Late Bronze Age Remains at Stutton Close, Stutton, Suffolk

Archaeological Excavation Report

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Archaeological Excavation Report

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Contents

List of Figures

List of Plates

Summary

Between 15th April – 4th May 2020 Oxford Archaeology East carried out an excavation on land to the west of Stutton Close, Stutton, Suffolk, ahead of a proposed residential development. A total of 2,979m^2 was excavated in two excavation areas within a former orchard.

Exposed within the excavation areas was a single Middle Bronze Age pit (Area B) and a discrete area of Late Bronze Age settlement (Area A), including at least one post-built structure consisting of six postholes and a cluster of 20 pits. The pits produced a varied assemblage of occupation debris, including a large quantity of Late Bronze Age pottery, five fragmentary fired clay loom weights, two spindle whorls, a rare fragment of flint quern and a fragment of sandstone saddlequern, with the majority deriving from four pits close to the structure (Pit Group **107**). One of the pits close to the structure was radiocarbon dated to 917-814 cal. BC.

A regionally significant assemblage of Late Bronze Age briquetage (115 fragments, 1791g) was recovered from six pits, with diagnostic pieces including bar fragments, pedestal fragments and pedestal terminals. The vast majority of the briquetage came from a single pit (**EV43**) in the centre of Area A, which was radiocarbon dated to 983-830 cal. BC. The same pit contained the largest assemblage of Late Bronze Age pottery from a single feature.

A post-medieval boundary ditch was also revealed along the western and southern edges of the investigation area.

Acknowledgements

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The project was managed for Oxford Archaeology by Matt Brudenell. The fieldwork was directed by Nicholas Cox, who was supported by Lindsey Kemp. Survey and digitising were carried out by Tom Houghton. Thanks are also extended to the teams of OA staff that cleaned and packaged the finds under the supervision of Natasha Dodwell, processed the environmental remains under the supervision of Rachel Fosberry, and prepared the archive under the supervision of Katherine Hamilton.

1 INTRODUCTION

1.1 Scope of work

1.1.1 Oxford Archaeology East (OAE) was commissioned by RPS to undertake an excavation at the site of a proposed residential development on land west of 35-40 Stutton Close, Stutton, Suffolk, south-east of the historic core of the village (Fig. 1; TM 1517 3468).

1.1.2 The work was undertaken as a condition of Planning Permission (planning ref. B/17/00950/FUL). A brief was set by Gemma Stewart of Suffolk County Council Archaeology Service (SCCAS) outlining the local authority's requirements for work necessary to inform the planning process. A written scheme of investigation (WSI) was produced by OAE detailing the methods by which OAE proposed to meet the requirements of the brief (Appendix E).

1.1.3 The site archive is currently held by OAE and will be deposited with the appropriate county stores under the Site Code STU 094 in due course.

1.2 Location, topography and geology

1.2.1 Situated on the Shotley Peninsula, the site lies close to the centre of the village of Stutton, immediately east of Church Road and north of Lower Street. The parish church of St Peter lies 1km to the east-south-east and the estuary of the River Stour extends east to west, 1.15km to the south of the site.

1.2.2 The area of proposed development consists of a former orchard, open scrubland prior to excavation, surrounded to the north, east and south by existing dwellings, and by Church Road to the west. The site has an approximate height of 29m OD.

1.2.3 The geology of the area is mapped as Kesgrave Catchment Subgroup sands and gravels overlying Red Crag Formation sand (https://www.bgs.ac.uk/map-viewers/geology-of-britain-viewer/ accessed 09/03/21).

1.3 Archaeological and historical background

1.3.1 The archaeological and historical background of the site is based on a 1km search of the Suffolk Historic Environment Record (HER), carried out in May 2021 (ref. 9505912), and supplemented by information from available historic maps and other documentary evidence as outlined in the WSI (Brudenell 2019).

Prehistoric and Roman (c. 500,000 BC – AD 410)

1.3.2 Neolithic finds recovered in the vicinity of the site include an axe (STU 013) recovered immediately to the north of the site in 1973 and an artefact scatter of two end scrapers and several other flakes (STU 020) found around 0.3km south-west of the site. Along the coastal shoreline, approximately 1.7km to the south-west, a collection of Palaeolithic and Neolithic flints have been collected (STU 001).

1.3.3 The only recorded Iron Age remains in the area lie on the coast south of STU 001; it consists of a pit exposed by tidal erosion, which contained Iron Age pottery, a loom

weight, animal bone and fired clay (STU 022). Furthermore, this is also a putative Roman site (STU 023), where pottery of the period has been recovered.

Medieval, post-medieval and modern (AD 410 – present)

1.3.4 Stutton Hall (STU 030), which was originally a timber framed house built in 1553, is situated around 1.6km to the south-west of the site. It was rebuilt in brick in the 19th century. Associated landscaping includes an avenue, park and garden.

1.3.5 A WWII pillbox and associated earthworks probably relating to a ring bank and weapons pit (STU 064) have been recorded on aerial photographs around 180m north of the site on Larksfield Road.

1.3.6 Historical Ordnance Survey (OS) maps show that the northern and eastern parts of the site was undeveloped agricultural land prior to the 1950s and comprised three fields separated by two north-west to south-east ditch alignments. The 1882 OS map shows the central portion of the site as either woodland or an orchard with the eastern and western portions of the site undeveloped. By 1904 the site is shown as a 'Nursery', presumably for trees and/or plants. The 1959 OS map no longer refers to the site as a nursery with an area of woodland shown in the western portion of the site. By 1978 this western portion appears to have been separated from the remainder of the site with the woodland no longer present.

Undated

1.3.7 Aerial photography across the surrounding landscape has recorded multiple examples of cropmarks. These include possible field boundaries and trackways (STU 077), along with a large oval enclosure (STU 043) and possible ring ditch (STU 075) *c*. 0.6km to the east. A rectilinear field system (HBK 004) and possible ring ditch (STU 078) have also been recorded *c*. 0.6km to the north-east, together with field boundaries and a trackway *c*. 0.8km to the north-west of the site (STU 008). An irregular enclosure (STU 018) was identified *c*. 0.8km to the north and further field boundaries and a trackway (STU 071) *c*. 0.6km to the west.

Previous work

1.3.8 A fluxgate magnetometer survey of the site was conducted by Magnitude Surveys in October 2018 (Magnitude Surveys 2018, report MSTM388). The survey detected a wide range of anomalies including comparatively subtle historic ploughing trends. Magnetic disturbance relating to modern activity, agricultural anomalies, and the sand and gravel superficial geology were also detected. No anomalies of probable or possible archaeological origin were identified.

1.3.9 An archaeological trial trench evaluation conducted at the site in March 2019 identified archaeological remains in eleven of the sixteen trenches excavated (Lucking 2019, OAE Report 2311). The earliest phase of activity was represented by a single pit (**35**) of possible Middle Bronze Age date, excavated in Trench 14, which yielded three pottery sherds from a single vessel of the period (Appendix B.4).

1.3.10 Two intercutting pits (**41** and **43**) of Late Bronze Age date were encountered in Trench 15. One of the pits contained large quantities of domestic pottery and fired clay salt-

making briquetage, along with loom weight fragments and a piece of quern. These finds strongly suggested Late Bronze Age occupation in the immediate vicinity.

1.3.11 Post-medieval and modern features were represented by field boundary ditches across the full extent of the site, which appeared to be either parallel with, or perpendicular to, extant boundaries in the surrounding area. A series of parallel gullies excavated in Trench 9 were interpreted as possible planting beds of post-medieval date. Two pits of this date were also excavated in Trench 12 and interpreted as possible sand and gravel extraction pits.

2 EXCAVATION AIMS AND METHODOLOGY

2.1 Aims

2.1.1 The project aims and objectives were as follows:

i. To preserve by record the archaeological evidence contained within the footprint of the development area, prior to damage by development.
ii. To investigate the origins, date, development, phasing, spatial organisation, character, function, status, and significance of the remains revealed.
iii. To place the remains in their local, regional and national archaeological context.

2.2 Site specific and regional aims

2.2.1 *Understanding Bronze Age salt-making at the site.*

"Identification of a Bronze Age presence in coastal and marine contexts is needed, coupled with a search for Bronze Age saltern sites" (Medlycott 2011, 21).

"The distribution and patterning of most basic artefact categories requires further study and synthesis, *e.g.* pottery, querns, briquetage, loom weights, spindle whorls, worked bone and antler, bronze and iron dress accessories, tools and weapons" (Brudenell 2018, 15).

"Technological studies are also needed to establish how artefacts were manufactured, and the different processes and raw materials involved in their production" (Brudenell 2018, 15).

- What aspects of the Late Bronze Age salt production process were conducted at this in-land location, and what was the scale of the operation?
- Can the briquetage fabrics be characterised more closely?
- How do the 'types' of briquetage relate to those on other Late Bronze Age sites in Eastern England?
- Were pottery vessels also used in the salt production process?
- Can radiocarbon dating help refine the date of the salt-making activity.

2.2.2 *Revealing and understanding prehistoric land use and occupation*

"Further analysis is needed to explore the range of settlement forms in the Late Bronze Age to Middle Iron Age, and establish their patterning and distribution" (Brudenell 2018, 14).

- What is the nature of Bronze Age occupation at the site? Do the remains constitute settlement, or do they relate specifically to salt-making? Are other activities being conducted at the site?
- Is there continuity of activity between the Middle and Late Bronze Age?

2.3 Fieldwork methodology

2.3.1 The methodology used followed that outlined in the brief (Stewart 2019) and detailed in the WSI (Brudenell 2019).

2.3.2 Machine excavation was carried out by a 360-type tracked excavator using a 2m wide flat-bladed ditching bucket under constant supervision of a suitably qualified and experienced archaeologist.

2.3.3 Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.

2.3.4 All archaeological features and deposits were recorded using OA's pro-forma sheets. Trench locations, plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of all relevant features and deposits.

2.3.5 Surveying was done using a survey-grade differential GPS (Leica CS10/GS08 or Leica 1200) fitted with "smartnet" technology with an accuracy of 5mm horizontal and 10mm vertical.

2.3.6 The site grid was accurately tied into the Ordnance Survey National Grid and located on the 1:2500 or 1:1250 map of the area. Elevations have been levelled to the Ordnance Datum.

2.3.7 The photographic record comprises high resolution uninterpolated images of at least 10 megapixels, taken with a camera with an APS-C (or larger) sensor.

2.3.8 Photographs include both general site shots and photographs of specific features. Every feature was photographed at least once. All photographs include a graduated metric scale of appropriate length. Photographs also include a north arrow, site code, and feature number (where relevant), unless they are to be used in publications. The photograph register records these details, and photograph numbers have been listed on corresponding context sheets.

2.3.9 Drone photography was used to supplement GPS survey, to create an accurate site plan (Plate 2). Drone photography was conducted using a DJI M V2 F550 Flame Wheel Hexacopter with control established using a Leica GS08 survey grade GPS. Images were processed in AgiSoft Photoscan Pro to produce a georectified 3D model.

2.3.10 Artefacts were collected by hand and by metal detector. Excavation areas and spoil were scanned visually and with a metal detector to aid recovery of artefacts. All finds were bagged and labelled according to the individual deposit from which they were recovered.

3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The results of the excavation are presented below by phase, and include a stratigraphic description of the archaeological remains. Details of all contexts are included in Appendix A, with finds and environmental reports presented in Appendices B and C respectively. An overall phase plan for Areas A and B is shown in Figure 3, with individual phase plans, including interventions and cut numbers, provided in Figs 4-6. Selected section drawings are presented in Fig. 7, whilst selected photographs are reproduced in Plates 1-10.

3.1.2 The excavation consisted of two separate areas (Plates 1-2) along the eastern edge of the development area. The largest of these (Area A) was in the north-east corner of the plot, measuring 54.3m west to east by 51.4m north to south (2754m^2), roughly pentagonal shape in shape. Area B was located 24m to the south-west and was square in shape, measuring 15.5m x 15.6m (225m^2).

3.1.3 Throughout the text cut numbers appear in **bold**. Where multiple interventions have been excavated through a single feature, or where a group of discrete features have been grouped together the feature group is referred to by the lowest cut number and usually labelled with its group name on the relevant figures (*e.g.* Structure **110**, Pit Group **107**). For clarity, context and cut numbers of features excavated during the evaluation are preceded with 'EV' (*e.g.* Pit **EV43**).

Site Phasing

3.1.4 Based on the findings the phasing for the site (Fig. 3) is as follows:

Phase 1: Middle Bronze Age (*c*. 1600-1150 BC)

Phase 2: Late Bronze Age (*c*. 1150-800 BC)

Phase 3: Post-medieval (AD 1500-1800)

3.1.5 Phasing was based mainly on dateable material recovered from features. A single Middle Bronze Age pit was encountered in Area B, although the focus of activity was a discrete area of Late Bronze Age occupation in Area A, specifically a cluster of pits (20 in total) divided into at least three separate groups, and six postholes which formed at least one post-built structure. The only other remains on the site related to post-medieval boundary ditches.

3.2 General soils and ground conditions

3.2.1 The natural geology of light grey yellow clayey sand was overlain by a mid grey brown silty sand subsoil (0.25-0.35m thick), which in turn was overlain by topsoil (0.2-0.4m thick).

3.2.2 Ground conditions throughout the excavation were generally good, and the site remained dry throughout. Archaeological features, where present, were easy to identify against the underlying natural geology.

3.3 Undated Features

3.3.1 Two tree throws which produced no dating evidence were recorded in the centre of Area A (**122** and **124**; Fig. 4). Tree throw **122** was 1.05m wide and 0.38m deep, whilst tree throw **124** was 1.1m wide and 0.43m deep (Fig. 7, Sections 110 and 111). They were both filled by mid brown sandy fills (123 and 125 respectively).

3.4 Phase 1: Middle Bronze Age (c. 1600-1150 BC)

3.4.1 A single sub-circular pit (**EV35**) was exposed in the central part of Area B (Trench 14 in the evaluation; Fig. 4), measuring 1.4m wide and 0.54m deep with steep sides and a concave base. It contained a single fill of light brownish-grey silty sand (36), which was 100% excavated to allow for full finds recovery. Three conjoining sherds (52g) of Middle Bronze Age pottery were recovered from the fill (Appendix B.4). An environmental soil sample taken from this fill yielded moderate amounts of charcoal, a single cleaver seed, and a single untransformed bramble seed (Appendix C.1).

3.5 Phase 2: Late Bronze Age (*c.* 1150-800 BC)

3.5.1 A cluster of 20 pits and six postholes dating to the Late Bronze Age were exposed within Area A, spread over an area of approximately 35m east to west by 15m north to south. The pits were divided into at least three separate groups (Pit Groups **41**, **107** and **149**) and the postholes formed at least one post-built structure (Structure **110**). Finds recovered from these features included an assemblage of Late Bronze Age pottery, several fired clay loom weights and spindle whorls and a significant assemblage of Late Bronze Age briquetage relating to salt production.

3.5.2 Two radiocarbon dates were obtained from Late Bronze Age features, which corroborate the dating of the artefactual evidence (Table 1). Radiocarbon date certificates can be found in Appendix D.

Certificate No.	Context	Cut	Feature type	Group	Material	Years BP	+/-	Cal BC 95% probability
BRAMS-4075	44	EV43	Pit	PG41	*Vicia faba* (broad bean)	2762	25	983-830
BRAMS-4076	130	126	Pit	PG107	*Triticum dicoccum/spelta* (emmer/spelt)	2726	25	917-814

Table 1. Summary of Late Bronze Age radiocarbon dates

Structure 110

3.5.3 A group of six sub-circular postholes were spread over an area of approximately 11.5m by 6.5m in the north-eastern corner of Area A. Three of these postholes (**116**, **118** and **120**) formed an arc to the north (Fig. 7, Sections 107, 108 and 109). Three further postholes (**110**, **112** and **114**) were located to the south-west, arranged in an L-shape (Fig. 7, Sections 104, 105 and 106). For ease of interpretation the postholes have been grouped as a single structure; its possible form and function is discussed below (Discussion, Section 4.3).

3.5.4 The postholes were all relatively shallow (Table 2) with U-shaped profiles and were filled by similar mid grey brown sands. Fill 113 (posthole **112**) produced a single fragment (1g) of fired clay and 11g of burnt flint (Appendix B.2). Fill 121 (posthole **120**) contained a single fragment (55g) of burnt stone (Appendix B.3). Environmental sampling from fill 115 (**114**) produced only a tiny amount (<1ml) of charcoal (Appendix C.1).

Cut	Fills	Width (m)	Depth (m)
110	111	0.38	0.07
112	113	0.36	0.15
114	115	0.40	0.17
116	117	0.27	0.12
118	119	0.25	0.12
120	121	0.30	0.07

Table 2. Postholes in Structure 110

Pit Group 107

3.5.5 Located around the western end of Structure 110 was a cluster of nine pits (**107**, **126**, **131**, **134**, **136**, **138**, **139**, **141**, **EV32**; Table 3).

3.5.6 At the eastern edge of the group was a sub-circular pit (**107**), measuring 1.35m long, 0.80m wide and 0.32m deep. This had near vertical sides and a concave base (Fig. 7, Section 103; Plate 3). At the north-eastern end of the pit was a deposit of slumping natural material (108), a mid yellow grey sand, 0.11m thick and devoid of finds. Above this was a dark brown grey clayey sand (109), 0.28m thick. This produced 40 sherds (265g) of Late Bronze Age pottery (Appendix B.4) and two fragmentary fired clay trapezoidal/pyramidal loom weights (1051g and 696g; Appendix B.6), one of which was a near complete example (Fig. 15, no. 9). An environmental sample from this fill also contained a small number of charred cereals and legumes, 5ml of charcoal and a moderate amount of hammerscale (Appendix C.1).

3.5.7 Pit **126** was located 2m to the west of pit **107**. This was sub-circular, 2.25m by 1.99m wide and 0.37m deep, with steep sides and a base sloping towards the south-east (Fig. 7, Section 112; Plate 4). Around the southern edge of the pit was a mid reddish brown sand (127), with a light yellow grey sand (128) around the northern edge; neither fill contained any finds. Overlying both fills in the centre of the pit was a mid red brown sand with some dark grey patches (129), 0.14m thick. This contained two sherds (20g) of Late Bronze Age pottery. Finally a dark brown grey sand (130) filled the centre of the pit, 0.18m in depth. This fill produced 66 sherds (469g) of Late Bronze Age pottery including the complete profile of a 6cm high bipartite cup with a small, dimple-like omphalos base (Fig. 11, V47; Appendix B.4), fragments of a clay pyramidal loom weight (1690g), four fragments (8g) of briquetage (Appendix B.6), three struck flints, 285g of burnt flint (Appendix B.2), four fragments of burnt stone (415g) and seven fragments (1541g) from a relatively rare flint quern (Fig. 9a and Plate 5; Appendix B.3). Environmental sampling of fill 130 also produced charred cereal grains, chaff and weed seeds, with 5ml of charcoal (Appendix C.1). A fragment of emmer/spelt from the upper fill (130) was radiocarbon dated to 917-814 cal. BC (BRAMS-4076; 2726 ± 25 BP; 95.4% probability).

3.5.8 Pit **EV32** was exposed to the south-west of pit **126**, in the north-eastern end of evaluation Trench 16. It was sub-circular in plan, 0.95m wide and 0.22m deep, with gentle sides and a concave base. It contained a single fill of light brownish-grey sandy silt (31). A finely crafted Late Neolithic flint scraper was recovered from the fill (Appendix B.2; Fig. 9c). Given the lack of any other obvious Neolithic features and the proximity of pit **EV32** to the other pits in Pit Group **107**, the Neolithic scraper is considered to be residual within the feature.

3.5.9 Immediately to the north-west of pit **126** were four shallow pits (**131**, **134**, **136** and **138**). Pit **136** was 1.46m long and 0.14m deep (Fig. 7, Section 115), filled with a mid brown grey sand (137). Pits **134** and **138** were nearly circular, 0.56m and 0.5m wide respectively and both 0.11m deep (Fig. 7, Sections 113 and 114). They were filled by a dark brown grey sand (135, pit **134**) and a mid brown grey sand (133, pit **138**). Fill 135 contained one sherd of Late Bronze Age pottery (39g). Pit **131** cut through the south-eastern edge of pit **138** (Fig. 7, Section 113). This pit was 0.65m in diameter and 0.34m deep with steep sides and a concave base. Its single fill (132) was a dark grey brown silty sand, containing a single abraded sherd (5g) of Late Bronze Age pottery.

3.5.10 The final two pits (**139** and **141**) were located furthest north within the group (Fig. 7, Section 116; Plate 6). Pit **141** was 1.2m wide and 0.16m deep, with an uneven base (Plate 7). It was filled by a single dark grey brown sand (142), which contained 16 sherds of Late Bronze Age pottery (118g), two small, complete spindle whorls (Fig. 15, nos. 10-11; Appendix B.6), and charred cereal grains, tree macrofossils and 4ml of charcoal from an environmental sample.

3.5.11 Pit **139** (which truncated the eastern edge of pit **141**) measured 1.1m wide and 0.13m deep. It contained a single mid grey brown sandy fill (140), which yielded 84 sherds (1940g) of Late Bronze Age pottery, largely comprised of refitting fragments belonging to the upper profile of two coarseware jars (Fig. 12, V56 and V57; Appendix B.4). The only other find was 4g of animal bone. An environmental sample also produced charred cereal grains, chaff and legumes, 2ml of charcoal and frequent fuel ash slag.

Cut	Fills	Width (m)	Depth (m)
107	108, 109	0.80	0.32
126	127, 128, 129, 130	2.25	0.37
131	132	0.65	0.34
134	135	0.56	0.11
136	137	1.46	0.14
138	133	0.50	0.11
139	140	1.10	0.13
141	142	1.20	0.16
EV32	31	0.95	0.22

Table 3. Pits in Pit Group 107

Pit Group 41

3.5.12 Located 5.4m to the north of Pit Group **107** was a group of four pits (**EV41**, **EV43**, **143**, **145**).

3.5.13 Pit **EV41** was uncovered in the central part of Trench 15 of the evaluation (Fig. 7, Section 15). It was sub-circular, 0.84m wide and 0.35m deep, with steep sides and a flat base. It contained a single fill of dark brownish-grey silty sand (42), which was 100% excavated to allow for full finds recovery. Ten sherds (183g) of Late Bronze Age pottery and nine fragments of fired clay were recovered from the fill. An environmental soil sample taken from this fill yielded minor amounts of charcoal, small quantities of legumes, a single brome seed and a single untransformed bramble seed.

3.5.14 Pit **EV41** was cut by pit **EV43** (Fig. 7, Section 15), which was sub-circular in plan, 1.34m wide and 0.35m deep, with steep sides and a flat base. It contained a single fill of dark brownish-grey silty sand (44), which was 100% excavated to allow for full finds recovery. The largest quantity of Late Bronze Age pottery from a single feature was recovered (257 sherds, 4194g), with sherds from at least 30 different vessels (Figs 10 and 11, V1, 10, 20, 22, 30, 26; Appendix B.4). Fired clay was also well represented (totalling 148 fragments, 4752g) and included briquetage and loom weights. The briquetage (91 fragments, 1736g) included pedestal fragments, pedestal terminals and bar fragments (Fig. 13, nos. 1-5 and Fig. 14, nos. 6-8), while the weights (57 fragments, 3016g) comprised two trapezoidal/pyramidal loom weights (Appendix B.6). Two struck flint flakes, four pieces of burnt flint, a fragment of animal bone and a fragment of sandstone saddlequern (SF1; Fig. 9b; Appendix B.3) were also recovered. An environmental soil sample taken from this fill yielded minor amounts of charcoal and small quantities of charred legumes, including a broad bean seed, which was radiocarbon dated to 983-830 cal. BC (BRAMS-4075; 2762 ± 25 BP; 95.4% probability).

3.5.15 Two further small pits (**143** and **145**) were located 2m to the north-west of pits **EV41** and **EV43**. Pit **145** was sub-circular, 0.7m in diameter and 0.14m deep (Fig. 7, Section 118). It contained a dark grey brown sand (146), from which six sherds (119g) of Late Bronze Age pottery was recovered, along with ten fragments (14g) of briquetage. An environmental sample produced less than 1ml of charcoal.

3.5.16 Pit **143** was 0.79m long and 0.24m deep with a slightly irregular base (Fig. 7, Section 117). Its sole fill was a mid brown sand with paler patches, which produced no finds.

Pit Group 149

3.5.17 An intercutting cluster of five pits of varying sizes (Table 4) was exposed in the north of Area A, 8.5m north-west of Pit Group 41 (Fig. 7, Sections 120 & 121; Plate 8).

3.5.18 The earliest of these was a shallow pit (**157**), possibly an infilled natural hollow measuring 0.92m wide and 0.19m deep. Its fill was mid grey brown sand (158) devoid of finds.

3.5.19 To the north-east was a small circular pit (**151**), 0.5m wide and 0.19m deep and filled with a dark grey brown sand (152) with no finds recovered.

3.5.20 Both were cut to the north by a large extraction pit (**149**), measuring 2.03m wide and 0.52m deep. This was backfilled filled with material tipped in from the south, the lowest fill being a dark grey sand (159) containing four sherds (14g) of Late Bronze Age pottery, charred cereal grains and 1ml of charcoal from an environmental sample. Above this was a mid brown yellow sand (160) with darker patches, which was devoid

of finds. The final fill (150) consisted of a dark grey brown sand, which produced 36 sherds (267g) of Late Bronze Age pottery, a single fragment (2g) of briquetage, a fragment of fired clay (88g), six struck flints and 166g of burnt flint.

3.5.21 Pits **151** and **157** were cut to the south and east by another large extraction pit (**153**), the relationship between this and pit **149** was unclear. This pit was 1.74m wide and 0.47m deep, with a single mid brown grey sandy fill (154), which produced a single sherd (5g) of Late Bronze Age pottery and three fragments of fired clay (12g).

3.5.22 A final large extraction pit (**155**) cut the southern edge of pit **153**. This was 1.6m wide and 0.52m deep (Plate 9). It contained a very dark brown grey sand (156), which produced 81 sherds (1061g) of Late Bronze Age pottery, four fragments (19g) of briquetage, 25 fragments (194g) of fired clay, two struck flints, 489g of burnt flint and 3ml of charcoal from an environmental sample.

Cut	Fills	Width (m)	Depth (m)
149	150, 159, 160	2.03	0.52
151	152	0.50	0.19
153	154	1.74	0.47
155	156	1.60	0.52
157	158	0.92	0.19

Table 4. Pits in Pit Group 149

Pits 103 and 105

3.5.23 On the eastern edge of the excavation area two further pits were exposed. The first (**103**) was 0.86m wide and 0.16m deep (Fig. 7, Section 101), filled by a mid yellow brown clayey sand (104), from which one sherd (11g) of Late Bronze Age pottery was recovered, along with 1ml of charcoal from an environmental sample.

3.5.24 To the north of pit **103** and just south of posthole **120** (Structure **110**) was a much larger pit (**105**). This was 1.57m in diameter and 0.28m deep, with irregular sides and base (Fig. 7, Section 102). Its single fill (106) was a dark grey brown clayey sand, containing 16 sherds (140g) of Late Bronze Age pottery and 82g of fired clay.

3.6 Phase 3: Post-medieval (AD 1500-1800)

3.6.1 Three ditches dating to the post-medieval period were identified during the excavation.

Area A

3.6.2 Exposed on the western edge of Area A, to the west of Evaluation Trench 13, was ditch **147**, on a north-north-west to south-south-east alignment. The ditch cut through the subsoil and measured 0.6m wide and 0.28m deep with a U-shaped profile (Fig. 7, Section 119; Plate 10). It contained a single fill of mid grey brown sand (148), which produced 15g of fired clay and one sherd (11g) of medieval pottery, an abraded rim sherd from a coarseware vessel (Appendix B.5).

Area B

3.6.3 A curvilinear ditch (**100**) was exposed near the northern edge of Area B. It followed an east to west alignment before turning towards the north. The ditch cut through the subsoil, measuring 0.88m wide and 0.48m deep (Fig. 7, Section 100). At the base it was filled by a loose light grey brown clayey sand (101), overlain by a mid grey brown silty sand (102). Neither fill produced any finds.

3.6.4 In the south of Area B and the southern half of Evaluation Trench 14 was a linear ditch (**EV37**=**EV39**), extending north-north-west to south-south-east. It measured between 0.54-0.79m wide and 0.14-0.34m deep with gentle sides and a flat base. Its single fill of mid brownish-grey silty clay (38=40) contained fragments of post-medieval ceramic building material and a single sherd (4g) of Stoneware pottery, dating to the late 17th-late 18th century (Appendix B.5). This ditch also cut through the subsoil and was becoming shallower as it extended northwards through the evaluation trench. In the excavation area it was not identified during machining, suggesting that beyond the southern part of Area B it did not penetrate below the subsoil.

3.7 Finds summary

3.7.1 Artefact summaries are presented below, with full reports appearing in Appendix B. Totals include both evaluation and excavation phases of work.

3.7.2 Five metal artefacts (four copper alloy and one lead) were metal-detected from the topsoil and subsoil (Appendix B.1). The copper alloy items comprises two medieval buckles, a loop and an undecorated modern button. The only lead artefact recovered (SF5) is a possible weight in the shape of a disc.

3.7.3 An assemblage of 16 struck flints was recovered along with 968g of burnt flint (Appendix B.2). The flint is thinly distributed over eight contexts from eight cut features, which include five Late Bronze Age pits. The total assemblage consists of five complete flakes, seven broken flakes, four retouched flakes including a Neolithic end scraper and 31 unworked burnt flints. None of the struck flint is strongly chronologically diagnostic except for the Late Neolithic end scraper, recovered from pit **EV32** (Fig. 9c) within Pit Group **107**.

3.7.4 A fragment of flint quern, highly vitrified on one side was recovered from pit **126** (Fig. 9a) within Pit Group **107**, while a fragment of sandstone saddlequern (SF1; Fig. 9b) was recovered from pit **EV43** (Appendix B.3).

3.7.5 A large assemblage of prehistoric pottery totalling 625 sherds (8902g) was recovered from 15 pits (Appendix B.4). The ceramics, primarily coarseware jars, bowls and cups, with smaller numbers of finewares, date from the Middle and Late Bronze Age, with the vast majority being post Deverel-Rimbury (PDR) wares of the Late Bronze Age. Whilst the quantity of material is not substantial (by modern standards), the PDR pottery is well preserved and includes a range of wares typical of occupation sites of the period and region. More significantly, assemblages of this dates are still relatively scarce in Suffolk (when compared to Essex or Cambridgeshire), especially groups that have been fully analysed and are associated with radiocarbon dates (pits **EV43** and **126**).

