Posthole	1264	163	39	4
1265	Fill	Fill, upper	1626	164	12	4.2
1266	Fill	Fill, basal	1626	165	12	4.2
1267	Fill	Fill, primary	1268	166	11	2
1268	Cut	Ditch, ring	1268	166	11	2
1269	Fill	Fill, upper	1678	167	12	4.2
1270	Fill	Fill, basal	1678	168	12	4.2
1271	Fill	Fill, secondary	1273	169	11	2
1272	Fill	Fill, primary	1273	170	11	2
1273	Cut	Ditch, ring	1273	170	11	2
1274	Fill	Fill, single	1275	171	40	4
1275	Cut	Posthole	1275	171	40	4
1276	Cut	Ditch, ring	1276	172	11	2
1277	Fill	Fill, upper	1700	173	12	4.2
1278	Fill	Fill, upper	1046	174	12	4.2
1279	Fill	Fill, secondary	1046	175	12	4.2
1280	Fill	Fill, primary	1281	176	11	2
1281	Cut	Ditch, ring	1281	176	11	2
1282	Fill	Fill, single	1283	177	42	1
1283	Cut	Pit	1283	177	42	1
1284	Fill	Fill, secondary	1286	178	11	2
1285	Fill	Fill, primary	1286	179	11	2
1286	Cut	Ditch, ring	1286	179	11	2
1287	Fill	Fill	1700	180	12	4.2
1288	Fill	Fill, upper	1259	181	34	4.2
1289	Deposit	Fill	1262	182	35	4.2
1290	Fill	Fill	1618	183	12	4.2
1291	Fill	Fill	1748	184	12	4.2
1292	Fill	Fill	1748	185	12	4.2

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1293	Fill	Fill, basal	1294	186	11	2
1294	Cut	Ditch, ring	1294	186	11	2
1295	Fill	Layer / spread	1295	187	47	4.1
1296	Fill	Fill, single	1297	188	55	4
1297	Cut	Posthole	1297	188	55	4
1298	Fill	Fill, upper	1300	189	35	4.2
1299	Fill	Fill, basal	1300	190	35	4.2
1300	Cut	Pit, quarry	1300	190	35	4.2
1301	Fill	Fill	1276	191	11	2
1302	Deposit	Fill	1302	192	62	4.2
1303	Fill	Fill, upper	1303	193	43	4.2
1304	Fill	Fill, single	1305	194	41	4
1305	Cut	Posthole	1305	194	41	4
1306	Fill	Fill, single	1307	195	41	4
1307	Cut	Posthole	1307	195	41	4
1308	Fill	Fill, single	1309	196	41	4
1309	Cut	Posthole	1309	196	41	4
1310	Fill	Fill, single	1311	197	41	4
1311	Cut	Posthole	1311	197	41	4
1312	Fill	Fill, single	1313	198	41	4
1313	Cut	Posthole	1313	198	41	4
1314	Fill	Fill, single	1315	199	41	4
1315	Cut	Posthole	1315	199	41	4
1316	Fill	Fill, single	1317	200	55	4
1317	Cut	Posthole	1317	200	55	4
1318	Fill	Fill, single	1319	201	55	4
1319	Cut	Posthole	1319	201	55	4
1320	Fill	Fill, single	1321	202	55	4
1321	Cut	Posthole	1321	202	55	4
1322	Fill	Fill, single	1323	203	55	4
1323	Cut	Posthole	1323	203	55	4
1324	Fill	Fill, upper	1326	204	34	4.2
1325	Fill	Fill, basal	1326	205	34	4.2
1326	Cut	Pit	1326	205	34	4.2
1327	Fill	Fill, secondary	1276	191	11	2
1328	Fill	Fill, basal	1276	172	11	2
1329	Deposit	Layer / spread	1329	206	47	4.2
1330	Deposit	Layer / spread	1330	206	47	4.2
1331	Fill	Fill, single	1332	207	55	4
1332	Cut	Posthole	1332	207	55	4
1333	Fill	Fill, single	1334	208	55	4
1334	Cut	Posthole	1334	208	55	4

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1335	Fill	Fill, single	1336	209	55	4
1336	Cut	Posthole	1336	209	55	4
1337	Fill	Fill, single	1338	210	55	4
1338	Cut	Posthole	1338	210	55	4
1339	Fill	Fill, single	1340	211	55	4
1340	Cut	Posthole	1340	211	55	4
1341	Fill	Fill, secondary	1343	213	55	4
1342	Fill	Fill, primary	1343	214	55	4
1343	Cut	Pit	1343	214	55	4
1344	Fill	Fill, single	1345	215	55	4
1345	Cut	Pit	1345	215	55	4
1346	Cut	Pit	1346	216	44	4.1
1347	Fill	Fill, single	1346	217	44	4.1
1348	Cut	Posthole	1348	218	44	4.1
1349	Fill	Fill, single	1348	218	44	4.1
1350	Layer	Remnant topsoil	1350	219	25	4.2
1351	Layer	Sealing deposit	1351	220	25	4.2
1352	Fill	Fill, single	1353	221	9	4.1
1353	Cut	Ditch	1353	222	9	4.1
1354	Cut	Posthole	1354	223	9	4.1
1355	Cut	Ditch	1355	224	9	4.1
1356	Fill	Fill, single	1355	225	9	4.1
1357	Fill	Fill, upper	1369	226	63	4.2
1358	Fill	Fill	1369	227	63	4.2
1359	Fill	Fill, upper	1701	228	12	4.2
1360	Fill	Fill, secondary	1701	229	12	4.2
1361	Fill	Fill, primary	1362	230	11	2
1362	Cut	Ditch, ring	1362	230	11	2
1363	Fill	Fill, single	1364	231	40	4
1364	Cut	Posthole	1364	231	40	4
1365	Fill	Fill, single	1366	232	40	4
1366	Cut	Posthole	1366	232	40	4
1367	Fill	Fill, single	1368	233	40	4
1368	Cut	Posthole	1368	233	40	4
1369	Cut	Pit	1369	234	63	4.2
1370	Fill	Fill, single	1371	235	9	4.1
1371	Cut	Ditch	1371	236	9	4.1
1372	Fill	Fill, single	1373	237	37	4.1
1373	Cut	Posthole	1373	237	37	4.1
1374	Fill	Fill, single	1375	238	37	4.1
1375	Cut	Posthole	1375	238	37	4.1
1376	Fill	Fill, single	1377	239	37	4.1

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1377	Cut	Posthole	1377	239	37	4.1
1378	Cut	Pit	1378	240	44	4.1
1379	Fill	Fill, upper	1378	241	44	4.1
1380	Fill	Fill, basal	1378	240	44	4.1
1381	Fill	Fill, single	1382	242	40	4
1382	Cut	Posthole	1382	242	40	4
1383	Cut	Ditch, ring	1383	243	11	2
1384	Fill	Fill, primary	1383	243	11	2
1385	Fill	Fill, secondary	1747	244	12	4.2
1386	Fill	Fill, upper	1747	245	12	4.2
1387	Cut	Posthole	1387	246	43	4.2
1388	Fill	Fill, single	1387	246	43	4.2
1389	Layer		1389	247	43	4.2
1390	Cut	Pit	1390	248	43	4.2
1391	Fill	Fill, single	1390	249	43	4.2
1392	Cut	Pit	1392	250	44	4.1
1393	Fill	Fill, single	1392	250	44	4.1
1394	Cut	Pit	1394	251	44	4.1
1395	Fill	Fill, single	1394	251	44	4.1
1396	Cut	Posthole	1396	252	44	4.1
1397	Fill	Fill, single	1396	252	44	4.1
1398	Fill	Fill, single	1399	253	55	4
1399	Cut	Posthole	1399	253	55	4
1400	Fill	Fill, single	1401	254	55	4
1401	Cut	Posthole	1401	254	55	4
1402	Fill	Fill, single	1403	255	55	4
1403	Cut	Posthole	1403	255	55	4
1404	Fill	Fill, single	1405	256	55	4
1405	Cut	Posthole	1405	256	55	4
1406	Deposit	Destruction debris	1470	257	62	4.2
1407	Cut	Posthole	1407	258	43	4.2
1408	Fill	Fill, single	1407	259	43	4.2
1409	Fill	Fill, single	1410	260	55	4
1410	Cut	Posthole	1410	260	55	4
1411	Fill	Fill, single	1412	261	37	4.1
1412	Cut	Posthole	1412	261	37	4.1
1413	Fill	Fill, single	1414	262	37	4.1
1414	Cut	Posthole	1414	262	37	4.1
1415	Fill	Fill	1416	263	58	4.2
1416	Cut	Pit	1416	264	58	4.2
1417	Fill	Fill	1418	265	58	4.2
1418	Cut	Pit	1418	266	58	4.2

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1419	Fill	Fill	1420	267	58	4.2
1420	Cut	Pit	1420	268	58	4.2
1421	Layer	Destruction debris	1421	269	25	4.2
1422	Fill	Fill, single	1423	270	55	4
1423	Cut	Posthole	1423	270	55	4
1424	Fill	Fill	1427	271	59	4.2
1425	Skeleton	Skeleton - animal	1427	272	59	4.2
1426	Skeleton	Skeleton - animal	1427	273	59	4.2
1427	Cut	Pit	1427	274	59	4.2
1428	Fill	Fill	1431	275	59	4.2
1429	Skeleton	Skeleton - animal	1431	276	59	4.2
1430	Skeleton	Skeleton - animal	1431	277	59	4.2
1431	Cut	Pit	1431	278	59	4.2
1432	Deposit	Geological feature	1432	279	33	5
1433	Fill	Fill, single	1434	280	9	4.1
1434	Cut	Gully	1434	281	9	4.1
1435	Cut	Posthole	1435	282	37	4.1
1436	Fill	Fill, single	1435	282	37	4.1
1437	Cut	Ditch, ring	1437	283	11	2
1438	Fill	Fill, basal	1437	283	11	2
1439	Fill	Fill	1437	284	11	2
1440	Fill	Fill	1437	284	11	2
1441	Fill	Fill	1704	285	12	4.2
1442	Fill	Fill	1704	286	12	4.2
1443	Fill	Fill, single	1444	287	9	4.1
1444	Cut	Gully	1444	288	9	4.1
1445	Cut	Posthole	1445	289	37	4.1
1446	Fill	Fill, single	1445	289	37	4.1
1447	Fill	Fill, single	1448	290	10	4.2
1448	Cut	Pit	1448	291	10	4.2
1449	Fill	Fill, single	1450	292	10	4.2
1450	Cut	Posthole	1450	293	10	4.2
1451	Fill	Fill, single	1452	294	53	4.2
1452	Cut	Pit	1452	295	53	4.2
1453	Fill	Fill, single	1454	296	6	4.1
1454	Cut	Gully	1454	297	6	4.1
1455	Fill	Fill, single	1456	298	6	4.1
1456	Cut	Gully	1456	299	6	4.1
1457	Fill	Fill, single	1458	300	54	1
1458	Cut	Pit	1458	301	54	1
1459	Fill	Fill, single	1460	302	54	1
1460	Cut	Pit	1460	303	54	1

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1461	Layer	Destruction debris	1461	304	25	4.2
1462	Fill	Fill, single	1463	305	10	4.2
1463	Cut	Posthole	1463	306	10	4.2
1464	Fill	Fill, single	1465	307	6	4.1
1465	Cut	Gully terminus	1465	308	6	4.1
1466	Cut	Posthole	1466	309	55	4
1467	Fill	Fill, single	1466	309	55	4
1468	Cut	Pit	1468	310	54	1
1469	Fill	Fill, single	1468	311	54	1
1470	Cut	Hollow	1470	312	62	4.2
1471	Fill	Fill, primary	1470	312	62	4.2
1472	Fill	Fill, secondary	1470	313	62	4.2
1473	Fill	Fill, primary	1470	313	62	4.2
1474	Cut	Pit	1474	314	53	4.2
1475	Fill	Fill, single	1474	315	53	4.2
1476	Cut	Gully	1476	316	6	4.1
1477	Fill	Fill, single	1476	317	6	4.1
1478	Cut	Posthole	1478	318	55	4
1479	Fill	Fill, single	1478	318	55	4
1480	Cut	Posthole	1480	319	55	4
1481	Fill	Fill, single	1480	319	55	4
1482	Fill	Post-pipe	1484	320	10	4.2
1483	Fill	Fill	1484	321	10	4.2
1484	Cut	Posthole	1484	322	10	4.2
1485	Fill	Fill, single	1486	323	10	4.2
1486	Cut	Pit	1486	324	10	4.2
1487	Cut	Pit	1487	325	54	1
1488	Fill	Fill, single	1487	326	54	1
1489	Cut	Posthole	1489	327	55	4
1490	Fill	Fill, single	1489	327	55	4
1491	Cut	Posthole	1491	328	55	4
1492	Fill	Fill, single	1491	328	55	4
1493	Cut	Posthole	1493	329	55	4
1494	Fill	Fill, single	1493	329	55	4
1495	Cut	Posthole	1495	330	55	4
1496	Fill	Fill, single	1495	330	55	4
1497	Cut	Posthole	1497	331	55	4
1498	Fill	Fill, single	1497	331	55	4
1499	Cut	Posthole	1499	332	55	4
1500	Fill	Fill, single	1499	332	55	4
1501	Cut	Posthole	1501	333	55	4
1502	Fill	Fill, single	1501	333	55	4

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1503	Cut	Posthole	1503	334	55	4
1504	Fill	Fill, single	1503	334	55	4
1505	Fill	Fill, single	1506	335	52	4
1506	Cut	Pit	1506	335	52	4
1507	Fill	Fill, single	1508	336	52	4
1508	Cut	Posthole	1508	336	52	4
1509	Cut	Tree throw	1509	337	54	1
1510	Fill	Fill, single	1509	337	54	1
1511	Fill	Fill, single	1512	338	54	1
1512	Cut	Pit	1512	338	54	1
1513	Fill	Fill, single	1514	339	54	1
1514	Cut	Pit	1514	339	54	1
1515	Cut	Posthole	1515	340	52	4
1516	Fill	Fill, single	1515	340	52	4
1517	Cut	Pit	1517	341	52	4
1518	Fill	Fill, single	1517	342	52	4
1519	Cut	Posthole	1519	343	52	4
1520	Fill	Fill, single	1519	343	52	4
1521	Skeleton	Skeleton - animal	1431	344	59	4.2
1522	Skeleton	Skeleton - animal	1431	345	59	4.2
1523	Deposit	Destruction debris	1523	304	25	4.2
1524	Cut	Pit	1524	346	54	1
1525	Fill	Fill, single	1524	347	54	1
1526	Fill	Fill, single	1527	348	54	1
1527	Cut	Pit	1527	348	54	1
1528	Fill	Fill, single	1529	349	54	1
1529	Cut	Pit	1529	349	54	1
1530	Fill	Fill, single	1531	350	54	1
1531	Cut	Pit	1531	350	54	1
1532	Fill	Fill, single	1533	351	54	1
1533	Cut	Pit	1533	351	54	1
1534	Deposit	Surface	1534	352	57	4.2
1535	Cut	Pit	1535	353	54	1
1536	Fill	Fill, single	1535	354	54	1
1537	Fill	Fill, single	1538	355	37	4.1
1538	Cut	Posthole	1538	355	37	4.1
1539	Fill	Fill, single	1540	356	6	4.1
1540	Cut	Ditch terminus	1540	357	6	4.1
1541	Fill	Fill, single	1542	358	42	1
1542	Cut	Pit	1542	359	42	1
1543	Cut	Geological feature	1543	360		
1544	Fill	Fill	1543	360		

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1545	Cut	Posthole	1545	361	43	4.2
1546	Fill	Fill	1545	362	43	4.2
1547	Cut	Flue	1547	363	43	4.2
1548	Cut	Posthole	1548	364	43	4.2
1549	Fill	Fill, single	1547	365	43	4.2
1550	Deposit	Destruction debris	1550	366		
1551	Deposit	Geological feature	1551	367		
1552	Deposit	Destruction debris	1552	368	43	4.2
1553	Void					
1554	Fill	Fill, single	1555	369	54	1
1555	Cut	Pit	1555	369	54	1
1556	Deposit	Geological feature	1556	370		
1557	Cut	Posthole	1557	371	43	4.2
1558	Fill	Fill, primary	1557	372	43	4.2
1559	Fill	Fill	1557	373	43	4.2
1560	Cut	Ditch terminus	1560	374	7	4.1
1561	Fill	Fill, single	1560	375	7	4.1
1562	Fill	Fill, upper	1564	376	8	4.1
1563	Fill	Fill, primary	1564	377	8	4.1
1564	Cut	Ditch terminus	1564	377	8	4.1
1565	Deposit	Fill	1565	378	25	4.2
1566	Cut	Posthole	1566	379	71	4.2
1567	Masonry or other construction	Column	1566	380	71	4.2
1568	Cut	Pit	1568	381	42	1
1569	Fill	Fill, single	1568	382	42	1
1570	Cut	Ditch terminus	1570	383	7	4.1
1571	Fill	Fill, single	1570	384	7	4.1
1572	Fill	Construction debris	1579	385	63	4.2
1573	Cut	Posthole	1573	386	71	4.2
1574	Fill	Fill, single	1573	387	71	4.2
1575	Masonry or other construction	Column	1607	388	71	4.2
1576	Fill	Construction debris		389	10	4.2
1577	Layer	Buried soil horizon		390	25	4.2
1578	Fill	Destruction debris	1578	391	63	4.2
1579	Cut	Construction cut	1579	392	63	4.2
1580	Fill	Fill, secondary	1582	393	8	4.1
1581	Fill	Fill, primary	1582	394	8	4.1
1582	Cut	Ditch terminus	1582	395	8	4.1
1583	Deposit		1583	396	28	4
1584	Cut	Pit	1584	397	65	4.2

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1585	Fill	Fill, single	1584	398	65	4.2
1586	Fill	Fill, single	1587	399	51	4
1587	Cut	Posthole	1587	400	51	4
1588	Cut	Pit	1588	401	49	1
1589	Fill	Fill, single	1588	402	49	1
1590	Fill	Fill, single	1548	403	43	4.2
1591	Deposit	Destruction debris	1591	404	25	4.2
1592	Fill	Post-pipe	1594	405	71	4.2
1593	Fill	Fill, single	1594	406	71	4.2
1594	Cut	Posthole	1594	406	71	4.2
1595	Cut	Pit	1595	407	54	1
1596	Fill	Fill, single	1595	408	54	1
1597	Cut	Pit	1597	409	54	1
1598	Fill	Fill, single	1597	410	54	1
1599	Fill	Fill, single	1600	411	54	1
1600	Cut	Pit	1600	411	54	1
1601	Layer	Surface	1601	412	56	4.2
1602	Cut	Pit	1602	413	49	1
1603	Fill	Fill, single	1602	414	49	1
1604	Fill	Fill, single	1605	415	10	4.2
1605	Cut	Posthole	1605	416	10	4.2
1606	Fill	Fill	1607	417	71	4.2
1607	Cut	Posthole	1607	418	71	4.2
1608	Fill	Fill, single	1609	419	10	4.2
1609	Cut	Posthole	1609	420	10	4.2
1610	Fill	Fill, single	1611	421	71	4.2
1611	Cut	Posthole	1611	422	71	4.2
1612	Layer	Surface	1612	423	56	4.2
1613	Masonry or other construction	Foundation		424	63	4.2
1614	Fill	Fill, single	1615	425	71	4.2
1615	Cut	Posthole	1615	426	71	4.2
1616	Skeleton	Skeleton - animal	1621	427	10	4.2
1617	Layer	Deposit		428	60	4.2
1618	Cut	Ditch, ring	1618	429	12	4.2
1619	Fill	Fill	1579	435	63	4.2
1620	Fill	Fill, upper	1621	430	10	4.2
1621	Cut	Posthole	1621	431	10	4.2
1622	Fill	Fill, primary	1621	432	10	4.2
1623	Layer	Destruction debris	1623	433	57	4.2
1624	Layer	Fill		434	60	4.2
1625	Fill	Fill	1653	436	10	4.2

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1626	Cut	Ditch, ring	1626	165	12	4.2
1627	Deposit	Surface		437	56	4.2
1628	Cut	Pit	1628	438	61	4.1
1629	Fill	Fill, single	1628	439	61	4.1
1630	Cut	Pit	1630	440	28	4
1631	Fill	Fill	1630	441	28	4
1632	Cut	Linear/pit	1632	442	28	4
1633	Fill	Fill, primary	1632	442	28	4
1634	Cut	Pit	1634	443	28	4
1635	Fill	Fill, single	1634	443	28	4
1636	Cut	Pit	1636	444	28	4
1637	Fill	Fill, single	1636	444	28	4
1638	Cut	Pit	1638	445	28	4
1639	Fill	Fill, single	1638	445	28	4
1640	Cut	Ditch	1640	446	7	4.1
1641	Fill	Fill, primary	1640	446	7	4.1
1642	Fill	Fill, secondary	1640	447	7	4.1
1643	Fill	Fill	1645	448	28	4
1644	Fill	Fill	1645	449	28	4
1645	Cut	Pit	1645	450	28	4
1646	Fill	Fill, upper	1640	451	7	4.1
1647	Layer	Destruction debris		452	62	4.2
1648	Layer	Destruction debris		453	62	4.2
1649	Deposit			454	28	4
1650	Layer	Destruction debris		455	25	4.2
1651	Layer	Redeposited natural		456	60	4.2
1652	Layer	Levelling deposit		457	60	4.2
1653	Cut	Posthole	1653	458	10	4.2
1654	Fill	Fill	1653	459	10	4.2
1655	Fill	Post-pipe	1653	460	10	4.2
1656	Cut	Posthole	1656	461	10	4.2
1657	Fill	Fill, primary	1656	462	10	4.2
1658	Fill	Post-pipe	1656	462	10	4.2
1659	Layer	Destruction debris		452	62	4.2
1660	Layer	Destruction debris		453	62	4.2
1661	Cut	Ditch, ring	1661	463	11	2
1662	Fill	Fill, primary	1661	463	11	2
1663	Fill	Fill, secondary	1661	463	11	2
1664	Fill	Fill, tertiary	1661	464	11	2
1665	Fill	Fill	1661	465	11	2
1666	Fill	Fill	1723	466	12	4.2
1667	Fill	Fill	1723	467	12	4.2

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1668	Cut	Ditch	1668	468	3	4.2
1669	Fill	Fill, single	1668	469	3	4.2
1670	Cut	Ditch, ring	1670	470	11	2
1671	Fill	Fill, primary	1670	470	11	2
1672	Fill	Fill, primary	1670	470	11	2
1673	Fill	Fill	1670	471	11	2
1674	Fill	Fill	1670	472	11	2
1675	Fill	Fill	1737	473	12	4.2
1676	Fill	Fill, upper	1737	474	12	4.2
1677	Deposit	Geological feature	1677	475	48	5
1678	Cut	Ditch, ring	1678	168	12	4.2
1679	Layer	Destruction debris		476	62	4.2
1680	Layer	Destruction debris		477	62	4.2
1681	Fill	Fill	1383	478	11	2
1682	Cut	Ditch, ring	1682	479	11	2
1683	Fill	Fill, primary	1682	479	11	2
1684	Fill	Fill, secondary	1682	480	11	2
1685	Fill	Fill	1682	480	11	2
1686	Fill	Fill	1682	481	11	2
1687	Fill	Fill	1724	482	12	4.2
1688	Fill	Fill, upper	1724	483	12	4.2
1689	Deposit	Redeposited natural		484	60	4.2
1690	Cut	Ditch, ring	1690	485	11	2
1691	Fill	Fill	1690	485	11	2
1692	Fill	Fill, basal	1690	485	11	2
1693	Fill	Fill	1690	486	11	2
1694	Fill	Fill, upper	1700	173	12	4.2
1695	Fill	Fill	1700	173	12	4.2
1696	Fill	Fill	1700	180	12	4.2
1697	Fill	Fill	1276	191	11	2
1698	Fill	Fill	1276	191	11	2
1699	Fill	Fill, basal	1276	172	11	2
1700	Cut	Ditch, ring	1700	180	12	4.2
1701	Cut	Ditch, ring	1701	229	12	4.2
1702	Layer	Destruction debris		487	62	4.2
1703	Layer	Destruction debris		488	62	4.2
1704	Cut	Ditch, ring	1704	489	12	4.2
1705	Fill	Fill	1690	490	11	2
1706	Cut	Ditch, ring	1706	491	11	2
1707	Fill	Fill, primary	1706	491	11	2
1708	Fill	Fill, primary	1706	491	11	2
1709	Fill	Fill	1706	491	11	2