3.7.6 Two sherds (15g) of post-medieval pottery were recovered from ditches in Areas A and B (Appendix B.5).

3.7.7 A total of 241 fragments of Late Bronze Age fired clay (8904g) were recovered (Appendix B.6). The vast majority was recovered from pits **EV43**, **107**, **126** and **155** and can be divided into briquetage (fired clay equipment used in salt making) and other fired clay material; the latter mainly belonging to a series of fragmented loom weights and two complete spindle whorls. The assemblage of fired clay forms a regionally significant group of material; of greatest importance is the well-preserved assemblage of briquetage, primarily from pit **EV43**, comprising bar fragments, pedestal fragments, and pieces of pedestal terminals.

3.7.8 Thin section petrographic analysis was undertaken on four briquetage samples, three loom weight fragments and three pottery sherds from Late Bronze Age contexts (Appendix B.7). Analysis suggests that the quartz, mica and chert-rich silty clay used to manufacture this group of ceramics could have be procured close to the site. Within each group of artefacts the petrographic composition was consistent but between the groups there was variability. The loom weight samples share some common inclusions with the briquetage in thin section, namely quartz, chert, fine mica and amphibole, but they were made with an otherwise different recipe. The three pottery sherds do not match either the briquetage or loom weights in thin section but share some common characteristics, such as the presence of chert/flint temper, which is also seen in the loom weights and the presence of plant temper as in the briquetage. The base clay used to manufacture the pottery sherds has similar silty inclusions to that used for the other two artefact types. Of interest is the presence of abundant muscovite mica, chert and rare amphibole.

3.8 Environmental summary

3.8.1 Environmental sampling produced small quantities of charred cereal grains, legumes and possible food fragments from 12 samples (Appendix C.1).

3.8.2 Excavations recovered only three recordable fragments of animal bone. Of these, one fragment is identifiable to species; a sheep/goat tibia from fill 140 (pit **139**, Phase 2).

4 DISCUSSION

With Matt Brudenell

4.1 Reliability of field investigation

4.1.1 Conditions on the site were generally good and did not affect the reliability of the investigation. The excavation confirmed the results of the previous evaluation, with none of its findings suggesting any significant deviations from the findings of that investigation (Lucking 2019).

4.2 Phase 1: Middle Bronze Age

"Is there continuity of activity between the Middle and Late Bronze Age"

4.2.1 Whilst the presence of Neolithic flintwork attests to a background earlier prehistoric presence in the area, with several residual retouched flakes and a scraper recovered (Appendix B.2), the earliest cut feature from the site dates to the Middle Bronze Age. This was a single small pit encountered in Area B, yielding a few sherds of Deverel-Rimbury pottery. Like the Neolithic artefacts, it alludes to a presence in this locale prior to the onset of sustained occupation in the Late Bronze Age, and probably reflects fleeting or sporadic activity. Further isolated pits may be located nearby, but the results of the geophysical survey and the evaluation show that in the development area at least, there is no evidence of contemporary ditched field systems or areas of permanent settlement. The fact that the pit was located away from the main focus of Late Bronze Age settlement suggests that direct continuity of activity is unlikely.

4.3 Phase 2: Late Bronze Age

Introduction

4.3.1 Late Bronze Age activity consisted of a small area of unenclosed settlement within Area A, represented by some 20 pits (three found during the evaluation and 17 during the excavation) and a possible post-built structure consisting of six postholes. Complete with a varied assemblage of occupation debris, including Post Deverel-Rimbury (PDR) Late Bronze Age pottery, querns, loom weights, spindle whorls and a significant assemblage of briquetage (relating to salt-working), the pits and postholes represent the below ground, surviving features of an area of settlement. The morphology of the settlement and its key aspects are examined below, framed by research questions posed in the WSI (Section 2.2 and Appendix E).

Settlement and economy

"What is the nature of Bronze Age occupation at the site? Do the remains constitute settlement, or do they relate specifically to salt-making? Are other activities being conducted at the site?"

4.3.2 'Open' or unenclosed settlements have long been recognised as a characteristic feature of the later prehistoric period in Suffolk (*e.g.* Clarke 1939). Although the excavations at Stutton were of limited scale, there is little doubt that the settlement

remains fall into this category, with no evidence for surrounding ditches, paddocks or contemporary boundaries, either within the excavation areas, or wider development plot (as investigated by geophysical survey and trial trenching). Instead, the remains comprise a spread of pits and postholes, clustered in the north-east corner of the site, on ground slightly higher than the immediate surroundings.

4.3.3 Comprehending the pattern of such features on 'open' prehistoric settlements is notoriously difficult, especially when the excavation window is relatively small. Feature scatters can be extensive, and in this setting, it is highly likely that remains once extended further to the north and east beneath the houses and gardens of Stutton Close. Nevertheless, there is a sense of 'structure' to the remains revealed, and although the feature scatter rests toward the edge of a wider swathe of occupation, the content, scale and character of the artefact assemblages indicate that this was a 'busy' and active part of the settlement complex.

4.3.4 In terms of identifiable architectural components, one possible building was identified in the excavation: Structure **110,** exposed in the east of Area A, and grouped as a single building. The form that this took is hard to discern, though one possibility is that the surviving six postholes were part of a sub-circular structure, possibly a domestic dwelling, with the arc of postholes to the north (**116**, **118** and **120**) potentially forming part of a circular ring, with the L-shaped arrangement to the south (**110**, **112** and **114**) being the remnants of a south-west facing porch. With a projected diameter of 11m, the form and size would be broadly consistent with other Late Bronze Age roundhouses in Eastern England. Alternatively, the features may represent the remnants of two separate structures; the arrangement and spacing of the L-shaped group possibly representing the partial remains of a 4-post granary building (another structure type widely encountered on Late Bronze Age sites in the region).

4.3.5 Regardless of the precise form, the pits which surround the building – both in Pit Group **107** and Pit Group **41** – contained the vast majority of the site's artefactual evidence (the more distant cluster of intercutting extraction pits in Pit Group **149** lying 20m to the north-west of the building). Leaving aside the briquetage finds, which are discussed in more detail below, the pits in this zone yielded a full spectrum of finds typical of domestic sites of the period: pottery, querns, loom weights, spindle whorls, burnt stone and flint, and possibly some worked flint (though most was residual, Appendix B.2).

4.3.6 The pottery assemblage is firmly rooted in the region's PDR ceramic tradition and comprises a range of coarseware jars, with a smaller number of fineware bowls and cups (Appendix B.4). The fabrics and forms are typical of Late Bronze Age occupational assemblages in Eastern England, with the preponderance of coarseware vessels being characteristic of 'domestic' settlement sites. These coarsewares were everyday cooking vessels, frequently used (sooting on the exterior), thus resulting in greater levels of damage, loss, and subsequently, a high visibility in waste contexts. The small number of burnished sherds present belong to the tableware component of the vessel repertoire, and include one fragment with a red-oxidised finish, which is very rare prior to the Early Iron Age.

4.3.7 Other artefacts speak of commonplace activities on settlement sites. Fires and cooking are evidenced by burnt stones and calcined flints, often caught up in Late Bronze Age features. Hot stones could be cooked on directly, or used indirectly to heat water (which leads to the shattered condition the burnt stones are often found in). Fires in this context also carbonised plant remains, with remains of cereals and legumes recovered, primarily emmer/spelt wheat and some barley (Appendix C.1).

4.3.8 The presence of five loom weights and two spindle whorls also indicate that textile production was being undertaken in the settlement. The spindle whorls are fine/complete examples of types widely used in the period (Fig. 15), and were discarded when they still had a potential use-life. Interestingly, the fabrics of the spindle whorls overlapped with those of the pottery, whilst the loom weights were made with different clays and tempering ingredients (Appendix B.6-7), suggesting that manufacture and production was organised along different lines.

4.3.9 The recovery of querns attests to cereal processing and grinding activities involved in culinary activities (the presence of carbonised emmer wheat spikelet forks also being suggestive of on-site cereal processing, see Appendix C.1). The excavation yielded two quernstones, one of them being a particularly unusual flint quern (Fig. 9a). Notably both show signs of burning, with the fragment of sandstone quern (Fig. 9b) having been reused for other purposes, including as an anvil. Flint querns are rare in Bronze Age contexts. Most are known from the fenland region, though a contemporary example was recently uncovered from Must Farm, Cambridgeshire (Appendix B.3).

4.3.10 Overall, the pits from the site yielded a range of finds which are commonly encountered on settlement sites of the period, all of which relate to food preparation, cooking, consumption, weaving and crop processing – activities central to domestic life in the Late Bronze Age. Save for the faunal remains, which have survived poorly in the site's acidic sandy soils (only one species-identifiable bone fragment, see Appendix C.2), what is surprising is the quantity of material (and the condition of some artefacts), given the limited aperture of the excavation. Several of the pits were very rich in finds (*e.g.* **EV43**, **107**, **126, 141** and **155**), and contained a mix of refuse generated from varying activities. Such material compositions are characteristic of a generalised occupation 'refuse', probably drawn from a localised surface midden where material accumulated over time. One such focus might have been around Structure **110**, with debris generated and dumped around the exterior during its occupation or after abandonment. Periodic 'clearance' events here may have resulted in the burial of some of the spent materials.

4.3.11 Detailing these dynamics further is fraught with difficulties, not least because the excavation window is restricted. However, the overall imprint of settlement appears fairly typical for Suffolk. In general, it is similar to that of the nearby settlement excavated at Days Road, Capel St Mary (Tabor 2014), located 7.5km to the north-west (Fig. 8), where a number of shallow pits and a possible post-built rectangular structure were revealed. More broadly, it can be compared with other Late Bronze Age open settlements in the county, including those excavated at Flixton Quarry, Flixton (Boutler forthcoming), Hartismere High School, Eye (Caruth 2012) and Bloodmoor Hill, Carlton Colville (Heard 2013).

Salt-production evidence

"What aspects of the Late Bronze age salt production process were conducted at this in-land location, and what was the scale of the operation?"

"Can radiocarbon dating help refine the date of the salt-making activity"

4.3.12 Perhaps the most remarkable find from the excavation is a well-dated group of Late Bronze Age salt making equipment (briquetage), primarily recovered from pit **EV43**, but with fragments also present in pits **EV41**, **126**, **145**, **149** and **155**. Aside from its association with PDR ceramics, the 10th-9th century BC dating of this material is secured by two radiocarbon determinations; one from pit **EV43** where the majority of the assemblage originated (983-830 cal. BC) and from pit **126** which also contained a small amount of material (917-813 cal. BC).

4.3.13 These dates are important. Pre-Late Iron Age salt making equipment remains extremely rare in Suffolk, and the few sites yielding potentially early evidence are insecurely dated and have no associated high-precision radiocarbon determinations. Whilst finds of Iron Age and Roman briquetage are relatively commonplace on coastal sites, with 'red hills' recorded along most of the county's major estuaries, earlier features and equipment relating to salt-making are, with a few exceptions, absent, and no material securely dated to the Late Bronze Age has been previously identified in Suffolk. The finds from Stutton are therefore highly significant.

4.3.14 Intriguingly though, despite there being briquetage finds, there are no features from the site directly connected to the salt production process, nor any obvious waste deposits. Although the pits on site may have played a wider role in salt production (*e.g.* storage of salt), features commonly associated with production sites, such as clay lined pits/brine tanks, settling tanks and hearths (Late Bronze Age examples were recently excavated at Maldon Road, Burnham-on-Crouch, Essex (Collie 2018, 34-35); Fig. 8) are entirely absent. Moreover, the briquetage assemblage does not include the full repertoire of salt making utensils. Various fragmentary bars and pedestals are present, but props, wedges, linings, and the ceramic salt containers/troughs themselves are missing – the items which normally make up the bulk of diagnostic components in a briquetage group.

4.3.15 This can partly be explained by the site's location, which is not on the foreshore or creeks, but set back in-land around 1km north from the River Stour and its brackish tidal waters. Most of the primary phases of production (*e.g.* brine boiling) would have occurred closer to the source, and though it is still surprising that some features like hearths or hearth deposits were not found at the Stutton site, these may lie outside of the excavation window, or have perhaps been lost to plough truncation. In short, this was not the primary production site, and was instead a settlement context in which some secondary phases of salt making were probably completed, and where equipment used in production was manufactured. The suggestion here is that the final drying phases of salt production may have been conducted in the settlement sphere, meaning stages of the process were drawn over a wider geographic area, and potentially involved different participants with different skills. Both stages – brine boiling and drying – would have needed bars and pedestals to perform, and so these constitute artefacts which might be found in both contexts. Indeed, these were

potentially portable items, and it seems likely they were moved between the settlements and creeks along the salt marsh as required.

Making briquetage

"Can the briquetage fabrics be characterised more closely?"

"How do the 'types' of briquetage relate to those on other Late Bronze Age sites in Eastern England?

"Were pottery vessels also used in the salt production process?"

4.3.16 The question of how briquetage production was organised in Late Bronze Age is still unclear, though the current investigation has helped shed some light on the issue, and characterised the artefacts much more closely. The macroscopic and microscopic analysis of briquetage fabrics (Appendix B.6-7) has shown them to be homogenous, with the makers employing a slightly sandy clay with abundant organic matter which burnt away during firing. Comparison with the other fired clay objects and pottery indicates that this recipe is specific to the briquetage, meaning particular clays and tempering ingredients were sought out and specially prepared for the manufacture of this equipment. This is significant as is suggests that briquetage production was organised and executed differently to the other categories of ceramics, and may have been learnt, practiced, and coordinated along different age and/or gender lines to potting.

4.3.17 In addition, the bars and pedestals at Stutton were being made in ways that were widely shared along the Essex coast and estuaries, including Burnham-on-Crouch and Crouch Site 2 (see Fig. 8; Collie 2018; Barford 1995) and as far south as the Thames estuary where typologically identical artefacts have been found at sites such as Mucking (Barford 1988; 2016). These connections in form, fabrics and 'style' point to shared understandings of the appropriate ways to forge, fashion and use these specific artefacts, which have a particular function in a specialist process. As such they belong to a specific material tradition acknowledged over a large part of the eastern region (see Fig. 8). This uniformity is perhaps less surprising when considered against the consistency in the conventions of producing PDR pottery, which has an even wider geographic reach, but emphasises the conservative nature of 'domestic' material traditions in the Bronze Age, and the absence of overlapping ways in which things were made and used. This is not only evidenced at Stutton in the different choice of clays and tempering ingredients used to make briquetage and pottery, but in the fact that the latter was not involved in the salt making process at all. Although pots could have easily been deployed for drying salt, none of the vessels from Stutton have signs of being salt affected (unlike the briquetage). As such these artefacts seem to have been made, used and conceived of in very different and exclusive ways in the Late Bronze Age.

4.4 Phase 3: Post-medieval boundaries

4.4.1 The excavation uncovered further evidence of the post-medieval boundaries encountered during the evaluation (Lucking 2019, 11). The ditch (**147**) exposed at the western edge of Area A equated to ditch **EV37**=**EV39** in Area B/Trench 14, and this

boundary matches the course of a field boundary depicted on the 1905 Ordnance Survey map (Lucking 2019, fig. 7).

4.4.2 An east to west aligned ditch branching off this alignment (ditch **100**) was uncovered within Area B, suggesting the presence of boundaries perpendicular to the established north to south field divisions.

4.5 Significance

4.5.1 The investigations at Sutton have revealed important evidence of Late Bronze Age occupation and activity. Although small in extent, the excavation has revealed part of a settlement swathe with pits containing a relatively rich and varied artefact content, affording valuable insights into the nature of activities at the site. Of particular significance is the recovery of an assemblage of briquetage, dated by two radiocarbon determinations. This is the first securely dated briquetage assemblages of this period in Suffolk, and sheds important light on early salt making in the county.

5 PUBLICATION AND ARCHIVING

5.1 Publication

5.1.1 It is proposed that a short, illustrated report on the results of the fieldwork will be submitted for publication in the *Proceedings of the Suffolk Institute of Archaeology & History.* This will focus on a summary of the findings, with particular emphasis on the regionally significant assemblage of briquetage.

5.1.2 This report both supplements the published article and is superseded by any new data and interpretations presented within it.

5.2 Archiving, Retention and Dispersal

5.2.1 The site archive (under Site Code STU 094, Accession No. STU 094) will be deposited with Suffolk County Council Stores and comprises a maximum of four bulk finds boxes, two document boxes and two small find boxes.

APPENDIX A CONTEXT INVENTORY

Context	Area	Group	Cut	Category	Feature Type	Breadth (m)	Depth (m)	Phase
1				layer	topsoil		0.2-0.4	
2				layer	subsoil		0.25-0.35	
3				layer	natural			
4	Tr1			cut	ditch	0.6	0.14	
5	Tr1		4	fill	ditch	0.6	0.14	
6	Tr3			cut	ditch	1.7	0.2	
7	Tr3		6	fill	ditch	1.7	0.2	
8	Tr3			cut	natural	1.1	0.08	
9	Tr3		8	fill	natural	1.1	0.08	
10	Tr7			cut	ditch	1.37	0.46	
11	Tr7		10	fill	ditch	1.37	0.46	
12	Tr2			cut	ditch	1.24	0.43	
13	Tr2		12	fill	ditch	1.24	0.43	
14	Tr2			cut	gully	0.62	0.16	
15	Tr2		14	fill	gully	0.62	0.16	
16	Tr6			cut	ditch	1	0.24	
17	Tr6		16	fill	ditch	1	0.24	
18				VOID				
19	Tr10			cut	pit	1.3	0.52	
20	Tr10		19	fill	pit	1.3	0.52	
21	Tr10			cut	ditch	1.4	0.3	
22	Tr10		21	fill	ditch	1.4	0.3	
23	Tr9			cut	gully	0.5	0.05	
24	Tr9		23	fill	gully	0.5	0.05	
25	Tr9			cut	gully	0.46	0.1	
26	Tr9		25	fill	gully	0.46	0.1	
27	Tr9			cut	gully	0.6	0.08	
28	Tr9		27	fill	gully	0.6	0.08	
29	Tr9			cut	gully	0.5	0.08	
30	Tr9		29	fill	gully	0.5	0.08	
31	Tr16		32	fill	natural	0.95	0.22	
32	Tr16			cut	natural	0.95	0.22	
33	Tr12		34	fill	ditch	2.1	0.68	
34	Tr12			cut	ditch	2.1	0.68	
35	Tr14			cut	pit	1.4	0.54	1
36	Tr14		35	fill	pit	1.4	0.54	1
37	Tr14			cut	ditch	0.54	0.14	
38	Tr14		37	fill	ditch	0.54	0.14	
39	Tr14			cut	ditch	0.79	0.34	
40	Tr14		39	fill	ditch	0.79	0.34	
41	Tr15			cut	pit	0.84	0.35	2
42	Tr15		41	fill	pit	0.84	0.35	2
43	Tr15			cut	pit	1.34	0.39	2
44	Tr15		43	fill	pit	1.34	0.39	2
45	Tr12			cut	pit	4	0.84	
46	Tr12		45	fill	pit	2	0.52	
47	Tr12		45	fill	pit	2	0.58	
48	Tr12		45	fill	pit	2	0.4	
49	Tr12			cut	pit	0.36	0.5	
50	Tr12		49	fill	pit	0.36	0.5	
100	B			cut	ditch	0.88	0.48	3

Context	Area	Group	Cut	Category	Feature Type	Breadth (m)	Depth (m)	Phase
101	B		100	fill	ditch		0.21	3
102	B		100	fill	ditch		0.39	3
103	A			cut	pit	0.86	0.16	2
104	A		103	fill	pit		0.16	2
105	A			cut	pit	1.57	0.28	2
106	A		105	fill	pit		0.28	2
107	A	107		cut	pit	0.80	0.32	2
108	A	107	107	fill	pit		0.11	2
109	A	107	107	fill	pit		0.28	2
110	A	110		cut	post hole	0.38	0.07	2
111	A	110	110	fill	post hole	0.38	0.07	2
112	A	110		cut	post hole	0.36	0.15	2
113	A	110	112	fill	post hole	0.36	0.15	2
114	A	110		cut	post hole	0.40	0.17	2
115	A	110	114	fill	post hole	0.40	0.17	2
116	A	110		cut	post hole	0.27	0.12	2
117	A	110	116	fill	post hole	0.27	0.12	2
118	A	110		cut	post hole	0.25	0.12	2
119	A	110	118	fill	post hole	0.25	0.12	2
120	A	110		cut	post hole	0.30	0.07	2
121	A	110	120	fill	post hole	0.30	0.07	2
122	A			cut	natural	1.05	0.38	
123	A		122	fill	natural		0.38	
124	A			cut	natural	1.10	0.43	
125	A		124	fill	natural		0.43	
126	A	107		cut	pit	2.25	0.37	2
127	A	107	126	fill	pit	0.50	0.37	2
128	A	107	126	fill	pit	0.62	0.23	2
129	A	107	126	fill	pit	1.30	0.14	2
130	A	107	126	fill	pit	1.30	0.18	2
131	A	107		cut	pit	0.65	0.34	2
132	A	107	131	fill	pit		0.34	2
133	A	107	138	fill	pit		0.11	2
134	A	107		cut	pit	0.56	0.11	2
135	A	107	134	fill	pit		0.11	2
136	A	107		cut	pit	1.46	0.14	2
137	A	107	136	fill	pit		0.14	2
138	A	107		cut	pit	0.50	0.11	2
139	A	107		cut	pit	1.10	0.13	2
140	A	107	139	fill	pit		0.13	2
141	A	107		cut	pit	1.20	0.16	2
142	A	107	141	fill	pit		0.16	2
143	A			cut	pit	0.79	0.24	2
144	A		143	fill	pit		0.24	2
145	A			cut	pit	0.70	0.14	2
146	A		145	fill	pit		0.14	2
147	A			cut	ditch	0.60	0.28	3
148	A		147	fill	ditch		0.28	3
149	A	149		cut	pit	2.03	0.52	2
150	A	149	149	fill	pit		0.30	2
151	A	149		cut	pit	0.50	0.19	2
152	A	149	151	fill	pit		0.19	2

Context	Area	Group	Cut	Category	Feature Type	Breadth (m)	Depth (m)	Phase
153	A	149		cut	pit	1.74	0.47	2
154	A	149	153	fill	pit		0.47	2
155	A	149		cut	pit	1.60	0.52	2
156	A	149	155	fill	pit		0.52	2
157	A	149		cut	pit	0.92	0.19	2
158	A	149	157	fill	pit		0.19	2
159	A	149	149	fill	pit		0.32	2
160	A	149	149	fill	pit		0.4	2

APPENDIX B FINDS REPORTS

B.1 Metalwork

By Denis Sami

Introduction

B.1.1 The assemblage consists of five artefacts, which were metal-detected from the topsoil and subsoil. The assemblage comprises copper-alloy (CuA) items and a lead (Pb) artefact (Table 5) dating to the late medieval and modern periods. Included within the assemblage are dress items (buckle, button and loop) and a possible lead weight.

Metal	No. of Artefact
CuA	4
Pb	1
Total	**5**

Table 5. Artefacts, by metal

B.1.2 Overall, the assemblage is in good condition with three complete items and two incomplete items.

Methodology

B.1.3 The metalwork was examined in accordance with the Oxford Archaeology East (OAE) metalwork finds standard based on the guidance of the Historical Metallurgy Society (HMS, Datasheets 104 and 108), the Archaeometallurgy Guidelines for Best Practice (Historic England 2015) and the Guidelines for the Storage and Display of Archaeological Metalwork (English Heritage/Historic England 2013).

B.1.4 The catalogues of medieval dress accessories from London published by Egan and Pritchard (2002) and the catalogue on post-medieval artefacts by Gardiner (2005) are used here as the main reference in the discussion and description of artefacts, while the Portable Antiquities Scheme (PAS) database was consulted for finds not reported in these publications work. The items were catalogued and the details are presented below (Table 6).

B.1.5 Finds were quantified using an Access database. A single Excel spreadsheet was used to enter details and measurements of each artefact. All metal finds were counted, weighed when relevant and classified on a context by context basis. The catalogue is organised by small find number.

The Assemblage

B.1.6 Two CuA buckles were recovered from the topsoil, SF3 is a common sub-trapezoidal double framed item dating to the late medieval period *c*. AD 1400-1500, while SF2 is of a well-known typology, of a double D-shaped frame buckle, documented among the items recovered from the Mary Rose wreck (Gardiner 2005, 104). Loop SF1 is a multifunctional object that could have been used in dressing as well as in shoe fastening. Undecorated button SF4 is a modern and undiagnostic artefact.

B.1.7 The only lead artefact recovered (SF5) is a possible weight in the shape of a disc with a central circular hollow. The item is relatively undiagnostic and other functions cannot be excluded.

SF	Context	Feature	Material	Artefact	No. Artefact	Condition	Description	Length (mm)	Width (mm)	Thickness (mm)	Diam. (mm)	Weight (gr)
1	1	topsoil	CuA	loop	1	complete	A loop with oval cross-section showing evidence of wear on one side. Internal diameter of 20.1 mm	0	0	2.2	18	3.82
2	2	subsoil	CuA	buckle	1	complete	A curved double-loop cast buckle, dating from the early post-Medieval period. Two D-shaped frames with D-shaped cross-section divided by a central axis which terminals project into a pointed knop. Each D-shaped frame has a moulded rosed as a resting pin	42	23	2.6	0	7
3	1	topsoil	CuA	buckle	1	incomplete	A cast double loop trapezoidal buckle with D-shaped cross-section. Only one frame and the central bar ending with pointed knops outside the edge of the frame remain.	21	27	2.1	0	3.73
4	1	topsoil	CuA	button	1	incomplete	A circular and flat undecorated button with missing loop	0	0	3.4	18	2.81
5	1	topsoil	Pb	unidentified	1	complete	A disk of lead with central circular concave hollow	0	0	3.2	25	15

Table 6. Catalogue of metalwork

Discussion

B.1.8 This small assemblage offers very little opportunity to speculate on the character or date of activities on the site, though those recovered appear to be mostly post-medieval and modern in date.

B.1.9 The very limited number of metal items recovered suggests the area was sporadically frequented and the absence of iron nails suggests that no timber structures have been built on the site.

B.2 Flint

By Rona Booth

Introduction

B.2.1 This report deals with a small flint assemblage recovered from both the evaluation and the excavation stages of work at Stutton Close. A total of 16 struck flints and 31 (968g) unworked burnt flints were recorded and catalogued for this report following standard typological and technological methods (*e.g.* Andrefsky 1998, Inizan 1999). Table 7 lists the number of flints by type and context.

B.2.2 The flint is thinly distributed over eight contexts from eight cut features, which include five Late Bronze Age pits. Most contexts produced between one and three struck flints and the largest assemblage from pit **149** (Pit Group **149**) only produced six struck flints.

B.2.3 The total assemblage consists of five complete flakes, seven broken flakes, four retouched flakes including a Neolithic end scraper and 32 unworked burnt flints.

Context	Cut	Feature type	Group	Flake	Narrow flake	End scraper	Retouched flake	Total struck flint	Unworked burnt flint count	Unworked burnt flint weight (g)
5	EV4	ditch	-	1				**1**		
7	EV6	ditch	-	1				**1**		
31	EV32	pit	107			1		**1**		
44	EV43	pit	41	2				**2**	4	21
113	112	posthole	110						1	11
130	126	pit	107	3				**3**	9	281
150	149	pit	149	4	1		1	**6**	7	166
156	155	pit	149				2	**2**	11	489
Total				**11**	**1**	**1**	**3**	**16**	**32**	**968**

Table 7. Quantification of the flint assemblage by context.

Raw materials and condition

B.2.4 All the struck flint is made up of made of fine-grained flint, although there is some variability in the colours represented, ranging from a translucent brown through to an opaque brownish grey flint. It is feasible from their appearance, that some of the tertiary flakes are of the same Bullhead flint as the Late Neolithic end scraper, recovered from pit **EV32** and therefore potentially contemporary with it. This flint, with its distinctive greyish green cortex and orange banding is found where certain tertiary deposits overlay the chalk (Shepherd 1972, 114). The nearest source of this material was likely to have been between six to eight kilometres from the site where the Thanet Group and Lambeth Formation overlie the chalk. (BGS map viewer).

B.2.5 Seven of the flakes and two of the retouched pieces, including the scraper, have a degree of cortication although this is minimal, generally covering less than 25% of the flint's surface. Where it occurs, the cortex is generally very thin and worn, indicating

the source of some of the flint material may have been nearby alluvial gravels. Only a few pieces have signs of incipient patination.

B.2.6 Two flakes retain a fresh appearance but most exhibit non-intentional breakage and edge damage, reflecting their residual nature, potentially existing as surface scatters before their incorporation into later cut features. Some of the edge damage is the result of utilisation, as evidenced by regular use wear and striations, with four of the non-retouched flakes showing signs of expedient use.

Unworked burnt flint

B.2.7 A total of 968g of unworked burnt flint was recovered from five contexts. Table 7 lists the number of burnt unworked flint recovered from each context.

B.2.8 The burnt flint consists of small flake-like pieces and larger fragments, ranging in colour from a lightly burnt pinkish and ruby red through to black, grey, and white with heavily crazed surfaces. One large but broken nodule, burnt to a ruby red, from pit **155**, appears to have had a flake removed deliberately, the point of impact being an abraded surface on the nodule, where the cortex was removed prior to burning. It is possible that another small piece from pit **149**, although now lacking diagnostic attributes may have come from that nodule as the cortical surface matches very closely.

B.2.9 Burnt flint occurs in archaeological contexts, either in situ or from the 'sweeping up' of debris and is produced when flint is used for a number of processes, for example, to heat water or as a temper for use in pottery.

Characterisation and technology

B.2.10 None of the struck flint is strongly chronologically diagnostic except for the scraper, and most of the flakes could date to any period from the Neolithic onwards. A narrow flake from pit **149** and a blade-like flake recovered from ditch **6** have undergone platform preparation. The former is likely to date to the Mesolithic or the Early Neolithic, whilst the latter is almost certainly early to Middle Neolithic. Four flakes have obtuse flaking angles, potentially making them later prehistoric, but the assemblage is not large enough to date the assemblage more precisely.

B.2.11 Only the scraper is formally retouched into a recognised type, but some minimal retouch was seen on three flakes. These are described more fully below.