Context	Type	Interpretation	Parent	SubGroup	Group	Period
1710	Fill	Fill	1706	492	11	2
1711	Fill	Fill	1706	493	11	2
1712	Fill	Fill	1723	494	12	4.2
1713	Fill	Fill, upper	1723	495	12	4.2
1714	Cut	Ditch, ring	1714	496	11	2
1715	Fill	Fill, upper	1744	497	12	4.2
1716	Fill	Fill	1744	498	12	4.2
1717	Fill	Fill, secondary	1714	499	11	2
1718	Fill	Fill, upper	1743	500	12	4.2
1719	Fill	Fill	1743	501	12	4.2
1720	Fill	Fill, secondary	1722	502	11	2
1721	Fill	Fill, basal	1722	503	11	2
1722	Cut	Ditch, ring	1722	503	11	2
1723	Cut	Ditch, ring	1723	504	12	4.2
1724	Cut	Ditch, ring	1724	505	12	4.2
1725	Cut	Pit	1725	506	10	4.2
1726	Fill	Fill	1725	507	10	4.2
1727	Fill	Fill, basal	1714	496	11	2
1728	Deposit	Levelling deposit		508	60	4.2
1729	Fill	Fill	1739	509	11	2
1730	Cut	Ditch, ring	1730	510	11	2
1731	Fill	Fill, upper	1745	511	12	4.2
1732	Fill	Fill	1745	512	12	4.2
1733	Fill	Fill	1730	513	11	2
1734	Fill	Fill, basal	1730	510	11	2
1735	Fill	Fill	1738	514	12	4.2
1736	Fill	Fill, upper	1738	515	12	4.2
1737	Cut	Ditch, ring	1737	516	12	4.2
1738	Cut	Ditch, ring	1738	517	12	4.2
1739	Cut	Ditch, ring	1739	518	11	2
1740	Fill	Fill, upper	1746	519	12	4.2
1741	Fill	Fill	1739	520	11	2
1742	Fill	Fill, primary	1739	518	11	2
1743	Cut	Ditch, ring	1743	521	12	4.2
1744	Cut	Ditch, ring	1744	522	12	4.2
1745	Cut	Ditch, ring	1745	523	12	4.2
1746	Cut	Ditch, ring	1746	524	12	4.2
1747	Cut	Ditch, ring	1747	525	12	4.2
1748	Cut	Ditch, ring	1748	185	12	4.2
1749	Cut	Ditch	1749	526	4	4.1
1750	Fill	Fill	1749	527	4	4.1
40/001	Layer	Topsoil				

Context	Type	Interpretation	Parent	SubGroup	Group	Period
40/002	Layer	Natural				
41/001	Layer	Topsoil				
41/002	Layer	Natural				
42/001	Layer	Topsoil				
42/002	Layer	Natural				
43/001	Layer	Topsoil				
43/002	Layer	Natural				
44/001	Layer	Topsoil				
44/002	Layer	Natural				
44/003	Fill	Fill, single	44/004		67	1
44/004	Cut	Pit	44/004		67	1
44/005	Fill	Fill, single	44/006		67	1
44/006	Cut	Pit	44/006		67	1
44/007	Fill	Fill, single	44/008		67	1
44/008	Cut	Pit	44/008		67	1
44/009	Cut	Pit	44/009		67	1
44/010	Fill	Fill, single	44/009		67	1
45/001	Layer	Topsoil				
45/002	Layer	Natural				
45/003	Fill	Fill, single	45/004		67	1
45/004	Cut	Pit	45/004		67	1
46/001	Layer	Topsoil				
46/002	Layer	Natural				
47/001	Layer	Topsoil				
47/002	Layer	Natural				
48/001	Layer	Topsoil				
48/002	Layer	Natural				
49/001	Layer	Topsoil				
49/002	Layer	Natural				
49/003	Cut	Posthole	49/003		69	5
49/004	Fill	Fill, single	49/003		69	5
49/005	Cut	Posthole	49/005		69	5
49/006	Fill	Fill, single	49/005		69	5
50/001	Layer	Topsoil				
50/002	Layer	Natural				
51/001	Layer	Topsoil				
51/002	Layer	Natural				
51/003	Cut	Pit	51/003		69	5
51/004	Fill	Fill, primary	51/003		69	5
51/005	Fill	Fill, secondary	51/003		69	5
52/001	Layer	Topsoil				
52/002	Layer	Natural				

Context	Type	Interpretation	Parent	SubGroup	Group	Period
53/001	Layer	Topsoil				
53/002	Layer	Natural				
53/003	Fill	Fill, single	53/004		69	5
53/004	Cut	Posthole	53/004		69	5
53/005	Fill	Fill, single	53/006		69	5
53/006	Cut	Pit	53/006		69	5
53/007	Fill	Fill, single	53/008		69	5
53/008	Cut	Posthole	53/008		69	5
54/001	Layer	Topsoil				
54/002	Layer	Natural				
54/003	Layer					
54/004	Layer	Subsoil				
55/001	Layer	Topsoil				
55/002	Layer	Natural				
56/001	Layer	Topsoil				
56/002	Layer	Natural				
56/003	Fill	Fill, single	56/004		70	5
56/004	Cut	Pit	56/004		70	5
56/005	Fill	Fill, single	56/006		70	5
56/006	Cut	Pit	56/006		70	5
56/007	Fill	Fill, single	56/008		70	5
56/008	Cut	Pit	56/008		70	5
56/009	Fill	Fill, single	56/010		70	5
56/010	Cut	Ditch terminus	56/010		70	5
56/011	Fill	Fill, single	56/012		70	5
56/012	Cut	Pit	56/012		70	5
56/013	Cut	Pit	56/013		70	5
56/014	Fill	Fill, single	56/013		70	5
57/001	Layer	Topsoil				
57/002	Layer	Natural				
58/001	Layer	Topsoil				
58/002	Layer	Natural				
58/003	Cut	Pit	58/003		69	5
58/004	Fill	Fill, single	58/003		69	5
58/005	Cut	Pit	58/005		69	5
58/006	Fill	Fill, single	58/005		69	5
59/001	Layer	Topsoil				
59/002	Layer	Natural				
60/001	Layer	Topsoil				
60/002	Layer	Natural				
61/001	Layer	Topsoil				
61/002	Layer	Natural				

Context	Type	Interpretation	Parent	SubGroup	Group	Period
61/003	Cut	Pit	61/003		68	5
61/004	Fill	Fill, single	61/003		68	5
62/001	Layer	Topsoil				
62/002	Layer	Natural				
63/001	Layer	Topsoil				
63/002	Layer	Natural				
64/001	Layer	Topsoil				
64/002	Layer	Natural				
64/003	Cut	Pit	64/003		66	3
64/004	Fill	Fill, primary	64/003		66	3
64/005	Fill	Fill, upper	64/003		66	3
64/006	Cut	Pit	64/006		66	3
64/007	Fill	Fill, basal	64/006		66	3
64/008	Fill	Fill, upper	64/006		66	3
64/009	Cut	Pit	64/009		66	3
64/010	Fill	Fill, upper	64/009		66	3
64/011	Fill	Fill	64/009		66	3
64/012	Fill	Fill, primary	64/009		66	3
65/001	Layer	Topsoil				
65/002	Layer	Natural				
67/001	Layer	Topsoil				
67/002	Layer	Subsoil				
67/003	Layer	Natural				
68/001	Layer	Topsoil				
68/002	Layer	Subsoil				
68/003	Layer	Natural				
69/001	Layer	Topsoil				
69/002	Layer	Natural				
69/003	Fill	Fill, single	69/004		68	5
69/004	Cut	Pit	69/004		68	5
70/001	Layer	Topsoil				
70/002	Layer	Subsoil				
70/003	Layer	Natural				
70/004	Layer	Natural				
71/001	Layer	Topsoil				
71/002	Layer	Natural				
72/001	Layer	Topsoil				
72/002	Layer	Subsoil				
72/003	Layer	Natural				
73/001	Layer	Topsoil				
73/002	Layer	Subsoil				
73/003	Layer	Natural				

Context	Type	Interpretation	Parent	SubGroup	Group	Period
74/001	Layer	Topsoil				
74/002	Layer	Natural				
74/003	Layer	Natural				
75/001	Layer	Topsoil				
75/002	Layer	Subsoil				
75/003	Layer	Natural				
76/001	Layer	Topsoil				
76/002	Layer	Subsoil				
76/003	Layer	Natural				
77/001	Layer	Topsoil				
77/002	Layer	Natural				
77/003	Layer	Natural				
78/001	Layer	Topsoil				
78/002	Layer	Natural				
79/001	Layer	Topsoil				
79/002	Layer	Natural				
80/001	Layer	Topsoil				
80/002	Layer	Natural				
81/001	Layer	Topsoil				
81/002	Layer	Natural				
81/003	Layer	Natural				
82/001	Layer	Topsoil				
82/002	Layer	Natural				
83/001	Layer	Topsoil				
83/002	Layer	Subsoil				
83/003	Layer	Natural				
84/001	Layer	Topsoil				
84/002	Layer	Natural				
84/003	Layer	Natural				
85/001	Layer	Topsoil				
85/002	Layer	Natural				
86/001	Layer	Topsoil				
86/002	Layer	Subsoil				
86/003	Layer	Natural				
87/001	Layer	Topsoil				
87/002	Layer	Natural				
88/001	Layer	Topsoil				
88/002	Layer	Natural				
89/001	Layer	Topsoil				
89/002	Layer	Subsoil				
89/003	Layer	Natural				
89/004	Layer	Natural				

Context	Type	Interpretation	Parent	SubGroup	Group	Period
90/001	Layer	Topsoil				
90/002	Layer	Subsoil				
90/003	Layer	Natural				
90/004	Fill	Fill, single	90/005		68	5
90/005	Cut	Gully	90/005		68	5
90/006	Fill	Fill, single	90/007		68	5
90/007	Cut	Gully	90/007		68	5
90/008	Fill	Fill, single	90/009		68	5
90/009	Cut	Pit/tree throw	90/009		68	5
91/001	Layer	Topsoil				
91/002	Layer	Subsoil				
91/003	Layer	Natural				
91/004	Layer	Natural				
91/005	Cut	Pit	91/005		68	5
91/006	Fill	Fill, single	91/005		68	5
92/001	Layer	Topsoil				
92/002	Layer	Subsoil				
92/003	Layer	Natural				
92/004	Layer	Natural				
93/001	Layer	Topsoil				
93/002	Layer	Subsoil				
93/003	Layer	Natural				
93/004	Layer	Natural				
94/001	Layer	Topsoil				
94/002	Layer	Subsoil				
94/003	Layer	Natural				
94/004	Layer	Natural				
96/001	Layer	Topsoil				
96/002	Layer	Natural				

Appendix 2: Group list

Group	Group Description	Group contents	Period
1	NE/SW ditch	1059, 1071	4.1
2	NW/SE Boundary ditch recut	1024, 1074, 1089, 1128, 1138, 1160, 1191	4.1
3	NW/SE Boundary ditch 2nd recut	1076, 1077, 1091, 1136, 1143, 1158, 1197, 1668	4.2
4	NW/SE Boundary ditch	1130, 1140, 1150, 1156, 1162, 1749	4.1
5	E/W Boundary ditch	1188, 1193, 1199, 1201, 1214, 1216	4.1
6	E/W boundary gully	1454, 1456, 1465, 1476, 1540, 30/004	4.1
7	N/S Boundary ditch / subdivision	1560, 1570, 1640	4.1
8	N/S boundary ditch / subdivision	1564, 1582	4.1
9	E/W Boundary gully	1353, 1354, 1355, 1371, 1373, 1434, 1444	4.1
10	Building 1 postholes	1448, 1450, 1463, 1484, 1486, 1605, 1609, 1621, 1653, 1656, 1725	4.2
11	Ring-ditch, prehistoric	1268, 1273, 1276, 1281, 1286, 1294, 1362, 1383, 1437, 1661, 1670, 1682, 1690, 1706, 1714, 1722, 1730, 1739,	2.1
12	Ring-ditch, Roman re-cut	1046, 1618, 1626, 1678, 1700, 1701, 1704, 1723, 1724, 1737, 1738, 1743, 1744, 1745, 1746, 1747, 1748, 14/007	4.2
13	Posthole line	1026, 1028, 1030, 1032, 1034, 1036, 1038, 1040, 1042	4.1
14	Well	1063	4.1
15	Roman pits	1082, 1098	4.1
16	Undated postholes in NW of site	1012, 1014, 1016, 1054, 1057, 1065, 1069, 1176	5
17	Undated pits in SW of site	1086, 1096, 1100, 1106, 1108, 1124	5
18	Pit containing dog burial	1122	4.1
19	Pit containing cattle burial	1174	4
20	Geological features, NW of site	1004, 1020	1.1
21	Geological spread, SW of site	1110, 1116, 1134	5

Group	Group Description	Group contents	Period
22	Roman pit at end of G1	1067	4.2
23	Undated pits in NW of site	1007, 1009, 1084	1.1
24	Roman pits	1022, 1113, 1118, 1125	4
25	Demolition layers incl. painted wall plaster	(1461), (1523), (1565), (1572), (1577), (1591), (1650)	4.2
26	Early Neolithic pit in NW of site	1011	1.1
27	Undated pits in SW of site	1102, 1104	5
28	Shallow features to E of bounded area	(1583), 1630, 1632, 1634, 1636, 1638, 1645, (1649)	4
29	Geological feature in W of site	1094	5
30	Undated pit group	1044, 1048, 1050	5
31	Undated isolated pit	1154	5
32	Undated posthole/pit group	1078, 1131, 1152	5
33	Natural deposit in centre of ring-ditch	(1432)	5
34	Pit cut into quarry G35	1259, 1326	4.2
35	Possible quarry pit	1262, 1300	4.2
36	Possible post structure to south of site	1195, 1203, 1206, 1209, 1211, 1218, 1225, 1227, 1243	1.1
37	Postholes associated with ditch G9	1375, 1377, 1412, 1414, 1435, 1445, 1538	4.1
38	Intercutting pit cluster	1145, 1147, 1164, 1166, 1168	4
39	Posthole group to SW of ring-ditch	1239, 1241, 1248, 1250, 1252, 1254, 1256, 1264	5
40	Undated postholes to S of ring-ditch	1275, 1364, 1366, 1368, 1382	5
41	Postholes to NE of ring-ditch	1305, 1307, 1309, 1311, 1313, 1315	5
42	Early Neolithic pits to SE of site	1234, 1283, 1542, 1568, 27/004, 27/008, 30/006	1.1
43	Postholes and ‘flue’ to N of G12	1387, (1389), 1390, 1407, 1545, 1547, 1548, (1552), 1557	4.2
44	Pits in N of site	1346, 1348, 1378, 1392, 1394, 1396	4.1

Group	Group Description	Group contents	Period
45	Pit at terminus of gully G6	1244	4.1
46	Pits to N of ditch G5	1183, 1185	4
47	Spread to S of G12	(1295), (1329), (1330)	4.2
48	Spread in E of site	(1677)	4.1
49	Early Neolithic pits at E of site	1588, 1602	1.1
50	Pits to W of G12	1179, 1181	2.1
51	Isolated posthole in E of site	1587	5
52	Postholes in SE of site	1506, 1508, 1515, 1517, 1519	5
53	Pits cutting gully G6	1452, 1474	4.1
54	Undated pits in E of site	1223, 1230, 1232, 1235, 1458, 1460, 1468, 1487, 1509, 1512, 1514, 1524, 1527, 1529, 1531, 1533, 1535, 1555, 1595, 1597, 1600	1.1
55	Postholes in centre of ring-ditch	1297, 1317, 1319, 1321, 1323, 1332, 1334, 1336, 1338, 1340, 1343, 1345, 1399, 1401, 11403, 1405, 1410, 1423, 1466, 1478, 1480, 1489, 1491, 1493, 1495, 1497, 1499, 1501, 1503	5
56	Chalk foundation of Building 1	(1601), (1612), (1627)	4.2
57	Gravel surface of Building 1	(1534), (1623)	4.2
58	Pits to W of Building 1	1416, 1418, 1420	4.2
59	Pits with skull deposits, W of Building 1	(1421), 1427, 1431	4.2
60	Levelling deposit underlying Building 1	(1617), (1624), (1651), (1652), (1689), (1728)	4.2
61	Pit under Building 1	1628	4.2
62	Spread to N of Building 1	1470, (1647), (1648), (1659), (1660), (1679), (1680), (1702), (1703)	4.2
63	L shaped slot to W of Building 1	1369, 1579	4.2
64	Neolithic pit in SW of excav area	1172	1.1
65	Roman pit at E of excav area	1584	4.2
66	Iron Age pits, Phase B evaluation	64/003, 64/006, 64/009	3.1
67	Early Neolithic pits, Phase B evaluation	44/006, 44/009, 45/004	1.1

Group	Group Description	Group contents	Period
68	Undated pits, Phase B evaluation	61/003, 69/004, 90/005, 90/007, 90/009, 91/005	5
69	Undated postholes, Phase B evaluation	49/003, 49/005, 51/003, 53/004, 53/006, 53/008	5
70	Undated pits, Phase B evaluation	44/004, 44/008, 56/004, 56/006, 56/008, 56/010, 56/012, 56/013	5
71	Building 1 postholes underlying 57	1566, 1573, 1594, 1607, 1611, 1615	4.2
72	Pit cut into boundary G5	1214	4.1

Appendix 3: Quantification of the bulk finds

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
us			8	48	5	22							5	54															1	8
1001			13	144							1	4	2	4																
1005	3	4	1	6																										
1010	3	18																												
1018	30	152	20	76																										
1021			26	180	2	6							1	<2																
1023			1	26																										
1025			1	6																										
1045			1	2	9	234																								
1060			19	202	120	468					4	14	55	310															1	4
1061			4	58	2	270																								
1064			5	4																										
1066			44	756	7	626							2	<2															1	<2
1070			11	100									35	242															3	6
1072					1	86																								
1081			44	506	1	226	1	44					55	360															140	2610
1092	1	4	6	86	1	162																								

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
1095			3	18							1	12	8	2																
1097			8	50	4	246							2	4																
1109			3	38	4	148																								
1111			4	60	10	1256							38	662															1	20
1112			10	86																										
1115			8	48	1	316																								
1117			2	22																										
1119	3	24					1	674					3	68															3	78
1121			4	16									146	388																
1123			4	20																										
1126			1	8																									2	6
1127					2	236																								
1133			7	56																										
1139	50	182	130	726									9	8			1	<2												
1141			1	18	1	40																								
1142			2	18											524	2256														
1144					1	134																								
1159			3	62																										

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
1170	2	14	15	158																										
1173													109	2194													1	16		
1177	7	22	50	700	22	964					2	8	20	148															5	62
1180			2	12																										
1184			12	64									3	28																
1187					1	180							2	8																
1190	2	4																												
1192					1	22	3	7170																						
1194			9	22																										
1196			8	98	6	502	1	736					20	94																
1198			2	14																										
1202			8	48																										
1205																	1	14												
1208																	1	20												
1212			11	592	19	1990	1	4064			11	50	2	80																
1221			6	30	2	134							13	120																
1226			10	58									8	32																
1231	3	112	3	16																										

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
1233	40	85	8	81																										
1236	2	6															1	10												
1240	1	16																												
1245			9	114	11	1590					3	20	17	1574															1	8
1246			1	72									48	558															1	2
1258			14	404	10	396							13	14																
1260			1	2	1	4																								
1261	1	2	3	72	2	2																								
1265	29	260	22	172	10	822	1	144					4	8																
1269	7	82	16	126	16	1046	1	152					19	88																
1277	11	82	39	784	34	2908					1	4	10	114																
1278			13	70	5	84							4	10																
1282			8	64													3	4												
1284	34	214	10	112	22	1016							13	86																
1287	12	96	9	386																										
1288	5	62	12	166									1	18																
1291			51	476	21	2222	2	322			2	10	21	172															2	22
1292	2	8																											1	2

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
1295			2	14	24	1358	1	204																						
1298	20	208	31	234							1	6					3	218												
1299	3	116	1	2																										
1301			1	4																										
1302	5	52	7	88	13	840							1	56																
1303			19	108	109	2602					11	76	3	12					5	14			7	40						
1324	2	6	61	670	7	442					2	16	32	76															1	4
1325	4	4	8	80	2	80							6	2																
1329	5	182	2	36																										
1330	3	38	25	206	33	1668							10	90																
1341	1	2																												
1347			26	206																										
1350	1	2	20	282	16	2002					3	30	4	6															4	44
1351	2	60	18	182	5	166	1	4			5	38	4	4												13	109	3	22
1352	1	4											1	140																
1356			3	14																										
1357			13	280							6	48	2	10								1171	931			120	3596	2	2
1358			11	74	7	992					2	20	23	76																

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
1359	1	20	14	92	22	1514							2	70																
1370			2	2									1	<2																
1379			26	120																										
1385	2	20	4	10	1	6																								
1386	12	102	84	610	26	1350					1	4	65	278															5	78
1389	8	114	5	18	3	10							2	14																
1391			6	192																									1	2
1406			195	2274	219	12410					2	12	37	254															12	138
1408			7	92									3	2																
1415			8	82	1	4																								
1417			5	94									3	6															5	38
1419			12	140	5	1180	8	5242			2	20	2	4									73	266			35	1902	3	58
1420											1	2																		
1421	1	6	10	44							8	80	10	10																
1424			2	6							1	4	2	4			1	10												
1425													93	92																
1426													113	218																
1428	4	12	22	444	1	412					2	10	38	98															4	60

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
1429													332	1254															
1430													154	584															
1441	5	62	1	6																									
1442	25	212	27	418	38	2108	1	818			2	14	14	160															
1447			13	12	4	840					2	4	2	4									7	1004				1	10
1449	4	18	2	10							3	38					1	2					0	48			12	372		
1462	1	16																											
1473	1	14	9	48	7	332																							
1482			1	18							1	8	1	2															
1483					3	1112							1	2															
1485	1	2	3	120	6	154							9	26															
1521													100	728															
1522													205	1194															
1523																							990	901			339	3131		
1539			1	2																									
1541	4	4	3	10																									
1546					1	624																							
1549	4	86	4	18	24	8290											1	6	6	94									

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
1550	2	24	8	38	17	1156							2	6																
1552			3	14	21	2186							1	<2																
1553	1	4	3	10	22	426							3	2					9	62										
1556					1	362																								
1558			2	8	1	158																								
1559					5	452					1	6	1	108																
1561			22	478									31	46																
1562			8	226	1	20					1	16	15	134														11	224
1563			10	202							1	8	1	2														9	102
1565																						48	208			127	1945		
1568	4	6																											
1570			2	58									4	14															
1571			26	400									7	24														3	56
1572			4	24	3	400	2	4318					3	26								0	3116					1	28
1574											1	10												9	1378				
1576											14	90																	
1577	21	226	101	1222	77	7344	7	2384			5	38	52	220								6	34	2	346			27	372
1578			69	192	25	2910	5	116			4	12	81	338								210	2855			190	6204	21	304