Retouched implements

B.2.12 Pit **EV32** (Pit Group **107**) produced a late Neolithic end scraper with dimensions of 60x37x11mm and made on a large hard hammer flake (Fig. 9c). The piece was retouched around the convex, distal end and continued along the right-hand edge for 25mm. The opposing lateral retained a cortical surface, a common trait in the Late Neolithic where cortex was often retained for ease of handling (Butler 2005). This covered a third of the dorsal surface along the length of the piece. Some edge damage was evident on the cortical side of the piece, which otherwise is in good condition.

B.2.13 Pit **149** (Pit Group **149**) produced a brownish grey semi-opaque flake, where the distal end is finely retouched to form a pointed flake. Very small abrupt removals form one of the oblique angles of the point and extend down the left lateral, whilst the opposing oblique is formed from the step fracture, where the flake terminated. The flake was damaged at its proximal end, but the flaking angle suggests the blank is Neolithic in date.

B.2.14 Pit **155** (Pit Group **149**) produced two partially retouched flakes, both of which were not particularly diagnostic owing to their condition. A brown semi-opaque, tertiary, edge damaged, flake was broken at its distal end. The small bulb and almost linear platform suggest an early date for the flake, which has a few millimetres of abrupt retouch at the distal end, perhaps forming part of a notch. As the 'notch' is truncated by the break. It cannot be determined whether the retouch continued, or if the piece was abandoned before completion.

B.2.15 The second flake is a heavily worn thick cortical, edge damaged flake with abrupt retouch extending down one lateral. The extent of the wear and damage makes the piece difficult to assign a clear function to, but this was probably a cutting implement.

Discussion

B.2.16 This is a small assemblage with few wholly diagnostic pieces. The character and technological traits of the struck flint suggest that most of it is Neolithic in date, edge damaged and broken and therefore likely to be residual. This broad assumption is supported by the presence of a Late Neolithic end scraper from pit **EV32**, although two flakes from pit **EV43** and two from pit **149** may be contemporary with the securely dated Late Bronze Age pits they were found in, as later prehistoric flint working tends to favour broader flakes with obtuse flaking angles. However, as the remainder of the flintwork from the Late Bronze Age pits is mainly residual, it suggests that working and using flint during this period at this site was very limited.

B.2.17 It is not possible to state whether the unworked burnt flint is contemporary with the features from which they were recovered but the filling of pits with debris resulting from settlement activity is common practice and it is likely that most of this material was 'swept up' into the pits as they were filled along with residual material that resulted from flint scatters nearby.

B.2.18 A number of Neolithic flint scatter have been identified within less than a kilometre of the site, including finds of an axe, flakes and two end scrapers. This small assemblage will add to the corpus of information available on localised flint scatters in the area.

B.3 Stone

Simon Timberlake and Lawrence Billington

Introduction

B.3.1 A small amount of burnt and worked stone and flint (quern) was recovered from this site. The stone saddlequern fragment was recovered from the evaluation conducted in 2019, and was reported on initially by Carole Fletcher. However, this was then re-examined for the purposes of determining lithology and source. The remaining burnt stone and flint 'quern' all come from the excavation. In total some 2.87kg of burnt and worked stone (and flint) was recorded.

Methodology

B.3.2 All of the stone was identified visually using an illuminated x10 magnifying lens, and compared where necessary with an archaeological stone reference collection. A dropper bottle containing dilute hydrochloric acid was used to confirm the presence or absence of calcite.

Burnt stone

Catalogue and description of burnt stone

B.3.3 A total of 474g (5 pieces) of burnt stone were identified (Table 8). This may not reflect the true amount of burnt stone from this site if other stone was either not recognised or recovered. The worked stone was also burnt, but has not been included in this category.

B.3.4 All of these were fragments of small pebble/ cobbles probably collected originally from the local gravel terraces or boulder clay. All were composed of (a variety) of different sandstones which had been moderately well burnt. The presence of hairline cracks and the reddening/ bleaching effect suggests these had all been immersed in a fire, then probably quenched in water. All were most likely used during the prehistoric period (perhaps during the Late Bronze Age), perhaps as 'potboilers' in cooking, but less likely to generate steam for the purposes of bathing (Barfield & Hodder 1987).

Context no.	Feature	No. pieces	Size (mm)	Wt. (g)	Geology	Source	Degree of burning	NOTES
121	Posthole **120**	1	35x50x32	55	quartzitic sandstone	glacial erratic - waterworn	moderate	cracked-quenched? NB assoc prehis pot
130 (1)	Pit **126**	1	53x35x30	61	sandstone/ grit	glacial erratic	moderate	quenched in water?
130 (2)	Pit **126**	3	45x55x40 + 35x42x46 + 45x53x50	354	sandstone (var)	glacial erratic – 1 waterworn	moderate	cracked-quenched?

Table 8. Catalogue of burnt stone

Worked stone and flint

Description

B.3.5 In total some 2434g (8 pieces) of worked stone and flint were identified (Table 9). All consisted of saddlequern which was both burnt and fragmentary, and all of it most likely Late Bronze Age in date, being recovered from features of the same date. The small tablet-like flint quern (Fig. 9a) is rare, whilst the sandstone saddlequern fragment (SF1; Fig. 9b) appears to have been used /re-used several times, perhaps also functioning as an anvil. As with the burnt stone, most of this quern (by weight) came from just one feature – the fill of pit **126** (fill 130), within Pit Group **107**.

Context	SF no	Nos	Dimensions (mm)	Wt (g)	Estim. orig. diam. (mm)	Type	Grind surface	Geology	Comment
44 (eval; Pit **EV43**)	1	1	130(L)x 130 (W)x65 (T)	893	200?	slab flat – slight dish saddlequer n	3-4	fine-med quartzitic sandstone (erratic)	burnt fragment of quern recovered from a LBA pit (F.43). There is evidence for the partial shaping (modification) of one edge, which is also more highly polished than the others + its additional use as an **anvil**
130 (3) (Pit **126**)		7	140x110 x50 (refit) +45-60	1541	140 (L)	small flat saddlequer n	4	floorstone flint	small saddlequern made from a flat block of fresh floorstone flint with grind surface prepared by pecking NB there has been short intense burning to the underside
Grind surface **1** = little or no wear; **2** = minor wear (patchy); **3** = smooth; **4** = high polish; **5** = concentric wear striations									

Table 9. Catalogue of worked stone

Discussion

B.3.6 The occurrence of both burnt stone (collected burnt and cracked/ fragmentary cobbles) and a burnt flint quern from the same pit (**126**) is consistent with the Late Bronze Age date of the feature.

B.3.7 Querns made of flint are quite rare and in Eastern England the vast majority of known examples have been recovered from the eastern fen edge and adjacent areas. These include a relatively large number recovered from prolific prehistoric artefact scatters along the Wissey Embayment (Norfolk), exposed by peat wastage and intensive cultivation over the course of the later 20th century (Healy 1996, 62, fig. 43), and, in Suffolk, fragmentary/reworked examples from excavations at West Row Fen and Mildenhall Fen (Martin and Murphy 1988; Healy forthcoming; Clark 1936). At West Row and Mildenhall Fen they were recovered alongside Biconical urn and/or Collared Urn pottery of Early Bronze Age date (*c*. 1950-1500 BC), whilst at Grime's Graves, in the Norfolk Breckland, fragments of flint quern were recovered from Middle Bronze Age midden deposits dating to somewhere between *c*. 1500-1200 BC (Shaft X; Herne 1991, 49, 52, fig. 31). More recently, examples recovered during developer-led excavations in the region have suggested a longer currency for these artefacts, and

have also extended their distribution beyond the eastern fen edge/Breckland, with, for instance, fragments found associated with Middle/later Iron Age pottery from East Winch, west Norfolk (Malone 2010) and Cringleford, in the Yare Valley, Norfolk (Firth and Billington 2019). Most significantly, the recent excavations at the Late Bronze Age 'pile-dwelling' of Must Farm, Whittlesey, Cambridgeshire, on the western fen edge, produced a series of flint querns (somewhat larger and more circular than the Stutton quern) which can be securely dated to the Late Bronze Age (Knight *et al*. 2019; forthcoming).

B.3.8 It has long been argued that the flint saddle querns known from the fens and the Breckland are likely to have been made from the very large nodules of flint that characterise the floorstone layer of Brandon flint series of the East Anglian Chalk, which was extensively exploited at the Late Neolithic mines at Grime's Graves (Healy 1991). This interpretation is consistent with the results of a recent dating programme at Grime's Graves itself, which has revealed a hitherto unrecognised, discrete, phase of post-Neolithic mining/quarrying during the final centuries of the Early Bronze Age which may have been are least partly geared towards the recovery of large nodules suitable for manufacturing flint querns (Healy *et al*. 2018, 293-294).

B.3.9 Regardless of their date, it seems that these artefacts have generally been assumed to have been functionally equivalent to their coarse stone counterparts (*i.e.* for grain processing), although at Must Farm the flint 'querns' have been interpreted as being possible wood rasps (Knight *et al*. forthcoming). The Stutton example, however, is almost certainly a quern, given the level and type of polish present, its unequal distribution, and the slight central declivity upon the grind surface – the latter a typical effect of milling grain or other stuffs using a rubber stone, alongside some evidence of its slight movement. The evidence on the reverse side (*i.e.* the underneath) of this quern for intense burning, surface-glazing and heat-cracking of the flint has a parallel in the Must Farm examples – although in the latter case the hot querns dropped into the water and were quenched when the wooden platform caught fire. However, at Stutton it is instead the effect of short-lived contact of the flint with the edge of a very hot open fire (perhaps a hearth) and the unexpected break-up of this material. As with the other known flint querns, there is evidence here of the selection of (flat) floorstone pieces eroded out or else mined from the tabular layers outcropping within the Upper Chalk. However, such outcrops would not have been local to Stutton, so such a piece may instead have been a 'local' glacial erratic picked up for this purpose, or else brought from further north along the East Anglian coastline.

B.3.10 The Stutton flint quernstone is significant in a number of respects, firstly in terms of providing a further example of a relatively small number found in a secure and relatively well dated context (in this case, Late Bronze Age), and secondly in continuing the recent trend for occasional examples of such artefacts to be found well outside of the restricted parts of western Suffolk and Norfolk where they are best-documented. In this context, it is notable that a further example of flint quernstone, recovered as a stray find on the beach at Bawdsey, 20km east of Stutton, is recorded in the Suffolk HER (BAW 222), and future work may yet demonstrate that these artefacts are more common in the eastern parts of the county than hitherto realised.

B.3.11 The sandstone slab quern from pit **EV43** is really far too fragmentary to say much about its form, although this example was evidently flat to slightly concave like many of the Bronze Age examples, and clearly well worn, and re-used. The polish present upon the worked rim edge of this suggests that the probable milling direction was from back to front with the quern tipped downwards, such that the milled grain might fall into a basket or other receptacle placed in front of it. The type of rim wear also suggests a certain instability and the possibility of some (rocking) movement during the milling process. A study of the quern surface and the pitting present would seem to indicate that this quern was also intermittently used as some sort of (light) anvil stone.

B.4 Prehistoric pottery

By Matt Brudenell

Introduction

B.4.1 The combined evaluation and excavation yielded 625 sherds of prehistoric pottery (8902g) with a high mean sherd weight (MSW) of 14.2g. The pottery was recovered from 17 contexts relating to 15 pits (Table 10).

B.4.2 The ceramics date from the Middle and Late Bronze Age, with the vast majority being of Late Bronze Age origin. The largest groups of material derive from pits **EV43**, **139** and **155**, with pits **EV43** and **126** associated with radiocarbon dates .

B.4.3 This report provides a full quantified description of the material by period, and a discussion of its date and affinity. The assemblage is in good condition, as reflected by the high MSW.

Feature	Context	No. sherds	Weight (g)	Date
Pit EV35	36	3	52	MBA
Pit EV41	42	10	183	LBA
Pit EV43	44	257	4194	LBA
Pit 103	104	1	11	LBA
Pit 105	106	16	140	LBA
Pit 107	109	40	265	LBA
Pit 126	129	2	20	LBA
	130	66	469	LBA
Pit 131	132	1	5	LBA
Pit 134	135	1	39	LBA
Pit 139	140	84	1940	LBA
Pit 141	142	16	118	LBA
Pit 145	146	6	119	LBA
Pit 149	150	36	267	LBA
	159	4	14	LBA
Pit 153	154	1	5	LBA
Pit 155	156	81	1061	LBA
TOTAL	-	*625*	*8902*	-

Table 10. Quantification of prehistoric pottery

Methodology

B.4.4 All the prehistoric pottery has been fully recorded following the recommendations laid out by the Prehistoric Ceramic Research Group (2011). After a full inspection of the assemblage, fabric groups were devised on the basis of dominant inclusion types, their density and modal size. Sherds from all contexts were counted, weighed (to the nearest whole gram) and assigned to a fabric group (Table 11). Sherd type was recorded, along with evidence for surface treatment, decoration, and the presence of soot and/or residue. Rim and base forms were described using a codified system recorded in the catalogue and were assigned vessel numbers. Where possible, rim and base diameters were measured, and surviving percentages noted. In cases where a sherd or groups of refitting sherds retained portions of the rim, shoulder and/or other

diagnostic features, the vessel was categorised by ceramic tradition (*e.g.* Deverel-Rimbury), with Later Bronze Age vessels classified using a form series devised by the author (Brudenell 2012), and the class scheme created by John Barrett (1980).

B.4.5 All pottery was subject to sherd size analysis. Sherds less than 4cm in diameter were classified as 'small' (271 sherds); sherds measuring 4-8cm were classified as 'medium' (324 sherds), and sherds over 8cm in diameter were classified as 'large' (30 sherds). The quantified data is presented on an Excel data sheet held with the site archive.

Prehistoric pottery fabrics

Flint fabrics

F1: Moderate to common coarse burnt flint (mainly 2-4mm in size)

F2: Sparse coarse burnt flint (mainly 2-4mm in size)

F3: Common to abundant medium burnt flint (mainly 1-2mm in size)

F4: Moderate to common medium burnt flint (mainly 1-2mm in size)

F5: Moderate to common fine burnt flint (mainly <1mm in size)

Flint and vegetable matter fabrics

FVE1: Moderate to common medium burnt flint (mainly 1-2mm in size) and moderate to common linear voids from burnt out vegetable matter

Flint and sand fabrics

FQ1: Sparse medium burnt flint (mainly 1-2mm in size) and common quartz sand

Flint and grog fabrics

F1: Moderate to common coarse burnt flint (mainly 2-4mm in size) and sparse to moderate medium to coarse grog (mainly 2-4mm in size)

Sand fabrics

Q1: Moderate to common quartz sand

Fabric Type	Fabric Group	No./Wt. (g) sherds	% fabric by Wt.	No./Wt. (g) burnished	% fabric burnished	MNV	MNV burnished
F1	Flint	487/7558	84.9	3/24	0.3	32	-
F2	Flint	7/144	1.6	-	-	-	-
F3*	Flint	3/52	0.6	-	-	-	-
F4	Flint	56/603	6.8	9/67	11.1	10	-
F5	Flint	51/291	3.3	50/282	96.9	11	10
FG1	Flint & grog	1/9	0.1	-	-	1	-
FQ1	Flint & sand	5/40	0.4	-	-	1	-
FVE1	Flint & veg	14/201	2.3	2/10	5.0	2	-
Q1	Sand	1/4	<0.1	-	-	-	-
TOTAL	-	*625/8902*	*100*	*64/382*	*4.3*	*57*	*10*

*Table 11. Quantification of prehistoric pottery by fabric. MNV calculated as the total number of different rims and bases (42 different rims, 14 different bases and one complete profile). * denotes Middle Bronze Age fabrics*

Middle Bronze Age

B.4.6 Three conjoining sherds (52g) of Middle Bronze Age pottery were recovered from pit **EV35** in Area B. The sherds are thick-walled in fabric F3, and include part of a fingertip decorated girth or neck cordon (one sherd, 27g). They belong to a Deverel-Rimbury type vessel.

Late Bronze Age pottery

B.4.7 A total of 622 sherds (8850g) of Plainware Post Deverel-Rimbury (PDR) Late Bronze Age pottery were recovered from the investigations. These derived from 16 contexts relating to 14 pits (Table 10). The assemblage has a high MSW of 14.2g.

Fabrics and forms

B.4.8 Across most parts of Eastern England calcined flint was the preferred additive to Late Bronze Age potting clays; crushed to varying grades and mixed in different quantities by potters, depending largely upon the vessel size and quality of ware being produced. By weight, 97% of the pottery recovered from the excavations has burnt flint inclusions (Table 11), with 87% classified as 'coarse' fabrics (fabrics F1-2), 7% 'intermediate' (F4) and 3% 'fine' (F5). The remaining pottery in the assemblage belongs to minor fabric groups, with flint and vegetable matter (FVE1, 2%), flint and sand (FQ1, 1%), flint and grog (<1%) and sand (<1%) being present. Overall, the range and frequency of fabrics is entirely typical of the period and region, with the clays and additives potentially available within the local landscape (see Quinn, Appendix B.7).

B.4.9 Based on the total number of different rims and bases identified, the assemblage is estimated to contain fragments of a minimum of 57 different vessels: 42 separate rims, 14 bases and one complete vessel profile. Jar, bowl and cup forms typical of the PDR tradition are present, with a total of 18 vessels being sufficiently intact to allow ascription to form (Table 12 – 117 sherds, 2452g; 18.8% of the assemblage by sherd count, or 27.7% by weight). Of these, 12 are un-burnished coarseware jars (Class I) in fabrics F1, F4 and FG1 (Table 12-13; 92 sherds, 2339g). These include 11 jars with round (Form F, seven vessels, Figs 10, 11 and 12, V1, 10, 20, 22, 30 and 56) or weakly-defined shoulders (Forms G, four vessels, Fig. 12, V57), and one jar with a bulbous body (Form A). Most of these have flattened, rounded or externally lipped rims, with measurable mouth diameters ranging from 18-30cm. Three of these are also decorated. One Form F jar has a cabled rim-top (Fig. 10, V22), whilst fingertip impressions adorn the rim-top of the Form A jar and the shoulder of one other Form F jar (Fig. 12, V56).

Form	Brief description	MNV	MNV burnished	No./wt. (g) sherds	Rim diameter range (cm)
A	Jar, bulbous body, upright neck	1	-	1/100	-
F	Jar, high rounded shoulder	7	-	64/1619	18-30
G	Jar, weakly shouldered, upright or hollowed neck	4	-	26/586	20-27
K	Bowl, round-bodied	1	1	1/34	14
L	Bowl, shouldered, hollowed or concave neck	1	1	1/9	-

Form	Brief description	MNV	MNV burnished	No./wt. (g) sherds	Rim diameter range (cm)
M	Bowl, bipartite, angular shoulder	1	-	1/9	-
R	Cup, hemispherical	2	1	3/24	9
U	Cup, bipartite	1	1	19/67	7
TOTAL	-	*18*	*4*	*117/2452*	*7-30*

Table 12. Quantification of Late Bronze Age vessel forms.

Fabric/Form	A	F	G	K	L	M	R	U	*TOTAL*
F1	-	6	4	-	-	-	-	-	10
F4	1	-	-	-	1	-	-	-	2
F5	-	-	-	1	-	1	1	1	4
FG1	-	1	-	-	-	-	-	-	1
FQ1	-	-	-	-	-	-	1	-	1
TOTAL	*1*	*7*	*4*	*1*	*1*	*1*	*2*	*1*	*18*

Table 13. Correlation between Late Bronze Age vessel forms and fabrics (by vessel count).

B.4.10 The only other un-burnished form-assigned vessel in the assemblage is a fragment of a bipartite Class III bowl (Form M, one sherd, 19g) in Fabric F5, decorated with fingernail impressions on the rim-top.

B.4.11 The remaining five form-assigned vessels comprise fineware bowls (Class IV, two vessels, two sherds, 43g) and cups (Class V, three vessel, 22 sherds, 91g). The vessels are in fabrics F5 and FQ1, and have finely moulded features such as thin-walled everted necks, or tapered and internally-bevelled rims. The bowls include a single burnished round bodied vessel with everted neck (Form K, mouth diameter 14cm), and a burnished shouldered bowl with a hollowed neck (Form L). The cups are small-mouthed vessels (<10cm in diameter) and comprise fragments of two hemispherical cups (Form R, Fig. 11, V26) and the complete profile of a 6cm high bipartite cup (Form U, Fig. 11, V47) with a small, dimple-like omphalos base.

B.4.12 Other non-form-assigned vessel rims in the assemblage (24 vessels) display a variety of shapes. Most are either flat-topped, rounded or are lipped or thickened on the exterior edge, though the more distinctive and diagnostic types are everted or bevelled (particularly burnished fineware rims). In total, the rims of only 15 vessels are measurable, ten of which belong to the form-assigned vessels described above. This is insufficient for further analysis, though the overall range is 7-30cm.

B.4.13 Most bases in the assemblage have either a simple flat foot or pinched-out foot. However, there are two omphalos bases, one of which belongs to a Form U cup (see above). Seven of the bases have heavy flint gritting on the underside.

Surface treatment and decoration

B.4.14 The character of surface treatment and decoration are closely linked to vessel class, vessel size, and the categories of coarseware and fineware in the PDR tradition. Indeed, the latter are primarily defined by the presence of smoothed, burnished or lustrous surfaces. In all, there are 64 sherds (383g) that are burnished in the assemblage, most of which display dark grey surfaces. Combined, these comprise

10.4% of the Late Bronze Age sherds by count or 4.2% by weight – frequencies typical of Plainware assemblages in Eastern England (Brudenell 2012).

B.4.15 Clear patterns can be observed in the fabric of vessels selected for burnishing. Though sherds in a range of fabrics are treated (F1, F4, F5 and FVE1), this finish is only common on vessels with 'fine' flint fabrics, namely F5.

B.4.16 The type and frequency of decoration is also closely related to the class of vessel, and is consistently low in Late Bronze Age assemblages. The Stutton Close group is no different, with decoration present on just 12 sherds (455g, 1.9% of the assemblage by sherd count, or 5.1% by weight), representing a maximum of five different decorated vessels (Table 14). Four of these are coarsewares, with decoration created by finger and nail marks, used to impress and cable the rim-top or shoulder (*e.g.* Figs 10 and 12, V22 and V56). More unusual, however, is the fact that one of the burnished sherds (24g) has a red oxidised finish, and is possibly haematite-coated. Such sherds are rare in Early Iron Age assemblages in Eastern England, and very unusual in Late Bronze Age contexts in this region.

Position/ Decoration	**Cabled**	**Fingernail impressions**	**Fingertip impressions**	***Haematite?/ oxidised finish**	***TOTAL***
Rim-top	1	1	1	-	*3*
Shoulder	-	-	1	-	*1*
Body	-	-	-	1	*1*
TOTAL	*1*	*1*	*2*	*1*	*5*

*Table 14. Quantification of Late Bronze Age decoration by vessel count. * denotes fineware applications.*

Vessel use evidence

B.4.17 Direct evidence for vessel use is registered by the presence of sooting and traces of thick carbonised food crusts adhering to the surfaces of sherds. Residues are recorded on 27 sherds (659g), representing just 4.3% of the Late Bronze Age assemblage by count or 7.4% by weight. The carbonised residues are restricted to the coarsewares, and are mainly found on the interior of sherds and the exterior areas around the rim, neck and shoulder of vessels (including nine of the 42 different rims in the assemblage) – zones where soot gathered or foodstuffs bubbled over and became burnt.

Pottery deposits and key groups

B.4.18 When examined by feature, most pottery groups can be classified as small or medium in size, with assemblages weighing under 500g (Table 15). The majority contain fewer than 15 sherds, and probably derived from a 'background' scatter of ceramic debris laying across the site which was unintentionally caught in dumps of soil during backfilling, or had naturally eroded into open features. Of note is the assemblage from pit **126** (Pit Group **107**), which is the largest medium-sized group (489g), and yielded the complete profile of a Form U cup (Fig. 11, V47). This can be considered a key group, especially as the upper fill (130) from pit **126** is associated with a radiocarbon date of 917-814 cal. BC (95.4% confidence; BRAMS-4076; 2726 ± 25 BP).

Deposit size	Wt. range	Number of features	% of features	Total no./wt. (g) sherds	% by count	% by wt.
Small	1-100g	4	28.6	4/60	0.6	0.7
Medium	101-250g	4	28.6	48/560	7.7	6.3
	251-500g	3	21.4	148/1035	23.8	11.7
Large	501-1000g	-	-	-	-	-
	1001g+	3	21.4	422/7195	67.8	81.3
TOTAL	-	*14*	*100.0*	*622/8850*	*99.9*	*100.0*

Table 15. Quantification of Late Bronze Age pottery by pottery deposits size.

B.4.19 The three largest feature assemblages from the site (from pits **EV43**, **139** and **155**) are also considered key groups by merit of their size. Combined they yielded over two thirds of the Late Bronze Age pottery (685 sherds by count, 81% by weight), including 70% of vessels (by MNV count), and all the form-assigned vessels except for the aforementioned cup from pit **126** (see above). Individually, each pit assemblage has a varying ceramic composition, the details of which are presented in Table 16.

B.4.20 The material from pit **155** (Pit Group **149**) is the most fragmented. Though it contains pieces of at least eight different vessels, there are no refitting sherds. By contrast, the assemblage from pit **139** (Pit Group **107**) is largely comprised of refitting fragments belonging to the upper profile of two coarseware jars (Form G and F; Fig. 12, V56 and V57). In both instances, around a quarter to a third of the vessel is present. Finally, the largest group derives from pit **EV43** (Pit Group **41**). This comprises a very varied assemblage, with sherds from numerous different pots represented (at least 30 different vessels) in varying states of fragmentation and abrasion (Figs 10 and 11, V1, 10, 20, 22, 30, 26). Importantly, this assemblage is also associated with a Late Bronze Age radiocarbon determination of 983-830 cal. BC (95.4% probability; BRAMS-4075; 2762 ± 25 BP).

Feature	No./wt. (g) sherds	No./wt. (g) refitting	MSW	MNV	% small	% medium	% large
Pit EV43	257/4194	28/606	16.3	30	32	63	5
Pit 139	84/1940	45/1307	23.1	2	27	61	12
Pit 155	81/1061	0/0	13.1	8	43	54	4

Table 16. Composition of the large-sized pottery deposits.

Discussion

B.4.21 With the exception of three conjoining sherds of Middle Bronze Age Deverel-Rimbury pottery from pit **EV35**, all the prehistoric ceramics from Stutton Close are of Late Bronze Age date and belong to the Plainware phase of the PDR ceramic tradition. Whilst the quantity of material is not substantial (by modern standards), the pottery is well preserved and includes a range of wares typical of occupation sites of the period and region. More significantly, assemblages of this dates are still relatively scarce in Suffolk (when compared to Essex or Cambridgeshire), especially groups that have been fully analysed and are associated with radiocarbon dates (pits **EV43** and **126**). The significance of this group is therefore elevated, and is an important addition to the regional corpus of Late Bronze Age ceramics.

B.4.22 In composition, the assemblage can be classed as a coarseware jar-dominated group containing fragments from a range of Class I vessels with very few burnished finewares present. This 'signature' is now known to be typical of most Late Bronze Age assemblages from settlement sites in Eastern England (Brudenell 2012), the character of which stems from the use of Class I jars as everyday cooking pots, which were then broken and discarded more frequently than their fineware counterparts. This leads to their high frequency representation in the archaeological record, where settlement is sustained. The pottery signature is therefore consistent with prolonged occupation, with fragments of at least 57 different vessels making their way into pits though varied pathways of deposition and refuse maintenance. Of particular note is the assemblage from pit **EV43** which represents a large dump of mixed ceramic refuse with parts of over 30 different vessels present in varying states of fragmentation and abrasion. This is likely to be a midden-derived dump of pottery, suggesting material was being pooled over time prior to being buried.

B.4.23 In the local landscape, the material is best paralleled by the published group of pottery from Day's Road, Capel St Mary (Brudenell 2014), located *c*. 6km to the north-west. This is also associated with a radiocarbon date of 970-820 cal. BC (95.4% probability; Beta-296835: 2750 ± 30 BP), broadly similar to the two dates achieved for Stutton Close. More widely, the pottery can be paralleled with other published Late Bronze Age Plainware assemblages from Suffolk, including pottery groups from Barnham (Martin 1993), Game Farm, Brandon (Last 2004) and Recreation Way, Mildenhall (Brudenell 2019).

Illustration catalogue

Fig. 10

V1. Class I Jar, Form F, fabric F1. Pit **EV43**, context 44.

V10 Class I, Form F, fabric F1, internal rim diameter 24cm. Pit **EV43**, context 44.

V20. Class I, Form F, fabric F1, internal rim diameter 18cm. Pit **EV43**, context 44.

V22. Class I, Form F, fabric F1, weakly cabled rim-top. Internal rim diameter 18cm. Pit **EV43**, context 44.

Fig. 11

V30. Class I, Form F, fabric F1, internal rim diameter 20cm. Pit **EV43**, context 44.

V26. Class V, Form R, fabric FQ1. Internal rim diameter 9cm. Pit **EV43**, context 44.

V47. Class V, Form U, fabric F5, burnished exterior and omphalos base. Height 6cm, internal rim diameter 7cm. Pit **126**, context 130.

Fig. 12

V56. Class I, Form F, fabric F1, fingertip impressed shoulder. Internal rim diameter 30cm. Pit **139**, context 140.

V57. Class I, Form G, fabric F1. Internal rim diameter 27cm. Pit **139**, context 140.

B.5 Medieval and post-medieval pottery

By Carole Fletcher

Introduction

B.5.1 Archaeological works produced a small pottery assemblage of two sherds, weighing 15g, recovered from ditches in Areas A and B. The assemblage was widely dispersed and moderately abraded, with a low average sherd weight of approximately 7.5g.

Methodology

B.5.2 The Medieval Pottery Research Group (MPRG), 2016 *A Standard for Pottery Studies in Archaeology* acts as a standard. Recording was carried out using OA East's in-house system, and basic fabric classification has been carried out for all sherds, although all identifications are tentative. All sherds have been counted, classified and weighed on a context-by-context basis. The assemblage is recorded in Table 17. The pottery and archive are curated by OA East until formal deposition or dispersal.

Assemblage and discussion

B.5.3 Two post-medieval ditches in Areas A and B produced single sherds of pottery. Ditch **147** in Area A contained an abraded rim sherd (11g) from a medieval coarseware vessel, possibly residual within its context. The rim is everted and the fabric is quartz tempered with what appear to be occasional grog or clay pellets. Ditch **EV39** in Evaluation Trench 14 (Area B) produced a moderately abraded body sherd (4g) of late 17th – late 18th century date.

Area	Ctxt.	Cut	Feature	Fabric	Form and Description	No. of sherds	Wgt (g)	Date
A	148	147	Ditch	Quartz tempered coarseware	Abraded rim	1	11	medieval
B (Tr 14)	40	EV39	Ditch	English Stoneware – Nottingham type	Moderately abraded body sherd	1	4	Late 17th-late 18th century

Table 17. Summary of post-medieval pottery.

B.6 Fired clay

By Matt Brudenell

B.6.1 A total of 241 fragments of Late Bronze Age fired clay (8904g) were recovered from the combined evaluation and excavation (Table 18). The material derived from 12 contexts relating to 12 features: ten pits, one posthole and one post-medieval ditch (residual). The vast majority was recovered from pits **EV43**, **107**, **126** and **155**, which collectively contained 87% of the fired clay assemblage by fragment count or 95% by weight. With the exception of two complete spindle whorls from pit **141** and one briquetage bar terminal fragment from pit **EV41**, these four features also contained all of the diagnostic pieces of fired clay.

B.6.2 The fired clay can be divided into briquetage (fired clay equipment used in salt making) and other fired clay material; the latter mainly belonging to a series of fragmented loom weights. The two categories of fired clay are discussed separately below. All the fired clay has been counted, weighed, catalogued, and assigned to fabric group (following PCRG guidelines 2011). The fabrics are described and quantified in Table 19 below, with the description of F4 and Q1 being the same as those for the prehistoric pottery (as identified macroscopically).

B.6.3 All the quantified data is presented on an Excel data sheet held with the site archive. The material is in good condition and has a high mean fragment weight (36.9g).

Feature	Context	Group	Category	No. fragments	Weight (g)	Key diagnostic components
Pit EV41	42	PG41	Briquetage	5	12	Bar terminal
			Fired clay	4	157	
Pit EV43	44	PG41	Briquetage	91	1736	Pedestal fragments and terminals; bar fragments and terminals
			Fired clay	57	3016	Loom weight fragments
Pit 105	106	PG107	Fired clay	2	82	
Pit 107	109	PG107	Fired clay	10	1764	Loom weight fragments
Posthole 112	113	S110	Fired clay	1	1	
Pit 126	130	PG107	Briquetage	4	8	
			Fired clay	19	1699	Loom weight fragments
Pit 141	142	PG107	Fired clay	2	85	Spindle whorls
Pit 145	146	PG41	Briquetage	10	14	
Ditch 147	148		Fired clay	2	15	
Pit 149	150	PG149	Briquetage	1	2	
			Fired clay	1	88	
Pit 153	154	PG149	Fired clay	3	12	
Pit 155	156	PG149	Briquetage	4	19	
			Fired clay	25	194	
TOTAL				*241*	*8904*	

Table 18. Quantification of fired clay by context and type.

Fired clay fabrics

Flint fabrics

F4: Moderate to common medium burnt flint (mainly 1-2mm in size).

Flint, crushed quartz and sand fabrics

FQIQ1: Moderate coarse burnt flint (2-4mm in size), moderate coarse to very coarse crushed quartz pea gravels (2-12mm in size), and moderate to quartz sand in a powdery clay matrix.

Sand fabrics

Q1: Moderate to common quartz sand with rare flint (1-4mm in size).

Q2: Moderate to common quartz sand, sparse to common medium to very coarse voids (2-7mm in size) and sparse sub-rounded and annual pea gravel quartz inclusions (2-10mm in size) in a slightly powdery clay matrix.

Sand and void fabrics

QV1: Common quartz sand and common sub-rounded linear voids (3-30mm in size). Similar to Q2, but with more voids.

Vegetable matter and sand fabrics

VEQ1: Fine, slightly sandy clay matrix with common to abundant linear voids from burnt out organic matter (2-5mm in size).

Fabric	Fabric group	No. frags	Weight frags. (g)	% fabric (by wt.)	Category
F4	Flint	2	85	1	Fired clay
FQIQ1	Flint, quartz & sand	1	696	7.8	Fired clay
Q1	Sand	33	2388	26.8	Fired clay
Q2	Sand	54	2093	23.5	Fired clay
QV1	Sand & voids	36	1851	20.8	Fired clay
VEQ1	Veg. & voids	115	1791	20.1	Briquetage
TOTAL	*241*	*241*	*8904*	*100*	-

Table 19. Quantification of fired clay by fabric

Briquetage

B.6.4 A sizeable, regionally significant assemblage of Late Bronze Age briquetage was recovered from the evaluation and excavation. The assemblage comprises 115 fragments of briquetage (1791g) deriving from pits **EV41**, **EV43**, **126**, **145**, **149** and **155**. The vast majority came from pit **EV43** (Pit Group **41**), context 44, which yielded 91 fragments (1736g), representing 79% of the material by fragment count or 97% weight. With the exception of one bar fragment from pit **EV41** (6g), this context also yielded all the diagnostic pieces (bar fragments, pedestal fragments and pedestal terminals, quantified in Table 20; Fig. 13, nos. 1-5 and Fig. 14, nos. 6-8). Other contexts contained only amorphous fragments or small miscellaneous pieces with flat surfaces. The latter may be fragments of containers/salt vessels, though none were positively identified (no base fragments or rims).

B.6.5 All the briquetage is made with a slightly sandy clay with common to abundant linear voids from burnt out organic matter (Fabric VEQ1; Table 19). The material is friable and varies in colour from pale orangey brown to reddish brown.

Feature	Type	No. fragments	Weight (g)
Pit EV41	Misc. fragments	4	6
	Bar fragments	1	6
Pit EV43	Misc. fragments	25	116
	Bar fragments	47	808
	Pedestal fragments	7	317
	Pedestal terminals	12	495
Pit 126	Misc. fragments	4	8
Pit 145	Misc. fragments	10	14
Pit 149	Misc. fragments	1	2
Pit 155	Misc. fragments	4	19
TOTAL	-	*115*	*1791*

Table 20. Quantification of briquetage by type

Bar fragments

B.6.6 Long rectangular bar fragments dominate the briquetage assemblage (48 fragments, 814g). None of the bars are complete, but several have refitting pieces (13 refits (287g) identified in total), with the most intact measuring 140mm in length. Away from the terminals, the bars are rectangular in cross-section and measure between 32-52mm in width, and 9-16mm in thickness. The terminals have square ends, slightly tapered ends, or slightly rounded ends (Fig. 13, nos. 1-3). Nine fragments (254g) are salt affected with a thin, patchy pale grey residue on the surface.

Pedestal fragments

B.6.7 Only seven pedestal fragments were present in the assemblage (317g). These are shaft fragments with an oval to sub-rectangular cross-section, measuring 21-41mm width. All the fragments are salt affected.

Pedestal terminals

B.6.8 Twelve fragments of pedestal terminal were recovered (495g), deriving from a maximum of ten different pedestals. Nine terminal fragments (373g) are salt affected. Four different terminal end types were identified:

1. Triangular terminals with tapered cross section (see Evans *et al*. 2016, 139, fig. 3.9, no. 2).

2. Triangular terminals with splayed edges.

3. 'Fish-tail' terminals, triangular in form with splayed edges and concave tops.

4. Cupped sub-rectangular terminals (see Barford 1988, 40, Fig. 27, no. 22).

Miscellaneous fragments

B.6.9 The assemblage includes 48 (165g) miscellaneous fragments of briquetage comprising small amorphous pieces. A total of 24 fragments (54g) have one flat surface. Some of the pieces are likely to be fragments of bars, whilst others are thin walled (6-7mm

thick) and may be pieces of containers. However, no container rims or bases were identified.

Other fired clay

B.6.10 A total of 126 fragments (7113g) of non-briquetage fired clay was recovered from the evaluation and excavation. The material was recovered from 11 contexts relating to pits **EV41**, **EV43**, **105**, **107**, **126**, **141**, **149**, **153** and **155**, posthole **112** and ditch **147**. The vast majority (88% by count and 94% by weight) was recovered from pits **EV43**, **107**, **126** and **155**.

B.6.11 Five different fabrics were distinguished in the assemblage (Table 19). Most common were fragments in sandy fabrics Q1 and Q2, which account for 63% of the material by weight. Loom weight fragments, pieces with flat surfaces and amorphous lumps were all found in fabrics Q1 and Q2. The second most commonly used fabric was QV1 (26% by weight), similar to Q1 and Q2, but containing common voids. Loom weight fragments and other pieces were found in this fabric. The minor fabrics in the assemblage are FQIQ1 (10% by weight) and F4 (1% by weight). The former, containing burnt flint and crushed quartz grits, was only found in a single loom weight fragment. The latter, which also contained burnt flint, was used to make two spindles whorls.

B.6.12 The main categories of artefact are described below.

Loom weights

B.6.13 Fragments of five different trapezoidal/pyramidal loom weights were recovered from pits **EV43**, **107** and **126**, spread across Pit Groups **41** and **107** (combined total of 26 pieces, 4553g). The weights are all partial, survive to different degrees, and vary in their dimensions and fabric: two in fabric QV1, and single examples in fabrics Q1, Q2 and FQIQ1. The forms are typical of the Late Bronze Age in Eastern England.

B.6.14 Each of the weight is described in turn below, with the most complete example (loom weight 4) illustrated in Figure 15, no. 9.

> Loom weight 1 (Pit **EV43**, context 44, fabric QV1). Upper half of a large trapezoidal/pyramidal loom weight (810g). The weight is broken along the perforated hole, with the cross-section at this point measuring 110mm by 90mm. The hole is 25mm wide.
>
> Loom weight 2 (Pit **EV43**, context 44, fabric QV1). Part of a narrow trapezoidal weight (306g). The surviving section is 57mm wide. It is broken along the perforated hole which measures 17mm in diameter.
>
> Loom weight 3 (Pit **107**, context 109, Fabric FQIQ1). Lower half of a trapezoidal/pyramidal loom weight, with well-defined corners (696g). The weight is 99mm wide at the base, and 65mm thick. It survives to a height of 106mm.
>
> Loom weight 4 (Pit **107**, context 109, Fabric Q1; Fig. 15, no. 9). Five fragments of near complete trapezoidal/pyramidal loom weight (1051g; three fragments refitting (1032g)), missing roughly one half of the lower profile. The weight has a height of 116mm, is 98mm wide at the base and 66mm wide at the top. The

perforated hole is centrally positioned through the upper profile of the weight and measures 17mm in diameter.

Loom weight 5 (Pit **126**, context 130, Fabric Q2). Fragments of a large trapezoidal/pyramidal loom weight (15 fragments (1690g), two weighing 1576g). Only the top and bottom parts of the weight survive. The section where the perforated hole should sit is missing. The weight was at least 155mm tall, with a base 116mm wide and the top 67mm wide.

Spindle whorls

B.6.15 Two complete spindle whorls were recovered from the excavation of pit **141** (Pit Group **107**), context 142 (combined weight 85g). The whorls were both made in fabric F4, a common potting fabric (see pottery report Appendix B.4). The size and form of the whorls is typical of the period and region. Both are described below and are illustrated in Figure 15, nos 10-11.

Spindle whorl 1 (Fabric F4, Fig. 15, no. 10). Complete ovoid spindle whorl measuring 44mm in diameter and 30mm in height (50g). The perforated hole is 9mm in diameter and is slightly of centre. The exterior of the whorl is dark grey and has a smoothed exterior finish.

Spindle whorl 2 (Fabric F4, Fig. 15, no. 11). Complete spindle whorl measuring 41mm in diameter and 22mm in height (35g). The whorl has a slightly flattened, biconical profile, with a central perforation 12mm in diameter. The fabric is similar to Spindle whorl 1 but includes occasional coarse flint.

Miscellaneous fragments

B.6.16 By fragment count, most of the non-briquetage fired clay comprises amorphous lumps or small pieces with single flat surfaces that lack any impressions or other diagnostic traits. In total, the combined evaluation and excavation yielded 98 (2475g) of such fragments: 27 in fabric Q1 (1337g), 37 in fabric Q2 (403g) and 34 in fabric QV1 (735g). Eight of the pieces (975g) have one flat surface, though their function is unclear. Some potentially belong to other broken loom weights. Alternatively, they may be fragments of oven lining or pieces of daub.

Discussion

B.6.17 The assemblage of fired clay from the site forms a regionally significant group of material from a sealed context, associated with a large group of Late Bronze Age pottery and two radiocarbon dates. Of greatest importance is the recovery of a well-preserved assemblage of briquetage, primarily from pit **EV43**, comprising bar fragments, pedestal fragments, and pieces of pedestal terminals. Pre-Late Iron Age salt making equipment is extremely rare in Suffolk, and very few sites yielding potentially early evidence of salt making are dated with any degree of confidence. Most briquetage finds from the county come from coastal sites and 'red hills', normally associated with Roman ceramics, or on rare occasions, 'Belgic'/Late Iron Age pottery. Although there are older records of briquetage being found with generic 'Iron Age' or 'Iron Age A' ceramics (including locally around the Stour foreshore at Stutton (STU 022) and Brantham (BNT 004)), the dating is by no means secure, especially given the

changing understanding of regional ceramic chronologies in the last three decades (Brudenell 2012). Recently, Early Iron Age briquetage has been identified on the Galloper Wind Farm site, Leiston (Wessex Archaeology 2019; LCS 161), but to the author's knowledge, no material positively dated to the Late Bronze Age has been previously identified in Suffolk.

B.6.18 The assemblage is therefore important, all the more so because pit **EV43**, which contained by far the largest assemblage of briquetage, is associated with a radiocarbon determination of 983-830 cal. BC (95.4% probability; BRAMS-4075; 2762 ± 25 BP). The Late Bronze Age date of the material is therefore beyond question. In terms of its typological affinity, the briquetage finds close parallel with published material from Essex, in particular that from Mucking (Barford 2016) and Mucking North Ring (Barford 1988). Interestingly, like Stutton, both these sites are over 1km away from the river/access to brackish tidal waters, suggesting that certain aspects of the salt making process were conducted away from the water's edge. The lack of briquetage from salt containers - the trough-like receptacles that brine was evaporated in or underwent final drying - is unusual though, since most inland finds relate to these vessels in Essex (Sealey 1995, 68). Various props and wedges that make up the full repertoire of salt making equipment are also notable by their absence. Instead, the Stutton assemblage contains a limited range of briquetage, made up of bars and pedestals. These, however, may constitute the portable element of the salt making kit that were taken to and from the Stour estuary as required. Indeed, if the final drying took place within the settlement context, as has been postulated (final drying was a separate process which avoided contaminating the salt with unpleasant impurities from the evaporation stage (Fawn *et al*. 1990, 20)), items such as these that supported containers about the heat source were needed in both settings.

B.6.19 The other items of fired clay in the assemblage are more typical of domestic Late Bronze Age settlement sites. The loom weights are characteristic of the period and can be widely paralleled across Southern Britain (loom weight 5 from pit **126** was associated with a radiocarbon date of 917-814 cal. BC (95.4% confidence; BRAMS-4076; 2726 ± 25 BP)). Interestingly, these were made with fabric recipes different to that used in the briquetage - various sandy clay mixtures being favoured instead of the vegetable tempered clays for salt equipment. This may be due to the different function of the artefacts, since voids left by the organic temper in the briquetage gives greater resistance to thermal shock, caused by the sudden heating and cooling of the items repeatedly used in the salt making process (Morris 1985, 343-4). It is also notable that some of the fired clay fabrics recipe overlap with those used in potting - fabrics Q1 and F4. Even fabric FQIQ1, used to make loom weight 3, is similar to potting fabrics F1-2, and may suggest that left over potting clay was sometimes used in the production of these items. Such expedient use of prepared clay is perhaps to be expected, especially for the manufacture of utilitarian items.

B.6.20 More broadly, the loom weights and spindle whorls attest to textile production at the site. The two spindle whorls are complete and in good condition. These are relatively common finds in settlement contexts, though it is rare to recover two complete examples from the same pit.

Illustration catalogue

Fig. 13

1. Bar terminal 1. Pit **EV43**, context 44.

2. Bar terminal 2. Pit **EV43**, context 44.

3. Bar terminal 3. Pit **EV43**, context 44.

4. Fishtail terminal 1. Pit **EV43**, context 44.

5. Dish terminal 1. Pit **EV43**, context 44.

Fig. 14

6. Triangular terminal 1. Pit **EV43**, context 44.

7. Triangular terminal 2. Pit **EV43**, context 44.

8. Wedge terminal 1. Pit **EV43**, context 44.

Fig. 15

9. Loom weight 4. Fabric Q1, height 116mm, width 98mm. Pit **107**, context 109.

10. Spindle whorl 1. Fabric F4, diameter 44mm, height 30mm. Pit **141**, context 142.

11. Spindle whorl 2. Fabric F4, diameter 41mm, height 22mm. Pit **141**, context 142.

B.7 Petrographic Analysis

By Patrick Quinn

Introduction

B.7.1 Thin section petrographic analysis has been undertaken on four briquetage samples, three loom weight fragments and three pottery sherds from Late Bronze Age contexts (Table 21). The aim of the analysis was to characterise the composition and technology of the various ceramic samples and shed light on their macroscopic fabric classification. Of interest was the existence of possible similarities or differences between the artefact types as well as links with briquetage from Mucking in Essex.

Methodology

B.7.2 The 10 ceramic samples were prepared as 30 µm petrographic thin sections using a modification of the standard geological technique (Quinn 2013, 23-33). They were then examined under a polarising light microscope and characterised in terms of their raw materials and manufacturing technology. The composition of the samples were compared to their microscopic fabric classification and artefact type. The ceramics' composition and technology was compared to contemporaneous material from the same area, as well as to the local and regional geology. Photomicrographs of the prepared thin section are presented in Figures 16–19.

Results and discussion

B.7.3 The four briquetage samples (Samples 1-4) are compositionally related to one another in thin section. All are characterised by a non-calcareous silty and occasionally sandy fabric with conspicuous curved elongate voids left from the destruction of plant matter (Fig. 16, Fig. 17 A and B). While plant matter can occur naturally in clay in coastal and estuarine environments, the high abundance of the material, particularly in Samples 2 and 3, as well as its relatively large size, might suggest that it was added as temper. Charred remains exist in many of the elongate voids, which also have blackened margins. Plant matter may have been added to decrease the weight of the thick walled briquetage. It would, however, have increased the porosity of the vessels, which may not have been advantageous given that they were used to boil brine.

B.7.4 The base clay to which the temper was added is non-calcareous and contains abundant angular silt sized inclusions of quartz, muscovite mica, chert and opaques, as well as rare feldspar and amphibole. Several of the samples exhibit heterogeneity in the clay matrix in the form of iron-rich mottling and streaking (Fig, 16 C and D). This seems likely to be natural variability in a sedimentary clay source that was not completely obliterated by working. Occasional argillaceous inclusions occur in Samples 2 and 4 and seem to be poorly homogenised remnants of the clay source. Less common rounded sand sized inclusions of quartz and occasional polycrystalline quartz and chert occur in the briquetage and are most abundant in Samples 1 and 3. It is not clear whether these were a natural sandy component of the clay or were added as temper. Their relative absence in Sample 2 might suggest the former. The ceramics were fired <850°C in a oxidising atmosphere. Some in-wash of fine clay is present in voids and

may be related to the use of the briquetage for boiling muddy estuarine water, though it could also have formed during burial.

B.7.5 The thin section petrographic analysis of the four briquetage samples confirms and appends their macroscopic fabric classification as 'vegetable matter and sand fabric VEQ1' (Table 21). This is described as having a "fine, slightly sandy clay matrix with common to abundant linear voids from burnt out organic matter (2-5mm in size)".

B.7.6 The three loom weight samples also have a related petrographic composition in thin section (Figure 17 C-F, Fig. 18 A and B). Their fabric is inclusion rich, containing abundant sub-angular to sub-rounded quartz-rich silt and variable amounts of more rounded quartz sand. White mica and amphibole are significant components of the silt size inclusions and chert and feldspar occur occasionally. The sand sized inclusions include polycrystalline quartz and chert. The latter can reach up to 2mm in Sample 7. It is not clear whether the sand sized inclusions were a natural sandy component of the clay or were added as temper. Sample 7 has a weakly bimodal grain-size distribution, which may support the latter interpretation in this case. Rounded opaques occur in all three samples; in Samples 5 and 6 these are sand sized and may represent oxidised inclusions of glauconite. Sample 7 contains an iron nodule with quartz grains. The ceramics were fired <750°C in a oxidising atmosphere.

B.7.7 The macroscopic fabric characterisation of the loom weights (Table 21) agrees more or less with their composition in thin section in that they contain quartz sand and some chert/flint. The linear voids reported in Sample 5 (Sand and void fabric QV1) were not encountered in the thin section manufactured of this sample. The idea that crushed quartz was added to Sample 7 (Flint, crushed quartz and sand fabric FQIQ1) is not supported by the evidence in thin section, though the large chert/flint inclusions in this sample could represent crushed rock temper.

B.7.8 The loom weight samples share some common inclusions with the briquetage in thin section, namely quartz, chert, fine mica and amphibole, but they were made with an otherwise different recipe. The base clay used for the briquetage contained heterogeneity and this was mixed with plant temper, neither of which were seen in the loom weights.

B.7.9 The three pottery sherds analysed from Stutton are compositionally related to one another in thin section due to the presence of angular chert temper inclusions (Fig. 18 C–F, Fig. 19 A and B). They nevertheless differ slightly from each other. The chert inclusions vary in size reaching up to 2 mm in Sample 10. Their size and angular appearance suggests that they were added as crushed rock temper. This is coarser and more abundant in Sample 9 than the other two. All three samples also contain rounded medium and fine sand sized quartz inclusions. This may also represent temper due to its distinct size difference from the finer silt-sized material in the samples, particularly in Sample 8. The sherds contain generally angular silt sized inclusions of quartz, muscovite mica, chert, amphibole, feldspar and opaques. These are likely to have been naturally occurring in a silty base clay. In Sample 8 the clay was more silty than the other two and contained natural iron-rich streaking that was not removed by working. Sample 8 also contains thin elongate fragments of carbonised organic matter that may suggest that plant matter was added. Sample 10 contains

elongate drying voids. Sample 9 was fired in an oxidising atmosphere, Sample 8 was moderately oxidised and Sample 10 was reduced. The maximum sustained firing temperature was below the vitrification level of the clay minerals (<850°C).

B.7.10 The petrographic characterisation of the three pottery sherds aligns well with their microscopic fabric classification (Table 21). All were determined to have flint/chert temper, though there is no evidence in thin section that this was burnt. Plant matter was also detected in Sample 8 in hand specimen (Flint and vegetable matter fabric FVE1). Sample 10 was determined to have quartz sand (Flint and sand fabric FQ1), though this was not detected in the other two samples.

B.7.11 The three pottery sherds do not match either the briquetage or loom weights in thin section. However, they share some common characteristics, such as the presence of chert/flint temper which is also seen in the loom weights and the presence of plant temper as in the briquetage. The base clay used to manufacture the pottery sherds has similar silty inclusions to that used for the other two artefact types. Of interest is the presence of abundant muscovite mica, chert and rare amphibole.

B.7.12 The quartz, mica and chert-rich silty clay used to manufacture the ceramics from Stutton could have be procured close to the site. The ancient sedimentary clay deposits of the Palaeogene Thames Group contains silty clay (Chatwin 1961), though the exact clast composition of this is not known at the time of writing. The presence of possible glauconite in Samples 5 and 6 might support the use of the Thames Group as this is known to be present in this unit. The overlying quaternary Crag Group is composed of sands and gravels with less clay component. It is nevertheless possible that quartz-rich sand from this unit could have been used by the potters of Stutton. A range of recent superficial deposits cover the sedimentary bedrock in the study area. These include glacial and fluvioglacial material as well as estuarine alluvium. Glacial deposits containing reworked material from the chalk bedrock to the west may have been the source of the fine chert material present in the ceramics. The lamination seen in some of the briquetage samples might be suggestive of the use of estuarine clay. This has also been proposed for the manufacture of medieval briquetage in Kings Lynn, Norfolk by Quinn (2020). Interestingly, these ceramics also contained plant material. The larger flint temper inclusions in the pottery samples may have come from the crushing of pebbles from the glacial material or could have come from debitage from the working of imported flint used to make stone tools.

Location of Scientific Samples and Access

B.7.13 The thin sections analysed in this report have been archived at the Institute of Archaeology, University College London. These can be accessed and studied for comparative purposes by arrangement with the authors.

Sample	Type	Macro Fabric	Context	Pit
Stutton 1	Briquetage bar fragment, tapered end	VEQ1	44	43
Stutton 2	Briquetage bar fragment, flat end	VEQ1	44	43
Stutton 3	Pedestal fragment, briquetage	VEQ1	44	43
Stutton 4	Briquetage, pedestal terminal	VEQ1	44	43
Stutton 5	Loom weight Fragment	QV1	44	43
Stutton 6	Loom weight Fragment	Q1	109	107
Stutton 7	Loom weight Fragment	FQIQ1	109	107
Stutton 8	Pottery sherd	FVE1	44	43
Stutton 9	Pottery sherd	F1	44	43
Stutton 10	Pottery sherd	FG1	44	43

Table 21. Details of Late Bronze Age briquetage, loom weights and pottery

B.8 Finds Quantification Table

Context	Cut	Metalwork	Struck Flint		Burnt flint		Burnt & worked stone		Prehistoric Pottery		Med - post-med pottery		Fired Clay		Animal bone	
		No.	No.	Wt (g)	No.	Wt (g)	No.	Wt (g)	No.	Wt (g)	No.	Wt (g)	No.	Wt (g)	No.	Wt (g)
1	Topsoil	4														
2	Subsoil	1														
5	EV4		1	5												
7	EV6		1	9												
22	21														1	47
31	EV32		1	30												
36	EV35								3	52						
40	EV39										1	4				
42	EV41								10	183			9	169		
44	EV43		2	15	4	21	1	893	257	4194			148	4752	1	2
104	103								1	11						
106	105								16	140			2	82		
109	107								40	265			10	1764		
113	112				1	11							1	1		
121	120						1	55								
129	126								2	20						
130			3	181	9	281	11	1956	66	469			23	1707		
132	131								1	5						
135	134								1	39						
140	139								84	1940					1	4
142	141								16	118			2	85		
146	145								6	119			10	14		

Context	Cut	Metalwork	Struck Flint		Burnt flint		Burnt & worked stone		Prehistoric Pottery		Med - post-med pottery		Fired Clay		Animal bone	
		No.	No.	Wt (g)	No.	Wt (g)	No.	Wt (g)	No.	Wt (g)	No.	Wt (g)	No.	Wt (g)	No.	Wt (g)
148	147										1	11	2	15		
150	149		6	166	7	166			36	267			2	90		
159									4	14						
154	153								1	5			3	12		
156	155		2	296	11	489			81	1061			29	213		
TOTAL		***5***	***16***	***702***	***32***	***968***	***13***	***2904***	***625***	***8902***	***2***	***15***	***241***	***8904***	***3***	***53***

APPENDIX C ENVIRONMENTAL REPORTS

C.1 Environmental Samples

By Martha Craven

Introduction

C.1.1 A total of twelve bulk samples were taken from the evaluation and excavation at Stutton Close. These samples were all taken from a variety of features which are all dated to the Late Bronze Age. The purpose of this report is to determine whether plant remains and other environmental indicators such as molluscs are present, their mode of preservation and what can be inferred from them about such things as past economies, agricultural practices, and diet.

Methodology

C.1.2 Each sample was processed by tank flotation using modified Sīraf-type equipment for the recovery of preserved plant remains, dating evidence and any other artefactual evidence that might be present. The floating component (flot) of the samples was collected in a 0.3mm nylon mesh and the residue was washed through 10mm, 5mm, 2mm and a 0.5mm sieve.

C.1.3 A magnet was dragged through each residue fraction for the recovery of magnetic residues prior to sorting for artefacts. Any artefacts present were noted and reintegrated with the hand-excavated finds.

C.1.4 The dried flots were subsequently sorted using a binocular microscope at magnifications up to x 60 and an abbreviated list of the recorded remains are presented in Table 22.

C.1.5 Identification of plant remains is with reference to the Digital Seed Atlas of the Netherlands (Cappers *et al*. 2006) and the Oxford Archaeology East reference collection. Nomenclature is according to Zohary and Hopf (2000) for cereals and Stace (2010) for other plants. The identification of cereals has been based on the characteristic morphology of the grains and chaff as described by Jacomet (2006).

Quantification

C.1.6 For the purpose of this assessment, items such as seeds and cereal grains have been scanned and recorded qualitatively according to the following categories:

= 1-5, ## = 6-25, ### = 26-100, #### = 100+ specimens

C.1.7 Items that cannot be easily quantified such as charcoal and molluscs have been scored for abundance

+ = rare, ++ = moderate, +++ = frequent, ++++ = abundant, +++++ = super abundant

Key to table: U=untransformed f= fragment

Results

C.1.8 Preservation of botanical material on this site is through carbonisation (charring) There is no evidence of preservation of plants remains through other means such as waterlogging or mineralisation. There is generally a low density and diversity of taxa in the plant assemblage from this site.

C.1.9 The samples are all fairly similar in terms of composition. Cereals and legumes are present in a number of the samples in generally small quantities alongside small quantities of weed seeds and tree/shrub macrofossils. A number of the samples also contain fragments of unidentifiable carbonised matter that may be burnt food or dung.

C.1.10 The most productive sample from this site is Sample 12, fill 130 of pit **126** (Area A), which contains a moderate quantity of carbonised cereal grains. The grains consist mainly of emmer/spelt (*Triticum dicoccum/spelta*) wheat with some barley (*Hordeum vulgare*). A fragment of emmer/spelt was radiocarbon dated to 917-814 cal. BC (BRAMS-4076; 2726 ± 25 BP; 95.4% probability). This sample also contains a small quantity of carbonised emmer spikelet forks. Other edible plant remains were recovered from Sample 11, fill 109 pit **107** (Area A) and Sample 15, fill 140 of pit **139** (Area A); in the form of small quantities of legume (*Fabaceae*) fragments.

C.1.11 All the samples from this site contain only small quantities of charcoal and are devoid of molluscs. It is interesting to note that Sample 15 contains a relatively large quantity of fuel ash slag.