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
1580			33	580									5	16															7	56
1581			2	16									1	<2																
1583					7	430	1	3980																						
1585			110	838	21	472					1	14																		
1591																							690	739						
1593			5	42									5	2																
1598													6	6																
1603	3	32	3	24																										
1604			2	4							1	8																		
1606					5	1488																								
1608											1	8																		
1610											1	8																		
1613					5	10642																	0	2326						
1614													1	<2															1	46
1619	16	212	65	456	5	362	3	2026					45	116															7	32
1620	1	38	4	40	1	72					1	2	84	26																
1624	63	892	11	38			3	854					17	14																
1625			1	8							6	50																		

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
1629	20	212	27	272									18	10			1	8												
1631			2	26																										
1635													1	6																
1637			1	4																										
1644			2	8																									2	8
1646			7	132							1	4																		
1647	8	28	248	5812	151	12636	28	5000	1	492	5	48	118	832												2	30	59	956
1649			19	84	2	156							34	24														1	12
1650	17	180	82	1568	61	7472	3	1522			5	38	97	556								1	6			1	148	7	50
1651			12	402																										
1652	114	1385	72	676	12	1672	2	944			7	46	24	94														1	10
1655											3	38																		
1659			19	222	2	1080					1	4	6	28												3	59	2	32
1660	3	16																												
1663													10	74																
1669	2	16	23	76	13	562							21	26																
1675	7	56	7	56									2	24																
1676	6	48	14	192	1	8					1	8	1	30																

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
1677			3	36	3	374																							1	20
1679	5	94	42	512	76	4028							5	38																
1683	1	6																												
1684	1	12																												
1687			1	16	1	12							8	18																
1688	12	96	2	16	1	132	1	36					17	66																
1689			2	14																										
1692			2	34	4	494							84	102															1	6
1693	2	34																												
1694	49	400	12	102	7	306							18	104															2	12
1696	15	144	4	154									9	30															3	24
1697	4	54																												
1701			7	40	3	124																							1	22
1702	1	26	17	252	22	1518					7	68	3	4																
1703											1	2																		
1707	1	2																												
1713	5	56	27	254	3	32							13	54															1	10
1715					4	234																								

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
1718	1	16	2	16	3	168																								
1719	7	114	1	6																										
1724			1	24	2	10							1	6													2	4		
1728			10	54	1	258	2	6235			1	4	2	26																
1729	1	<2	1	2									28	6																
1731			6	18	7	482							2	14																
1733			1	2																										
1735	3	58					1	238																						
1736			1	6																										
1740			3	112																										
1755			3	32																										
11/004			2	76	1	154							3	6																
12/004			7	36	1	6																								
14/005	55	496	41	180	5	236					2	2	31	60							1	1								
20/001			1	38																										
20/004					4	128																								
20/005	4	4	4	34	1	10							3	4																
20/006			1	6																									1	10

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
21/001			1	14																										
21/004			6	86	3	370																								
21/006			4	74	1	140							1	12																
21/007			2	12																										
21/008			2	22																										
21/009			1	2									1	2																
21/010	1	62	15	100	2	364																						1	18	
23/003	2	2	8	62	1	86							3	1																
23/005			3	32	1	100							1	8																
23/007			17	103																										
25/001	1	4																												
25/003					4	200																								
25/004	5	64	1	2																										
27/003	20	122	5	36																										
29/001	2	4																												
29/003			4	32																										
30/005	1	4	1	6																										
44/005	1	<2	2	6																										

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
44/010	2	4	8	172																										
45/003	2	<2	2	12													18	68												
46/001											1	40																		
48/001											1	30																		
50/001											1	12																		
56/005	1	2											2	2																
56/011	1	<2																												
58/001											1	24																		
59/001											1	26																		
64/005			6	26									5	14																
64/006			16	250									1	22																
64/007			15	188									14	56																
64/008			11	148																										
64/009			5	144	2	24																								
64/010			5	18																										
64/011			4	18																										
70/001											1	6																		
79/001											1	50																		

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Bulk Metalwork	Weight (g)	Bone	Weight (g)	Human Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Mortar	Weight (g)	Other Building Material	Weight (g)	Plaster	Weight (g)	Shell	Weight (g)
81/001											1	8																		
Topsoil			5	46	1	38																								
Total	862	8066	2842	33852	1554	121348	80	47227	1	492	160	1280	2915	16383	524	2256	32	360	20	170	1	1	3203	12474	11	1724	845	17516	373	5694

Appendix 4: List of Registered Finds

RF	Context	Material	Object	Date	Date
1	20/005	COPPER	COIN	348	350
2	23/003	COPPER	COIN	275	285
3	1066	IRON	NAIL		
4	1082	IRON	NAIL		
5	1097	IRON	NAIL		
6	1066	IRON	NAIL		
7	1066	IRON	UNK		
8	1177	COPPER	COIN	378	378
9	1177	COPPER	COIN	275	285
10	1177	COPPER	COIN	275	285
11	1177	COPPER	COIN	330	340
12	1177	IRON	NAIL		
13	1177	IRON	NAIL		
14	1177	IRON	OXGOAD	43	410
15	1177	IRON	NAIL		
16	1177	IRON	?BROOCH		
17	1177	IRON	NAIL		
18	1212	COPPER	COIN	318	320
19	1177	COPPER	PLAQUE	43	410
20	1196	COPPER	COIN	275	285
21	1212	COPPER	RING		
22	1177	COPPER	COIN	275	285
23	1212	IRON	UNK		
24	1212	COPPER	COIN	300	410
25	1212	COPPER	COIN	200	410
26	1647	COPPER	COIN	300	410
27	1647	COPPER	COIN	310	319
28	1647	COPPER	COIN	275	285
29	1647	COPPER	COIN	275	285
30	1261	COPPER	UNK		
31	1291	COPPER	PLAQUE	43	410
32	1277	COPPER	BRACELET	43	410
33	u/s	COPPER	TERRET	43	200
34	1291	COPPER	BROOCH	-100	100
35	1303	COPPER	COIN	250	296
36	1303	COPPER	COIN	250	296
37	1303	COPPER	COSMETIC	-100	100
38	1212	COPPER	COIN	310	364
39	1212	COPPER	COIN	367	375
40	1471	COPPER	COIN	300	410
41	1471	COPPER	COIN	354	361
42	1385	COPPER	COIN	90	91
43	1429	COPPER	COIN	156	157
44	1421	COPPER	COIN	250	296

RF	Context	Material	Object	Date	Date
45	1421	COPPER	COIN	307	307
46	1428	COPPER	COIN	253	260
47	1428	COPPER	COIN	300	410
48	1428	COPPER	COIN	330	340
49	1522	COPPER	COIN	141	141
50	1428	COPPER	COIN	348	350
51	1562	COPPER	COIN	43	250
52	1563	STONE	AXE		
53	1571	IRON	RING		
54	1641	COPPER	COIN	268	293
55	1577	COPPER	COIN	293	296
56	1647	STONE	AXE		
57	1647	COPPER	COIN	294	295
58	us/0MD	COPPER	COIN	348	350
59	us/0MD	COPPER	COIN	364	378
60	1692	COPPER	LOOP		
61	1713	COPPER	TWEEZERS	43	410
62	1577	COPPER	COIN	72	73
63	1647	COPPER	PLAQUE	43	410
64	1728	COPPER	COIN	148	148
65	1212	COPPER	COIN	310	318
66	1652	COPPER	HAIR PIN	43	200
67	1694	SILVER	COIN	43	410
68	1650	COPPER	HAIR PIN	43	200
69	1483	COPPER	UNK	43	410
70	1650	COPPER	COIN	250	296
71	1066	IRON	NAIL		
72	1066	IRON	NAIL		
73	1066	IRON	NAIL		
74	1212	COPPER	COIN	250	296
75	1212	COPPER	COIN	250	296
76	1212	COPPER	COIN	250	410
77	1728	COPPER	COIN	147	161
78	1728	COPPER	COIN	43	200
79	1728	COPPER	COIN	43	200
80	1471	COPPER	COIN	335	341
81	1471	COPPER	COIN	300	410
82	1471	COPPER	COIN	300	410
83	1018	STONE	ARROW		
84	1419	IRON	KNIFE	43	410
85	1358	COPPER	COIN	364	378
86	1330	COPPER	UNK		
87	1066	GLASS	BEAD	-200	410
88	1549	CERAMIC			
89	1650	CERAMIC	VESSEL	43	410
90	1429	COPPER	COIN	335	341

RF	Context	Material	Object	Date	Date
91	1303	IRON	PUNCH	43	410
92	1303	IRON	BINDING		
93	1562	IRON	?TOOL	43	410
94	1585	IRON	OXGOAD	43	410
95	1095	IRON	OXGOAD	43	410

Appendix 5: Environmental Sample Quantification

Appendix 5ba Environmental sample residue quantification
(* = 1-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams. Preservation (+ = poor, ++ = moderate, +++ = good).
Key: RC = radial cracks, PDS = post-depositional, IH = insect hole, D: distorted, RW: round wood

Period	Group Number	Sample Number	Context	Context Type/ Parent Context	Sample Volume (L)	Charcoal >4mm	Weight (g)	Charcoal 2-4mm	Weight (g)	Charcoal Identifications	Preservation	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Marine Molluscs	Weight (g)	Land Snail shells	Weight (g)	Other (eg, pot, cbm) (presence/ weight)
1	64	9	1139	Pit [1140]	40																	**	<1	Pot (*/22g) FCF (**/31g) Mag.Mat. >2mm (**/1g) Mag.Mat. <2mm (****/14g) Flint (*/2g)
1	36	17	1219	Pit [1218]	10	**	<1	***	2															FCF (**/21g) Mag.Mat. <2mm (***/2g) Mag.Mat. >2mm (**/<1g) Inudstrial? (*/2g)
1	42	18	1233	Pit [1234]	40	**	2	**	1															FCF (*/13g) Pot (*/31g) Flint (**/69g) Mag.Mat. >2mm (**/3g) Mag Mat <2mm (****/15g)
1	49	46	1589	Pit [1588]	20	*	<1	**	<1															Mag.Mat. >2mm (**/1g) Mag.Mat. <2mm (****/4g) FCF (*/26g) Flint (* /4g)
2	11	59	1717	Ring Ditch [1714]	40																	**	1	FCF (*/7g) Flint (*/29g) Mag.Mat. >2mm (*/<1g) Mag.Mat. <2mm (***/1g)
2	11	60	1727	Ring Ditch [1714]	40																			FCF (*/2g) Mag.Mat. >2mm (*/<1g) Mag.Mat. <2mm (***/<1g)

Period	Group Number	Sample Number	Context	Context Type/ Parent Context	Sample Volume (L)	Charcoal >4mm	Weight (g)	Charcoal 2-4mm	Weight (g)	Charcoal Identifications	Preservation	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Marine Molluscs	Weight (g)	Land Snail shells	Weight (g)	Other (eg, pot, cbm) (presence/ weight)
2	11	61	1729	Ring Ditch [1739]	40	*	<1	**	<1															FCF (**/81g) Mag.Mat. >2mm (**/1g) Mag.Mat. <2mm (****/4g)
4	24	4	1021	Pit [1022]	40	**	<1	**	<1			**	13	*	2	**	1	*	<1	**	13	*	<1	Mortar /Plaster? (***/433g) FCF (**/69g) Pot (*/38g) Mag.Mat. <2mm (****/40g) Mag.Mat. >2mm (***/8g)
4	24	7	1112	Pit [1113]	40	*	<1	**	<1			*	<1	*	5	**	3	*	<1			*	<1	FCF (**/98g) Pot (*/4g) Mag.Mat. <2mm (****/14g) Mag.Mat. >2mm (***/2g)
4	18	8	1121	Pit [1122]	40							**	18									**	1	Mag.Mat. >2mm (*/<1g) Mag.Mat. <2mm (****/2g)
4.1	15	2	1081	Pit [1082]	40	*	<1	**	<1			**	4			*	<1	*	<1	*	41	***	2	Fe (*/5g) Pot (*/14g) FCF (**/96g) Mag.Mat. >2mm (***/3g) Mag.Mat. <2mm (****/15g)
4.1	15	6	1097	Pit [1098]	40	*	<1	**	<1			**	21			**	1	*	1			**	<1	FCF (**/30g) Pot (*/7g) Mag.Mat. <2mm (****/12g) Mag.Mat. >2mm (**/2g)
4.1	8	44	1563	Ditch Terminus [1561]	40	*	<1	*	<1			*	<1					*	<1	*	9	*	<1	Flint * 150g/ Pot * 2g/ Mag Mat >2mm * <1g/ Glass * <1g/ Green? * <1g/ Mag mat <2mm *** 1g
4.1	61	57	1629	Pit [1628]	40	**	<1	**	<1			**	4	**	7	**	5	**	1			*	<1	Pot (*/30g) FCF (***/190g) Flint (*/19g) Mag.Mat. >2mm (***/6g) Mag.Mat. <2mm (****/27g)

Period	Group Number	Sample Number	Context	Context Type/ Parent Context	Sample Volume (L)	Charcoal >4mm	Weight (g)	Charcoal 2-4mm	Weight (g)	Charcoal Identifications	Preservation	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Marine Molluscs	Weight (g)	Land Snail shells	Weight (g)	Other (eg, pot, cbm) (presence/ weight)
4.2	22	3	1066	Pit [1067]	40	*	<1															****	25	FCF (*/23g) Fe (*/19g) Pot (*/27g) CBM (*/9g) Mag.Mat. <2mm (****/3g) Mag.Mat. >2mm (***/4g)
4.2	3	10	SK 1142	Burial [1143]	10																			Fe (*/2g) Mag.Mat. <2mm (***/<1g) H.Bone 4-8mm (**/<1g) H.Bone 2-4mm (**/1g) H.Bone >8mm (*/3g)
4.2	3	11	SK 1142	Burial [1143]	10																	*	<1	H.Bone (***/16g)
4.2	3	12	SK 1141	Grave Cut [1143]	40																			
4.2	12	23	1287	Ring Ditch re-cut [1700]	40	*	<1	**	<1			*	<1											Flint (*/28g) Pot (**/131g) Mag.Mat. >2mm (*/<1g) Mag.Mat. <2mm (****/6g)
4.2	12	24	1291	Ring Ditch re-cut [1748]	40	*	<1	*	<1			*	7	*	<1	*	<1	*	<1			**	<1	Pot (**/28g) CBM (*/<1g) Mag.Mat. >2mm (**/2g) Mag.Mat. <2mm (****/7g)
4.2	58	29	1415	Fire Pit [1416]	10	*	<1	**	<1			*	<1			*	<1					*	<1g	Mag.Mat. <2mm (****/3g) Pot (*/9g) Fe (*/14g)
4.2	58	30	1417	Fire Pit [1418]	10	**	<1	**	1	*Taxus baccata* (7) *Quercus* sp. (3) (from flot)	+ + +	*	<1									*	4	Plaster (***/122g) Stone (*/122g) Pot (*/7g)

Period	Group Number	Sample Number	Context	Context Type/ Parent Context	Sample Volume (L)	Charcoal >4mm	Weight (g)	Charcoal 2-4mm	Weight (g)	Charcoal Identifications	Preservation	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Marine Molluscs	Weight (g)	Land Snail shells	Weight (g)	Other (eg, pot, cbm) (presence/ weight)
																								Mag.Mat. >2mm (**/4g) Mag.Mat. <2mm (****/9g)
4.2	58	31	1419	Fire Pit [1420]	10	***	5	***	1	*Taxus baccata* (5) *Quercus* sp. (5) [PDS: 1]	+++	*	3	*	2	*	<1			*	20			Plaster (***/126g) Mag.Mat. >2mm (***/2g) Mag.Mat. <2mm (****/8g) Pot (*/87g)
4.2	10	32	1449	Posthole [1450]	40	**	1	**	<1	*Quercus* sp. (10) [CC: 10, RC:1] (from flot)	++													Pot (*/<1g) Flint (*/24g) Mag.Mat. >2mm (**/1g) Plaster (**/324g) Fe (*/4g) FCF (*/17g) Mag.Mat. <2mm (****/5g)
4.2	59	34	1428	Pig Skull Burial [1431]	20			*	<1	*Quercus* sp. (5) [IH:1] *Quercus/Castanea* (1) *Fraxinus excelsior* (1) *Sambucus* sp. (1) Indet. (1) [D:1] (from flot)	++	*	4									*	<1	Pot (*/6g) Flint (*/43g) Mag.Mat. >2mm (**/<1g) Mag.Mat. <2mm (****/3g)
4.2	59	35	1428	Pig Skull Burial [1431]	30			*	<1	*Quercus* sp. (10) (from flot)	+++	*	1	*	<1							*	<1	Pot (*/2g) FCF (*/3g) Flint (*/18g) CBM (*/1g) Mag.Mat. >2mm (**/2g) Mag.Mat. <2mm (****/4g)

Period	Group Number	Sample Number	Context	Context Type/ Parent Context	Sample Volume (L)	Charcoal >4mm	Weight (g)	Charcoal 2-4mm	Weight (g)	Charcoal Identifications	Preservation	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Marine Molluscs	Weight (g)	Land Snail shells	Weight (g)	Other (eg, pot, cbm) (presence/ weight)
4.2	59	36	1424	Pig Skull Burial [1427]	20					*Quercus* sp. (10) (from flot)	+++	**	5									*	<1	Plaster (*/2g) Pot (*/1g) Mag.Mat. <2mm (****/2g) Flint (*/5g) Mag.Mat. >2mm (**/1g)
4.2	59	37	1428	Pig Skull Burial [1431]	20							*	2											Coin (*/2g) Pot? (* /<1g) Mag.Mat. >2mm (*/<1g) Mag.Mat. <2mm (***/1g) CBM (*/7g)
4.2	10	38	1482	Post Pipe [1484]	10	*	<1	**	<1	*Quercus* sp. (10) (from flot)	+++	*	<1									*	<1	Mag.Mat. <2mm (****/2g) Mag.Mat. >2mm (**/<1g)
4.2	10	39	1483	Post Packing [1484]	30	**	1	**	<1	*Quercus* sp. (10) [IH:1] (from flot)	+++	*	1							*	19	*	<1	CBM (*/12g) FCF (*/28g) Mag.Mat. <2mm (****/6g) Mag.Mat. >2mm (**/1g)
4.2	59	40	1428 (under skull)	Pig Skull Burial [1431]	10							*	1											Pot (*/6g) FCF (*/7g) Fe (*/3g) Flint (*/2g) Mag.Mat. >2mm (*/<1g) Mag.Mat. <2mm (***/1g)
4.2	59	42	1428	Pig Skull Burial [1431]	20			*	<1			*	1									*	<1	Mag.Mat >2mm (*/<1g) Pot (*/8g) Flint (*/2g) Mag.Mat. <2mm (****/4g)
4.2	43	45	1549	Flue [1547]	30	*	<1	**	<1			*	4	*	1	*	<1					**	<1	Mortar? (*/227g) F.Clay (*/23g) CBM (*/37g) Pot? (*/<1g) FCF (*/53g) Flint (*/13g) Plaster (*/1g)

Period	Group Number	Sample Number	Context	Context Type/ Parent Context	Sample Volume (L)	Charcoal >4mm	Weight (g)	Charcoal 2-4mm	Weight (g)	Charcoal Identifications	Preservation	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Marine Molluscs	Weight (g)	Land Snail shells	Weight (g)	Other (eg, pot, cbm) (presence/ weight)
																								Mag.Mat. <2mm (****/17g) Mag.Mat. >2mm (***/7g)
4.2	10	47	1592	Post Pipe [1594]	5	*	<1	**	<1			*	<1							*	1	*	<1	Mag Mat >2mm (*/<1g) Pot (*/<1g)
4.2	10	48	1593	Post Packing [1594]	20	*	<1	*	<1			*	2			*	<1	*	<1			*	<1	FCF (*/10g) Flint (*/15g) Mag.Mat. >2mm (*/<1g) Mag.Mat <2mm (****/2g)
4.2	10	49	1574	Posthole [1573]	5	*	<1	*	<1			*	<1									*	<1	Mortar (***/267g) Pot (*/1g) Mag.Mat. <2mm (****/1g) Mag.Mat. >2mm (*/<1g)
4.2	10	50	1606	Posthole [1607]	20			*	<1									*	<1					Mortar (***/796g) Fe (*/1g) FCF (**/<1g) CBM (**/62g) Mag.Mat. >2mm (*/<1g) Mag.Mat. <2mm (****/3g)
4.2	10	51	1608	Posthole [1609]	<5	*	<1	***	<1			*	<1					*	<1			*	<1	Mag.Mat. <2mm (****/1g) Mag.Mat. <2mm (**/<1g) Pot (*/1g)
4.2	63	52	1578	Destruction Layer [1578]	40	**	<1	**	<1													*	<1	Flint (*/79g) FCF (**/265g) Plaster (***/1195g) Mortar (***/697g) Fe (*/18g) Pot (*/8g) Mag.Mat. <2mm (****/19g) Mag.Mat. >2mm (***/5g)

Period	Group Number	Sample Number	Context	Context Type/ Parent Context	Sample Volume (L)	Charcoal >4mm	Weight (g)	Charcoal 2-4mm	Weight (g)	Charcoal Identifications	Preservation	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Marine Molluscs	Weight (g)	Land Snail shells	Weight (g)	Other (eg, pot, cbm) (presence/ weight)
4.2	10	54	1620	Posthole [1621]	40	*	<1	**	<1			*	15			*	<1	*	<1			*	<1	FCF (**/63g) Flint (*/44g) Fe (**/23g) Mag.Mat. >2mm (***/2g) Mag.Mat. <2mm (****/13g)
4.2	10	55	1614	Posthole [1615]	40	**	2	**	<1			*	3									*	<1	FCF (*/57g) Flint (*/27g) Mag.Mat. <2mm (****/6g) Mag.Mat. >2mm (**/1g) Fe (*/4g)
4.2	12	58	1735	Ring Ditch re-cut [1738]	40	**	2	**	1	*Corylus avellana*. (10) [RW:6, IH:1] (from flot)	+ + +	** *	13	*	4	**	4	*	<1			***	5	F.Clay (*/26g) FCF (*/32g) Pot (*/3g) Mag.Mat. >2mm (**/<1g) Mag.Mat. <2mm (****/4g)

Appendix 5b: Environmental sample flot quantification

(* = 1-10, ** = 11-50, *** = 51-250, **** = >250) Preservation (+ = poor, ++ = moderate, +++ = good)

Phase	Sample Number	Context	Weight (g)	Flot Volume (ml)	Volume Scanned (ml)	Uncharred (%)	Sediment (%)	Seeds uncharred	Charcoal >4mm	Charcoal 2-4mm	Charcoal <2mm	Crop Seeds Charred	Identifications	Preservation	Weed Seeds Charred	Identifications	Preservation	Other Botanical Charred	Identifications	Preservation	Insects, Fly Pupae etc.	Small Mammal Bone	Land Snail Shells
1	9	1139	33	85	85	90	9	Chenopodiaceae ****		*	**												***
1	17	1219	1	5	5	5	20	Chenopodiaceae *	*	**	***												
1	18	1233	27	30	30	40	30	*Rubus* sp. Chenopodiaceae *	*	***	****	*	*Cerealia* indet.	+									
1	46	1589	2	5	5	25	15	Chenopodiaceae * Poaceae *		*	**	*	*Triticum* sp. (1) *Cerealia* indet. *Hordeum* sp. (2)	+	***	*Polygonum aviculare* *Chenopodium album* *Polygonum* (cotyledon)	++						
2	59	1717	6	5	5	80	19			*	**												****
2	60	1727	2	5	5	30	65				*										*		**