Sample No.	Context No.	Trench /Area	Cut No.	Feature Type	Volume Processed (L)	Flot Volume (ml)	Cereals	Chaff	Legumes	Weed Seeds	Tree/Shrub Macrofossils	Indet. Macro	Charcoal Volume (ml)	Pottery	Fired Clay	Hammerscale	Fuel Ash Slag
1	36	14	35	Pit	18	80	#	0	0	#	#U	0	44	0	0	+	0
2	42	15	41	Pit	18	60	#	0	#	#	#U	0	2	#	0	0	0
3	44	15	43	Pit	18	65	#	0	#	0	0	0	4	#	#	0	0
10	104	A	103	Pit	16	50	0	0	0	0	0	#	1	0	0	0	0
11	109	A	107	Pit	17	5	#	0	#f	0	0	0	5	##	0	++	0
12	130	A	126	Pit	16	10	##	#	0	#	0	#	5	#	0	0	0
13	142	A	141	Pit	18	10	#	0	0	0	#U	0	4	#	0	0	0
14	146	A	145	Pit	17	5	0	0	0	0	0	0	<1	#	0	0	0
15	140	A	139	Pit	20	50	#	#	#f	0	0	0	2	0	0	0	+++
16	115	A	114	Post-hole	6	10	0	0	0	0	0	0	<1	0	0	0	0
17	156	A	155	Pit	20	30	0	0	0	0	0	0	3	##	0	0	0
18	159	A	149	Pit	19	10	#	0	0	0	0	0	1	#	0	0	0

Table 22. Environmental bulk samples

Discussion

C.1.12 The samples from this site have produced a relatively small assemblage of carbonised plant remains that include cereal grains, legumes and possible food fragments. This assemblage is typical in composition when compared with other British Late Bronze

Age sites. In the Late Bronze Age emmer is usually the predominant cultivated cereal found at sites in East Anglia. Spelt wheat is thought to have been introduced to the area in the Middle Bronze Age (Stevens 2009) and became the favoured cereal by the Iron Age. This trend did not occur uniformly across East Anglia however, as some Late Bronze Age sites, such as Lofts Farm, Essex, have significant assemblages of spelt in comparison with emmer (Stevens 2009). The small quantity of emmer spikelet forks in several of the samples at Stutton suggest that on-site processing of cereal remains may have been carried out.

C.1.13 The small quantity of legumes recovered from this site provides some insight into the cultivation of other food plants in this period. The importance of legumes in the Prehistoric diet is slowly gaining more recognition (Treasure and Church 2017) and these legumes may have provided a key source of protein. It is important to note that legumes are thought to be underrepresented in the archaeological record as they do not need to be subject to fire when being processed (Treasure and Church 2017).

C.1.14 The relatively large quantity of fuel ash slag in Sample 15 suggests that this deposit may have included the sweepings from a hearth or kiln. Fuel ash slag is the product of the melting/partial melting/fusion of siliceous materials such as sandy soils with fuel and is often associated with hearth or kiln features (Young 2010).

Retention, dispersal and display

C.1.15 The samples from this site have been fully processed and assessed. The sample flots will be retained with the project archive.

C.2 Animal Bone

By Zoë Uí Choileáin

Introduction

C.2.1 Excavations recovered only three recordable fragments of animal bone (Table 23). Of these, one fragment is identifiable to species. The remaining two bones are categorised as large or medium mammal.

C.2.2 The method used to quantify this assemblage was a modified version of that devised by Albarella and Davis (1996). Identification of the faunal remains was carried out at Oxford Archaeology East. References to Hillson (1992) and Schmid (1972) were used where needed for identification purposes.

C.2.3 The surface condition of the bone was assessed using the 0-5 scale devised by McKinley where 0 represents no erosion and 5 represents the total erosion of the surface bone (2004, 16; fig. 6).

Results of Analysis

C.2.4 The surface condition of the bone is variable; however, the main bulk represents a 1-2 on the McKinley scale (2004, 16; fig. 6), meaning that there is a small amount of erosion.

C.2.5 Only a single fragment could be identified to taxon; a sheep/goat tibia from fill 140 (pit **139**, phase 2). Fill 44 (pit **EV43**, phase 2) contained a fragment of burnt medium mammal skull.

Context	Cut	Feature	Phase	Taxon	Element	Count	Condition
22	21	Ditch	-	Large mammal	Femur	1	3
44	EV43	Pit	2	Medium mammal	Skull	1	1
140	139	Pit	2	Sheep/goat (*Ovis/Capra*)	Tibia	1	1

Table 23. Catalogue of bone by context

Discussion

C.2.6 These specimens represent domestic waste. Due to the small size of the assemblage few other conclusions can be reached as regards the butchery or dietary practices of the population.

APPENDIX D RADIOCARBON DATING CERTIFICATES

University of BRISTOL

brams
Bristol Radiocarbon Accelerator Mass Spectrometer
43 Woodland Road,
BRISTOL, BS8 1UU,
UK

Tuesday, 10 November 2020

Report on Radiocarbon Age Determination for BRAMS-4075

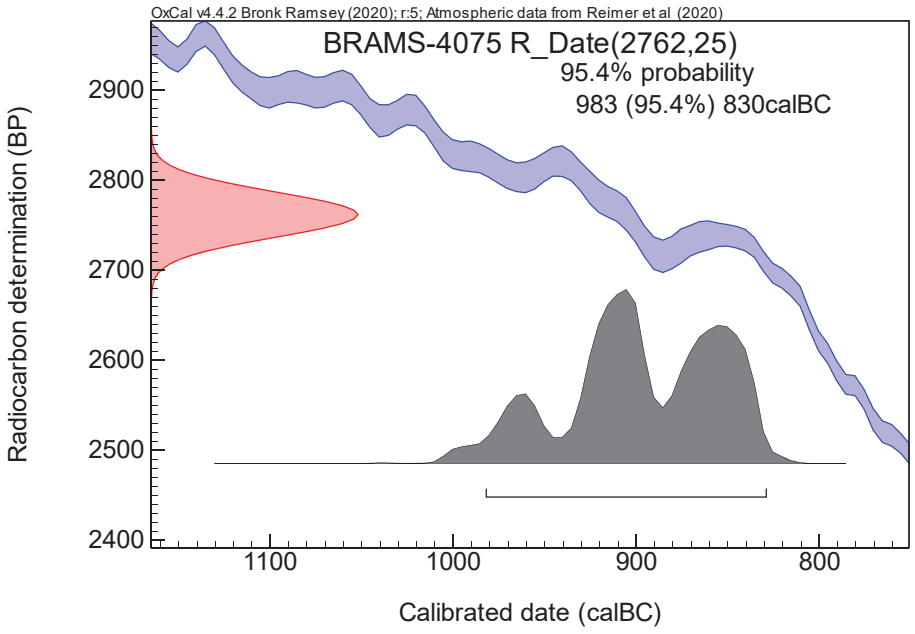
Submitter:	Rachel Fosberry
Submitter's Code:	<3> (44) (Vicia faba)
Project:	STU094
Sample material:	Macrofossils
Pretreatment Code:	ABA

$F^{14}C$	**0.7090± 0.22 %**
Result	**2762 ± 25 BP**
Indicative $\delta^{13}C$	**-22.9 ‰**

The result is given in uncalibrated radiocarbon years Before Present (BP). Data given are corrected for isotopic fractionation using the $^{13}C/^{12}C$ ratio measured on the AMS. The $\delta^{13}C$ value was measured on the AMS and may have been subject to additional isotopic fractionation. The error associated with this value is typically ±1‰.

Calibration Plot

Calibration was performed using OxCal software v4.4 and the IntCal20 atmosphric calibration curve



Dr. Timothy Knowles
BRAMS Manager

University of BRISTOL

brams
Bristol Radiocarbon Accelerator Mass Spectrometer
43 Woodland Road,
BRISTOL, BS8 1UU,
UK

Tuesday, 10 November 2020

Report on Radiocarbon Age Determination for BRAMS-4076

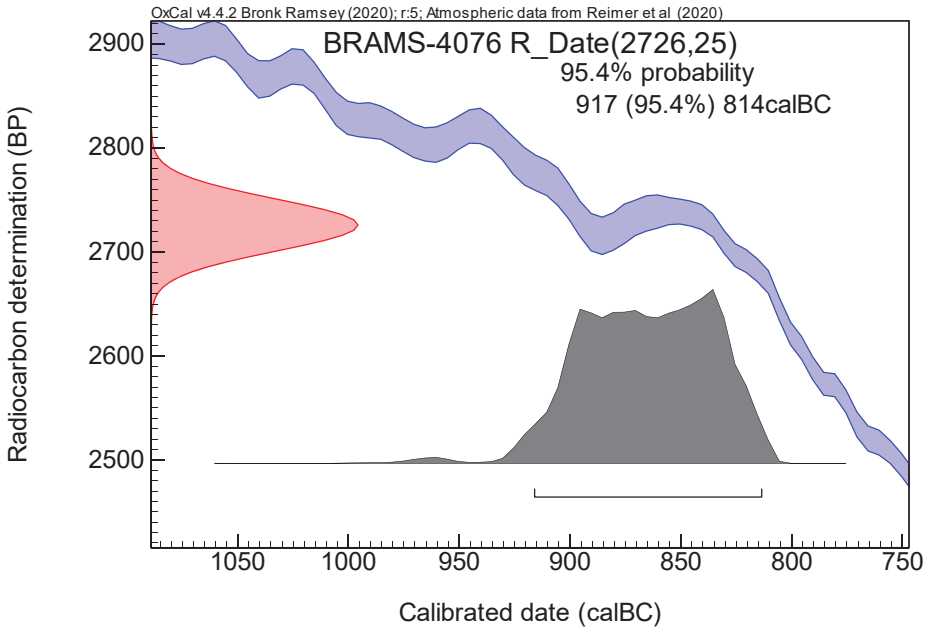
Submitter:	Rachel Fosberry
Submitter's Code:	<12> (130) (Triticum dicoccum/spelta)
Project:	STU094
Sample material:	Macrofossils
Pretreatment Code:	ABA

$F^{14}C$	**0.7122± 0.22 %**
Result	**2726 ± 25 BP**
Indicative $\delta^{13}C$	**-28.8 ‰**

The result is given in uncalibrated radiocarbon years Before Present (BP). Data given are corrected for isotopic fractionation using the $^{13}C/^{12}C$ ratio measured on the AMS. The $\delta^{13}C$ value was measured on the AMS and may have been subject to additional isotopic fractionation. The error associated with this value is typically ±1‰.

Calibration Plot

Calibration was performed using OxCal software v4.4 and the IntCal20 atmosphric calibration curve



Dr. Timothy Knowles
BRAMS Manager

APPENDIX E WRITTEN SCHEME OF INVESTIGATION

Land West of 35-40 Stutton Close, Stutton, Suffolk

Written Scheme of Investigation

Client: RPS of behalf of Hopkins Homes Ltd

Prepared by	Matt Brudenell
Date prepared	November 2019
Version	3

Planning application no.	B/17/00950/FUL
Site code	XSFSCS19EX
Project number	22930
Project type	Excavation
NGR	TM 1517 3468
Parish Code	STU094
OASIS no:	oxfordar3-371733

oxfordarchaeology easteasteast

CONTENTS

1 GENERAL BACKGROUND

1.1.1 This Written Scheme of Investigation (WSI) conforms to the principles identified in Historic England's guidance documents *Management of Research Projects in the Historic Environment (MoRPHE)*, specifically the MoRPHE *Project Manager's Guide* (2015) and *Project Planning Note 3: Archaeological Excavation* (2008).

1.1.2 All work will be conducted in accordance with the Chartered Institute for Archaeologists *Code of Conduct* (2014) and *Standard and Guidance for Archaeological Field Evaluation* (2014).

1.1.3 This WSI also incorporates the requirements of the EAA *Standards for Field Archaeology in the East of England* (Gurney 2003) and conforms to the Suffolk County Council's *Requirements for Archaeological Excavation* (2017) document.

1.2 Circumstances of the project

1.2.1 Oxford Archaeology East (OA East) have been commissioned by RPS on behalf of Hopkins Homes Ltd to undertake a programme of archaeological excavation on land proposed for the construction of 34 dwellings and associated access, landscaping, and parking at land west of 35-40 Sutton Close, Sutton, Suffolk (centred TM 1519 3469).

1.2.2 This WSI has been prepared in response to a Brief for Archaeological Excavation issued by Gemma Stewart of the Suffolk County Council Archaeological Service (SCCAS, dated 25/10/2019), and is required by Babergh District Council in respect to Conditions 9 and 10 of planning application B/17/00950/FUL.

1.2.3 The works follow on from a geophysical survey conducted at the site in October 2018 (Magnitude Surveys 2018, report MSTM388), and trenched archaeological evaluation carried out in March 2019 (Lucking 2019, OAE Report 2311). The evaluation revealed Bronze Age remains in the eastern part of the site. These included two intercutting pits of Late Bronze Age date; one containing a large quantity of domestic pottery and fired clay salt-making briquetage along with loom weight fragments and a piece quern.

1.3 The archaeological strategy

1.3.1 Excavation will occur in two areas of the site identified by the SCCAS and labelled A-B on plan in Section 12. These target areas of archaeological interest identified in the evaluation of the site (Lucking 2019, OAE Report 2311). The combined area for excavation totals 0.22ha (Area A, 0.20ha; Area B, 0.02ha). Area C (0.17ha) is a contingency area which may also require excavation (subject to the results of Areas A and B).

1.4 Changes to this method statement

1.4.1 If changes need to be made to the methods outlined below – either before or during works on site – SCCAS will be informed and asked to consider changes before they are made. Changes will be agreed in writing before work on site commences, or else at the earliest available opportunity.

1.4.2 Provision will be made, where necessary, to extend areas of excavation, should significant archaeological remains be shown to continue beyond the pre-defined excavation limits, until a 10m 'archaeology free' buffer zone has been achieved.

1.4.3 Any decision to extend areas will be discussed and formally agreed by SCCAS and RPS, on behalf of the Client, before extensions begin.

1.4.4 SCCAS will be kept regularly informed about developments both during the site works and subsequent post-excavation work.

2 THE GEOLOGY, TOPOGRAPHY AND OTHER FEATURES OF THE SITE

2.1.1 The village of Stutton is located on the southern side of the Shotley Peninsula, lying between the tidal reach of the River Stour *c*.1km to the south and Alton Water reservoir *c*.1km to the north.

2.1.2 The *c*.1.7ha development site is located towards the centre of the village, immediately east of Church Road, and north of Lower Street. It is enclosed by houses and gardens to the north, south and east, and Church Road to the west. The site is currently under grass and low scrub at a height of approximately 29m OD.

2.1.3 The geology of the area is mapped as a bedrock of Red Crag Formation- sand, with superficial deposits of Kesgrave Catchment subgroup- sand and gravel.

3 ARCHAEOLOGICAL BACKGROUND

3.1 Prehistoric and Roman

3.1.1 Neolithic finds recovered in the vicinity of the site include an axe (STU013) recovered immediately to the north of the site in 1973 and an artefact scatter of two end scrapers and several other flakes (STU020) around 0.3km south-west of the site. Along the coastal shoreline, approximately 1.7km to the south-west, a collection of Palaeolithic and Neolithic flints have been collected (STU001).

3.1.2 The only recorded Iron Age remains in the area lie on the coast, in the same area as STU001 and consists of a pit exposed by tidal erosion which contained Iron Age pottery, a loomweight, animal bone and fired clay (STU022). Furthermore, this is also a putative Roman site (STU023) where pottery of the period has been recovered.

3.2 Medieval, post-medieval and modern

3.2.1 Stutton Hall (STU030), which was originally a timber framed house built in 1553, is situated around 1.6km to the south-west of the site. It was rebuilt in brick in the 19th century. Associated landscaping includes an avenue, park and garden.

3.2.2 A WWII pillbox and associated earthworks probably relating to a ring bank and weapons pit (STU064) have been recorded on aerial photographs around 180m north of the site on Larksfield Road.

3.2.3 Historical Ordnance Survey (OS) maps show the northern and eastern parts of the site was undeveloped agricultural land prior to the 1950s and comprised three fields separated by two north-west to south-east ditch alignments. The 1882 OS map shows the central portion of the site as either woodland or an orchard with the eastern and western portions of the site undeveloped. By 1904 the site is shown as a 'Nursery', presumably for trees and/or plants. The 1959 OS map no longer refers to the site as a nursery with an area of woodland shown in the western portion of the site. By 1978 this western portion appears to have been separated from the remainder of the site with the woodland no longer present.

3.3 Undated

3.3.1 Aerial photography across the surrounding landscape has recorded multiple examples of cropmarks. These include possible field boundaries and trackways (STU077), along with a large oval enclosure (STU043) and possible ring ditch (STU075) *c*.0.6km to the east. A rectilinear field system (HBK004) and possible ring ditch (STU078) have also been recorded *c*.0.6km to the north-east, together with field boundaries and a trackway *c*.0.8km to the north-west of the site (STU008). An irregular enclosure (STU018) was identified *c*.0.8km to the north and further field boundaries and trackway (STU071) *c*.0.6km to the west.

3.4 Previous work

3.4.1 A fluxgate magnetometer survey of the site was conducted by Magnitude Surveys in October 2018 (Magnitude Surveys 2018, report MSTM388). The survey has detected a wide range of anomalies including comparatively subtle historic ploughing trends. Magnetic disturbance relating to modern activity, agricultural anomalies, and the sand and gravel superficial geology were also detected. No anomalies of probable or possible archaeological origin were identified.

3.4.2 An archaeological trial trench evaluation conducted at the site in March 2019 identified archaeological remains in eleven of the sixteen trenches excavated (Lucking 2019, OAE Report 2311). The earliest phase of activity is represented by a single pit of possible Middle Bronze Age date, excavated in Trench 14, which yielded three pottery sherds from a single vessel of the period.

3.4.3 Two intercutting pits of Late Bronze Age date were encountered in Trench 15. One of the pits contained large quantities of domestic pottery and fired clay salt-making briquetage along with loom weight fragments and a piece quern. These finds strongly suggest Late Bronze Age occupation in the immediate vicinity.

3.4.4 Post-medieval and modern features were represented by field boundary ditches across the full extent of the site, which appeared to be either parallel with, or perpendicular to, extant boundaries in the surrounding area. A series of parallel gullies were also excavated in Trench 9 that were interpreted as possible planting beds of post-medieval date. Two pits of this date were also excavated in Trench 12 and interpreted as possible sand and gravel extraction pits.

4 AIMS AND OBJECTIVES

4.1 Aims of the excavation

4.1.1 The overall aim of the investigation is to preserve by record the archaeological evidence contained within the footprint of the development area, prior to damage by development, and investigate the origins, date, development, phasing, spatial organisation, character, function, status, and significance of the remains revealed, and place these in their local, regional and national archaeological context.

4.1.2 Based on the results of the two phases of evaluation, a series of more specific research themes and questions can be formulated as follows:

- Understanding Bronze Age salt-making at the site

  "Identification of a Bronze Age presence in coastal and marine contexts is needed, coupled with a search for Bronze Age saltern sites" (Medlycott 2011, 21)

  "The distribution and patterning of most basic artefact categories requires further study and synthesis, e.g. pottery, querns, briquetage, loom weights, spindle whorls, worked bone and antler, bronze and iron dress accessories, tools and weapons" (Brudenell 2018, 15).

  "Technological studies are also needed to establish how artefacts were manufactured, and the different processes and raw materials involved in their production." (Brudenell 2018, 15).

  - What aspects of the Late Bronze age salt production process were conducted at this in-land location, and what was the scale for the operation?
  - Can the briquetage fabrics be characterised more closely?
  - How do the 'types' of briquetage relate to those on other Late Bronze Age sites in eastern England? What other evidence for counterparty salt production in Suffolk?
  - Were pottery vessels also used in the salt production process?
  - Can radiocarbon dating help refine the date of the slat-making activity.

- Revealing and understanding prehistoric land use and occupation

  "Further analysis is needed to explore the range of settlement forms in the Late Bronze Age to Middle Iron Age, and establish their patterning and distribution" (Brudenell 2018, 14).

- What is the nature of Bronze Age occupation at the site? Do the remains constitute settlement, or do they relate specifically to salt-making? Are other activities being conducted at the site?
- Is there continuity of active between the Middle and Late Bronze Age.

4.1.3 Following the completion of the fieldwork, these research aims will be revised and redefined or expanded as necessary, ensuring that they contribute to the goals of the Regional Research Frameworks relevant to this area.

4.2 Research frameworks

4.2.1 This excavation takes place within, and will contribute to the goals of Regional Research Frameworks relevant to this area:

- Glazebrook J. (1997). *Research and Archaeology: A Framework for the Eastern counties: 1. Resource Assessment*. East Anglian Archaeology Occasional Papers 3.
- Brown, N. & Glazebrook, J. (2000). *Research and Archaeology: A Framework for the Eastern counties: 2. Research Agenda and Strategy*. East Anglian Archaeology Occasional Papers 8.
- Medlycott, M. (2011). *Research and Archaeology Revisited: A Revised Framework for the East of England*. East Anglian Archaeology Occasional Papers 24.
- Brudenell, M. (2018). Late Bronze Age to Middle Iron Age, c. 1150-100 BC. East Anglian Research Framework Review (summary paper for discussion). http://eaareports.org.uk/algao-east/regional-research-framework-review/

5 METHODS

5.1 Background research

5.1.1 A suitable level of documentary research will be undertaken before work on site commences. This research will draw on information in the Suffolk Historic Environment Record and County Records Office, and will include any relevant historical sources, maps, previous archaeological finds, and past archaeological investigations in the vicinity. The results will not be presented separately, but will be incorporated into the final excavation report.

5.2 Parish code, site code and OASIS number

5.2.1 The parish code STU 094 will be used for the excavation (as requested by the Suffolk HER), with a unique site code assigned to the project (XSFSCS19EX). Context numbers will follow on from the evaluation to ensure continuity in the archive. The OASIS number for the project is oxfordar3-371733.

5.3 Excavation method

Excavation standards

5.3.1 The proposed archaeological excavation and analysis will be conducted in accordance with current best archaeological practice and the appropriate national and regional standards and guidelines.

5.3.2 All work will be conducted in accordance with the Chartered Institute for Archaeologists' *Code of Conduct* and *Standard and Guidance for Archaeological Excavation*.

5.3.3 All fieldwork will be undertaken in accordance with the requirements of the OA Field Manual (ed. D Wilkinson 1992), and the revised OA fieldwork manual (publication forthcoming). Further guidance is provided to all excavators in the form of the OA *Fieldwork Crib Sheets – a companion guide to the Fieldwork Manual.* These have been issued ahead of formal publication of the revised Fieldwork Manual.

5.3.4 The excavation will also adhere to the SCCAS *Requirements for Excavation* (2017).

Pre-commencement

5.3.5 Before work on site commences, service plans will be checked to ensure that access and groundworks can be conducted safely.

5.3.6 In order to minimise damage to the site and disruption to site users, Oxford Archaeology will agree the following with the client/landowner before work on site commences:

- the location of entrance ways
- sites for welfare units
- soil storage areas

- refuelling points for plant (if necessary), and the extent of any bunding required around fuel dumps
- access routes for plant and vehicles across the site

Soil stripping

5.3.7 Service plans will be checked before work commences on site. Before excavation areas are stripped, they will be scanned by a qualified and experienced operator, using a CAT and Genny with a valid calibration certificate.

5.3.8 All machine excavation will take place under the supervision of a suitably qualified and experienced archaeologist.

5.3.9 The excavation areas will be stripped by a mechanical excavator to the depth of geological horizons, or to the upper interface of archaeological features or deposits, whichever is encountered first. A toothless ditching bucket will be used to strip topsoil. Overburden will be excavated in spits not greater than 0.1m thick.

5.3.10 Where the archaeological levels are particularly deep, safe excavation procedures will be followed to ensure that trenches are safe to enter. This may include shoring or stepping the sides of trenches, as appropriate to the soil and site conditions. If trenches become flooded, pumps may be used to remove excess water, and they will be assessed for stability and safety before staff enter them.

5.3.11 Spoil will be stored beside excavation areas, at a safe working distance. The location will be mindful of the need to potentially expand excavation areas.

5.3.12 No machinery will be allowed to track over excavation area until they have been signed off by the SCCAS.

Hand excavation

5.3.13 The top of the first archaeological deposit will be cleared by machine, then cleaned off by hand. Exposed surfaces will be cleaned by trowel and hoe as necessary, in order to clarify located features and deposits.

5.3.14 All features will be investigated and recorded to provide an accurate assessment of their character and contents. All relationships between features or deposits will be investigated and recorded. Any natural subsoil surface revealed will be hand cleaned and examined for archaeological deposits and artefacts. Excavation will characterise the full archaeological sequence down to undisturbed natural deposits. Apparently natural features (such as tree throws) will be sampled sufficiently to establish their character.

5.3.15 All excavation of all archaeological deposits will be done by hand, unless agreed with SCCAS that there will be no loss of evidence using a machine. The method of excavation will be decided by the senior project archaeologist.

5.3.16 There will be sufficient excavation to give clear evidence for the period, depth, and nature of each archaeological deposit. We will use the following levels for excavating features, unless others are agreed during the project.

Feature Class	*Proportion*
Layers/deposits/horizontal stratigraphy relating to domestic/industrial activity (e.g. hearths, floor surfaces)	100%
Post-built structures of pre-modern date	100%
Domestic ring-ditches or roundhouse gullies	100%
Pits associated with agricultural & other activities	50%
Linear features (ditches & gullies) associated with structural remains (minimum 1m slot excavated across width)	20%
Pre-modern linear features not associated with structural remains (minimum 1m slot excavated across width)	10%
Human burials, cremations & other deposits relating to funerary activity	100%

5.3.17 In the unlikely event that deep features cannot be excavated safely, they will be sampled using a hand augur or boreholes, in order to establish their depth and structure.

5.3.18 If exceptional or unexpected feature are uncovered, SCCAS will be informed, and their advice sought on further excavation or preservation.

5.4 Human remains

5.4.1 If human remains are encountered during excavation, the Client, Suffolk Coroner, and SCCAS will be informed immediately.

5.4.2 Human remains will be excavated in accordance with all appropriate legislation and Environmental Health regulations. Excavation will only take place after Oxford Archaeology has obtained a Ministry of Justice exhumation licence.

5.5 Metal detecting and the Treasure Act

5.5.1 Metal detector searches will take place at all stages of the excavation by an experienced metal detector user (James Fairbairn). Excavated areas will be detected immediately before and after mechanical stripping. Both excavated areas and spoil heaps will be checked. To prevent losses from night-hawking, features will be metal detected immediately after stripping.

5.5.2 Metal detectors will not be set to discriminate against iron.

5.5.3 Artefacts will be removed and given a small find number. Labels will be placed on the location of each 'small find' and surveyed in with a GPS.

5.5.4 If finds are made that might constitute ‘Treasure’ under the definition of the Treasure Act (1996), they will, if possible, be excavated and removed to a safe place. Should it not be possible to remove the finds on the day they are found, suitable security will be arranged. Finds that are 'Treasure' will be reported to the landowner and Suffolk Coroner within 14 days, in

accordance with the Act. The Suffolk Finds Liaison Officer from the Portable Antiquities Scheme will also be informed.

5.6 Recording of archaeological deposits and features

5.6.1 Records will comprise survey, drawn, written, and photographic data.

Survey

5.6.2 Surveying will be done using a survey-grade differential GPS (Leica CS10/GS08 or Leica 1200) fitted with "smartnet" technology with an accuracy of 5mm horizontal and 10mm vertical.

5.6.3 The site grid will be accurately tied into the Ordnance Survey National Grid and located on the 1:2500 or 1:1250 map of the area. Elevations will be levelled to the Ordnance Datum.

Written records

5.6.4 A register of all trenches, features, photographs, survey levels, small finds, and human remains will be kept.

5.6.5 All features, layers and deposits will be issued with unique context numbers. Each feature will be individually documented on context sheets, and hand-drawn in section and plan. Written descriptions will be recorded on pro-forma sheets comprising factual data and interpretative elements.

5.6.6 Where stratified deposits are encountered, a Harris Matrix will be compiled during the course of the excavation.

Plans and sections

5.6.7 Pre-excavation plans will be prepared using either GPS-based survey equipment or photogrammetry.

5.6.8 Site excavation plans will normally be drawn at 1:50, but on deeply-stratified sites a scale of 1:20 will be used. Detailed plans of individual features or groups will be at an appropriate scale (1:10 or 1:20).

5.6.9 Long sections showing layers will be drawn at 1:50. Sections of features or short lengths of trenches will be drawn at 1:20. All section levels will be tied in to Ordnance Datum.

5.6.10 All site drawings will include the following information: site name, site code, scale, plan or section number, orientation, date and the name or initials of the archaeologist who prepared the drawing.

Photogrammetric recording

5.6.11 Plans and sections may be supplemented with photogrammetric recording of the excavation areas. Photogrammetric models will be based on high-resolution digital photographs with a minimum file size of 5 MB. Photogrammetric processing will be conducted using the Agisoft Photosoft (Professional Edition) software, and will incorporate reference points taken by GPS-based survey equipment.

Drone photography

5.6.12 Where conditions are safe to do so, and when ground and weather conditions are suitable, drone photography will be used to supplement GPS survey, to create an accurate site plan and potentially to identify additional features not visible on the ground. Where possible drone photography will be used both before and after machine stripping.

5.6.13 Drone photography will be conducted by a licenced pilot using a DJI M V2 F550 Flame Wheel Hexacopter with control established using a Leica GS08survey grade GPS. Images will be processed in AgiSoft Photoscan Pro to produce a georectified 3D model.

Photographs

5.6.14 The photographic record will comprise high resolution uninterpolated images of at least 10 megapixels; taken with a camera with an APS-C (or larger) sensor.

5.6.15 Photographs will include both general site shots and photographs of specific features. Every feature will be photographed at least once. All photographs will include a graduated metric scale or appropriate length. Vertical scales will be used against deep sections in combination with horizontal scales. Photographs will also include a north arrow, site code, and feature number (where relevant), unless they are to be used in publications. The photograph register will record these details, and photograph numbers will be listed on corresponding context sheets.

5.7 Post-excavation processing

5.7.1 Processing will take place in tandem with excavation, and advice will be sought from relevant specialists on key artefact types. The Project Manager and fieldwork project officer will be given feedback to enable them to develop excavation strategies during fieldwork.

5.7.2 Any finds requiring specialist treatment and conservation will be sent for appropriate treatment.

5.7.3 Finds will be marked with context numbers, site code or accession number, as detailed in the requirements of the Suffolk County Council Stores.