Phase	Sample Number	Context	Weight (g)	Flot Volume (ml)	Volume Scanned (ml)	Uncharred (%)	Sediment (%)	Seeds uncharred	Charcoal >4mm	Charcoal 2-4mm	Charcoal <2mm	Crop Seeds Charred	Identifications	Preservation	Weed Seeds Charred	Identifications	Preservation	Other Botanical	Identifications	Preservation	Insects, Fly Pupae etc.	Small Mammal Bone	Land Snail Shells
2	61	1729	1	<1	<1	20	10		*	**	***												*
3	4	1021	60	160	100	5	5	*Fumaria* sp. * *Rubus* sp. * *Lamium* sp. * *Stellaria* sp. * *Centranthus robur* *	***	****	****	*	*Cerealia* indet.	+	***	*Polygonum aviculare* Chenopodiaceae *Rumex* sp. *Lamium* sp. *Lithospermum arvense* (grey) E*uphrasia/ Odontites Stellaria/ Silene Lapsana communis* Poaceae (small) *Chenopodium album Crepis* sp.	++						*	**
3	7	1112	8	20	20	60	10	*Rubus* sp. Chenopodiaceae **	*	**	***	**	*Cerealia* sp. *Hordeum* sp. *Triticum* sp. *T.dicoccum/ spelta* (1)	+	**	*Trifolium*-type *Euphrasia/ Odontites* Poaceae (small) Brassicaceae *Carex* sp.	++	*	*T.dicoccum/spelta* glume base (1)	+		*	

Phase	Sample Number	Context	Weight (g)	Flot Volume (ml)	Volume Scanned (ml)	Uncharred (%)	Sediment (%)	Seeds uncharred	Charcoal >4mm	Charcoal 2-4mm	Charcoal <2mm	Crop Seeds Charred	Identifications	Preservation	Weed Seeds Charred	Identifications	Preservation	Other Botanical	Identifications	Preservation	Insects, Fly Pupae etc.	Small Mammal Bone	Land Snail Shells
3	8	1121	15	15	15	40	50	*Fumaria* sp. * Chenopodiaceae * *Lamium* sp. *		*	**											*	****
4.1	2	1081	26	65	65	50	10	*Arrhenatherum elatius* * *T.aestivum* rachis * *Fumaria* sp. *	**	***	****				**	*Polygonum/ Eleocharis* Chenopodiaceae	++					*	****
4.1	6	1097	15	30	30	40	40	Chenopodiaceae * *Rubus* sp. *Sambucus nigra* capsule * *Fumaria* sp. * *Arrhenatherum elatius* *	**	***	****	*	*Triticum* sp. (1) *Cerealia* indet.	+	*	*Trifolium*-type Poaceae (small) *Rumex* sp.							****
4.1	44	1563	5	5	5	25	70	Chenopodiaceae * *Polygonum aviculare* *		*	**												

Phase	Sample Number	Context	Weight (g)	Flot Volume (ml)	Volume Scanned (ml)	Uncharred (%)	Sediment (%)	Seeds uncharred	Charcoal >4mm	Charcoal 2-4mm	Charcoal <2mm	Crop Seeds Charred	Identifications	Preservation	Weed Seeds Charred	Identifications	Preservation	Other Botanical	Identifications	Preservation	Insects, Fly Pupae etc.	Small Mammal Bone	Land Snail Shells
4.1	57	1629	13	35	35	20	20	Rubus sp. * Stellaria media *	*	**	***	**	Cerealia indet. T.dicoccum/ spelta Hordeum sp.	+	***	Rumex sp. Chenopodium album Vicia/ Lathyrus (small) Polygonum aviculare Trifolium-type Carex sp. Brassica sp. Poa annua Lamiaceae	++	*	Vicia/ Lathyrus (large) (1)	++			
4.2	3	1066	24	50	50	89	10	Chenopodiaceae *** *Sambucus nigra* * *Fumaria* sp. *		*	**												****
4.2	10	SK 1142	<1	<1	<1	80	19	Chenopodiaceae *			*												
4.2	11	SK 1142	2	3	3	30	70	*Rumex* sp. Chenopodiaceae *															*

Phase	Sample Number	Context	Weight (g)	Flot Volume (ml)	Volume Scanned (ml)	Uncharred (%)	Sediment (%)	Seeds uncharred	Charcoal >4mm	Charcoal 2-4mm	Charcoal <2mm	Crop Seeds Charred	Identifications	Preservation	Weed Seeds Charred	Identifications	Preservation	Other Botanical	Identifications	Preservation	Insects, Fly Pupae etc.	Small Mammal Bone	Land Snail Shells
4.2	12	SK 1141	21	20	20	15	80	Chenopodiaceae ** Lamiaceae *			*												***
4.2	23	1287	11	20	20	40	30	*Fumaria* sp. *	**	***	***												***
4.2	24	1291																					
4.2	29	1415	17	50	50	30	10	Chenopodiaceae *	**	***	****				*	Poaceae (small)	++					*	**
4.2	30	1417	67	230	100	5	5	Chenopodiaceae * *Lamium* sp. *	****	****	****											*	*
4.2	31	1419	121	320	100	1	1	Chenopodiaceae *	****	****	****												
4.2	32	1449	45	120	100	20	20	Chenopodiaceae * *Daucus carrota* *	***	****	****											*	*

Phase	Sample Number	Context	Weight (g)	Flot Volume (ml)	Volume Scanned (ml)	Uncharred (%)	Sediment (%)	Seeds uncharred	Charcoal >4mm	Charcoal 2-4mm	Charcoal <2mm	Crop Seeds Charred	Identifications	Preservation	Weed Seeds Charred	Identifications	Preservation	Other Botanical	Identifications	Preservation	Insects, Fly Pupae etc.	Small Mammal Bone	Land Snail Shells
4.2	34	1428	9	20	20	40	20	Chenopodiaceae *	*	***	****												**
4.2	35	1482	16	45	45	60	10	Chenopodiaceae * *Rubus* sp.	**	***	****												***
4.2	36	1483	11	15	15	25	20		*	**	***												***
4.2	37	1428	8	10	10	40	20	Chenopodiaceae **		***	****												**
4.2	38	1482	38	115	100	5	5	Chenopodiaceae **	***	****	****							*	*Cerealia* culm node (2)	++			***
4.2	39	1483	66	250	100	5	10	Chenopodiaceae *	***	****	****							*	*Cerealia* culm node (2)	++		*	**
4.2	40	1428	2	5	5	50	20			**	**										*		**
4.2	42	1428	2	5	5	25	25	Chenopodiaceae * *Carex* sp. *		*	**				*	*Vicia/ Lathyrus* (small)	++						
4.2	45	1549	10	15	15	40	50	Chenopodiaceae **		**	***												****

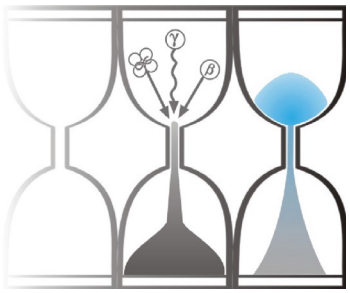
Phase	Sample Number	Context	Weight (g)	Flot Volume (ml)	Volume Scanned (ml)	Uncharred (%)	Sediment (%)	Seeds uncharred	Charcoal >4mm	Charcoal 2-4mm	Charcoal <2mm	Crop Seeds Charred	Identifications	Preservation	Weed Seeds Charred	Identifications	Preservation	Other Botanical	Identifications	Preservation	Insects, Fly Pupae etc.	Small Mammal Bone	Land Snail Shells
4.2	47	1592	1	<5	<5	30	60	Chenopodiaceae * Sambucus nigra *		*	**												**
4.2	48	1593	4	10	10	70	25	Polygonum sp. *		*	**												**
4.2	49	1574	1	<5	<5	49	60	Sambucus nigra *			*												
4.2	50	1606	9	20	20	40	30	Fallopia sp. ** Rubus fruticosas *	*	**	***												****
4.2	51	1608	1	<5	<5	10	10		*	**	**							*	Vicia/ Lathyrus/ Pisum (large)	++			**
4.2	52	1578	24	80	80	10	10	Pinus sp. * Chenopodiaceae ** Rubus idaeus * Stellaria media *	*	****	****												****
4.2	54	1620	10	40	40	30	20	Fallopia sp. Lamiaceae * Chenopodiaceae	*	****	****											*	****

Phase	Sample Number	Context	Weight (g)	Flot Volume (ml)	Volume Scanned (ml)	Uncharred (%)	Sediment (%)	Seeds uncharred	Charcoal >4mm	Charcoal 2-4mm	Charcoal <2mm	Crop Seeds Charred	Identifications	Preservation	Weed Seeds Charred	Identifications	Preservation	Other Botanical	Identifications	Preservation	Insects, Fly Pupae etc.	Small Mammal Bone	Land Snail Shells
								** Rubus idaeus *															
4.2	55	1614	17	50	50	20	10	Chenopodiaceae **	**	****	****							*	Cerealia culm node (1)	(++)			***
4.2	58	1735	33	70	70	5	10	Chenopodiaceae ** Sambucus nigra *	***	****	****	*	Cerealia indet.	+								*	****

Appendix 6: OSL Dating Report

University of Gloucestershire

Luminescence dating laboratory



Optical dating of sediments: Red Lodge excavations, UK

to

J. Stevenson

Archaeology South-East

Prepared by Dr P.S. Toms, 21 February 2017

Contents

Scope of Report

This is a standard report of the Luminescence dating laboratory, University of Gloucestershire. In large part, the document summarises the processes, diagnostics and data drawn upon to deliver Table 1. A conclusion on the analytical validity of each sample's optical age estimate is expressed in Table 2; where there are caveats, the reader is directed to the relevant section of the report that explains the issue further in general terms.

Field Code	Lab Code	Overburden (m)	Grain size (μm)	Moisture content (%)	NaI γ-spectrometry (*in situ*) γ D_r ($Gy.ka^{-1}$)	Ge γ-spectrometry (*ex situ*)			β D_r ($Gy.ka^{-1}$)	Cosmic D_r ($Gy.ka^{-1}$)	Preheat (°C for 10s)	Low Dose Repeat Ratio	Interpolated:Applied Low Regenerative-dose D_e	High Dose Repeat Ratio	Interpolated:Applied High Regenerative-dose D_e	Post-IR OSL Ratio
						K (%)	Th (ppm)	U (ppm)								
REDL01	GL16085	0.83	180-250	8 ± 2	0.24 ± 0.06	0.42 ± 0.05	2.02 ± 0.32	0.57 ± 0.09	0.38 ± 0.06	0.18 ± 0.02	260	0.99 ± 0.04	0.98 ± 0.03	1.01 ± 0.03	1.01 ± 0.02	0.97 ± 0.03
REDL02	GL16086	1.03	180-250	5 ± 1	0.37 ± 0.07	0.76 ± 0.07	2.60 ± 0.35	0.75 ± 0.12	0.66 ± 0.08	0.18 ± 0.02	240	1.00 ± 0.03	1.00 ± 0.02	1.03 ± 0.02	1.03 ± 0.02	0.98 ± 0.03

Field Code	Lab Code	Total D_r ($Gy.ka^{-1}$)	D_e (Gy)	Age (ka)
REDL01	GL16085	0.80 ± 0.06	5.9 ± 0.7	7.4 ± 1.0 (1.0)
REDL02	GL16086	1.20 ± 0.08	4.7 ± 0.2	3.9 ± 0.3 (0.3)

Table 1 D_r, D_e and Age data of submitted samples located at c. 52°N, 1°E, 20m. Age estimates expressed relative to year of sampling. Uncertainties in age are quoted at 1σ confidence, are based on analytical errors and reflect combined systematic and experimental variability and (in parenthesis) experimental variability alone (see 6.0). Blue indicates samples with accepted age estimates, red, age estimates with caveats (see Table 2).

Generic considerations	Field Code	Lab Code	Sample specific considerations
None	REDL01	GL16085	Potential pedoturbation effects (see section 3.2.2); accept as maximum age estimate
	REDL02	GL16086	None

Table 2 Analytical validity of sample suite age estimates and caveats for consideration

1.0 Mechanisms and principles

Upon exposure to ionising radiation, electrons within the crystal lattice of insulating minerals are displaced from their atomic orbits. Whilst this dislocation is momentary for most electrons, a portion of charge is redistributed to meta-stable sites (traps) within the crystal lattice. In the absence of significant optical and thermal stimuli, this charge can be stored for extensive periods. The quantity of charge relocation and storage relates to the magnitude and period of irradiation. When the lattice is optically or thermally stimulated, charge is evicted from traps and may return to a vacant orbit position (hole). Upon recombination with a hole, an electron's energy can be dissipated in the form of light generating crystal luminescence providing a measure of dose absorption.

Herein, quartz is segregated for dating. The utility of this minerogenic dosimeter lies in the stability of its datable signal over the mid to late Quaternary period, predicted through isothermal decay studies (e.g. Smith *et al.*, 1990; retention lifetime 630 Ma at 20°C) and evidenced by optical age estimates concordant with independent chronological controls (e.g. Murray and Olley, 2002). This stability is in contrast to the anomalous fading of comparable signals commonly observed for other ubiquitous sedimentary minerals such as feldspar and zircon (Wintle, 1973; Templer, 1985; Spooner, 1993)

Optical age estimates of sedimentation (Huntley *et al.*, 1985) are premised upon reduction of the minerogenic time dependent signal (Optically Stimulated Luminescence, OSL) to zero through exposure to sunlight and, once buried, signal reformulation by absorption of litho- and cosmogenic radiation. The signal accumulated post burial acts as a dosimeter recording total dose absorption, converting to a chronometer by estimating the rate of dose absorption quantified through the assay of radioactivity in the surrounding lithology and streaming from the cosmos.

$$\text{Age} = \frac{\text{Mean Equivalent Dose } (D_e, \text{ Gy})}{\text{Mean Dose Rate } (D_r, \text{ Gy.ka}^{-1})}$$

Aitken (1998) and Bøtter-Jensen *et al.* (2003) offer a detailed review of optical dating.

2.0 Sample Preparation

Two sediment samples were collected within opaque tubing and submitted for Optical dating. To preclude optical erosion of the datable signal prior to measurement, all samples were opened and prepared under controlled laboratory illumination provided by Encapsulite RB-10 (red) filters. To isolate that material potentially exposed to daylight during sampling, sediment located within 20 mm of each tube-end was removed.

The remaining sample was dried and then sieved. The fine sand fraction was segregated and subjected to acid and alkaline digestion (10% HCl, 15% H_2O_2) to attain removal of carbonate and organic components respectively. A further acid digestion in HF (40%, 60 mins) was used to etch the outer 10-15 μm layer affected by α radiation and degrade each samples' feldspar content. During HF treatment, continuous magnetic stirring was used to effect isotropic etching of grains. 10% HCl was then added to remove acid soluble fluorides. Each sample was dried, resieved and quartz isolated from the remaining heavy mineral fraction using a sodium polytungstate density separation at 2.68g.cm^{-3}. Twelve 8 mm multi-grain aliquots (*c.* 3-6 mg) of quartz from each sample were then mounted on aluminium discs for determination of D_e values.

All drying was conducted at 40°C to prevent thermal erosion of the signal. All acids and alkalis were Analar grade. All dilutions (removing toxic-corrosive and non-minerogenic luminescence-bearing substances) were conducted with distilled water to prevent signal contamination by extraneous particles.

3.0 Acquisition and accuracy of D_e value

All minerals naturally exhibit marked inter-sample variability in luminescence per unit dose (sensitivity). Therefore, the estimation of D_e acquired since burial requires calibration of the natural signal using known amounts of laboratory dose. D_e values were quantified using a single-aliquot regenerative-dose (SAR) protocol (Murray and Wintle 2000; 2003) facilitated by a Risø TL-DA-15 irradiation-stimulation-detection system (Markey *et al*., 1997; Bøtter-Jensen *et al*., 1999). Within this apparatus, optical signal stimulation is provided by an assembly of blue diodes (5 packs of 6 Nichia NSPB500S), filtered to 470±80 nm conveying 15 $mW.cm^{-2}$ using a 3 mm Schott GG420 positioned in front of each diode pack. Infrared (IR) stimulation, provided by 6 IR diodes (Telefunken TSHA 6203) stimulating at 875±80nm delivering ~5 $mW.cm^{-2}$, was used to indicate the presence of contaminant feldspars (Hütt *et al*., 1988). Stimulated photon emissions from quartz aliquots are in the ultraviolet (UV) range and were filtered from stimulating photons by 7.5 mm HOYA U-340 glass and detected by an EMI 9235QA photomultiplier fitted with a blue-green sensitive bialkali photocathode. Aliquot irradiation was conducted using a 1.48 GBq $^{90}Sr/^{90}Y$ β source calibrated for multi-grain aliquots of 180-250 μm quartz against the 'Hotspot 800' ^{60}Co γ source located at the National Physical Laboratory (NPL), UK.

SAR by definition evaluates D_e through measuring the natural signal (Fig. 1) of a single aliquot and then regenerating that aliquot's signal by using known laboratory doses to enable calibration. For each aliquot, five different regenerative-doses were administered so as to image dose response. D_e values for each aliquot were then interpolated, and associated counting and fitting errors calculated, by way of exponential plus linear regression (Fig. 1). Weighted (geometric) mean D_e values were calculated from 12 aliquots using the central age model outlined by Galbraith *et al*. (1999) and are quoted at 1σ confidence (Table 1). The accuracy with which D_e equates to total absorbed dose and that dose absorbed since burial was assessed. The former can be considered a function of laboratory factors, the latter, one of environmental issues. Diagnostics were deployed to estimate the influence of these factors and criteria instituted to optimise the accuracy of D_e values.

3.1 Laboratory Factors

3.1.1 Feldspar contamination

The propensity of feldspar signals to fade and underestimate age, coupled with their higher sensitivity relative to quartz makes it imperative to quantify feldspar contamination. At room temperature, feldspars generate a signal (IRSL; Fig. 1) upon exposure to IR whereas quartz does not. The signal from feldspars contributing to OSL can be depleted by prior exposure to IR. For all aliquots the contribution of any remaining feldspars was estimated from the OSL IR depletion ratio (Duller, 2003). The influence of IR depletion on the OSL signal can be illustrated by comparing the regenerated post-IR OSL D_e with the applied regenerative-dose. If the addition to OSL by feldspars is insignificant, then the repeat dose ratio of OSL to post-IR OSL should be statistically consistent with unity (Table 1). If any aliquots do not fulfil this criterion, then the sample age estimate should be accepted tentatively. The source of feldspar contamination is rarely rooted in sample preparation; it predominantly results from the occurrence of feldspars as inclusions within quartz.

3.1.2 Preheating

Preheating aliquots between irradiation and optical stimulation is necessary to ensure comparability between natural and laboratory-induced signals. However, the multiple irradiation and preheating steps that are required to define single-aliquot regenerative-dose response leads to signal sensitisation, rendering calibration of the natural signal inaccurate. The SAR protocol (Murray and Wintle, 2000; 2003) enables this sensitisation to be monitored and corrected using a test dose, here set at 5 Gy preheated to 220°C for 10s, to track signal sensitivity between irradiation-preheat steps. However, the accuracy of sensitisation correction for both natural and laboratory signals can be preheat dependent.

The Dose Recovery test was used to assess the optimal preheat temperature for accurate correction and calibration of the time dependent signal. Dose Recovery (Fig. 2) attempts to quantify the combined effects of thermal transfer and

sensitisation on the natural signal, using a precise lab dose to simulate natural dose. The ratio between the applied dose and recovered D_e value should be statistically concordant with unity. For this diagnostic, 6 aliquots were each assigned a 10 s preheat between 180°C and 280°C.

That preheat treatment fulfilling the criterion of accuracy within the Dose Recovery test was selected to generate the final D_e value from a further 12 aliquots. Further thermal treatments, prescribed by Murray and Wintle (2000; 2003), were applied to optimise accuracy and precision. Optical stimulation occurred at 125ºC in order to minimise effects associated with photo-transferred thermoluminescence and maximise signal to noise ratios. Inter-cycle optical stimulation was conducted at 280ºC to minimise recuperation.

3.1.3 Irradiation

For all samples having D_e values in excess of 100 Gy, matters of signal saturation and laboratory irradiation effects are of concern. With regards the former, the rate of signal accumulation generally adheres to a saturating exponential form and it is this that limits the precision and accuracy of D_e values for samples having absorbed large doses. For such samples, the functional range of D_e interpolation by SAR has been verified up to 600 Gy by Pawley *et al*. (2010). Age estimates based on D_e values exceeding this value should be accepted tentatively.

3.1.4 Internal consistency

Abanico plots (Dietze *et al*., 2016) are used to illustrate inter-aliquot D_e variability (Fig. 3). D_e values are standardised relative to the central D_e value for natural signals and are described as overdispersed when >5% lie beyond $\pm 2\sigma$ of the standardising value; resulting from a heterogeneous absorption of burial dose and/or response to the SAR protocol. For multi-grain aliquots, overdispersion of natural signals does not necessarily imply inaccuracy. However where overdispersion is observed for regenerated signals, the efficacy of sensitivity correction may be problematic. Murray and Wintle (2000; 2003) suggest repeat dose ratios (Table 1) offer a measure of SAR protocol success, whereby ratios ranging across 0.9-1.1 are acceptable. However, this variation of repeat dose ratios in the high-dose region can have a significant impact on D_e interpolation. The influence of this effect can be outlined by quantifying the ratio of interpolated to applied regenerative-dose ratio (Table 1). In this study, where both the repeat dose ratios and interpolated to applied regenerative-dose ratios range across 0.9-1.1, sensitivity-correction is considered effective.

3.2 Environmental factors

3.2.1 Incomplete zeroing

Post-burial OSL signals residual of pre-burial dose absorption can result where pre-burial sunlight exposure is limited in spectrum, intensity and/or period, leading to age overestimation. This effect is particularly acute for material eroded and redeposited sub-aqueously (Olley *et al*., 1998, 1999; Wallinga, 2002) and exposed to a burial dose of <20 Gy (e.g. Olley *et al*., 2004), has some influence in sub-aerial contexts but is rarely of consequence where aerial transport has occurred. Within single-aliquot regenerative-dose optical dating there are two diagnostics of partial resetting (or bleaching); signal analysis (Agersnap-Larsen *et al*., 2000; Bailey *et al*., 2003) and inter-aliquot D_e distribution studies (Murray *et al*., 1995).

Within this study, signal analysis was used to quantify the change in D_e value with respect to optical stimulation time for multi-grain aliquots. This exploits the existence of traps within minerogenic dosimeters that bleach with different efficiency for a given wavelength of light to verify partial bleaching. $D_e(t)$ plots (Fig. 4; Bailey *et al*., 2003) are constructed from separate integrals of signal decay as laboratory optical stimulation progresses. A statistically significant increase in natural $D_e(t)$ is indicative of partial bleaching assuming three conditions are fulfilled. Firstly, that a statistically significant increase in $D_e(t)$ is observed when partial bleaching is simulated within the laboratory. Secondly, that there is no significant rise in $D_e(t)$ when full bleaching is simulated. Finally, there should be no significant augmentation in $D_e(t)$ when zero dose is simulated. Where partial bleaching is detected, the age derived from the sample should be considered a maximum estimate only. However, the utility of signal analysis is strongly dependent upon a samples pre-burial

experience of sunlight's spectrum and its residual to post-burial signal ratio. Given in the majority of cases, the spectral exposure history of a deposit is uncertain, the absence of an increase in natural D_e (t) does not necessarily testify to the absence of partial bleaching.

Where requested and feasible, the insensitivities of multi-grain single-aliquot signal analysis may be circumvented by inter-aliquot D_e distribution studies. This analysis uses aliquots of single sand grains to quantify inter-grain D_e distribution. At present, it is contended that asymmetric inter-grain D_e distributions are symptomatic of partial bleaching and/or pedoturbation (Murray *et al*., 1995; Olley *et al*., 1999; Olley *et al*., 2004; Bateman *et al*., 2003). For partial bleaching at least, it is further contended that the D_e acquired during burial is located in the minimum region of such ranges. The mean and breadth of this minimum region is the subject of current debate, as it is additionally influenced by heterogeneity in microdosimetry, variable inter-grain response to SAR and residual to post-burial signal ratios.

3.2.2 Turbation

As noted in section 3.1.1, the accuracy of sedimentation ages can further be controlled by post-burial trans-strata grain movements forced by pedo- or cryoturbation. Berger (2003) contends pedogenesis prompts a reduction in the apparent sedimentation age of parent material through bioturbation and illuviation of younger material from above and/or by biological recycling and resetting of the datable signal of surface material. Berger (2003) proposes that the chronological products of this remobilisation are A-horizon age estimates reflecting the cessation of pedogenic activity, Bc/C-horizon ages delimiting the maximum age for the initiation of pedogenesis with estimates obtained from Bt-horizons providing an intermediate age 'close to the age of cessation of soil development'. Singhvi et al. (2001), in contrast, suggest that B and C-horizons closely approximate the age of the parent material, the A-horizon, that of the 'soil forming episode'. Recent analyses of inter-aliquot D_e distributions have reinforced this complexity of interpreting burial age from pedoturbated deposits (Lombard *et al*., 2011; Gliganic *et al*., 2015; Jacobs *et al*., 2008; Bateman *et al*., 2007; Gliganic *et al*., 2016). At present there is no definitive post-sampling mechanism for the direct detection of and correction for post-burial sediment remobilisation. However, intervals of palaeosol evolution can be delimited by a maximum age derived from parent material and a minimum age obtained from a unit overlying the palaeosol. Inaccuracy forced by cryoturbation may be bidirectional, heaving older material upwards or drawing younger material downwards into the level to be dated. Cryogenic deformation of matrix-supported material is, typically, visible; sampling of such cryogenically-disturbed sediments can be avoided.

4.0 Acquisition and accuracy of D_r value

Lithogenic D_r values were defined through measurement of U, Th and K radionuclide concentration and conversion of these quantities into β and γ D_r values (Table 1). β contributions were estimated from sub-samples by laboratory-based γ spectrometry using an Ortec GEM-S high purity Ge coaxial detector system, calibrated using certified reference materials supplied by CANMET. γ dose rates were estimated from *in situ* NaI gamma spectrometry using an EG&G μNomad portable NaI gamma spectrometer (calibrated using the block standards at RLAHA, University of Oxford); these reduce uncertainty relating to potential heterogeneity in the γ dose field surrounding each sample. The level of U disequilibrium was estimated by laboratory-based Ge γ spectrometry. Estimates of radionuclide concentration were converted into D_r values (Adamiec and Aitken, 1998), accounting for D_r modulation forced by grain size (Mejdahl, 1979) and present moisture content (Zimmerman, 1971). Cosmogenic D_r values were calculated on the basis of sample depth, geographical position and matrix density (Prescott and Hutton, 1994).

The spatiotemporal validity of D_r values can be considered a function of five variables. Firstly, age estimates devoid of *in situ* γ spectrometry data should be accepted tentatively if the sampled unit is heterogeneous in texture or if the sample is located within 300 mm of strata consisting of differing texture and/or mineralogy. However, where samples are obtained

throughout a vertical profile, consistent values of γ D_r based solely on laboratory measurements may evidence the homogeneity of the γ field and hence accuracy of γ D_r values. Secondly, disequilibrium can force temporal instability in U and Th emissions. The impact of this infrequent phenomenon (Olley *et al*., 1996) upon age estimates is usually insignificant given their associated margins of error. However, for samples where this effect is pronounced (>50% disequilibrium between ^{238}U and ^{226}Ra; Fig. 5), the resulting age estimates should be accepted tentatively. Thirdly, pedogenically-induced variations in matrix composition of B and C-horizons, such as radionuclide and/or mineral remobilisation, may alter the rate of energy emission and/or absorption. If D_r is invariant through a dated profile and samples encompass primary parent material, then element mobility is likely limited in effect. Fourthly, spatiotemporal detractions from present moisture content are difficult to assess directly, requiring knowledge of the magnitude and timing of differing contents. However, the maximum influence of moisture content variations can be delimited by recalculating D_r for minimum (zero) and maximum (saturation) content. Finally, temporal alteration in the thickness of overburden alters cosmic D_r values. Cosmic D_r often forms a negligible portion of total D_r. It is possible to quantify the maximum influence of overburden flux by recalculating D_r for minimum (zero) and maximum (surface sample) cosmic D_r.

5.0 Estimation of Age

Ages reported in Table 1 provide an estimate of sediment burial period based on mean D_e and D_r values and their associated analytical uncertainties. Uncertainty in age estimates is reported as a product of systematic and experimental errors, with the magnitude of experimental errors alone shown in parenthesis (Table 1). Cumulative frequency plots indicate the inter-aliquot variability in age (Fig. 6). The maximum influence of temporal variations in D_r forced by minima-maxima in moisture content and overburden thickness is also illustrated in Fig. 6. Where uncertainty in these parameters exists this age range may prove instructive, however the combined extremes represented should not be construed as preferred age estimates. The analytical validity of each sample is presented in Table 2.

6.0 Analytical uncertainty

All errors are based upon analytical uncertainty and quoted at 1σ confidence. Error calculations account for the propagation of systematic and/or experimental (random) errors associated with D_e and D_r values.

For D_e values, systematic errors are confined to laboratory β source calibration. Uncertainty in this respect is that combined from the delivery of the calibrating γ dose (1.2%; NPL, pers. comm.), the conversion of this dose for SiO_2 using the respective mass energy-absorption coefficient (2%; Hubbell, 1982) and experimental error, totalling 3.5%. Mass attenuation and bremsstrahlung losses during γ dose delivery are considered negligible. Experimental errors relate to D_e interpolation using sensitisation corrected dose responses. Natural and regenerated sensitisation corrected dose points (S_i) were quantified by,

$$S_i = (D_i - x.L_i) / (d_i - x.L_i) \qquad \textbf{Eq.1}$$

where D_i = Natural or regenerated OSL, initial 0.2 s
L_i = Background natural or regenerated OSL, final 5 s
d_i = Test dose OSL, initial 0.2 s
x = Scaling factor, 0.08

The error on each signal parameter is based on counting statistics, reflected by the square-root of measured values. The propagation of these errors within Eq. 1 generating σS_i follows the general formula given in Eq. 2. σS_i were then used to define fitting and interpolation errors within exponential plus linear regressions.

For D_r values, systematic errors accommodate uncertainty in radionuclide conversion factors (5%), β attenuation coefficients (5%), a-value (4%; derived from a systematic α source uncertainty of 3.5% and experimental error), matrix density (0.20 $g.cm^{-3}$), vertical thickness of sampled section (specific to sample collection device), saturation moisture content (3%), moisture content attenuation (2%), burial moisture content (25% relative, unless direct evidence exists of the magnitude and period of differing content) and NaI gamma spectrometer calibration (3%). Experimental errors are associated with radionuclide quantification for each sample by NaI and Ge gamma spectrometry.

The propagation of these errors through to age calculation was quantified using the expression,

$$\sigma y\ (\delta y/\delta x) = (\Sigma\ ((\delta y/\delta x_n).\sigma x_n)^2)^{1/2} \qquad \textbf{Eq. 2}$$

where y is a value equivalent to that function comprising terms x_n and where σy and σx_n are associated uncertainties.

Errors on age estimates are presented as combined systematic and experimental errors and experimental errors alone. The former (combined) error should be considered when comparing luminescence ages herein with independent chronometric controls. The latter assumes systematic errors are common to luminescence age estimates generated by means identical to those detailed herein and enable direct comparison with those estimates.

Fig. 1 Signal Calibration

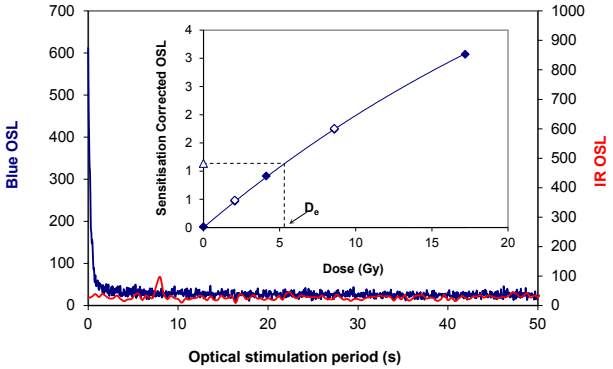


Fig. 2 Dose Recovery

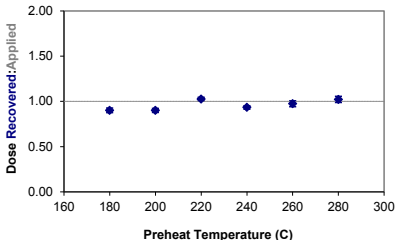


Fig. 3 Inter-aliquot D_e distribution

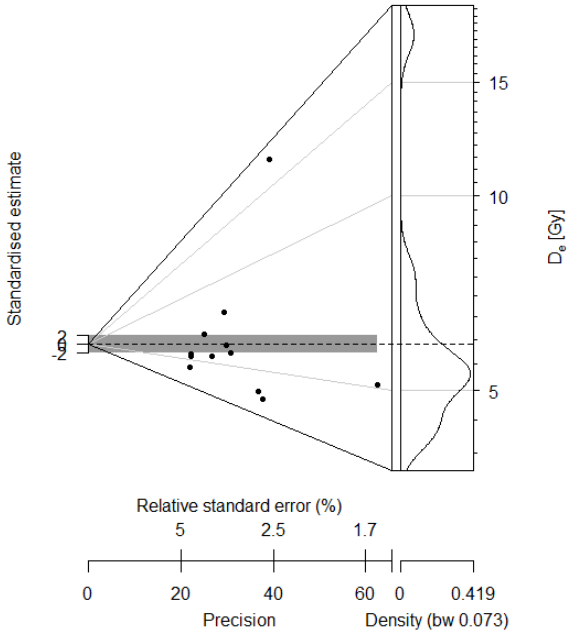


Fig. 4 Signal Analysis

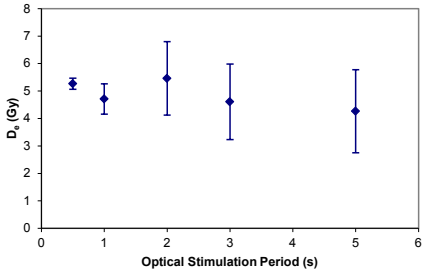


Fig. 5 U Decay Activity

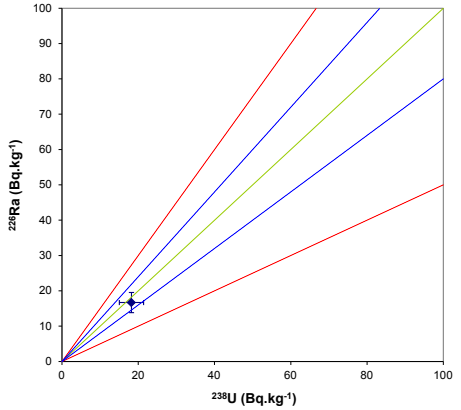


Fig. 6 Age Range

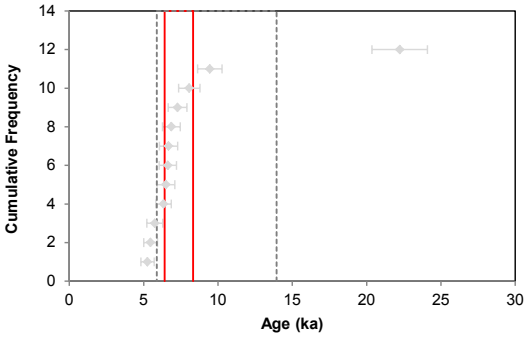


Fig. 1 Signal Calibration Natural blue and laboratory-induced infrared (IR) OSL signals. Detectable IR signal decays are diagnostic of feldspar contamination. Inset, the natural blue OSL signal (open triangle) of each aliquot is calibrated against known laboratory doses to yield equivalent dose (D_e) values. Repeats of low and high doses (open diamonds) illustrate the success of sensitivity correction.

Fig. 2 Dose Recovery The acquisition of D_e values is necessarily predicated upon thermal treatment of aliquots succeeding environmental and laboratory irradiation. The Dose Recovery test quantifies the combined effects of thermal transfer and sensitisation on the natural signal using a precise lab dose to simulate natural dose. Based on this an appropriate thermal treatment is selected to generate the final D_e value.

Fig. 3 Inter-aliquot D_e distribution Abanico plot of inter-aliquot statistical concordance in D_e values derived from **natural** irradiation. Discordant data (those points lying beyond **±2 standardised ln D_e**) reflect heterogeneous dose absorption and/or inaccuracies in calibration.

Fig. 4 Signal Analysis Statistically significant increase in **natural** D_e value with signal stimulation period is indicative of a partially-bleached signal, provided a significant increase in D_e results from **simulated partial bleaching** followed by insignificant adjustment in D_e for simulated **zero** and **full bleach** conditions. Ages from such samples are considered maximum estimates. In the absence of a significant rise in D_e with stimulation time, simulated partial bleaching and zero/full bleach tests are not assessed.

Fig. 5 U Activity Statistical concordance (equilibrium) in the activities of the daughter radioisotope ^{226}Ra with its parent ^{238}U may signify the temporal stability of D_r emissions from these chains. Significant differences (disequilibrium; >50%) in activity indicate addition or removal of isotopes creating a time-dependent shift in D_r values and increased uncertainty in the accuracy of age estimates. A 20% disequilibrium marker is also shown.

Fig. 6 Age Range The Cumulative frequency plot indicates the inter-aliquot variability in age. It also shows the **mean age range**; an estimate of sediment burial period based on mean D_e and D_r values with associated analytical uncertainties. The **maximum influence** of temporal variations in D_r forced by minima-maxima variation in moisture content and overburden thickness is outlined and may prove instructive where there is uncertainty in these parameters. However the combined extremes represented should not be construed as preferred age estimates.

Sample: GL16085

Fig. 1 Signal Calibration

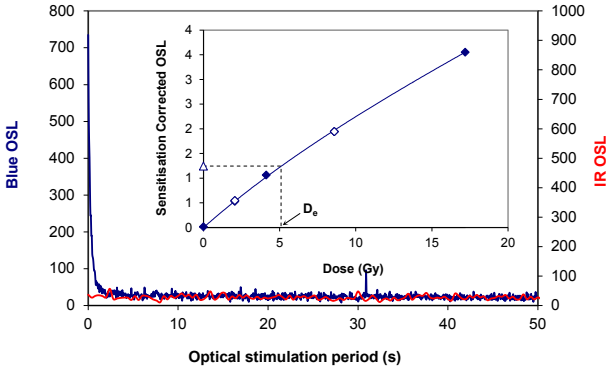


Fig. 1 Signal Calibration Natural blue and laboratory-induced infrared (IR) OSL signals. Detectable IR signal decays are diagnostic of feldspar contamination. Inset, the natural blue OSL signal (open triangle) of each aliquot is calibrated against known laboratory doses to yield equivalent dose (D_e) values. Repeats of low and high doses (open diamonds) illustrate the success of sensitivity correction.

Fig. 2 Dose Recovery The acquisition of D_e values is necessarily predicated upon thermal treatment of aliquots succeeding environmental and laboratory irradiation. The Dose Recovery test quantifies the combined effects of thermal transfer and sensitisation on the natural signal using a precise lab dose to simulate natural dose. Based on this an appropriate thermal treatment is selected to generate the final D_e value.

Fig. 3 Inter-aliquot D_e distribution Abanico plot of inter-aliquot statistical concordance in D_e values derived from **natural** irradiation. Discordant data (those points lying beyond **±2 standardised ln D_e**) reflect heterogeneous dose absorption and/or inaccuracies in calibration.

Fig. 4 Signal Analysis Statistically significant increase in **natural** D_e value with signal stimulation period is indicative of a partially-bleached signal, provided a significant increase in D_e results from **simulated partial bleaching** followed by insignificant adjustment in D_e for simulated **zero** and **full bleach** conditions. Ages from such samples are considered maximum estimates. In the absence of a significant rise in D_e with stimulation time, simulated partial bleaching and zero/full bleach tests are not assessed.

Fig. 5 U Activity Statistical concordance (equilibrium) in the activities of the daughter radioisotope ^{226}Ra with its parent ^{238}U may signify the temporal stability of D_r emissions from these chains. Significant differences (disequilibrium; >50%) in activity indicate addition or removal of isotopes creating a time-dependent shift in D_r values and increased uncertainty in the accuracy of age estimates. A 20% disequilibrium marker is also shown.

Fig. 6 Age Range The Cumulative frequency plot indicates the inter-aliquot variability in age. It also shows the **mean age range**; an estimate of sediment burial period based on mean D_e and D_r values with associated analytical uncertainties. The **maximum influence** of temporal variations in D_r forced by minima-maxima variation in moisture content and overburden thickness is outlined and may prove instructive where there is uncertainty in these parameters. However the combined extremes represented should not be construed as preferred age estimates.

Fig. 2 Dose Recovery

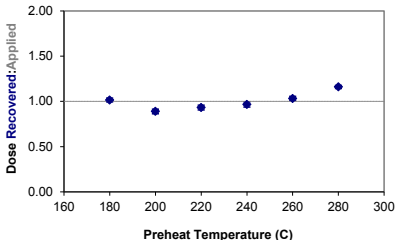


Fig. 3 Inter-aliquot D_e distribution

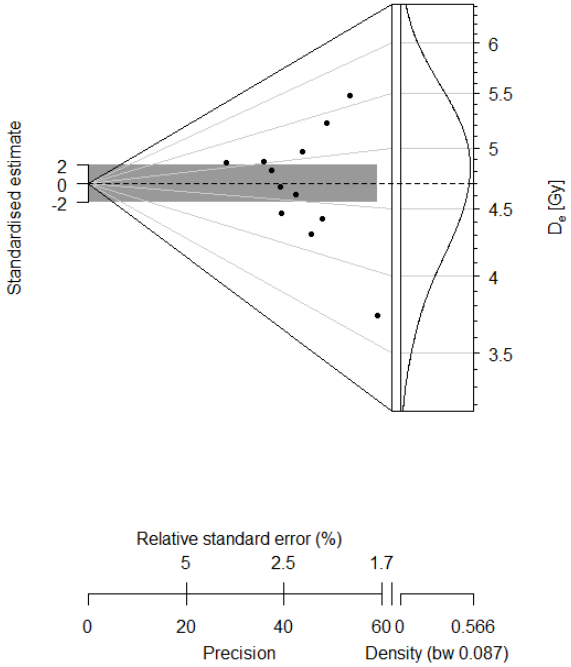


Fig. 4 Signal Analysis

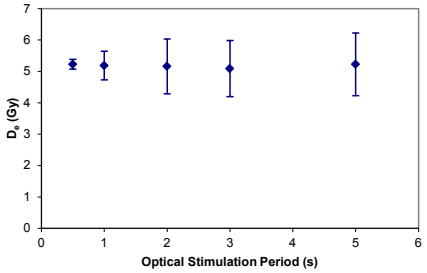


Fig. 5 U Decay Activity

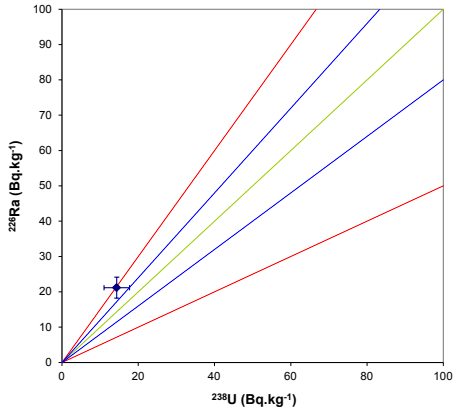
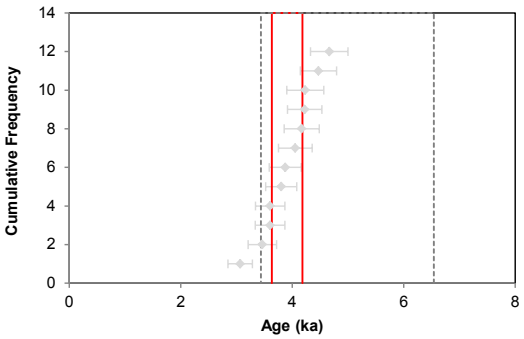


Fig. 6 Age Range



Sample: GL16086

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Appendix 7: HER Summary

Site name/Address: Land east of Kings Warren, Red Lodge	
Parish: Red Lodge	***District:*** Forest Heath
NGR: NGR: TL 7073 7034	***Site Code:*** RDL002, RDL003
Type of Work: Excavation & watching brief	***Site Director/Group:*** Angus Forshaw
Date of Work: 11 July – 21 Oct 2017	***Size of Area Investigated:*** 2ha
Location of Finds/Curating Museum: Suffolk Archive store	***Funding source:*** Developer
Further Seasons Anticipated?: No	***Related HER No's:*** FRK008
Event No: ESF 24526	***OASIS No:*** 278189
Periods Represented: Early Neolithic, Early Bronze Age, Iron Age, Roman, Modern	

SUMMARY OF FIELDWORK RESULTS:

The development area was known to contain the remains of a probable largely ploughed-out prehistoric barrow at its south, previously detected as an aerial photographic soilmark, a positive ?earthwork on the field surface and a geophysical survey ring-ditch anomaly.

Prior evaluation of the south of the development area (Phase A) identified a few tentative prehistoric features, confirmed the presence of the ring-ditch and recorded a number of Roman pits, ditches and some possible postholes - particularly in the vicinity of the ring-ditch. A further area of evaluation (Phase B) undertaken across 6.93ha immediately to the north of Phase A recorded archaeological remains predominately in its southern half. A small cluster of Early Neolithic pits in the south-east and another of Early Iron Age date towards the centre of Phase B were identified. The remaining features, the majority of which were pits or possible postholes, were undated. Some of these may have in fact been of natural origin.

A c.2ha excavation area was investigated within Phase A. A low incidence of isolated Early Neolithic pits and postholes, and residual artefacts in later features was recorded. The full extent of the 45m-diameter ring-ditch was exposed and an Early Bronze Age date for its original construction established by OSL dating of its lower fills. However, no evidence for its function as a funerary monument was recorded. Other than a few outlying pits, this monument stood in apparent isolation. A low density of Iron Age pits recorded in the Phase B evaluation area attest to continued low intensity land use, though the recovery of part of an Iron Age ceramic vessel from the ring-ditch attests to it surviving in the landscape as a remnant earthwork.