5.8 Finds recovery

Standards for finds handling

5.8.1 Finds will be exposed, lifted, cleaned, conserved (including X-rays of appropriate material), marked, bagged, and boxed in line with the standards in:

- United Kingdom Institute for Conservators (2012) *Conservation Guidelines No. 2*
- Watkinson & Neal (1988) *First Aid for Finds*

- Chartered Institute for Archaeologists (2014) *Standard and Guidance for the Collection, Documentation, Conservation and Research of* Archaeological Materials
- English Heritage (1995) *A Strategy for the Care and Investigation of Finds.*
- SCCAS (2019) *Archaeological Archives in Suffolk: Guidelines for Preparation and Deposition*

5.8.2 Where finds require conservation, this will be done in accordance with the guidelines of the Institute for Conservation (ICON),

Procedures for finds handling

5.8.3 At the start of work, a finds supervisor will be appointed to oversee the collection, processing, cataloguing, and specialist advice on all artefacts collected.

5.8.4 Artefacts will be collected by hand and metal detector. Excavation areas and spoil will be scanned visually and with a metal detector to aid recovery of artefacts. All finds will be bagged and labelled according to the individual deposit from which they were recovered, ready for later cleaning and analysis. 'Special/small finds' may be located more accurately by GPS if appropriate.

5.8.5 Processing will take place in tandem with excavation, and advice will be sought from relevant specialists on key artefact types. (See the Appendix for a list of specialists.)

5.8.6 All artefacts recovered from excavated features will be retained for post-excavation processing and assessment, except:

- those which are obviously modern in date
- where very large volumes are recovered (typically ceramic building material)
- where directed to discard on site by SCCAS.

5.8.7 Where artefacts are not removed from site, a strategy will be employed to ensure a sufficient sample is retained, in order to characterise the date and function of the features they were excavated from. A record will be kept of the quantity and nature of artefacts which are not removed from site.

5.8.8 Any finds requiring specialist treatment and conservation will be sent for appropriate treatment.

5.9 Sampling for environmental remains and small artefact retrieval

Standard methodology – summary

5.9.1 Sampling methods will follow guidelines produced by Historic England and Oxford Archaeology. The project team will consult Historic England's Scientific Advisor on environmental sampling and dating where necessary. Where possible an environmental specialist(s) will visit the site to advise on sampling strategies which will be reviewed periodically during the length of the excavation. Specialists will be consulted where non-standard sampling is

required (e.g. TL, OSL or archaeomagnetic dating) and if appropriate will be invited to visit the site and take the samples.

Standards for environmental sampling and processing

Paleoenvironmental remains will be sampled and processed in accordance to the OA Sampling Policy (2005) with reference to the relevant guidelines produced by Historic England:

- Oxford Archaeology 2005. *Environmental Sampling Guidelines*, 2nd ed.
- Historic England 2011. *Environmental Archaeology. A guide to the theory and practice of methods, from sampling and recovery to post excavation*, (2nd ed)
- Historic England 2008. *Guidelines for the Curation of Waterlogged Macroscopic Plant and Invertebrate Remains*.
- Historic England 2010. *Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood*.
- Historic England 2012. *Waterlogged organic artefacts. Guidelines on their recovery, analysis and conservation*.
- Historic England 2008. *Investigative conservation. Guidance on how detailed examination of artefacts from archaeological sites can shed light on their manufacture and use.*
- Historic England 2014. *Animal Bones and Archaeology. Guidelines for Best Practice*.
- Historic England 2004. *Dendrochronology: Guidelines on Producing and Interpreting Dendrochronological Dates*.
- Historic England 2006. *Archaeomagnetic Dating. Guidelines for Producing and Interpreting Archaeomagnetic Dates*.
- Historic England 2008. *Luminescence Dating. Guidelines on Using Luminescence Dating in Archaeology*.
- Historic England 2015. *Archaeometallurgy. Guidelines for Best Practice.*
- Historic England 2015 *Geoarchaeology. Using Earth Sciences to Understand the Archaeological Record*.

Procedures for sampling and processing

5.9.2 Environmental samples (up to 40 litres or 100% of context if less is available) will be taken from a range of potentially datable features and well-stratified deposits to target the recovery of plant remains, fish, bird, small mammal and amphibian bone and small artefacts. Samples will be labelled with the site code, context number, and sample number and a register will be kept.

5.9.3 Larger soil samples (up to 100L) may be taken for the complete recovery of animal bones, marine shell and small artefacts from appropriate contexts. Smaller bulk samples (general biological samples) of 20 litres will be taken from any waterlogged deposits present for the recovery of macroscopic plant remains and insects. Series of incremental 2L samples may be taken through buried soils and deep feature fills for the recovery of snails and/or waterlogged plant remains, depending on the nature of the stratigraphy and of the soils and sediments.

5.9.4 Columns will be taken from buried soils, peats and waterlogged feature fills for pollen and/or phytoliths, diatoms, ostracods if appropriate. Soil samples will be taken for soil investigations (particle size, organic matter, bulk chemistry, soil micromorphology etc.) in consultation with the appropriate specialists. Where features containing very small artefacts such as micro-debitage and hammerscale are identified, 1L grid sampling may be employed.

5.9.5 Early feedback on selected samples taken during the excavation will result in a dynamic sampling strategy according the results of rapid assessment of typically 10L sub-samples.

5.9.6 Typically, 20 litres of each bulk sample will be processed standard water flotation using a modified Siraf-style machine and meshes of 0.3mm (flot) and 0.5 or 1mm depending on sediment type and like modes of preservation (residue). The remaining soil from a sample will be subsequently processed if appropriate based on the results of an initial assessment. Normally, early prehistoric samples will be fully processed and samples containing human remains will always be fully processed. Heavy residues will be wet sieved, air dried and selectively sorted. Samples taken exclusively for the recovery of bones, marine shell or artefacts will be wet sieved to 2mm. Waterlogged samples will have a sub-sample (approximately 10L) processed as above and the flot will assessed whilst wet and again once dried. Snail samples (2L) will be processed by hand flotation with flots and residues collected to 0.5mm; these flots and residues will be sorted by the specialist.

5.9.7 Where practical, waterlogged wood specimens will be recorded in detail on site, in situ. When removed, they will be cleaned and photographed, and stored in wet cool conditions for assessment by a suitably qualified specialist (see the Appendix).

6 OUTREACH ACTIVITIES

6.1.1 Should the excavation reveal significant remains, OA East will hold open afternoon on the site for local residents to view and understand the results of the excavations. The will be subject to agreement with the Client.

6.1.2 OA East can also promote the site to the public via regular updates on the OA website. Interviews may also be given to local radio and newspapers as requested, and with the agreement of the Client.

7 REPORTING

7.1 Post-excavation Assessment Report

7.1.1 Post-excavation analysis and reporting will follow guidance in Historic England's (2015) *Management of Research Projects in the Historic Environment (MoRPHE)*,

7.1.2 Within four weeks of the end of fieldwork a written timetable for post-excavation assessment, updated project design and/or reporting will be produced for the SCCAS for review.

7.1.3 It is anticipated that a post-excavation assessment report and updated research design will be delivered within six months of the completion of fieldwork.

7.1.4 If substantial remains are recorded during the project, it may be necessary to undertake a full programme of analysis and publication. If this is the case, then a timetable and programme of work for this aspect of the project will be included in the post-excavation assessment report as and Updated Project Design (UPD).

7.2 Contents of the Assessment Report

7.2.1 The post-excavation assessment report will provide an objective account of the archaeological investigation and its findings. It will contain a comprehensive, illustrated assessment of the results and consider the potential for further analysis and publication in light of relevant research issues within regional and national research agendas.

7.2.2 The report will include:

- a title page detailing site address, site code and accession number, NGR, author/originating body, client's name and address
- full list of contents
- a non-technical summary of the findings
- a description of the geology and topography of the area
- a description of the methodologies used
- a description of the findings and assessment of the stratigraphic evidence
- tables summarising features and artefacts
- site location plans, and plans of each area excavated showing the archaeological features found
- selected sections of excavated features
- specialist assessment reports on artefacts and environmental finds
- relevant photographs of features and the site
- a discussion of the findings and their significance
- A discussion of the relationship between findings on the site and other archaeological information held in the Suffolk Historic Environment Record

- an updated project design linked to relevant local and regional research issues, including a programme of work and timetable for further analysis and publication (where appropriate)
- a bibliography of all reference material
- the OASIS reference and summary form.
- A copy of the WSI

7.3 Analysis Report and Publication

7.3.1 Where appropriate (in consultation with SCCAS), and following the production of the post-excavation assessment report, a post-excavation analysis report and/or publication will be produced.

7.3.2 The content of the post-excavation analysis report will be detailed in the updated project design contained within the post-excavation assessment report. Where required, this will be delivered within 18 months of the completion of fieldwork.

7.3.3 The results of the evaluation will be integrated with the results of the excavation in the archive report. Finds from the previous stage of work (e.g. the Bullhead flint scraper) will be described in full and integrated in the report.

7.3.4 The scope, format and venue of any publication will be proportionate to the significance of the results and discussed in the post-excavation assessment report. It is anticipated that the excavation will result in the production of an article in the *Proceedings of the Suffolk Institute of Archaeology and History*.

7.3.5 A summary report on the excavation will also will be prepared for the annual round up of sites in the *Proceedings of the Suffolk Institute of Archaeology and History*.

7.4 Draft and final reports

7.4.1 A draft copy of all post-excavation reports will be supplied to SCCAS for comment.

7.4.2 Following approval of the report, one printed copy and one digital copy (PDF) will be presented to the Suffolk Historic Environment Record.

7.5 OASIS

7.5.1 A digital copy of the approved report will be uploaded to the OASIS database.

7.5.2 A copy of the OASIS Data Collection Form will be included in the report.

8 ARCHIVING

Archive standards

8.1.1 The site archive will conform to the requirements Appendix 1 of the Historic England's (2015) *Management of Research Projects in the Historic Environment* (MoRPHE), and the SCCAS *Archaeological Archives in Suffolk: Guidelines for Preparation and Deposition* (2019)

8.1.2 The preparation of the archive will follow the guidelines contained in *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (United Kingdom Institute for Conservation, 1990), *Standards in the Museum care of Archaeological Collections* (Museums and Galleries Commission 1992), and *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation (*Brown 2007*).*

Archive contents

8.1.3 The archive will be quantified, ordered, and indexed. It will include:

- artefacts
- ecofacts
- project documentation – including plans, section drawings, context sheets, registers, and specialist reports
- photographs (high quality raw DNG or TIFF images will be stored on CDROM, and colour printouts made of key features)
- a printed copy of the Written Brief
- a printed copy of the WSI
- a printed copy of all reports
- a printed copy of the OASIS form.

8.1.4 It is Oxford Archaeology Ltd's policy, in line It is Oxford Archaeology Ltd's policy, in line with accepted practice, to keep site archives (paper and artefactual) together wherever possible.

Transfer of ownership

8.1.5 The archaeological material and paper archive produced from this investigation will be held in storage by OA East who will seek to transfer the complete project archive to the Suffolk County Council Stores, in order to facilitate future study and ensure long-term public access to the archive. To do so will require a transfer of title to the repository in line with the county's guidance on deposition of archaeological archives. Where the landowner wishes to retain items recovered during excavation, all selected artefacts will be fully drawn and photographed, identified, analysed, documented and conserved in order to create a comprehensive catalogue of items to be kept by the landowner before the remainder of the archive can be deposited in the Suffolk County Council Stores.

8.1.6 A written transfer of ownership document will be forwarded to the SCC Archaeology Service before the archive is deposited.

8.1.7 In the unlikely event that artefacts of significant monetary value are discovered, and if they are not subject to Treasure Act legislation, separate

ownership arrangements may be negotiated following the creation of a comprehensive illustrated catalogue, as described above.

9 TIMETABLE

9.1.1 Fieldwork is expected to take up to four weeks to complete, based on a five-day week, working Monday to Friday. This does not allow for delays caused by bad weather.

9.1.2 Post-excavation processing and assessment tasks will commence shortly after excavation commences, to inform the excavation strategy and minimise time required to prepare the final report after excavation is completed.

9.1.3 Post-excavation tasks will take a maximum of 6 months following the end of fieldwork, unless there are exceptional discoveries requiring lengthier analysis.

9.1.4 Final publication of the site (whether as a journal article or some other form agreed with SCCAS) will be completed within 2 years of completing fieldwork.

9.1.5 The project archive will be deposited within 18 months of delivering the final report, unless SCCAS requires further excavation on the site.

10 STAFFING AND SUPPORT

10.1 Fieldwork

10.1.1 The fieldwork team will be made up of the following staff:
- 1 x Project Manager (supervisory only, not based on site)
- 1 x Project Officer/Supervisor (full-time)
- 2 x Site Assistants (as required)
- 1 x Archaeological Surveyor
- 1 x Finds Assistant (part-time, as required)
- 1 x Environmental Assistant (part-time, as required)

10.1.2 The Project Manager will be Dr Matthew Brudenell. Site work will be directed by one of OAE's Project Officers or Supervisors.

10.1.3 All Site Assistants will be drawn from a pool of qualified and experienced staff. Oxford Archaeology East will not employ volunteer, amateur, or student staff, whether paid or unpaid, except as an addition to the team stated above.

10.2 Post-excavation processing

10.2.1 We anticipate that the site may produce prehistoric to modern remains. Environmental remains will also be sampled.

10.2.2 Pottery will be assessed by Dr Matthew Brudenell (prehistoric), Alice Lyons (Roman) and Dr Paul Spoerry (Anglo-Saxon and medieval).

10.2.3 Environmental analysis will be carried out by OA East staff, in consultation with the OA Environmental Department in Oxford. The results will be reported to Historic England's Regional Scientific Advisor. Environmental analysis will be undertaken by Rachel Fosberry (charred plant macrofossils, plant macrofossils), Liz Stafford (land molluscs), and Denise Druce and Mairead Rutherford (pollen analysis).

10.2.4 Faunal remains will be examined by Hayley Foster.

10.2.5 Conservation will be undertaken by Karen Barker (Antiquities Conservator), and will be undertaken in accordance with guidelines issued by the Institute for Conservation (ICON).

10.2.6 In the event that OA's in-house specialists are unable to undertake the work within the time constraints of the project, or if other remains are found, specialists from the list in the Appendix will be approached to carry out analysis.

11 OTHER MATTERS

11.1 Monitoring

11.1.1 SCCAS will be informed appropriately of dates and arrangements to allow for adequate monitoring of the works.

11.1.2 During the excavation, representatives of Oxford Archaeology East (Matt Brudenell), RPS (Ben Barker), the Client, and the SCCAS (Gemma Stewart) will meet on site to monitor the excavations, discuss progress and findings to date, and excavation strategies to be followed.

11.2 Insurance

11.2.1 OA East is covered by Public and Employer's Liability Insurance. The underwriting company is Lloyds Underwriters, policy number CC004337. Details of the policy can be supplied on request to the Oxford Archaeology East office.

11.3 Chartered Institute for Archaeologists

11.3.1 Oxford Archaeology is a Registered Organisation with the Chartered Institute for Archaeologists (CIfA), and is bound by CIfA By-Laws, Standards, and Policy.

11.4 Services, Public Rights of Way, Tree Preservation Orders etc.

11.4.1 The client will inform the project manager of any live or disused cables, gas pipes, water pipes or other services that may be affected by the proposed excavations before the commencement of fieldwork. Hidden cables/services should be clearly identified and marked where necessary. If there are overhead cables on the site or in the approachways, a survey must be completed by the relevant authority before plant is taken onto site.

11.4.2 The client will likewise inform the project manager of any public rights of way or permissive paths on or near the land which might affect or be affected by the work.

11.4.3 The client will inform the Project Manager if the site is a Scheduled Ancient Monument, Site of Special Scientific Interest (SSSI), or any other type of designated site. The client will also inform the project manager of any trees subject to Tree Preservation Orders, protected hedgerows, protected wildlife, nesting birds, or areas of ecological significance within the site or on its boundaries.

11.5 Site Security

11.5.1 Unless previously agreed with the Project Manager in writing, this specification and any associated statement of costs is based on the assumption that the site will be sufficiently secure for archaeological work to

commence. All security requirements, including fencing, padlocks for gates etc. are the responsibility of the client.

11.6 Access

11.6.1 The client will secure access to the site for archaeological personnel and plant, and obtain the necessary permissions from owners and tenants to place a mobile office and portable toilet on or near to the site. Any costs incurred to secure access, or incurred as a result of withholding of access will not be Oxford Archaeology East's responsibility. The costs of any delays as a result of withheld access will be passed on to the client in addition to the project costs already specified.

11.7 Site Preparation

11.7.1 The client is responsible for clearing the site and preparing it so as to allow archaeological work to take place without further preparatory works, and any cost statement accompanying or associated with this specification is offered on this basis. Unless previously agreed in writing, the costs of any preparatory work required, including tree felling and removal, scrub or undergrowth clearance, removal of concrete or hard standing, demolition of buildings or sheds, or removal of excessive overburden, refuse or dumped material, will be charged to the client, in addition to any costs for archaeological evaluation already agreed.

11.8 Site offices and welfare

11.8.1 All site facilities – including welfare facilities, tool stores, mess huts, and site offices – will be positioned to minimise disruption to other site users, and to minimise impact on the environment (including buried archaeology).

11.9 Health and Safety, Risk Assessments

11.9.1 A risk assessment and method statement (RAMS) covering all activities to be carried out during the lifetime of the project will be prepared before work commences, and sent to SCCAS.

11.9.2 The risk assessment will conform to the requirements of health and safety legislation and regulations, and will draw on OA East's activity-specific risk assessment literature.

11.9.3 All aspects of the project, both in the field and in the office will be conducted according to OA East's Health and Safety Policy, Oxford Archaeology Ltd's Health and Safety Policy, and *Health and Safety in Field Archaeology* (J.L. Allen and A. St John-Holt, 1997). A copy of Oxford Archaeology's Health and Safety Policy can be supplied on request.

12 APPENDIX: CONSULTANT SPECIALISTS

NAME	SPECIALISM	ORGANISATION
Allen, Leigh	Worked bone, CBM, medieval metalwork	Oxford Archaeology
Allen, Martin	Medieval coins	Fitzwilliam Museum
Allen, Martyn	Zooarchaeology	Oxford Archaeology
Anderson, Katie	Roman pottery	Freelance
Anderson, Sue	Medieval & post-medieval pottery (specifically from Norfolk & Suffolk), CBM and human remains	Freelance
Bamforth, Mike	Woodworking	York University
Barker, Karen	Small find conservation & X-Ray	Freelance
Bayliss, Alex	C14 advice	Historic England
Biddulph, Edward	Roman pottery	Oxford Archaeology
Billington, Lawrence	Lithics	Oxford Archaeology
Bishop, Barry	Lithics	Freelance
Blinkhorn, Paul	Iron Age, Anglo-Saxon and medieval pottery	Freelance
Booth, Paul	Roman pottery and coins	Oxford Archaeology
Boreham, Steve	Pollen and soils/ geology	Cambridge University
Broderick, Lee	Zooarchaeology	Oxford Archaeology
Brown, Lisa	Prehistoric pottery	Oxford Archaeology
Brudenell, Matt	Prehistoric pottery	Oxford Archaeology
Cane, Jon	Display & reconstruction artist	Freelance
Champness, Carl	Molluscs, geoarchaeology	Oxford Archaeology
Cotter, John	Medieval/post-medieval finds, pottery, CBM	Oxford Archaeology
Crummy, Nina	Small finds	Freelance
Cowgill, Jane	Slag/metalworking residues	Freelance
Dickson, Anthony	Worked Flint	Oxford Archaeology
Dodwell, Natasha	Osteology, including cremations	Oxford Archaeologist
Donelly, Mike	Lithics	Oxford Archaeology
Doonan, Roger	Slags, metallurgy	Freelance
Druce, Denise	Pollen, charred plants, charcoal/wood identification, sediment coring and interpretation	Oxford Archaeology
Drury, Paul	CBM (specialised)	Freelance
Fletcher, Carole	Medieval & post-medieval pottery, glass, shell & small finds	Oxford Archaeology
Fosberry, Rachel	Charred waterlogged and mineralised plant remains	Oxford Archaeology
Foster, Hayley	Zooarchaeologist	Oxford Archaeology
Fryer, Val	Molluscs/environmental	Freelance
Mark Gibson	Osteology	Oxford Archaeology

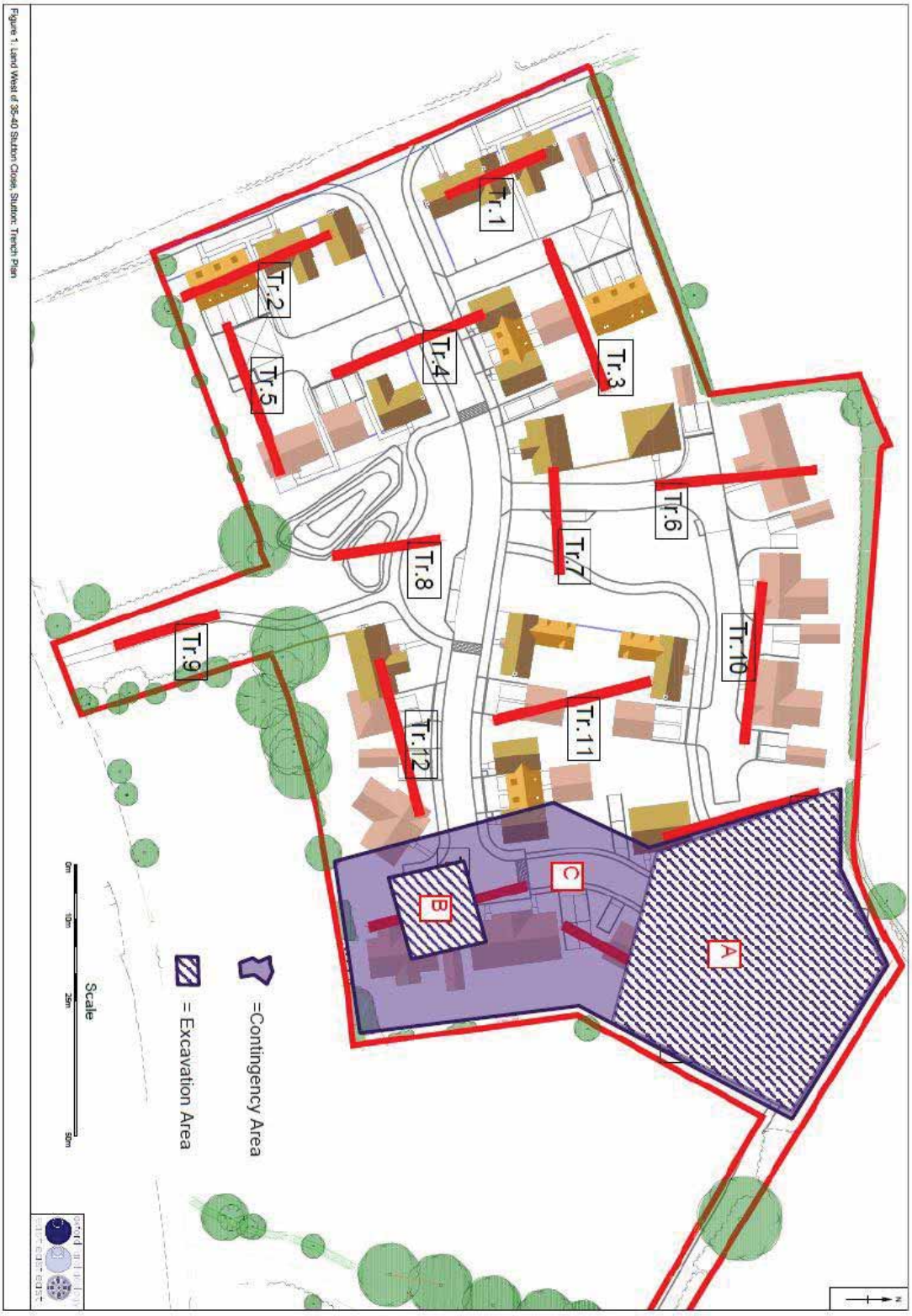
NAME	SPECIALISM	ORGANISATION
Gleed-Owen, Chris	Herpetologist (amphibians & reptiles)	CGO Ecology Ltd
Goffin, Richenda	Post-Roman pottery, building materials, painted wall plaster	Suffolk CC
Howard-Davis, Chris	Small finds, Mesolithic flint, leather, wooden objects and wood technology	Freelance
Locker, Alison	Fish bone	Freelance
Loe, Louise	Osteology	Oxford Archaeology
Lyons, Alice	Late Iron Age/Roman pottery	Oxford Archaeology
Martin, Toby	Anglo-Saxon metalwork and artefacts	Oxford University
Masters, Pete	Geophysics	Cranfield University
McIntyre, Lauren	Osteology	Oxford Archaeology
Middleton, Paul	Phosphates/garden history	Peterborough Regional College
Mould, Quita	Ironwork, leather	freelance
Nicholson, Rebecca	Fish and small mammal and bird bones, shell	Oxford Archaeology
Palmer, Rog	Aerial photographs	Air Photo Services
Percival, Sarah	Prehistoric pottery, quern stones	Freelance
Poole, Cynthia	Multi-period finds, CBM, fired clay	Oxford Archaeology
Popescu, Adrian	Roman and later coins	Fitzwilliam Museum
Quinn, Patrick	Pottery thin section, ceramic petrology	UCL
Riddler, Ian	Worked bone objects & related artefact types	Freelance
Robinson, Mark	Insects	Oxford University
Rowland, Steve	Zooarchaeology & osteology	Oxford Archaeology
Rutherford, Mairead	Pollen, diatoms, *etc*	Oxford Archaeology
Samuels, Mark	Architectural stonework	Freelance
Scott, Ian	Roman, medieval, post-medieval finds, metalwork, glass	Oxford Archaeology
Shaffrey, Ruth	Worked stone and Roman CBM	Oxford Archaeology
Smith, David	Insects	University of Birmingham
Smith, Ian	Zooarchaeology	Oxford Archaeology
Spoerry, Paul	Medieval pottery	Oxford Archaeology
Stafford, Liz	Molluscs and geoarchaeology	Oxford Archaeology
Timberlake, Simon	Archaeometallurgy & geoarchaeology	Freelance
Tyers, Ian	Dendrochronology	Sheffield University
Ui Choileain, Zoe	Osteology & zooarchaeology	Oxford Archaeology
Vickers, Kim	Insects	Sheffield University
Wadeson, Stephen	Samian pottery, Roman glass	Oxford Archaeology
Walker, Helen	Medieval pottery (Essex)	Essex CC
Way, Twigs	Medieval landscape and garden history	Freelance

NAME	SPECIALISM	ORGANISATION
Webb, Helen	Osteology	Oxford Archaeology
Young, Jane	Medieval Pottery (Lincolnshire)	Freelance
Zant, John	Roman coins	Oxford Archaeology

Radiocarbon dating is normally undertaken for Oxford Archaeology East by SUERC and by the Oxford University Accelerator Laboratory.

Geophysical prospection is normally undertaken by Magnitude Surveys Ltd.

13 MITIGATION PLAN



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APPENDIX F BIBLIOGRAPHY

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APPENDIX G OASIS REPORT FORM

Project Details

OASIS Number	oxfordar3-371733
Project Name	Land West of 35-40 Stutton Close, Stutton, Suffolk

Start of Fieldwork	15/3/2020	End of Fieldwork	3/4/2020
Previous Work	Yes	Future Work	No

Project Reference Codes

Site Code	STU 094	Planning App. No.	B/17/00950/FUL
HER Number	STU 094	Related Numbers	

Prompt	NPPA
Development Type	Residential development
Place in Planning Process	After full determination (eg. As a condition)

Techniques used (tick all that apply)

☐ Aerial Photography – interpretation	☐ Grab-sampling	☒ Remote Operated Vehicle Survey
☐ Aerial Photography - new	☐ Gravity-core	☐ Sample Trenches
☐ Annotated Sketch	☐ Laser Scanning	☐ Survey/Recording of Fabric/Structure
☐ Augering	☒ Measured Survey	☐ Targeted Trenches
☐ Dendrochronological Survey	☒ Metal Detectors	☐ Test Pits
☐ Documentary Search	☐ Phosphate Survey	☐ Topographic Survey
☒ Environmental Sampling	☐ Photogrammetric Survey	☐ Vibro-core
☐ Fieldwalking	☒ Photographic Survey	☐ Visual Inspection (Initial Site Visit)
☐ Geophysical Survey	☐ Rectified Photography	

Monument	Period
Pit	Late Bronze Age (- 1000 to - 700)
Posthole	Late Bronze Age (- 1000 to - 700)
Ditch	Post Medieval (1540 to 1901)

Object	Period
Vessel	Late Bronze Age (- 1000 to - 700)
Loom weight	Late Bronze Age (- 1000 to - 700)
Spindle whorl	Late Bronze Age (- 1000 to - 700)
Quern	Late Bronze Age (- 1000 to - 700)

Insert more lines as appropriate.

Project Location

County	Suffolk
District	Babergh
Parish	Stutton
HER office	Suffolk
Size of Study Area	1,700 sq.m
National Grid Ref	TM 1517 3468

Address (including Postcode)

Stutton Close
Stutton
Ipswich
Suffolk
IP9 2SG

Project Originators

Organisation	OA East
Project Brief Originator	Gemma Stewart
Project Design Originator	Matt Brudenell
Project Manager	Matt Brudenell
Project Supervisor	Nicholas Cox

Project Archives

	Location	ID
Physical Archive (Finds)	Ipswich Museum	STU 094
Digital Archive	OA East	XSFSCS19EX
Paper Archive	Ipswich Museum	STU 094

Physical Contents	Present?	Digital files associated with Finds	Paperwork associated with Finds
Animal Bones	☒	☐	☐
Ceramics	☒	☐	☐
Environmental	☐	☐	☐
Glass	☐	☐	☐
Human Remains	☐	☐	☐
Industrial	☐	☐	☐
Leather	☐	☐	☐
Metal	☒	☐	☐
Stratigraphic		☐	☐
Survey		☐	☐
Textiles	☐	☐	☐
Wood	☐	☐	☐
Worked Bone	☐	☐	☐
Worked Stone/Lithic	☒	☐	☐
None	☐	☒	☒
Other	☒	☐	☐

Digital Media		Paper Media	
Database	☒	Aerial Photos	☐
GIS	☒	Context Sheets	☒
Geophysics	☐	Correspondence	☐
Images (Digital photos)	☒	Diary	☐
Illustrations (Figures/Plates)	☒	Drawing	☐
Moving Image	☐	Manuscript	☐
Spreadsheets	☐	Map	☐
Survey	☒	Matrices	☐
Text	☒	Microfiche	☐
Virtual Reality	☐	Miscellaneous	☐
		Research/Notes	☐
		Photos (negatives/prints/slides)	☐

Plans	☒
Report	☒
Sections	☒
Survey	☒

Further Comments

Figure 1: Site location map

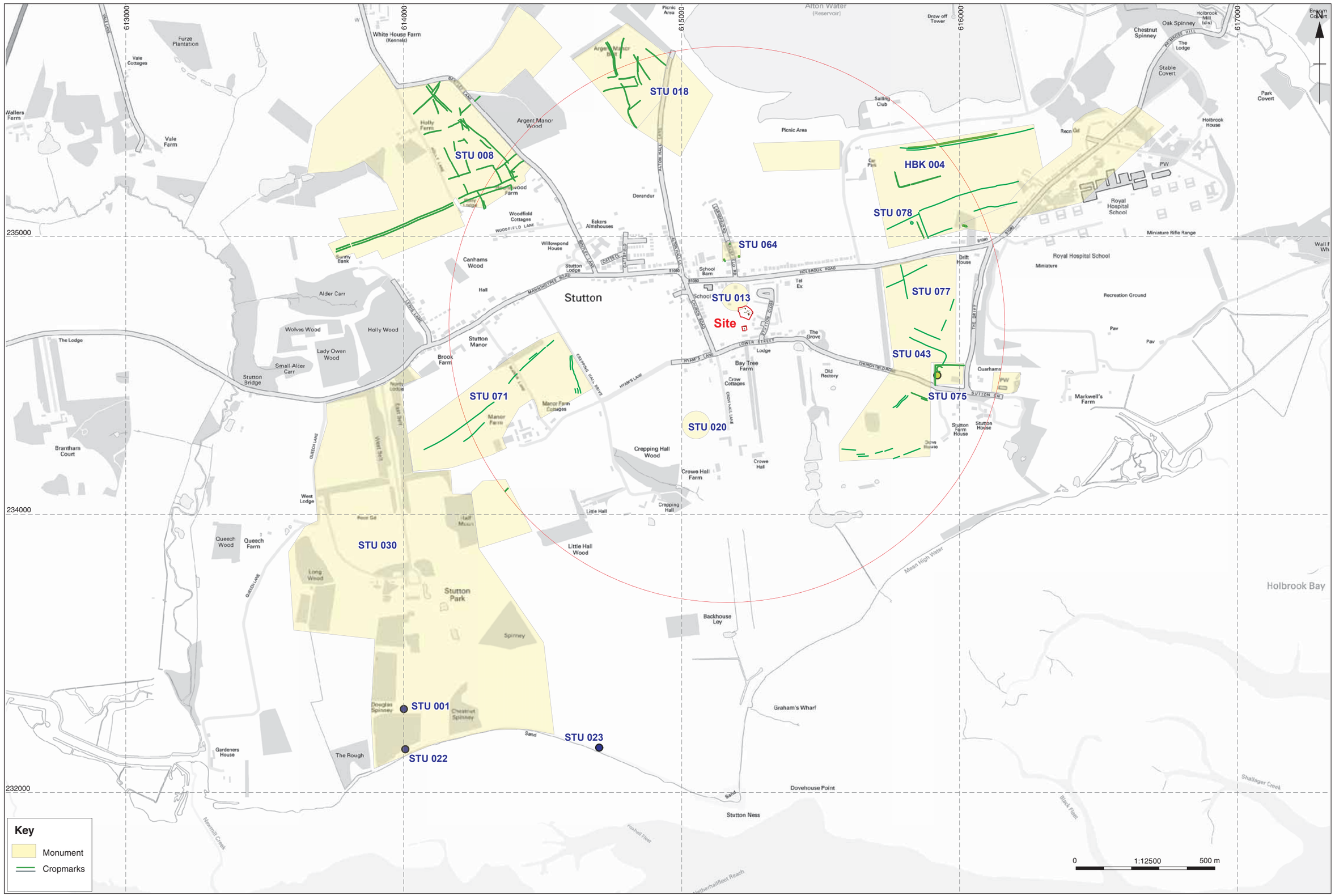


Figure 2: HER records mentioned in the text

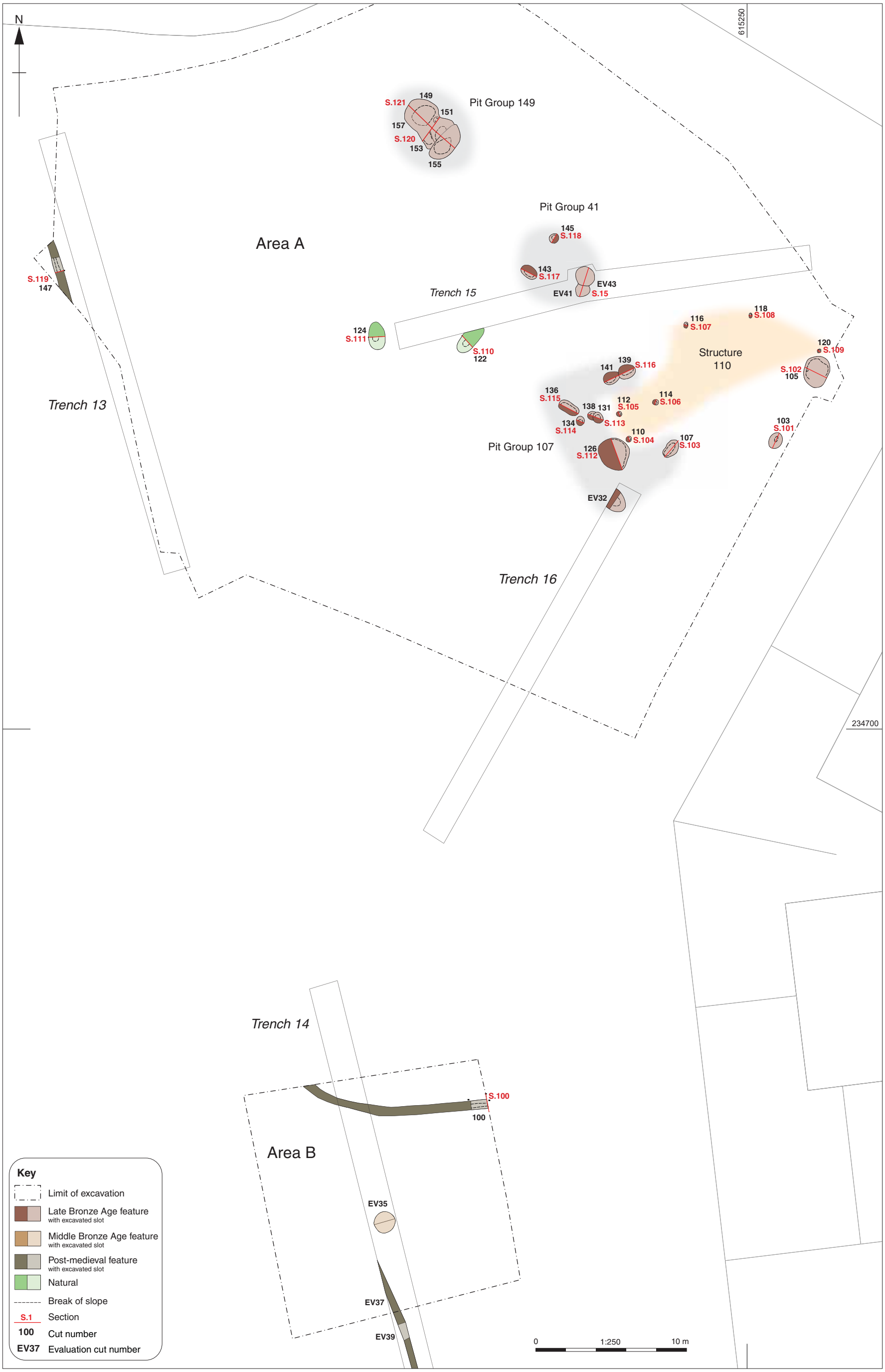


Figure 3: Phased site plan

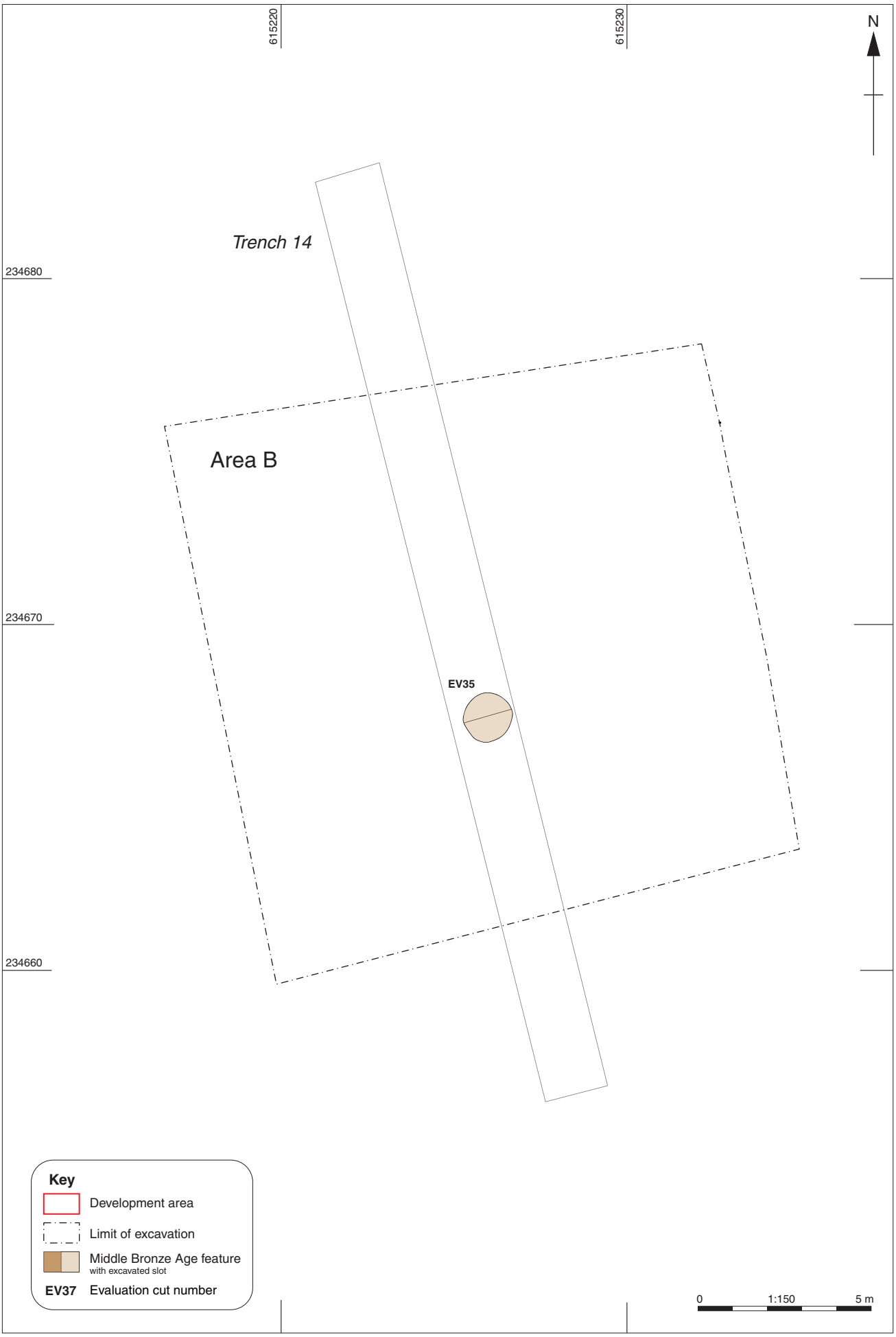


Figure 4: Phase 1, Area B

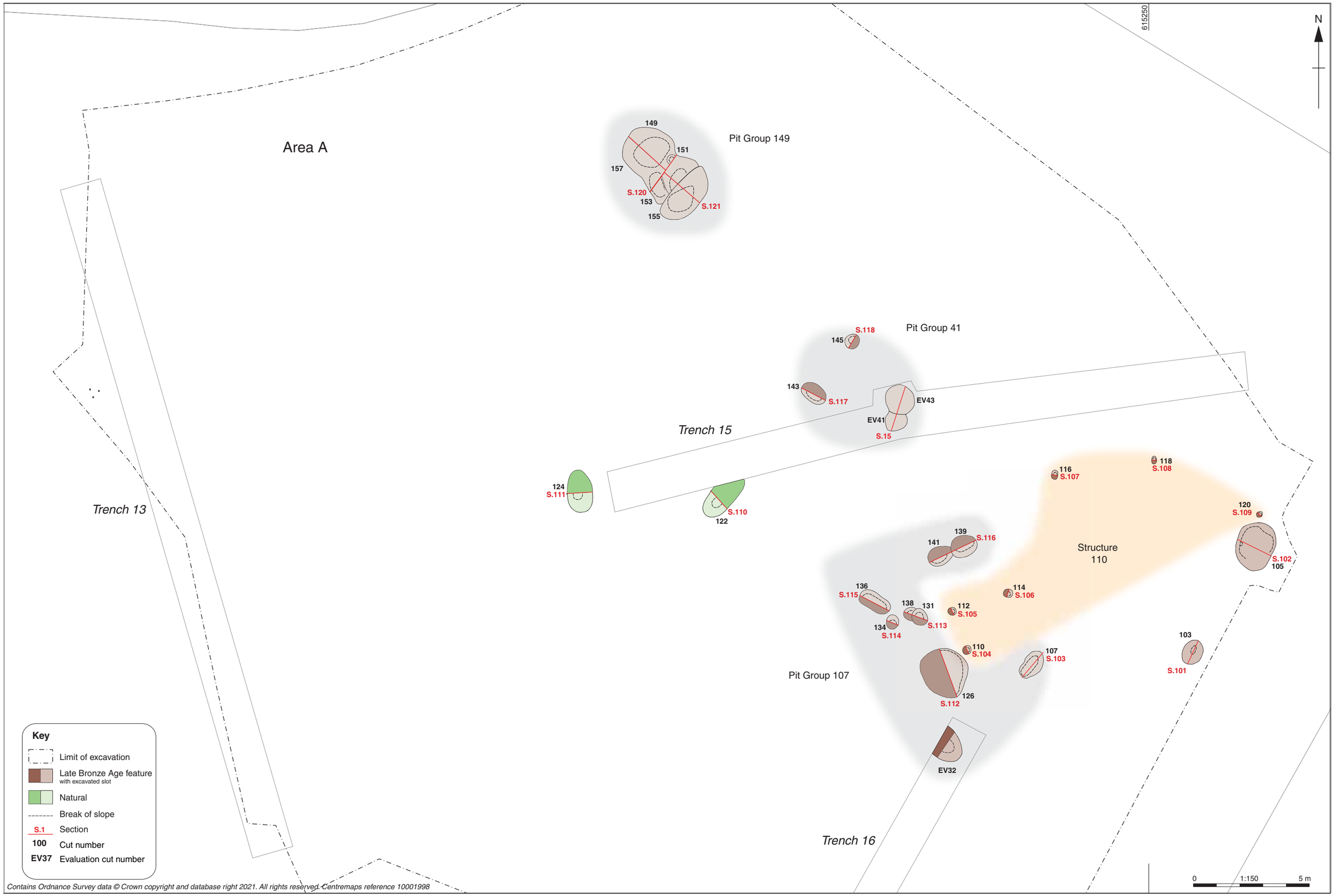
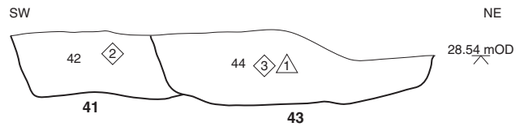


Figure 5: Phase 2, Area A

Figure 6: Phase 3, Areas A and B

Section 15



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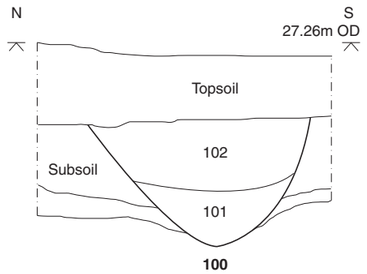

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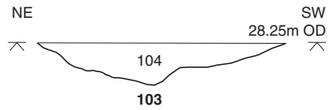

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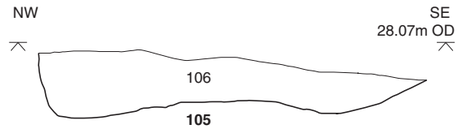

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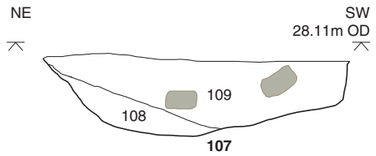

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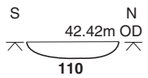

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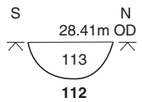

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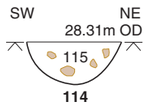

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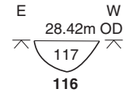

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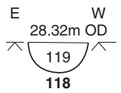

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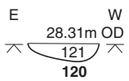
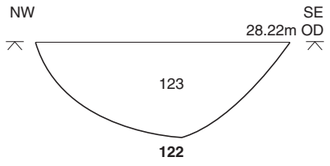


Section 110



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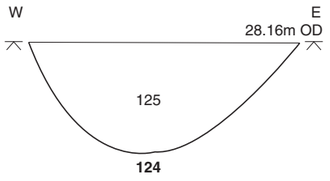

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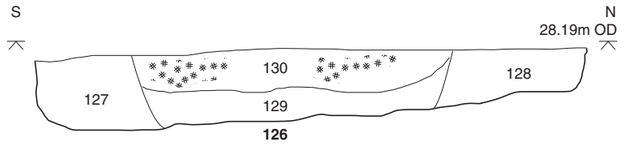

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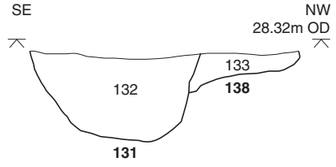

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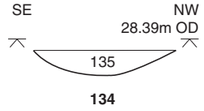

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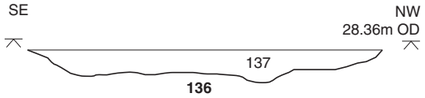
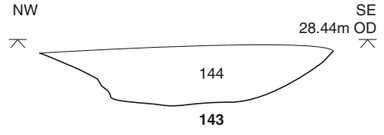


Section 116

Section 118

Section 117



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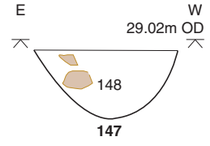

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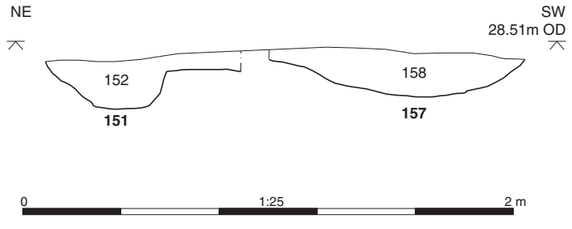

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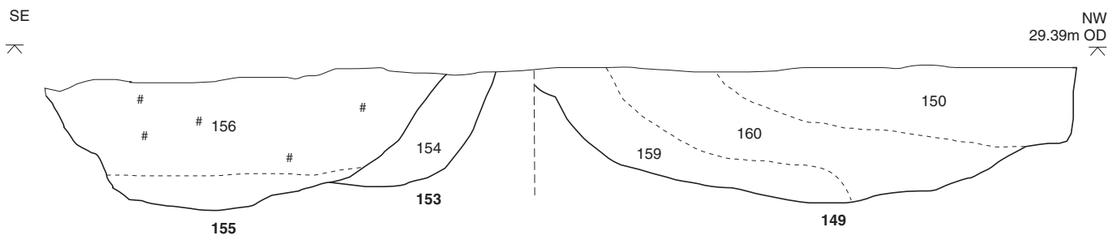


Key

- Cut
- Deposit horizon
- Deposit horizon uncertain
- Top of surface/natural
- Limit of excavation
- Break in section/limit of section
- Stone
- Burnt clay
- Charcoal
- Pottery
- **118** Cut number
- 117 Deposit number
- 18.45m OD Ordnance datum

Figure 7: Selected sections

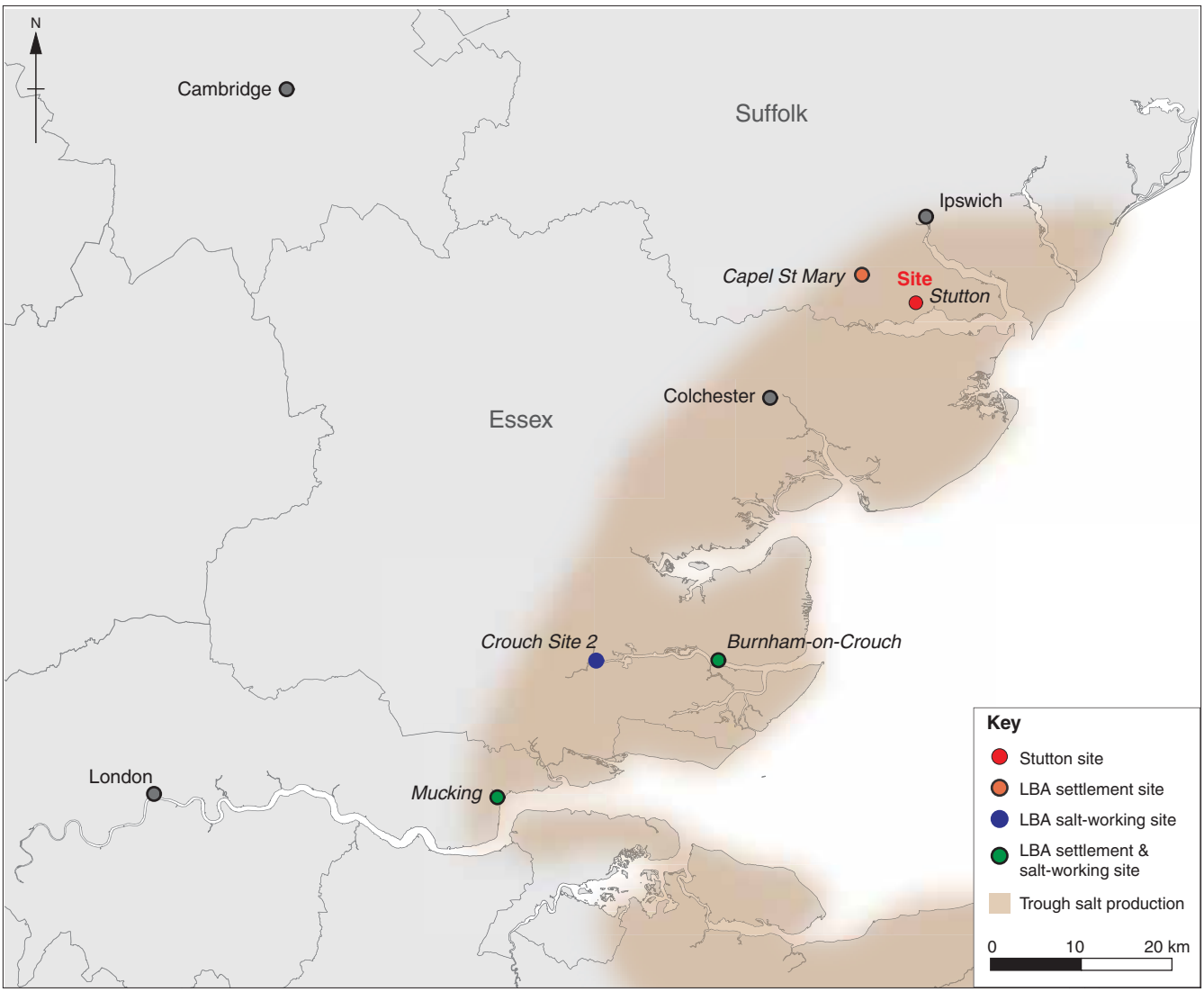


Figure 8: The Suffolk and Essex coast, showing and extent of trough salt production (after Evans *et al* 2016, fig 6.3)

Figure 9a: Flint quern fragments from pit **126** (fill 130)

Figure 9b: Saddlequern fragment (SF1) from pit **EV43** (fill 44)

Figure 9c: Late Neolithic end scraper from pit **EV32** (fill 31)