The majority of excavated remains were of Roman date. A rectilinear enclosure was imposed around the ring-ditch remains during the earlier Roman period. The Prehistoric ring-ditch was recut and became infilled during the Late Roman period. A small rectangular structure, with painted plaster walls and tile roof, was built immediately to the east of the ring-ditch. Identified as a probable religious shrine, placed 'head and hoof' deposits of pig remains were found in association. Further structured animal bone deposits, pits containing probable votive deposition of artefacts, and layers containing shrine debris and votive material were present elsewhere within the enclosure. However,

no use of the recut ring-ditch enclosure was discerned. This rural shrine site was abandoned by the end of the Roman period after which there was no evidence for land use prior to the modern period. The monitoring of test-pits and construction groundworks for a shallow swale down eastern edge of the Phase A site area did not identify any archaeological remains.
Previous Summaries/Reports: ASE. 2018, *Archaeological Evaluation: Phases A and B, Land East of Kings Warren, Red Lodge, Suffolk.* Unpubl. ASE rep. 2018022

Author of Summary: M. Atkinson	***Date of Summary:*** 08/02/2018

Appendix 8: OASIS Form

OASIS ID: archaeol6-278189	
Project details	
Project name	Phase A excavation, Land east of Kings Warren
Short description of the project	Area excavation revealed the full extent of the 45m-diameter ring-ditch known to be present within the site. OSL dating of its lower fills established an Early Bronze Age construction date though no evidence for a funerary function was recorded. Other than a few outlying pits, this enclosure stood in apparent isolation. The majority of recorded remains were of Roman date. A rectilinear enclosure was imposed around the ring-ditch remains during the earlier Roman period. The Prehistoric ring-ditch was recut and a small rectangular shrine structure was built immediately to its east. Placed porcine 'head and hoof' deposits were found in association. A range of other structured deposits were present elsewhere within the enclosure, but no use of the recut ring-ditch enclosure itself was discerned. This rural shrine site was abandoned by the end of the Roman period after which there was no evidence for land use prior to the modern period.
Project dates	Start: 20-06-2016 End: 21-10-2016
Previous/future work	Yes / Not known
Associated project reference codes	160630 - Contracting Unit No. ESF 24526 - HER event no. RDL002 - Sitecode
Type of project	Recording project
Site status	None
Current Land use	Cultivated Land 2 - Operations to a depth less than 0.25m
Monument type	PIT Early Neolithic RING-DITCH Early Bronze Age PIT Iron Age DITCH Roman SHRINE BUILDING Roman DEBRIS LAYER Roman PIT Roman STRUCTURED DEPOSIT Roman WELL / SHAFT Roman RECUT RING-DITCH Roman POSTHOLE Roman INHUMATION Roman
Significant Finds	POTTERY Early Neolithic WORKED FLINT Late Prehistoric POTTERY Iron Age POTTERY Early Bronze Age POTTERY Roman CBM Roman ANIMAL BONE Roman COIN Roman WORKED STONE Roman WALL PLASTER Roman HUMAN BONE Roman
Investigation type	"Open-area excavation"

Prompt	Planning condition
Project location	
Country	England
Site location	SUFFOLK FOREST HEATH RED LODGE Land East of Kings Warren
Postcode	IP28 8YU
Study area	18760 Square metres
Site coordinates	TL 7073 7034 52.304161905499 0.504394331101 52 18 14 N 000 30 15 E Point
Project creators	
Name of Organisation	Archaeology South-East
Project brief originator	Suffolk County Council Archaeological Service
Project design originator	Archaeology South-East
Project director/manager	Andy Leonard
Project supervisor	Angus Forshaw
Type of sponsor/funding body	Developer
Project archives	
Physical Archive recipient	Suffolk County Council Archive Store
Physical Contents	"Animal Bones","Ceramics","Environmental","Glass","Human Bones","Industrial","Metal","Worked stone/lithics","other"
Physical Archive notes	includes painted wall plaster
Digital Archive recipient	Suffolk County Council Archive Store
Digital Contents	"Animal Bones","Ceramics","Environmental","Glass","Human Bones","Industrial","Metal","Stratigraphic","Survey","Worked stone/lithics","other"
Digital Media available	"Images raster / digital photography","Spreadsheets","Text"
Paper Archive recipient	Surrey Archaeological Society
Paper Contents	"Animal Bones","Ceramics","Environmental","Glass","Human Bones","Industrial","Metal","Stratigraphic","Worked stone/lithics","other"
Paper Media available	"Aerial Photograph","Context sheet","Drawing","Miscellaneous Material","Photograph","Plan","Report","Section"
Project bibliography	
Publication type	Grey literature (unpublished document/manuscript)
Title	Updated Project Design. Archaeological investigation at land East of Kings warren, Red Lodge, Suffolk
Author(s)/Editor(s)	Forshaw, A.

Other bibliographic details	ASE rep. 2017294
Date	2017
Issuer or publisher	Archaeology South-East
Place of issue or publication	Witham
Description	A4 bound report / PDF
Entered by	Mark Atkinson (mark.atkinson@ucl.ac.uk)
Entered on	8 August 2017

Appendix 9: Written Scheme of Investigation

Archaeology South-East

ASE

Written Scheme of Investigation for Archaeological Excavation at Phase A, Land East of Kings Warren, Red Lodge, Suffolk (Southern End)

NGR: TL 7073 7034
Planning Application Ref. No.: F/2013/0257/HYB

OASIS Number: archaeol6-253413

ASE Project no: 160630
HER Number & Site Code: RDL 002
Event Number: ESF24059
HER Search Invoice Reference: 9188338

July 2016
Updated September 2016

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Written Scheme of Investigation for Archaeological Excavation at Phase A, Land East of Kings Warren, Red Lodge, Suffolk (Southern End)

NGR: TL 7073 7034
Planning Application Ref. No.: F/2013/0257/HYB

OASIS Number: archaeol6-253413

ASE Project no: 160630
HER Number & Site Code: RDL 002
Event Number: ESF24059
HER Search Invoice Reference: 9188338

July 2016
Updated September 2016

Prepared by:	Darryl Palmer	Senior Project Manager	
Reviewed and approved by:	Niall Oakey	Project Manager	
Date of Issue:	14th July 2016		
Revision 1:	25th July 2016		
Revision 2:	12th September 2016		

1. INTRODUCTION

1.1 This Written Scheme of Investigation (WSI) has been prepared by Archaeology South-East (ASE) on behalf of CgMs Consulting for an archaeological excavation at Phase A, Land East of Kings Warren, Red Lodge, Suffolk (Southern End), (Figure 1; TL 7073 7034).

1.2 This site is part of a larger development, mainly lying to the north. This WSI is for mitigation work following on from the recently completed evaluation of the Southern end of the site.

1.3 This WSI is for the machine excavation of an area (Figure 2) comprising of c.2ha of the total c.3.65ha southern area.

2. PROJECT BACKGROUND

2.1 Site Description and Location

2.1.1 The site comprises almost entirely of agricultural land except for the existing property 'Hundred Acre Farm' and a relatively small area of garden around it.

2.1.2 The underlying geology of the site is chalk of the Holywell Nodular Chalk and New Pit Chalk formation. There are no superficial geological deposits. The site is located on gently sloping ground between 23m on the south and 22m on the north.

2.2 Reasons for Project

2.2.1 A planning application (Ref. No.: F/2013/0257/HYB) has been submitted to the Forest Heath District Council (FHDC) for the demolition of the Hundred Acre Farm and the construction of dwellings, associated landscaping, drainage and public space as well as retail space.

2.2.2 An Archaeological Desk-Based Assessment (CgMs 2013) was compiled in support of the planning application; that document highlighted the high potential for prehistoric remains in this area (the south end of the site) and moderate potential for Saxon remains. The potential for all other periods was low. Following evaluation trenching (ASE 2016), the Suffolk County Council Archaeological Service (SCCAS), in their capacity as archaeological advisors to FHDC, recommended that archaeological excavation be undertaken to mitigate the impact of the development upon the archaeological resource.

2.2.3 The guidance is based on both regional and national planning guidance, the most recent of which is the National Planning Policy Framework (DCLG 2012, Section 12) and Planning Practice Guidance (PPG, March 2014), and the Mid Suffolk District Council Core Strategy (2008, Policy CS5). The NPPF states that:

No development or preliminary groundworks of any kind shall take place until the applicant has secured the implementation of a programme of archaeological work and recording in accordance with a written scheme of investigation which has been submitted by the applicant, and approved by the planning authority.

2.3.4 This Written Scheme of Investigation (WSI) is produced by ASE to be submitted to CgMs Consulting for onward submission to the SCCAS for approval. All work will be carried out in accordance with these documents, as well as with the *Standards for Field Archaeology in the East of England* (Gurney 2003) and the *Standards and Guidance* of the Chartered Institute of Field Archaeologists (CIfA 2014), other codes and relevant documents of the CIfA.

2.3.5 It should be noted that this Written Scheme of Investigation relates solely to Phase A of the proposed development. The remainder of the development area will require evaluation and potentially further mitigation following that and will be subject to separate WSIs.

3 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

3.1 The following information is drawn from the Desk Based Assessment (CgMs 2013a) and is not repeated in full below.

3.2 Prehistoric

3.2.1 A Mesolithic microlith is recorded with a (Bronze Age?) burial excavated at Chalk Hill round barrow. An assemblage of fifty flints recovered from Hundred Acre Field are recorded as containing a Mesolithic element.

3.2.2 A Neolithic scraper is recorded from the area of TL 6935 7005 and an assemblage of Neolithic pottery associated with burnt bone is recorded from Swales Tumulus, possibly on a buried land surface below a Bronze Age burial mound. A possible late Neolithic activity site is recorded at Worlington Quarry (TL 6964 7156). A large, complete, Neolithic axehead is recorded from TL 7092 6908.

3.2.3 The Bronze Age is widely represented within a 1km radius of the site and it is evident that during the Bronze Age the site lay in a highly developed agricultural and ritual landscape.

3.2.4 A Barrow at Hundred Acres Hill (SHER FRK 008, TL 7065 6908) falls within part of the site. This has now been ploughed down to a height of only c. 0.50m. Analysis of air photographs (CgMs 2013) indicates the form of the barrow ring ditch survives as a ploughed down feature. The air photographs suggest a large number of associated features such as ditches and enclosures in this part of the site. There is an oblique reference to (illegal) metal detecting within the southern site recovering 'Celtic' (Iron Age) coins (TL 7065 6980).

3.2.5 A series of archaeological evaluations to the north and north-west of the site were negative, possibly as a result of archaeological features being completely ploughed out.

3.3 Roman

3.3.1 Very few Roman finds are recorded within a 1km radius of the site. A small quantity of Roman pottery is recorded from Hundred Acre field as a surface find (TL 7034 7036) and there is a probably dubious record of a Roman villa at Chalk Hill Quarry (TL 7115 7215). There is an oblique reference to Roman

finds being recovered during illegal metal detecting within the site (TL 7065 6980).

3.4 Anglo-Saxon and Early Medieval

3.4.1 There are no formal records of any Anglo Saxon or early medieval finds within a 1km radius of the site. However, there is an oblique reference to Anglo Saxon finds being recovered from the site during illegal metal detecting.

3.5 Late Medieval, Post-Medieval and Modern

3.5.1 During these periods the site comprised agricultural land, although there is documentary reference to the Bronze Age Barrow in the south of the site being used as a gallows (execution site) in the thirteenth century (SHER Ref: FRK 008, TL 7065 6980).

3.5.2 The first accurate map of the area of the site is the Ordnance Survey of 1817 (CgMs 2013) which shows the site as generally unremarkable agricultural land. A small enclosure is shown on the south of the site.

3.5.3 By 1881 Hundred Acre Farm had been established within the site. Otherwise the site comprised unremarkable agricultural land. Virtually no change has occurred until the current phase of development.

3.6 Previous archaeological work

3.6.1 Various archaeological evaluations have taken place for different phases of the development and a geophysical survey has been undertaken on the Phase A land itself. The geophysical survey (CgMs 2013b) produced positive results for archaeological remains (Fig. 4), including a large sub-circular shaped anomaly towards the centre of the site which probably represents a ring ditch. The anomaly corresponds well with cropmark and Google Earth images which have also identified the feature. In addition to this the survey suggests there is a large ditched enclosure on the site, along with other ditches and discrete features.

3.7 2016 Evaluation Summary of Results

3.7.1 The fieldwork identified below-ground archaeological features and deposits to be present in 15 of the 32 trenches located within the Phase A development area. Elsewhere, the evaluation revealed only a generally straightforward sequence of ploughsoil deposits overlying natural strata.

3.7.2 The recorded remains were all encountered beneath ploughsoil deposits and were cut directly into the natural strata. It is evident that they had been truncated by agricultural activity, with frequent plough scars seen on the base of the evaluation trenches. Overburden deposits averaged a thickness of 0.30-0.4m across the evaluated area.

3.7.3 Remains were concentrated in the centre and to the east of the site comprising of ditches and pits along with some larger features, possibly representing larger pits. These largely correspond to anomalies identified by aerial photography and geophysical survey. Other anomalies identified during the geophysical survey appear to be natural features or deposits.

3.7.4 Cultural material was found within a majority of features and diagnostic

sherds and coins will hopefully provide accurate dating of some of the features. Their distribution suggests a focus of activity, centring on the ring ditch and in land to its east.

3.7.5 The evidence suggests a concentration of Roman activity focused around the ring ditch (formerly presumed to be a barrow). Outlying features are likely to represent activity associated with the primary function of the ring ditch.

4 RESEARCH AIMS AND OBJECTIVES

4.1 Aims

4.1.1 The general aim of the investigation is to excavate and record any archaeological remains present within the excavation areas in order to ensure their preservation by record prior to destruction by the development.

4.2 Objectives

4.2.1 The general research aims for the project are:

- To determine, as far as reasonably practicable, the location, extent, date, character, condition, significance and quality of the surviving archaeological remains.

- To establish the ecofactual and environmental potential of archaeological deposits and features encountered.

- To assess the degree of truncation caused by later plough damage.

4.2.2 The specific research aims for the project are:

- To further identify any potential Bronze Age activity, particularly that associated with the Barrow at Hundred Acres Hill. Does this feature represent Bronze Age ritual or funerary practice? How does this relate to the surrounding landscape?

- To better understand the extent, form and function of the probable Roman ditch. Are there any re-cuts or associated features? Can this feature be understood as part of the wider landscape?

- What role has the topography, geography and geology of the site played in its development during both the prehistoric and Roman periods?

4.2.3 With reference to 'Research and Archaeology: a framework for the Eastern Counties, 2. Research agenda and strategy' (Brown and Glazebrook 2000) and 'Research and Archaeology Revisited: a revised framework for the East of England' (Medleycott 2011) the excavation will aim to address the following regional research objectives:

Bronze Age

- "*Patterns of burial practice need further exploration. This should include the relationship between settlement sites and burial, and the development and*

use of monuments, including burial mounds as key elements in determining and understanding the landscape." (Medleycott 2011, 20).

- The reuse of Bronze Age barrow cemeteries (Medleycott 2011, 17, 43).

Roman

- The collection of re-deposition of 'ancient' items, particularly Bronze Age metalwork within Roman burial monuments (Medleycott 2011, 42).
- The reuse of earlier ritual monuments during the Roman period (Medleycott, 2011, 43).
- "*The evidence for change in ritual practices, including the introduction of Christianity, needs reassessing in the light of recent excavations. How many religious sites (temples/shrines/etc.) are known from the region? Synthesis of Roman cemeteries and burial practice is needed.*" (Medleycott 2011 48).
- *Can either the finds assemblages or the cemeteries (if these can be located) provide information about Continental contacts?* (Brown and Glazebrook 2000, 21).

5 METHODOLOGY

5.1 The archaeological excavation will comprise the controlled strip, map and sample excavation of one area (Figure 2). The area will be clearly marked out and no tracking will take place within the area until formally signed off by SCCAS. Provision will be made to extend the area dependent on the results of the initial stripping. Any extension will only be undertaken with the agreement of SCCAS & CGMS.

5.2 An event number will be obtained from the Suffolk HER for the excavation. This event number will be clearly marked on the report, any subsequent project documentation and for the preparation of the project archive. A new OASIS record has also been initiated for the excavation work.

5.1 Standards

5.1.1 ASE will adhere to the CIfA *Standard and Guidance for archaeological field evaluation*, and Code of Conduct (CIfA 2014a & 2014b), and the *Standards for Field Archaeology in the East of England* (Gurney 2003) throughout the project. ASE is a Registered Organisation with the CIfA. All work will be undertaken in line with SCCAS 2012 *Requirements for Archaeological Excavation.*

5.2 Excavation and Recording

5.2.1 The areas will be excavated using a large tracked mechanical excavator. The areas will be excavated through undifferentiated topsoil and modern made ground in spits of no more than 0.20m with artefact recovery taking place every scrape until archaeological deposits are encountered or the top of the underlying natural sediments reached. The excavator will be fitted with a smooth grading bucket and care will be taken that archaeological deposits are not damaged due to over machining. All machining will stop if significant archaeological deposits are encountered.

5.2.2 All exposed archaeological features and deposits will be recorded and excavated, except obviously modern features (e.g. concrete/brick 19th- and 20th-century structures) and disturbances.

5.2.3 A full pre-excavation plan will be prepared as the stripping progresses using Global Positioning System (GPS) planning technology in combination with Total Station surveying. This pre-excavation plan will be available in Autocad or PDF format and will be printed at a suitable scale (1:20 or 1:50) for on-site use. The plan will be updated by regular visits to site by the Archaeology South-East Surveyor who will plot excavated features and record levels in close consultation with the Supervisor and/or the excavators. Where it is deemed necessary (for example detailed structural features or burials) features will be hand planned at a scale of 1:20 from the grid and then digitised to be included on the overall plan.

5.2.4 Datum levels will be taken where appropriate. Sufficient levels will be taken to ensure that the relative height of the archaeological/subsoil horizon can be extrapolated across the whole of the development area.

5.2.5 A metal detector will be used throughout the programme of topsoil/subsoil removal and again during any subsequent hand excavation. A log of its use will be kept.

5.2.6 Archaeological features and deposits will be excavated using hand tools, unless they cannot be accessed safety or unless a machine-excavated trench is the only practical method of excavation. Any machine-excavation of archaeologically significant features will be agreed with SCCAS & CgMs.

5.2.7 With the exception of modern disturbances, normally a minimum 50% of all discrete features (e.g. non-structural pits) will be excavated. Normally 10% of non-structural linear features will be excavated. Structural features, including pits, postholes, beam slots, foundation trenches etc.) will be excavated in full. Modern disturbances will only be excavated as necessary in order to properly define and evaluate any features that they may cut. Details of the precise excavation strategy and any alterations to it will be discussed with the monitoring officer if particularly significant archaeology is revealed as a result of topsoil stripping. Further discussion and agreement on the approach to the excavation of complex areas may also be requested during the project.

5.2.8 Any articulated human remains, graves and cremation vessels/deposits encountered will be fully excavated. The coroner will be informed and a licence from the Ministry of Justice will be sought immediately – CgMs will also be informed, who will inform the client and SCC as appropriate. In the event of any unexpected or unusual discoveries of cremation or inhumation burials specialist advice will be sought from an appropriate specialist (Dr Lucy Sibun – ASE – Senior Forensic Archaeologist). Where burials are encountered standard excavation and recording techniques for dealing with human skeletal remains will be employed. Inhumation burials will be recorded in situ and then lifted, packed and marked to standards compatible with those set out in the *Excavation and post-excavation treatment of Cremated and Inhumed Human Remains* (McKinley & Roberts 1993). Any human bone that is recovered will be assessed and recorded in accordance with the above and *Guidelines to the Standards for Recording Human Remains* (BABAO/IFA 2004), *Human Bones from Archaeological Sites* (English Heritage 2004) and *Science and the Dead* (English Heritage 2013).

5.2.9 Human remains are to be treated at all stages with care and respect, and are to be dealt with in accordance with the law. Proposals for the final deposition of any human remains that are recovered during the archaeological work will be made in the post-excavation assessment report, following specialist study and analysis.

5.2.10 A full photographic record comprising colour digital images will be made. The photographic record will aim to provide an overview of the excavation and the surrounding area. A representative sample of individual feature shots and sections will be taken, in addition to working shots and elements of interest (individual features and group shots). The photographic register will include: film number, shot number, location of shot, direction of shot and a brief description of the subject photographed.

5.3 Finds/Environmental Remains

5.3.1 In general, all finds from all features will be collected. Where large quantities of 19th century and later finds are present and the feature is not of intrinsic or group interest, a sample of the finds will normally be collected sufficient to date and characterise the feature.

5.3.2 Finds will be identified, by context number, to a specific deposit or, in the case of topsoil finds, to a specific area of the site.

5.3.3 All finds will be properly processed according to ASE guidelines and the CIfA Standard and guidance for the collection, documentation, conservation and research of archaeological materials (2014c) All pottery and other finds, where appropriate, will be marked with the site code and context number.

5.3.4 If appropriate, environmental samples will be taken from well-stratified, datable deposits that are deemed to have potential for the preservation/survival of environmental material. Bulk soil samples (40 litres or 100% of context) will be taken for wet sieving and flotation, and for finds recovery. If necessary, the English Heritage regional scientific advisor will be consulted. In all instances deposits with clear intrusive material will be avoided.

5.3.5 Any finds believed to fall potentially within the statutory definition of Treasure, as defined by the Treasure Act 1996, amended 2003, shall be reported to CgMs (who will be responsible for informing the landowner) and the Suffolk County Council Finds Liaison Officer. Should the find's status as potential treasure be confirmed the Coroner will also be informed. A record shall be provided to all parties of the date and circumstances of discovery, the identity of the finder, and the exact location of the find(s) (OS map reference to within 1 metre, and find spot(s) marked onto the site plan).

6.0 POST-EXCAVATION, ANALYSIS, REPORTING and ARCHIVE

6.1 Report

6.1.1 Within 4 weeks of the completion of the site works a brief summary of the results and a timetable for the production of a post-excavation assessment report will be submitted to SCCAS & CgMs. Within a maximum of six months

of the completion of fieldwork the full post-excavation assessment report will be produced. The assessment will be undertaken in accordance with the Written Scheme of Investigation for the project and will also give due consideration to assessing the significance of any remains encountered in relation to the Regional Research Framework priorities and agendas. The assessment will contain the following information:

- SUMMARY: A concise non-technical summary
- INTRODUCTION: General introduction to project including reasons for work and funding, planning background.
- BACKGROUND: to include geology, topography, current site usage/description, and what is known of the history and archaeology of the surrounding area.
- AIMS AND OBJECTIVES: Summary of aims and objectives of the project
- METHOD: Methodology used to carry out the work.
- FIELDWORK RESULTS: Detailed description of results. In addition to archaeological results, the depth of the archaeological horizon and/or subsoil across the site will be described. The nature, location, extent, date, significance and quality of any archaeological remains will be described.
- SPECIALIST REPORTS: Summary descriptions of artefactual and ecofactual remains recovered. Brief discussion of intrinsic value of assemblages and their more specific value to the understanding of the site. Recommendations for further assessment and publication.
- DISCUSSION AND CONCLUSIONS: Overview to include assessment of value and significance of the archaeological deposits and artefacts, and consideration of the site in its wider context. Proposals for dissemination/ publication of results.
- APPENDICES: Context descriptions, finds catalogues, contents of archive and deposition details, HER summary sheet.
- FIGURES: to include a location plan of the archaeological works in relation to the proposed development (at an Ordnance Survey scale), specific plans of areas of archaeological interest (at 1:50), a section drawing to show present ground level and depth of deposits, section drawings of relevant features (at 1:20).
- PLATES: Colour photographs of the more significant archaeological features and general views of the site will be included where appropriate.

6.1.2 Copies of the report will be supplied to SCCAS & CgMs in both digital and hard copy. Following agreement with SCCAS & CgMs a digital copy of the report will be supplied to Suffolk Historic Environment Record.

6.1.3 A form will be completed for the Online Access to Index of Archaeological Investigations (OASIS) at http://ads.ahds.ac.uk/project/oasis/UTH in accordance with the guidelines provided by English Heritage and the Archaeological Data Service.

6.2 Publication

6.2.1 Following completion of the post-excavation assessment, a review of the post-excavation programme will be held in consultation with CgMs. At this review stage a timetable and the aims of any further specialist research required will be presented in an Updated Project Design for agreement with

CgMs. All specialist reports will be commissioned and the full post-excavation programme implemented through to full archive report and publication. A publication report will be submitted to a relevant journal or monograph series within 12 months of completion of the fieldwork. Further, detailed information on the publication programme will be presented in the post-excavation assessment and updated project design.