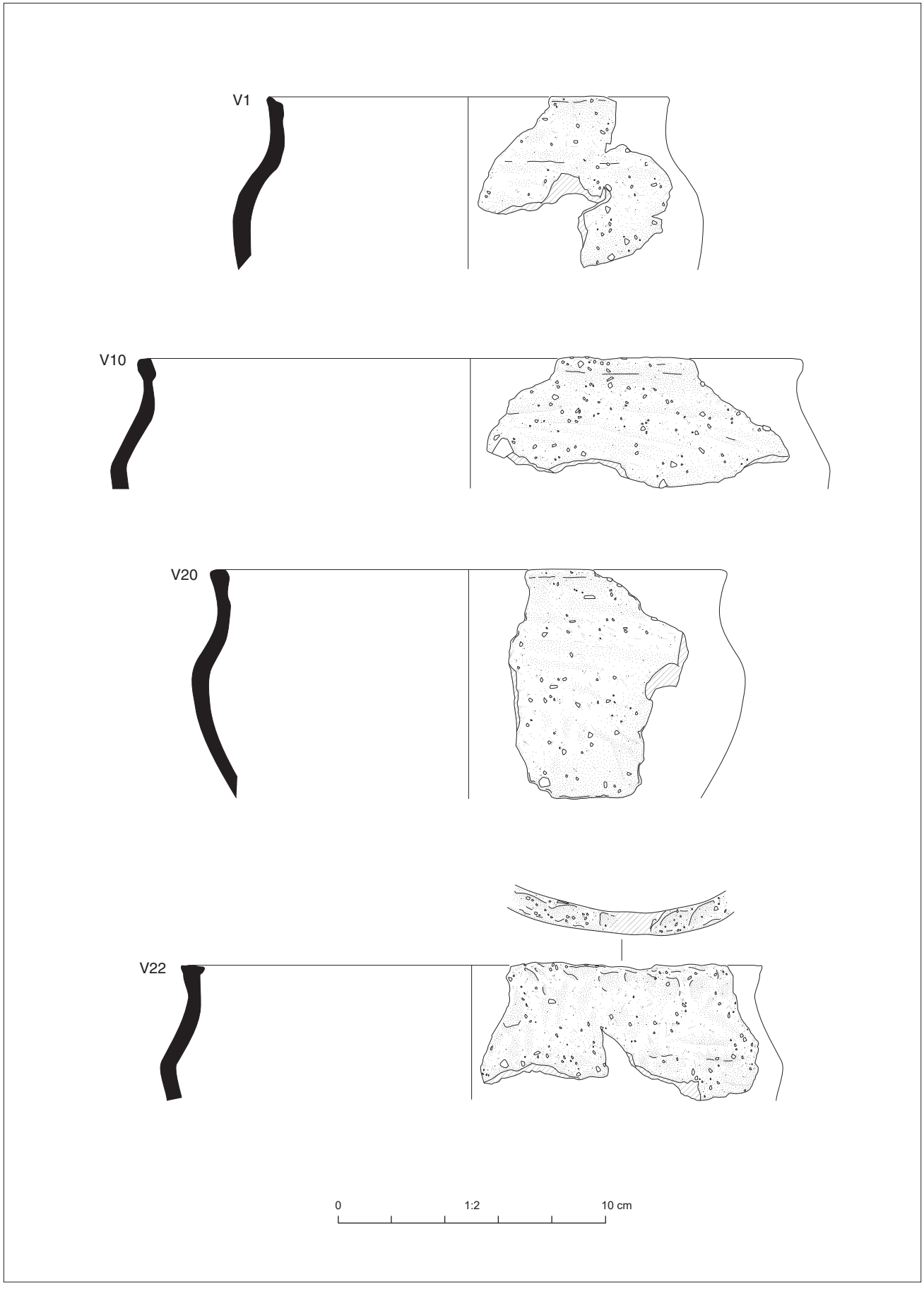


Figure 10: Prehistoric pottery illustrations

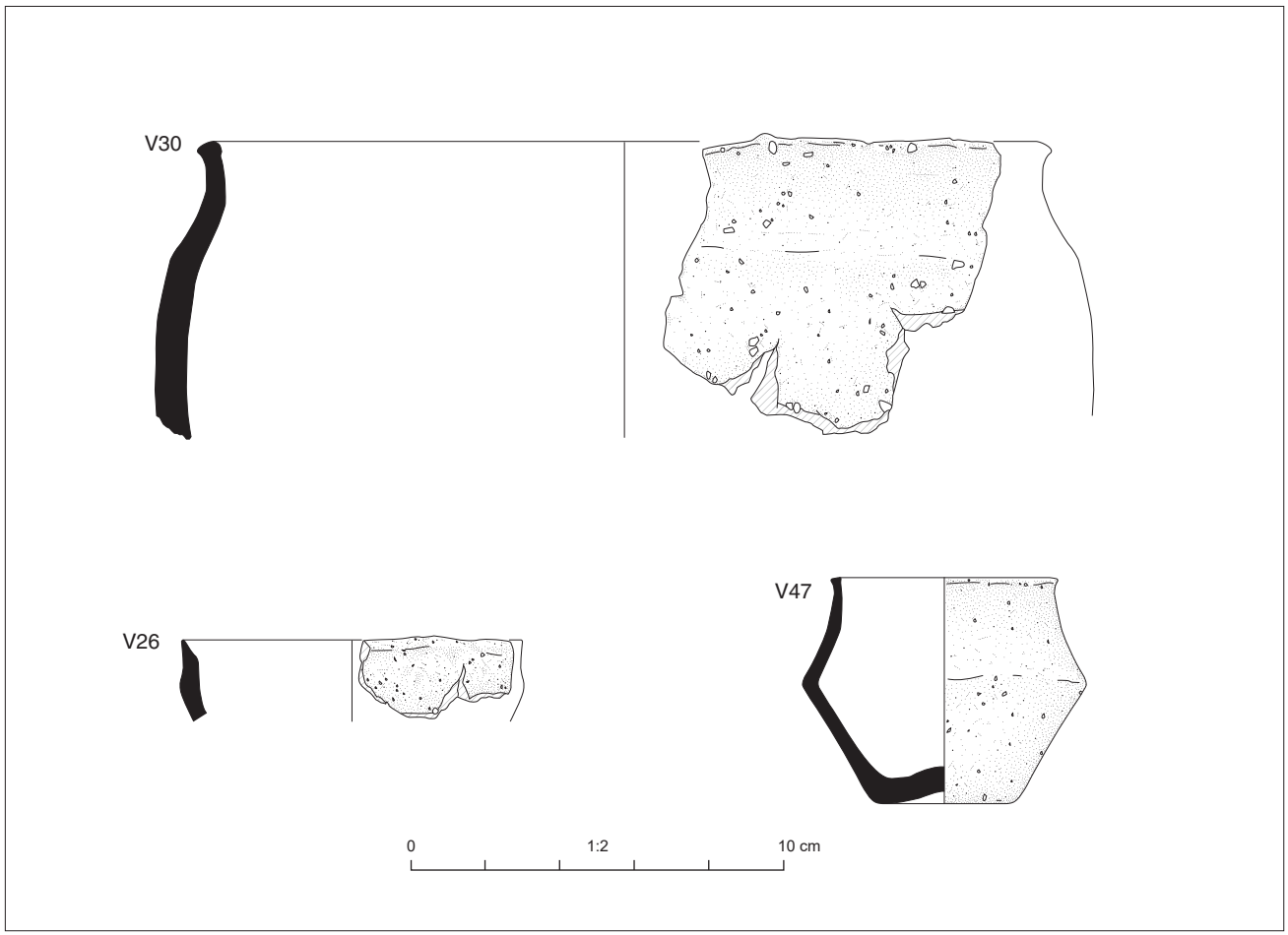


Figure 11: Prehistoric pottery illustrations

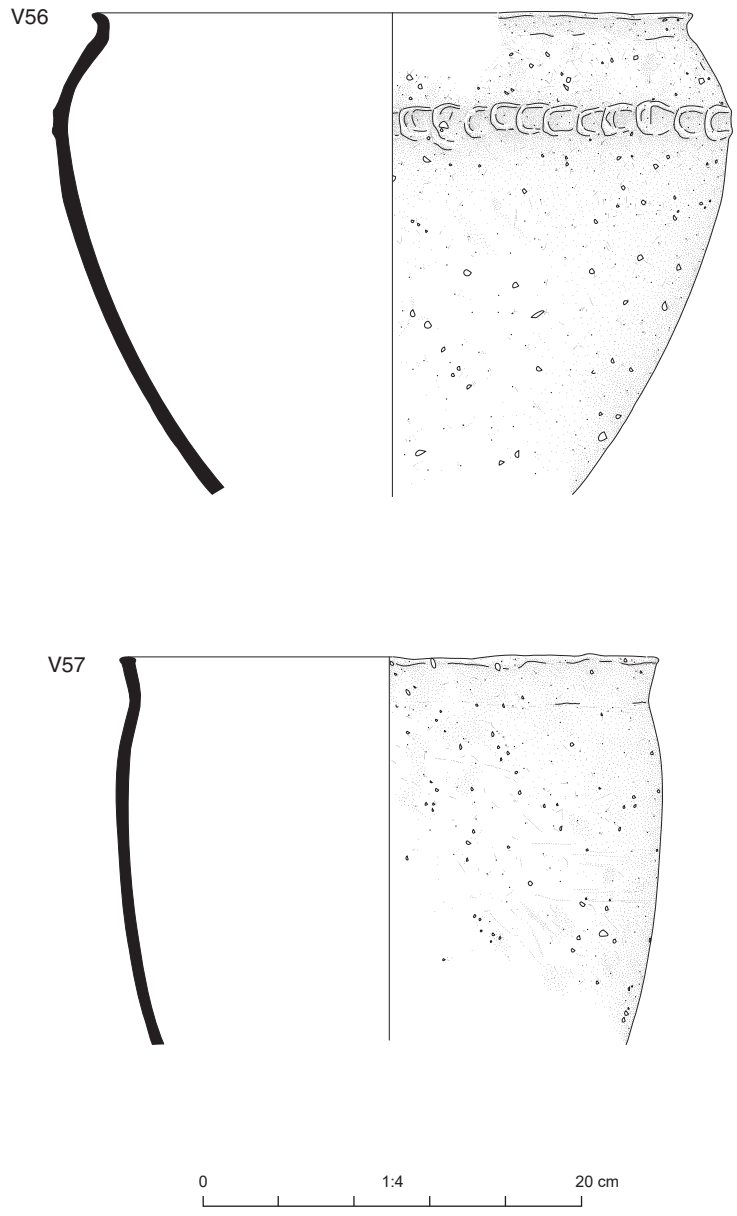


Figure 12: Prehistoric pottery illustrations

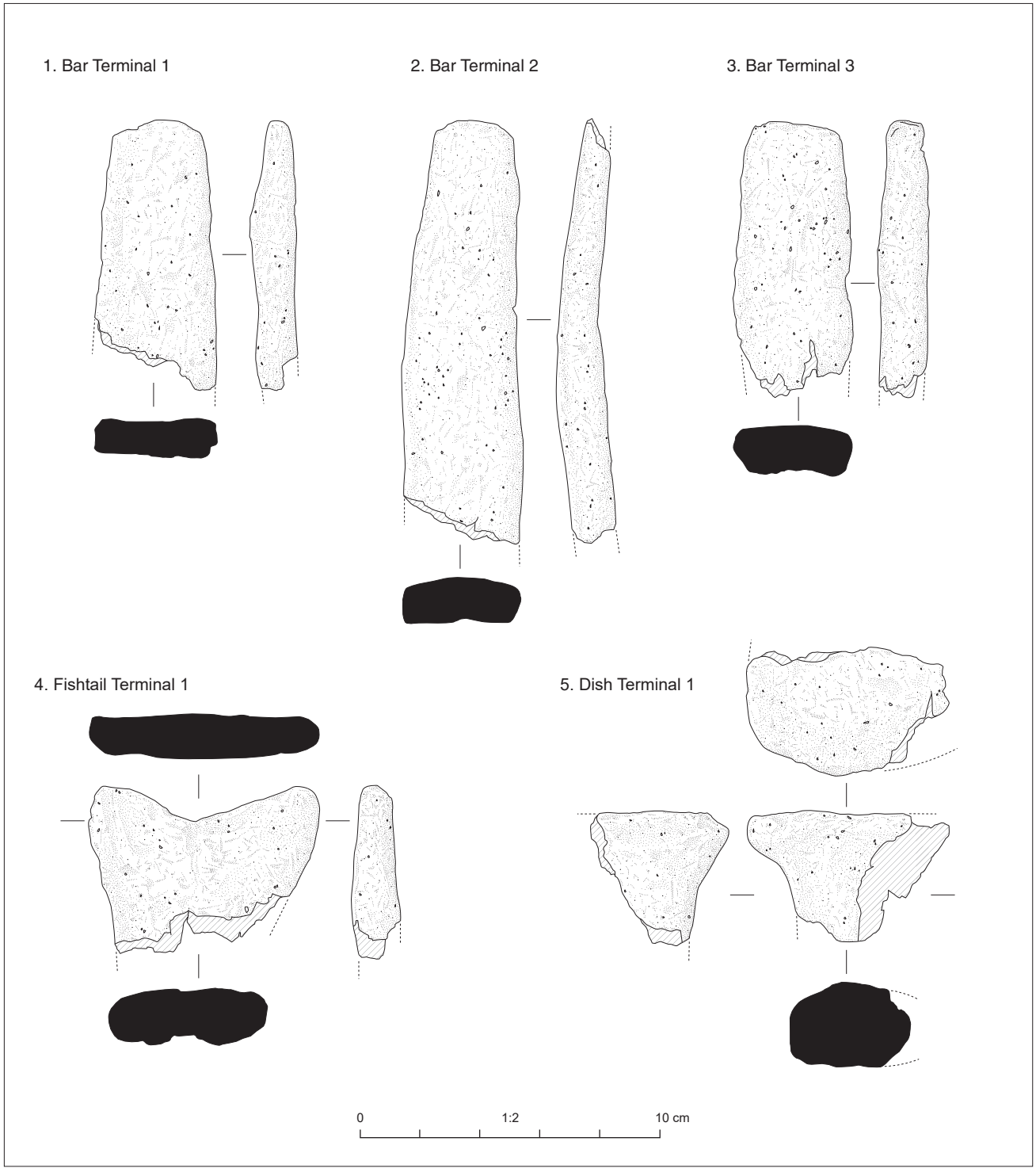


Figure 13: Fired clay illustrations (briquetage)

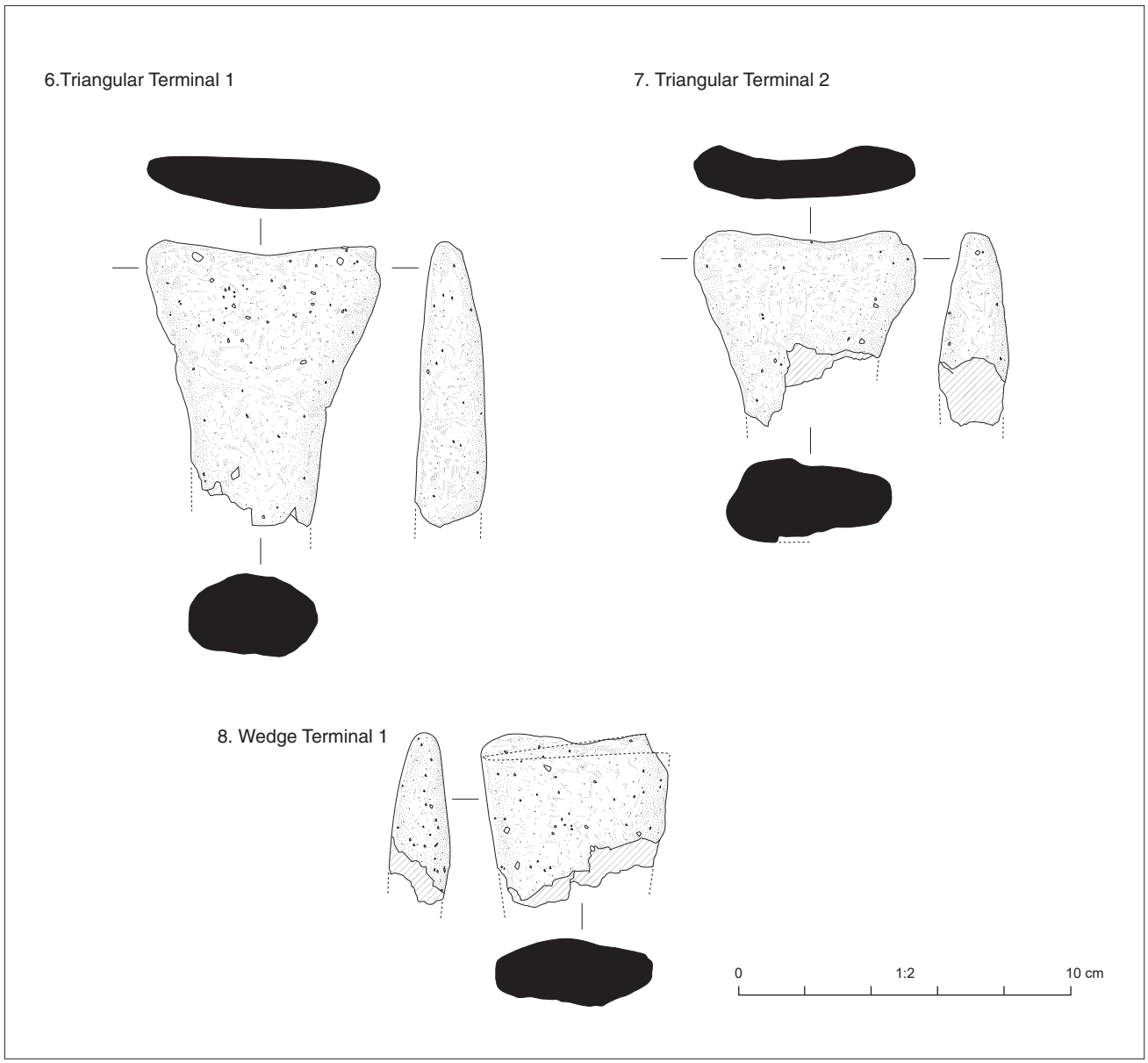


Figure 14: Fired clay illustrations (briquetage)

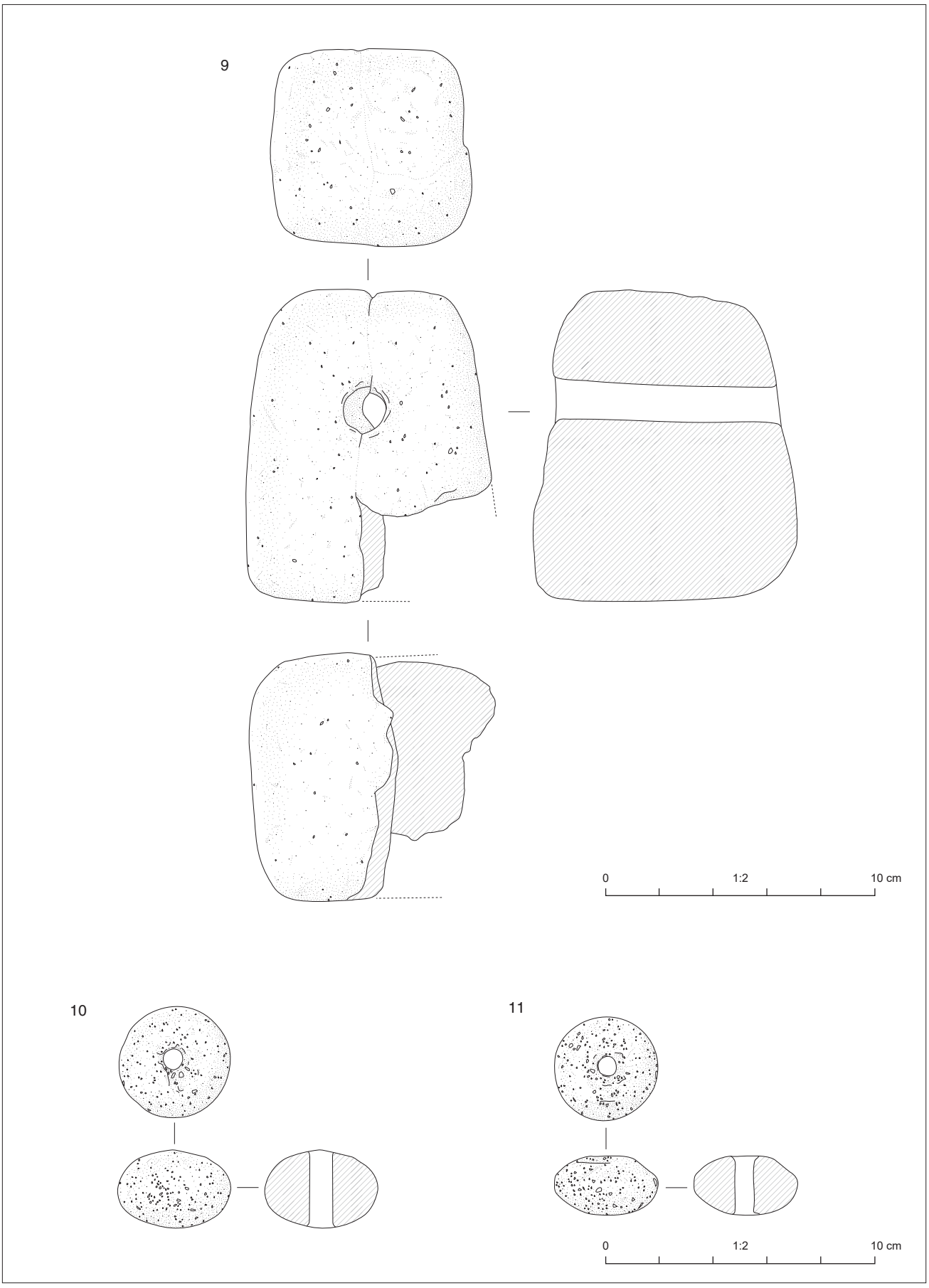


Figure 15: Fired clay illustrations (loom weight and spindle whorls)

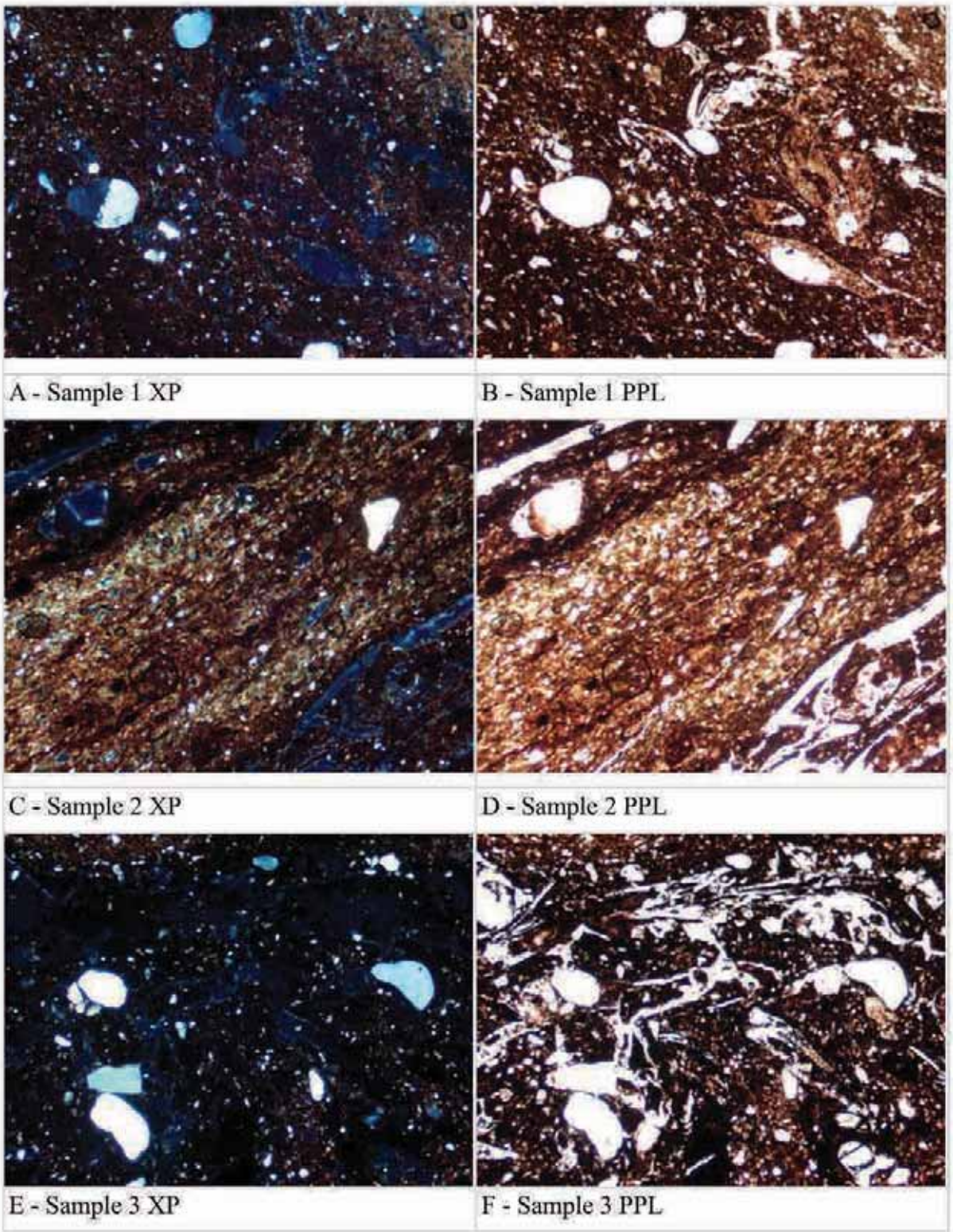


Figure 16: Thin section photomicrographs of Late Bronze Age briquetage, loomweights and pottery

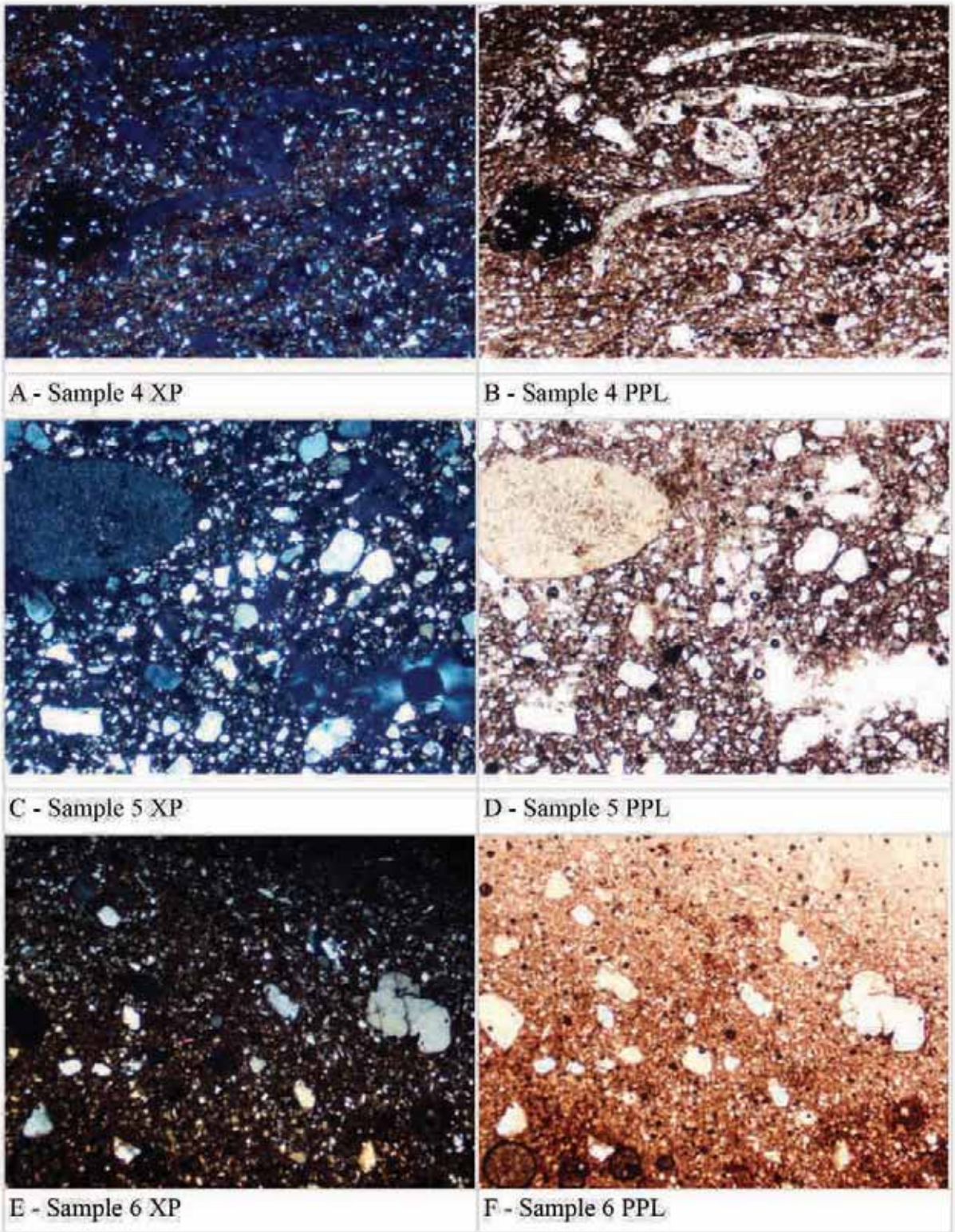


Figure 17: Thin section photomicrographs of Late Bronze Age briquetage, loomweights and pottery

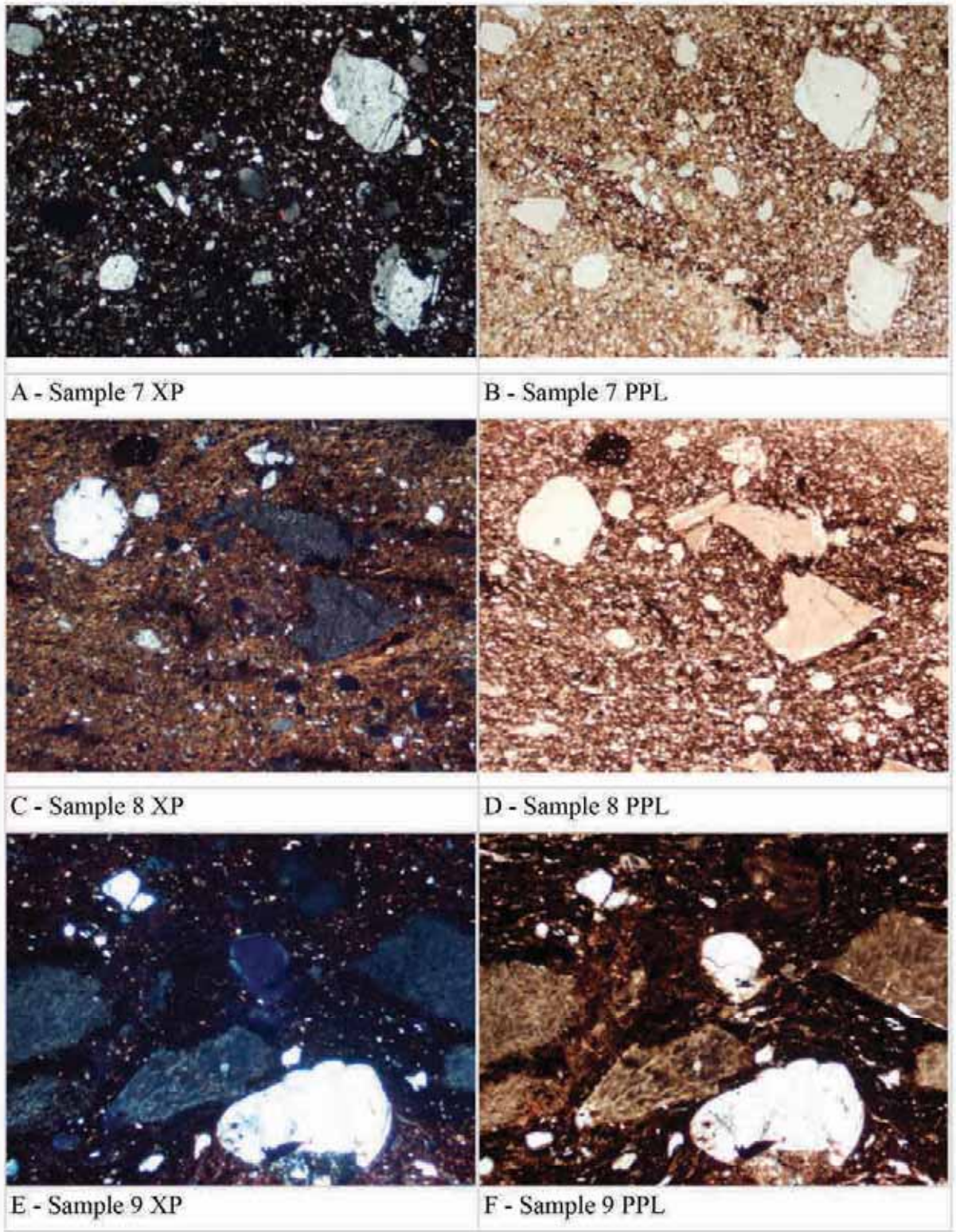
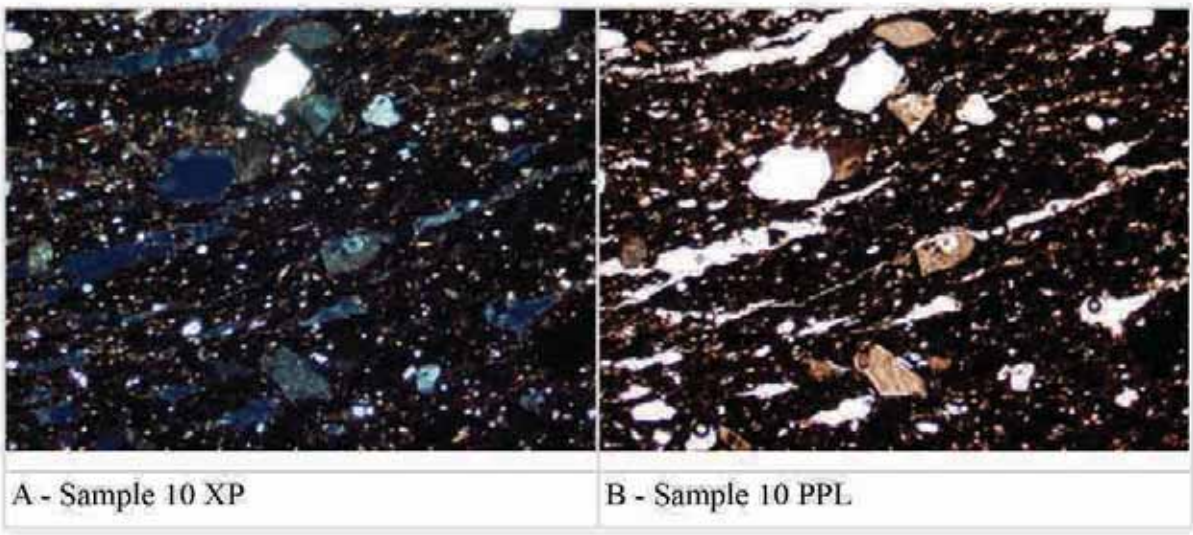


Figure 18: ' Thin section photomicrographs of Late Bronze Age briquetage, loomweights and pottery.



A - Sample 10 XP

B - Sample 10 PPL

Figure 19: Thin section photomicrographs of Late Bronze Age briquetage, loomweights and pottery

Plate 1: Aerial view of the site, looking east towards toward the River Stour

Plate 2: Aerial view of the site, facing east

Plate 3: Late Bronze Age pit **107**, Area A, looking south-east

Plate 4: Late Bronze Age pit **126**, Area A, looking south-west

Plate 5: Late Bronze Age pit **126**, Area A, fully excavated, with finds assemblage

Plate 6: Late Bronze Age pits **141** and **139**, Area A, looking north

Plate 7: Late Bronze Age pit **141**, Area A, fully excavated, with finds assemblage

Plate 8: Late Bronze Age pit group 149, Area A, fully excavated, looking south-west

Plate 9: Late Bronze Age pits **153** and **155**, Area A, looking north-east

Plate 10: Post-medieval ditch **147**, Area A, looking south

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