6.3 Archive

6.3.1 A full archive will be prepared for all work undertaken in accordance with the CIfA Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (2014d) and in line with the requirements of the SCCAS (SCCAS Conservation Team 2015 *Archaeological Archives in Suffolk. Guidelines for preparation and deposition).*

6.3.2 Finds from the fieldwork will be kept with the archival material and permission will be sought from the landowner to deposit the finds and paper archive with the SCCAS.

7.0 Public Engagement

7.1 Consideration will be given to community access during the archaeological investigation in so far as health and safety permits. The scale of public communication will be dependent on the quality of the results of the archaeology and will be agreed between ASE, CGMS and their client and SCCAS.

7.2 Upon completion of the fieldwork, and once the initial results/finds assessment has been completed, arrangements will be made to give talks, should the results justify it, to local societies, schools etc.

8 HEALTH AND SAFETY

8.1 Site Risk Assessment and Safety Measures

8.1.1 ASE's Risk Assessment and Method Statement (RAMS) system covers most aspects of excavation work and ensures that for most sites the risks are adequately controlled. Prior to and during fieldwork sites are subject to an ongoing assessment of risk. Site-specific risk assessments are kept under review and amended whenever circumstances change which materially affect the level of risk. Where significant risks have been identified in work to be carried out by ASE a written generic assessment will be made available to those affected by the work. A copy of the Risk Assessment is kept on site.

9 RESOURCES AND PROGRAMMING

9.1 Staffing and Equipment

9.1.1 The archaeological works will be undertaken by a professional team of archaeologists, comprising an Archaeologist with support from a team of Assistant Archaeologists and a surveyor as required.

9.1.2 The Archaeologist for the project will be determined once the programme has been agreed with CgMs and will be responsible for fieldwork, post-excavation reporting and archiving in liaison with the relevant specialists. The project will

be managed by Andy Leonard (project manager, fieldwork) and Mark Atkinson (project manager, post-excavation).

9.1.3 CgMs will inform the SCCAS monitoring officer prior to start of works and should any subsequent change of personnel occur. CVs of all key staff are available on request.

9.1.4 Specialists who may be consulted are:

Prehistoric and Roman pottery Louise Rayner & Anna Doherty (ASE)
Prehistoric Nick Lavender (external: Essex region)
Post-Roman pottery Luke Barber (external: Sussex, Kent and London)
Post-Roman pottery (Essex) Helen Walker (external: Essex)
CBM Sue Pringle & Luke Barber (external)
Fired Clay Elke Raemen & Trista Clifford (ASE)
Clay Tobacco Pipe Elke Raemen (ASE)
Glass Elke Raemen (ASE)
Slag Luke Barber, Lynne Keyes (external); Trista Clifford (ASE)
Metalwork Trista Clifford (ASE)
Worked Flint Karine Le Hégarat (ASE); Hugo Anderson-Whymark (external)
Geological material and worked stone Luke Barber (external)
Human bone incl cremated bone Lucy Sibun (ASE)
Animal bone incl fish Gemma Ayton (ASE)
Marine shell Elke Raemen (ASE); David Dunkin (external)
Registered Finds Elke Raemen & Trista Clifford (ASE)
Coins Trista Clifford (ASE)
Treasure administration Trista Clifford (ASE)
Conservation and x-ray Fishbourne Roman Villa or UCL Institute of Archaeology
Geoarchaeology Dr Matt Pope & Liz Chambers (ASE)
Geoarchaeology (incl wetland environments) Kristina Krawiec (ASE)
Macro-plant remains Dr Lucy Allott & Karine Le Hégarat (ASE)
Charcoal & Waterlogged wood Dr Lucy Allott & Dawn Elise Moony (ASE).

9.1.5 Other specialists may be consulted if necessary. These will be made known to the monitoring office for approval prior to consultation. Similarly, any changes in the specialist list will be made known to the monitoring office for approval prior to consultation.

10 MONITORING

10.1 The SCCAS monitoring officer will be responsible for monitoring progress and standards on behalf of the LPA throughout the project. CgMs will liaise as appropriate to facilitate the monitoring process.

10.2 Any variations to the specification will be agreed with CgMs.

10.3 CgMs will keep SCCAS informed of progress throughout the project and will be contacted in the event that significant archaeological features are discovered. CgMs will arrange for the SCCAS monitoring officer to inspect the excavation areas before they are backfilled.

11 Insurance

11.1 Archaeology South-East is insured against claims for: public liability to the value of £50,000,000 any one occurrence and in the aggregate for products liability; professional indemnity to the value of £15,000,000 any one occurrence; employer's liability to the value of £50,000,000 each and every loss.

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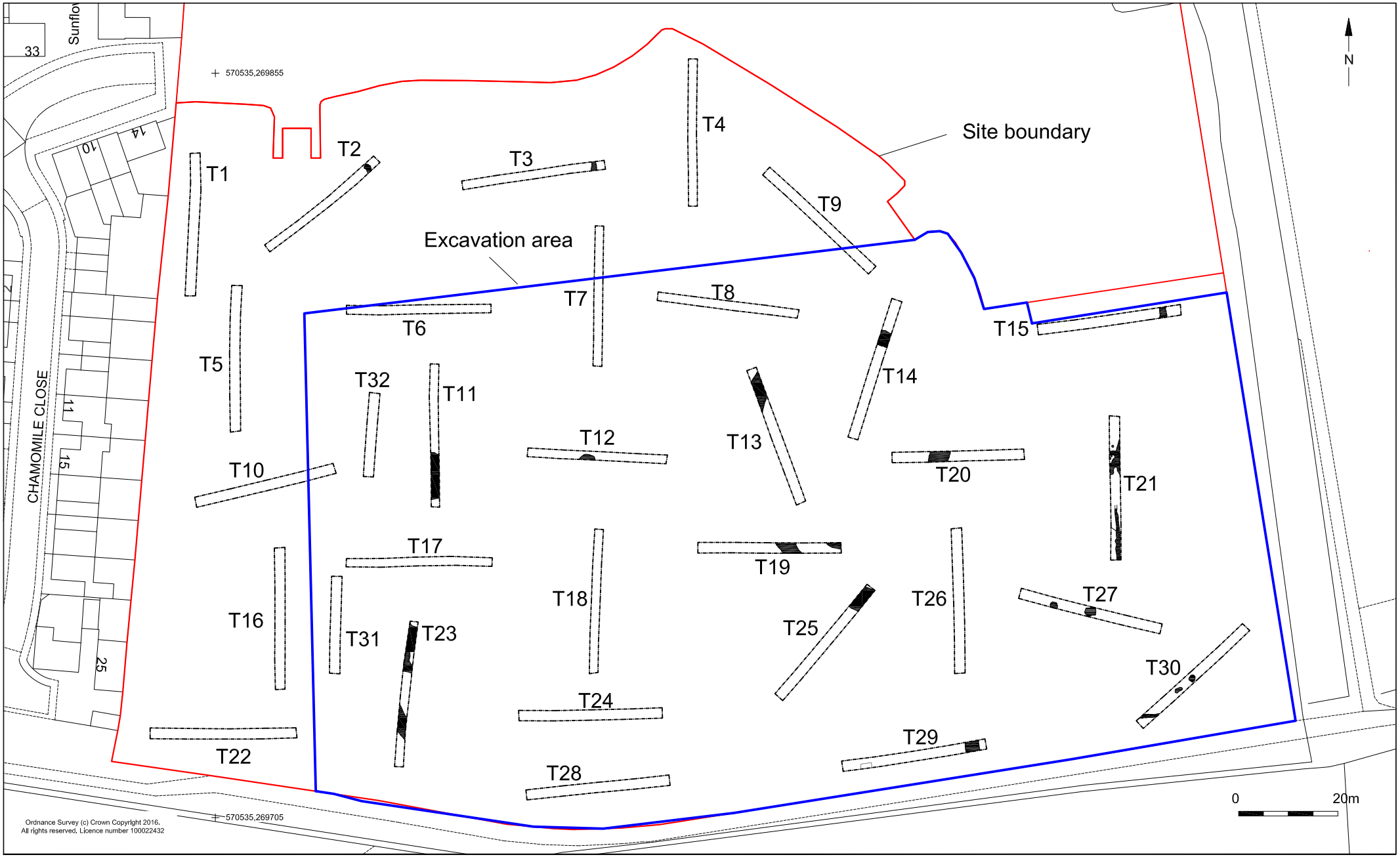
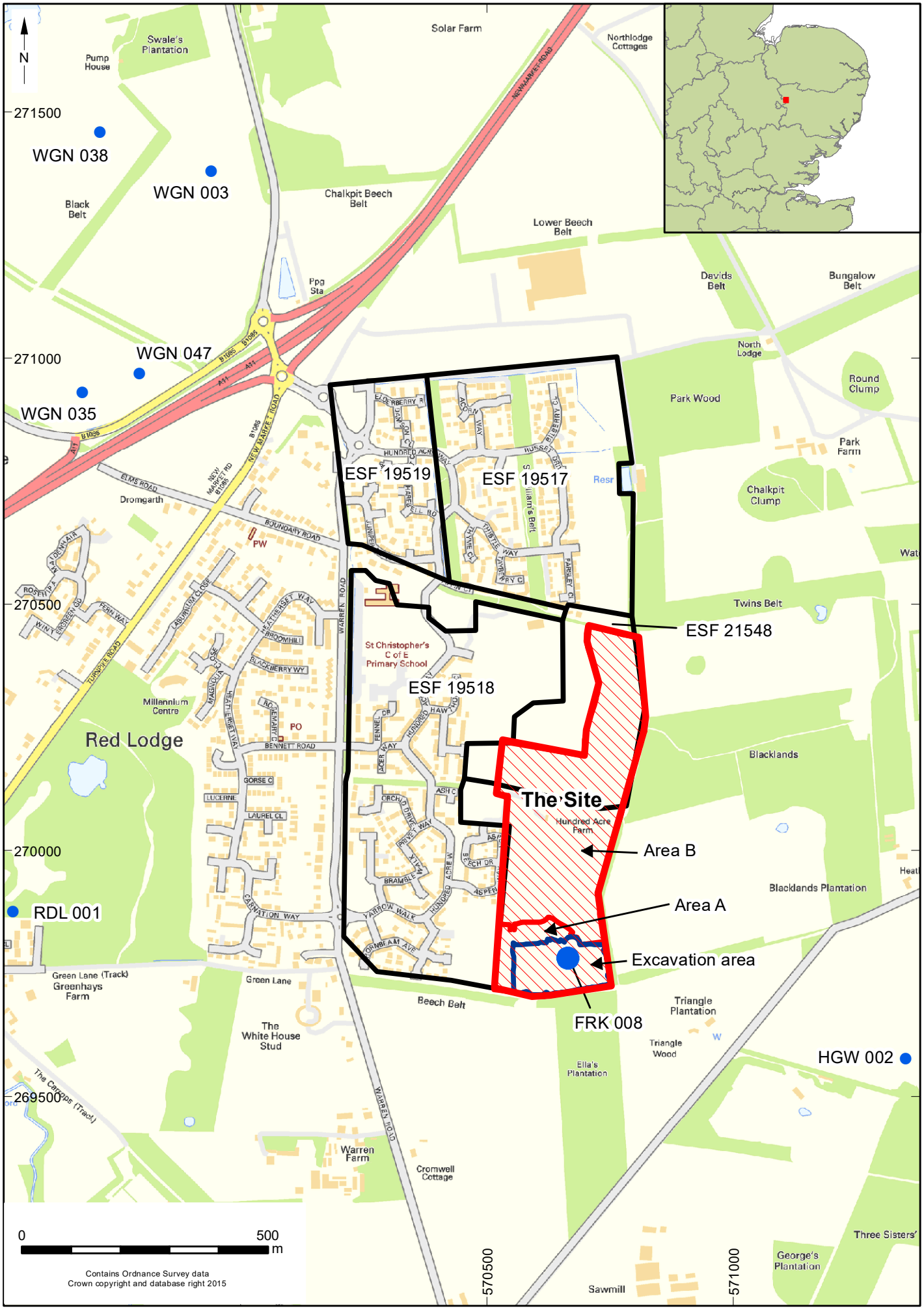
http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html
Accessed 30/05/2016

© Archaeology South-East		Land at Kings Warren, Red Lodge, Suffolk	Fig. 1
Project Ref: 160630	July 2016	Site location	
Report No:WSI	Drawn by: APL		



© Archaeology South-East		Land at Kings Warren, Red Lodge, Suffolk	Fig. 2
Project Ref: 160630	July 2016	Location of excavation area	
Report No: WSI	Drawn by: APL		



© Archaeology South-East		Land at Kings Warren, Red Lodge, Suffolk	Fig. 1
Project Ref: 160630	Jan 2018	The site location with areas of adjacent previous archaeological work	
Report No: 2018022	Drawn by: APL		

Sports Court

Red Lodge Sports Pavilion

Play Area

Playing Field

Allotment Gardens

Track

Hundred Acre Farm

Track

ASPEN WAY

Phase B

Phase A

1.22m RH

1.22m CB

N

570400, 270400

570900, 270400

570400, 269800

570900, 269800

101

94

92

91

93

90

89

88

87

86

85

84

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100

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T1

T2

T3

T4

T5

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T7

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T9

T10

T11

T12

T13

T14

T15

T16

T17

T18

T19

T20

T21

T22

T23

T24

T25

T26

T27

T28

T29

T30

T31

T32

T33

T34

T35

T36

T37

T38

T39

T66

T95

TP1

TP2

TP3

TP4

Evaluation trench

Evaluation trench (not dug)

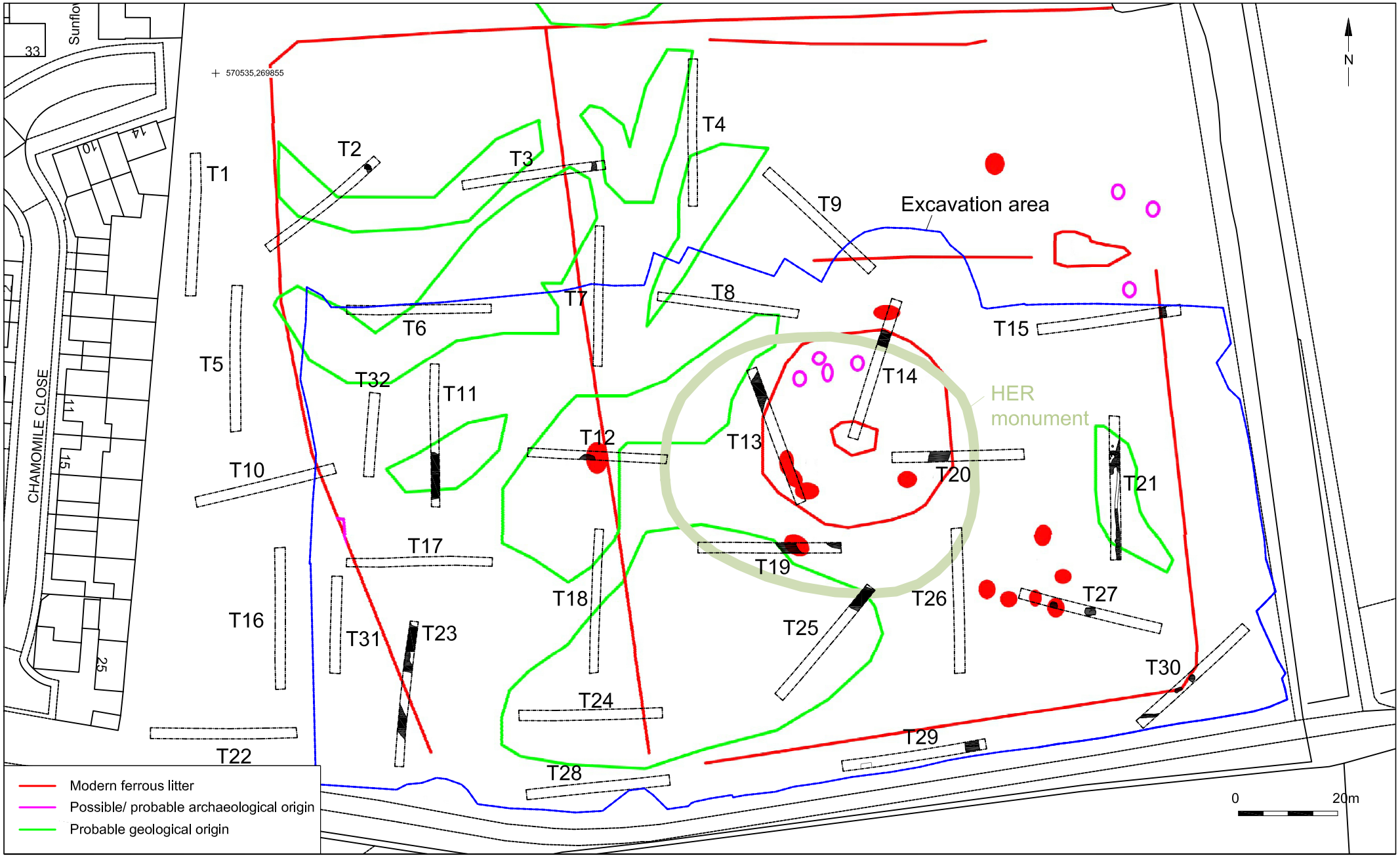
Excavation area

Monitored area

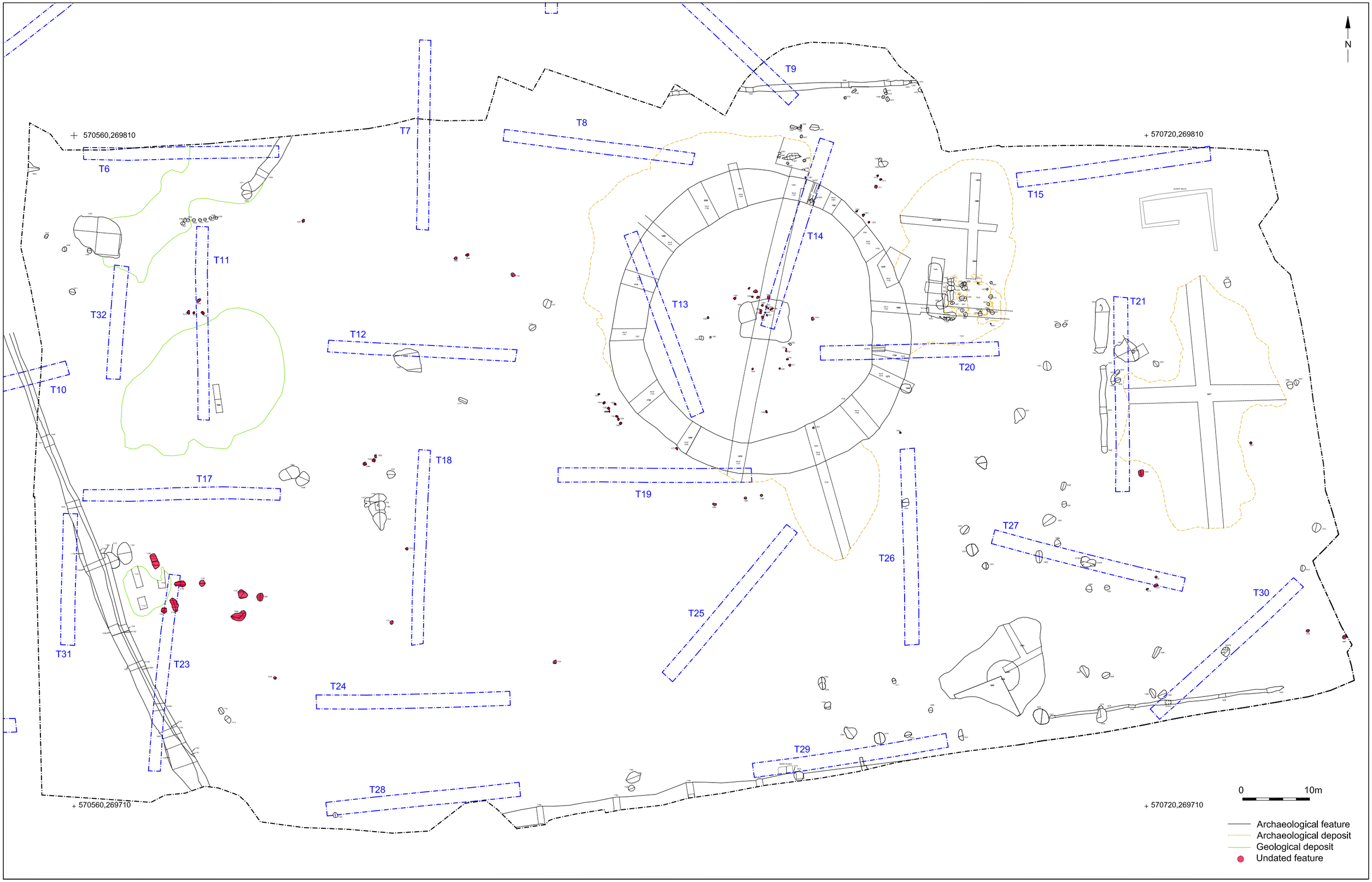
0

50m

© Archaeology South-East		Land east of Kings Warren, Red Lodge, Suffolk	Fig.2
Project Ref: 160630	July 2017	Areas of archaeological work	
Report Ref: 2017294	Drawn by: APL		



© **Archaeology South-East**		Land east of Kings Warren, Red Lodge, Suffolk	Fig.3
Project Ref: 160630	July 2017	Evaluation trenches with geophysical survey interpretation	
Report Ref: 2017294	Drawn by: APL		



© Archaeology South-East		Land east of Kings Warren, Red Lodge, Suffolk	Fig. 4
Project Ref: 160630	July 2017	Plan of all features	
Report Ref: 2017294	Drawn by: APL		

N

570560,269810

570720,269810

G20

G20

G23

G26

G42

G54

G49

G54

G42

G54

G42

G54

G54

G64

Section 1

G42

G54

G36

0 10m

570720,269710

Early Neolithic

Undated features possibly of this phase

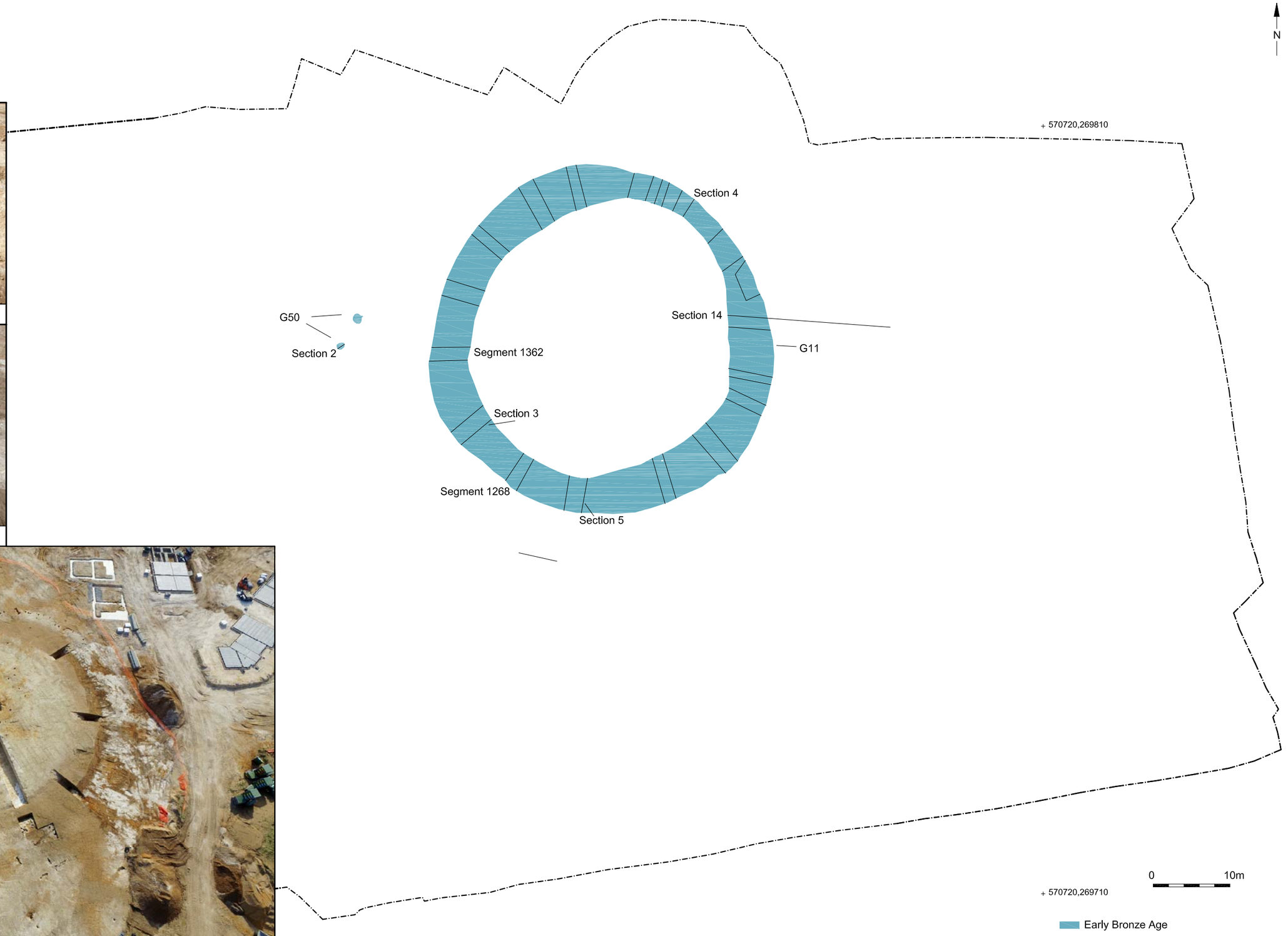
G20 looking south-east, 1m scale

© Archaeology South-East		Land east of Kings Warren, Red Lodge, Suffolk	Fig. 5
Project Ref: 160630	July 2017	Excavation area - Period 1 Early Neolithic	
Report Ref: 2017294	Drawn by: APL		

Ring-ditch segment 1268, looking west, 1m scale

Ring-ditch segment 1362, looking south, 1m scale

Aerial photograph of the ring ditch



© Archaeology South-East		Land east of Kings Warren, Red Lodge, Suffolk	Fig. 6
Project Ref: 160630	July 2017	Excavation area - Period 2 Early Bronze Age	
Report Ref: 2017294	Drawn by: APL		

N

570560,269810

G1

Section 8

G22

G13

G9

G37

G44

?Cockrel

G44

Animal burial Group 19, looking south, 0.5m scale

G61

G14

G19

Cow

G2

Section 9

G15

G24

G38

Ring-ditch possibly retained

G8

Rabbit

G28

G7

G48

Rabbit

G18

Section 7

Dog

Section 1

G4

G24

G45

G53

G6

Section 10

G46

G5

G72

Section 11

570560,269710

G24

0

10m

570720,269710

Early / mid Roman

Roman

Posthole Group 13, looking north, 0.5m scale

© Archaeology South-East		Land east of Kings Warren, Red Lodge, Suffolk	Fig. 7
Project Ref: 160630	July 2017	Excavation area - Period 4.1 Early / Mid Roman	
Report Ref: 2017294	Drawn by: APL		

Quarry pit G35, looking south-west, 1m scales

Possible flue Group 43, 0.3m scale

N

+ 570720,269810

G43

Section 4

G62

Section 12

Building 1

G65

Section 14

Pig skulls

Section 3

G12

Section 5

G47

Section 1

G3

G35

G34

Section 13

Skeleton, 1142

Section 11

+ 570560,269710

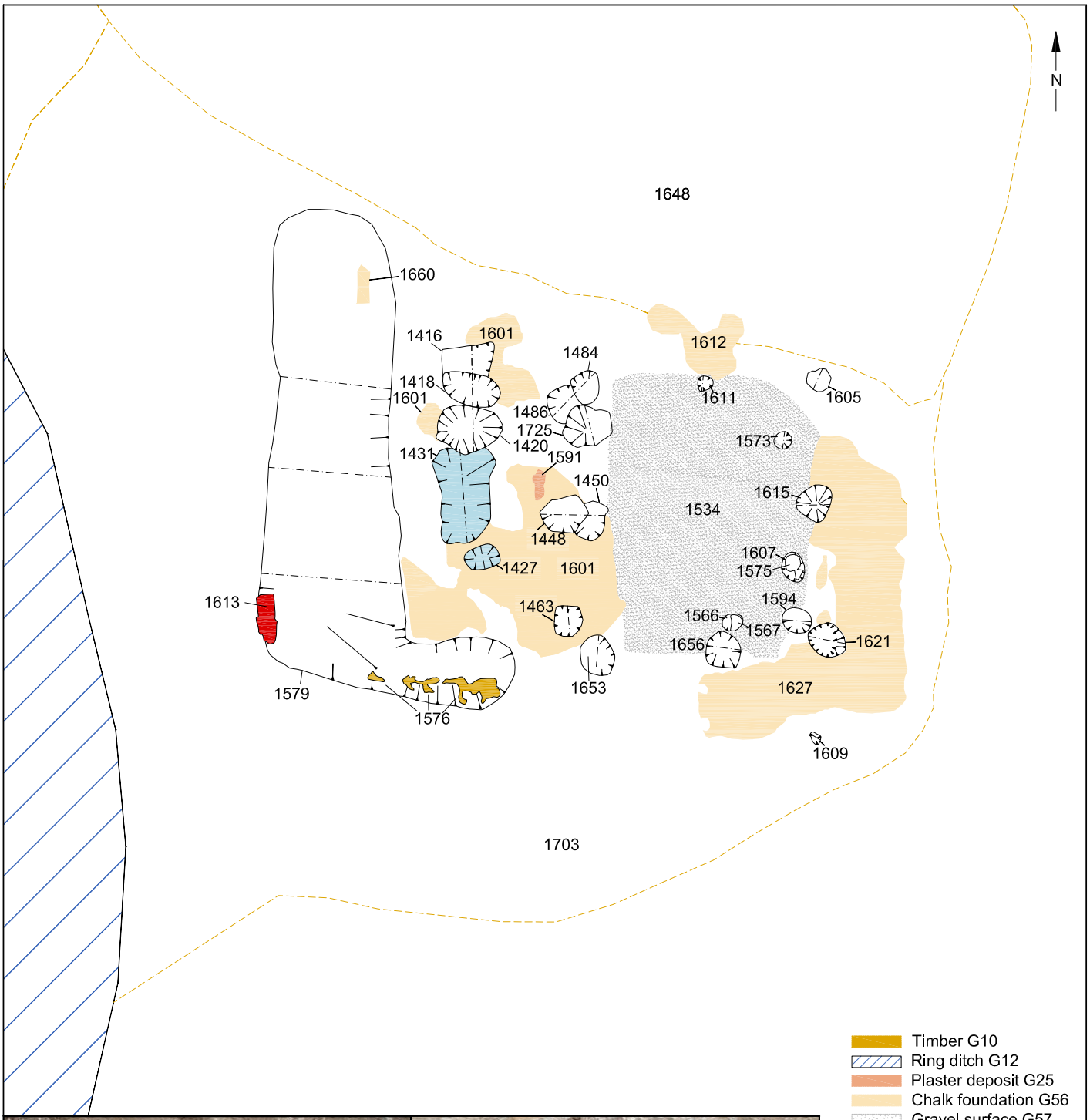
Inhumation 1142, 0.5m scale

0 10m

+ 570720,269710

Late Roman

© **Archaeology South-East**		Land east of Kings Warren, Red Lodge, Suffolk	Fig. 8
Project Ref: 160630	July 2017	Excavation area - Period 4,2 Late Roman	
Report Ref: 2017294	Drawn by: APL		



Pig skulls G59, 0.5m scale

Column base 1575, 0.5m scale

© Archaeology South-East		Land east of Kings Warren, Red Lodge, Suffolk	Fig. 9
Project Ref: 160630	July 2017	Plan and photographs of Building 1	
Report Ref: 2017294	Drawn by: APL		

T45

45/004

T44

44/009

44/006

44/004

44/008

N

Early Neolithic

Undated

0 5m

Pit 64/006 looking south, 1m scale

Pit 64/009 looking north, 1m scale

T56

56/012

56/010

56/008

56/006

56/004

56/013

0 5m

Undated

T64

64/009

64/006

64/003

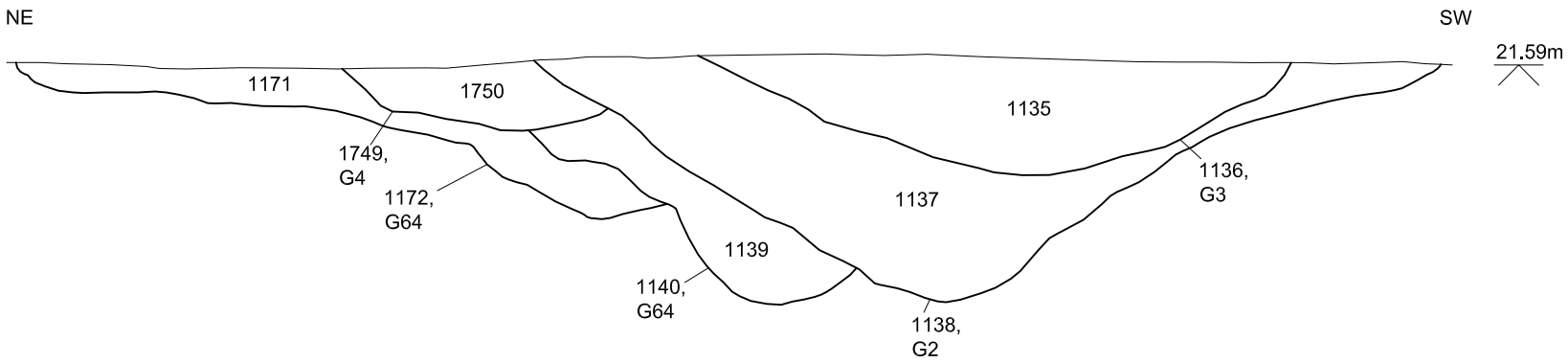
Section 6

Early Iron Age

0 5m

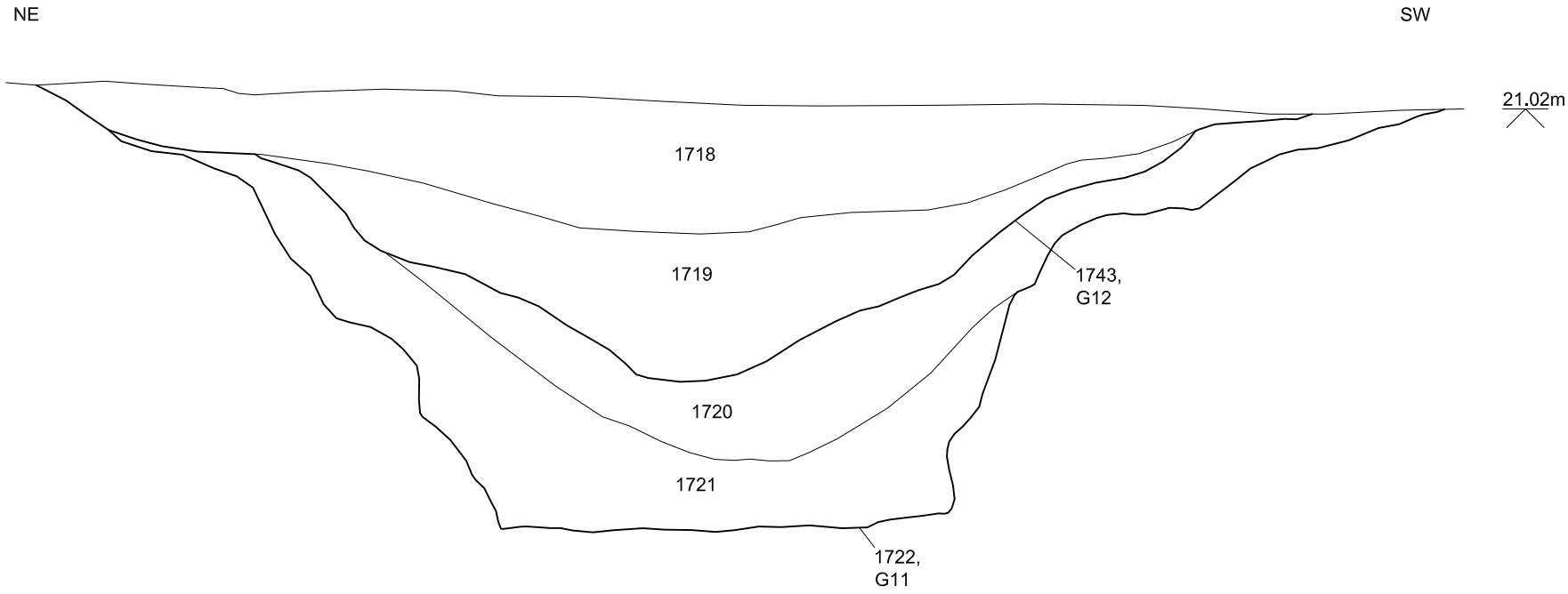
© Archaeology South-East		Land east of Kings Warren, Red Lodge, Suffolk	Fig.10
Project Ref: 160630	July 2017	Evaluation area features	
Report Ref: 2017294	Drawn by: APL		

Section 1



Section 2

Section 3



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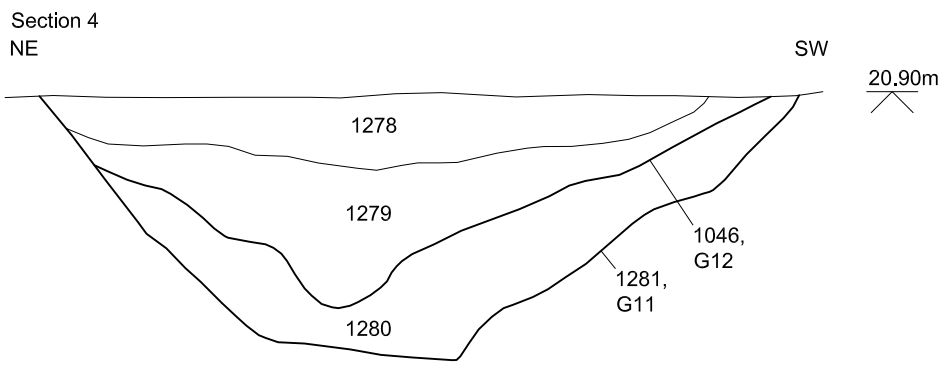

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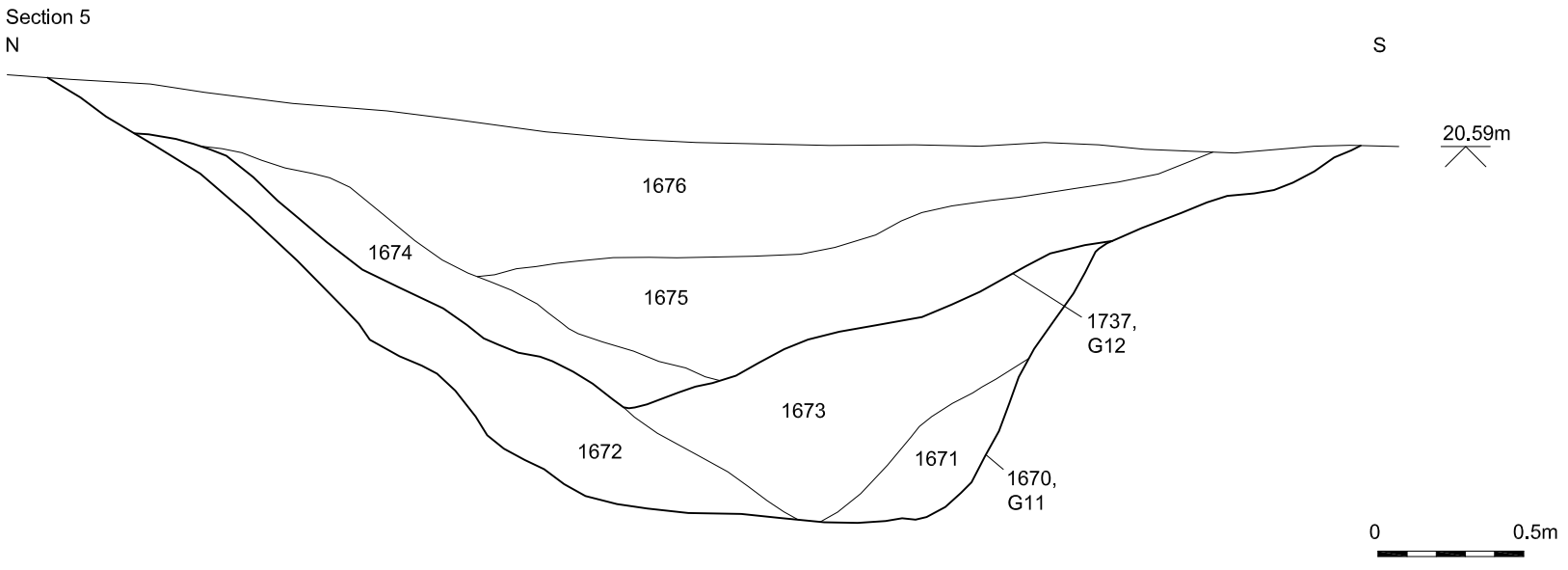
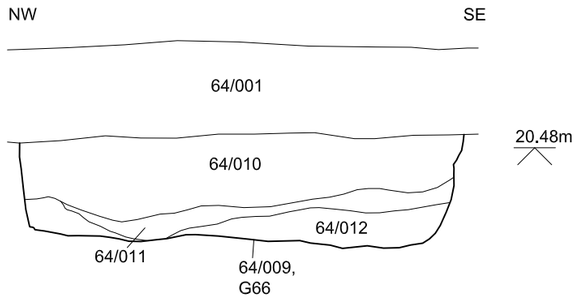
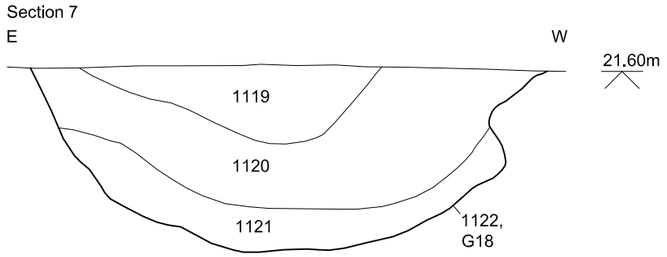


© Archaeology South-East		Land east of Kings Warren, Red Lodge, Suffolk	Fig.11
Project Ref: 160630	July 2017	Sections 1 - 5	
Report Ref: 2017294	Drawn by: APL		

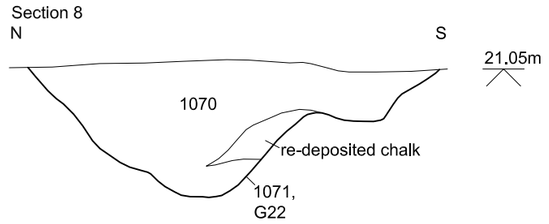
Section 6



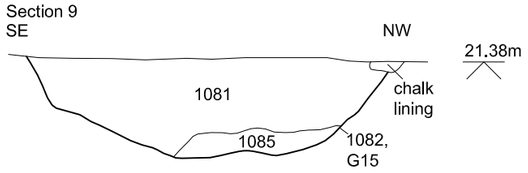
Section 7



Section 8



Section 9



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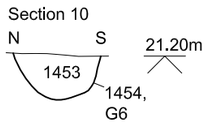

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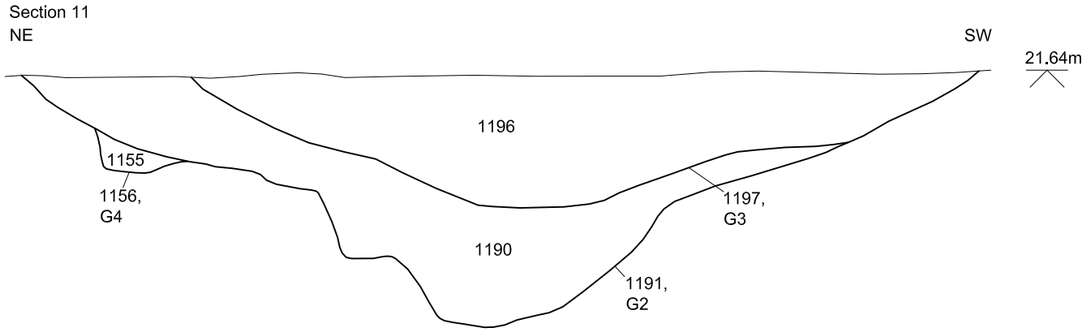

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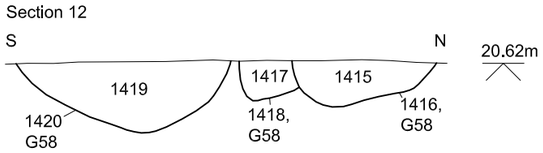

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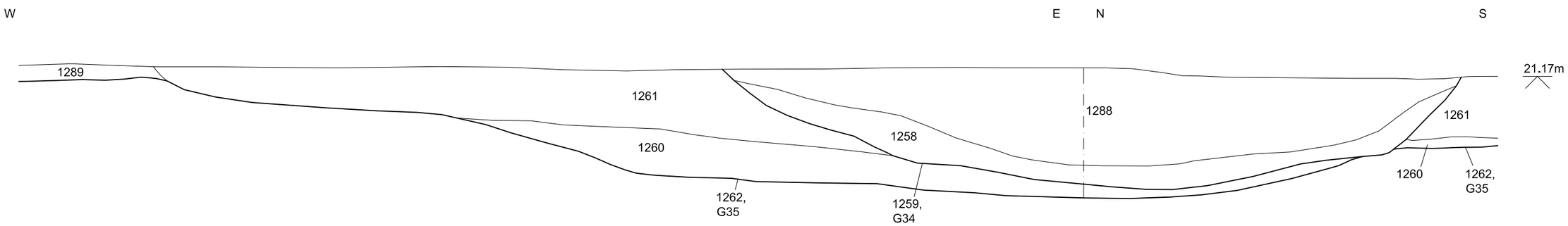

0 0.5m

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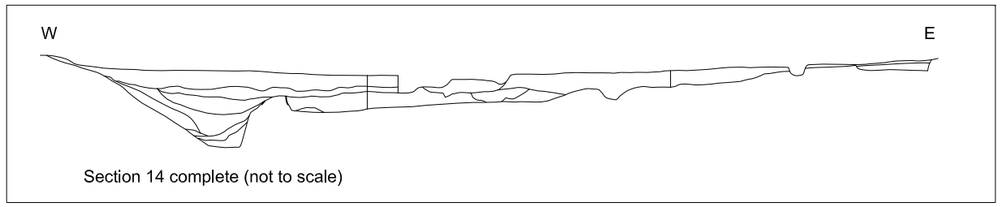
Project Ref: 160630	July 2017	Sections 6 - 13	
Report Ref: 2017294	Drawn by: APL		



Section 14

W

E

1577

1650

1688

1652

1724, G12

1686

1687

1689

1685

1684

1682, G11

1683

continued below

W

continued from above

1577

1650

1652

1619

1629

1651

1617

1579, G63

1628, G61

E

continued below

W

continued from above

1617

1594, G10

E

21.26m

1617

1703

0 0.5m

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Project Ref: 160630	July 2017	Section 14	
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