



Land south of Burwell Road, Exning, Suffolk Archaeological Excavation Report

April 2023

Client: RPS on behalf of Persimmon Homes

Issue No: Draft

OA Report No: 2589

NGR: TL 6139 6551



Client Name: RPS on behalf of Persimmon Homes
Document Title: Land south of Burwell Road, Exning, Suffolk
Document Type: Full Excavation Report
Report No.: 2589
Grid Reference: TL 6139 6551
Site Code: EXG 112
Invoice Code: XSFBRE22
Receiving Body: Suffolk County Council Archaeological Service (SCCAS)
Accession No.: EXG 112
Oasis No.: oxfordar3-504941

OA Document File Location: <https://files.oxfordarchaeology.com/nextcloud>
OA Graphics File Location: <https://files.oxfordarchaeology.com/nextcloud>

Issue No: draft
Date: March 2023
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Land south of Burwell Road, Exning, Suffolk

Archaeological Excavation Report

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Summary

Between 26th May and 16th June 2022 Oxford Archaeology East undertook a 0.3ha archaeological excavation on the site of Land south of Burwell Road, Exning, Suffolk.

This phase of work targeted two evaluation trenches (79 and 80), opened as part of a previous phase of archaeological evaluation in 2019 (OA 2019), which had revealed a feature (EV 71) containing Early Neolithic pottery, struck flint and animal bone.

Aside from one small pit, the majority of the features exposed during this phase of excavation had been formed by natural processes. The feature associated with Early Neolithic finds discovered in the evaluation (EV 71) was demonstrated to be part of a large natural hollow (104) which contained a localised dark deposit from which a substantial amount of Early Neolithic pottery was recovered, alongside struck flints and animal bone. The fresh condition of some of the pottery and multiple re-fits between the sherds suggested that this material had not been subject to significant disturbance since it was deposited, possibly as a result of what might have been 'everyday and informal' discard activities. In addition, the presence of two small sherds of Middle Neolithic pottery from the same deposit suggest a later phase of activity in this area.

Six other test pits were excavated into the same hollow (104) but only sparse finds were recovered from these. Close to the south edge of hollow 104, adjacent to the finds-rich deposit, lay another smaller natural feature (102) from which Early Neolithic pottery was also recovered.

The single small pit (114) revealed by the excavation contained no finds, and test pits excavated into other natural features on the site also yielded no finds.

It therefore appears that the Early Neolithic activity observed at the site was focused on a small area within the south-eastern corner of the site. The domestic nature of the finds assemblage recovered from hollow 104 suggests settlement activity in the vicinity, in particular, the un-abraded condition of the pottery indicates it has not moved since it was deposited. From the small size of this deposit within such a concentrated area is difficult to infer sustained settlement activity. It is more probable that the site was visited episodically as a stopover site or camp, while the presence of two sherds of Middle Neolithic pottery within the same deposit indicates that it could have been utilised in a similar way for a much longer period of time.

This report contains the full analysis of all the artefactual and stratigraphic data, and no further work is proposed.

Acknowledgements

OA East would like to thank Persimmon Homes and RPS for commissioning this project, especially Serena Ranieri for overseeing it on their behalf. Thanks are also extended to James Rolfe, who monitored the work on behalf of Suffolk County Council.

The project was managed for OA East by Chris Thatcher. The fieldwork was directed by Emily Abrehart and hand excavation was undertaken by Jack Everett, Robert Howarth, Stephanie Matthews and Catherine O'Doherty. Survey and digitising was carried out by Gareth Rees and Emily Abrehart. The UAV pilot was Gareth Rees. 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 OA East was commissioned by RPS on behalf of Persimmon Homes to undertake an excavation on land south of Burwell Road, Exning, Suffolk in advance of a new housing development (Fig. 1; TL 6139 6551).
- 1.1.2 The work was undertaken as a condition of Planning Permission and a brief was set by James Rolfe of the Suffolk County Council Archaeological Service (SCCAS, dated 27/01/2022) outlining the Local Authority's requirements for work necessary to inform the planning process. A written scheme of investigation was produced by OA East (Kwiatkowska 2022; App. F) detailing the methods by which OA proposed to meet the requirements of the brief.
- 1.1.3 The site archive is currently held by OA East and will be deposited with the appropriate county stores under the Site Code EXG 112 in due course.

1.2 Location, topography and geology

- 1.2.1 The development site comprises an L-shaped block of land, c. 13ha in extent, located on the western edge of Exning, on land south of Burwell Road. The site is bounded to the north by Burwell Road and residential properties, and to the south and west by agricultural land.
- 1.2.2 The excavation area measured 0.3ha and was located in the south-east corner of the development site. The excavation was placed to target an area of archaeological interest identified in the evaluation within Trenches 79 and 80 (see below, Blackburn 2019).
- 1.2.3 The underlying geology comprises chalk of the Zig Zag Chalk Formation, formed during the Cretaceous Period. No overlying superficial deposits are recorded (British Geological Survey, accessed 17/06/2022).

1.3 Archaeological and historical background

- 1.3.1 The following background is taken from the evaluation report (Blackburn 2019) and is based on a search of the Suffolk Historic Environment Record (SHER) for a 1km radius of the site. The most pertinent SHER records are referred to below and illustrated on Fig. 2.

Prehistoric

- 1.3.2 A series of prehistoric finds have been made within the vicinity of the site. The earliest comprises a possible broken Palaeolithic hand-axe or side scraper, found at Hamilton Stud Farm (EXG 004), 1.5km to the south-east of the site, and a further two hand-axes found between Exning and Burwell Fen (EXG 132). A Mesolithic artefact scatter was located on fields c.500m to the south-east of the site (EXG 051). These were recovered alongside other generic prehistoric worked flints. Another collection of worked flints was recovered during the Granta Relief Scheme located 1km to the east (EXG 046). An Iron Age artefact scatter, including a small quantity of hand-made burnished pottery,

was recovered c.600m to the north-west of the site (EXG 013), whilst struck flint was recovered from investigations immediately north (EXG 101). Some of these flints derived from a possible four-post structure suggesting settlement activity in the vicinity. More significantly, the excavation immediately north revealed a ring-ditch, likely to be the remains of a Bronze Age barrow. Another large hill-top enclosure with Late Bronze Age/ Early Iron Age pottery lies c.1.3km to the north-east (EXG 082).

Roman

- 1.3.3 Small quantities of 2nd to 4th century AD Roman pottery were recovered from a series of ditches and gullies in the excavations immediately north of the site (EXG 101), some of which appeared to respect the location of the ring-ditch (see above). An extensive area of Roman settlement was uncovered during excavations 1.3km to the north-west (EXG 013) and another area of Roman and Iron Age activity, including a road, was discovered just over 1km to the south-east (EXG 102). Two other notable scatters of Roman material have been recorded in the areas surrounding the site. To the north-west, c. 600m from the site, pottery, tile and Roman metalwork have been recovered (EXG 078). A similar artefact scatter has been recorded in fields c. 500m to the south-east of the site, with finds including Roman pottery, a disc brooch and coin (EXG 051; 055). Other Roman finds include residual sherds recovered from investigations c. 700m to the east of the site (EXG 091) and a Roman plate brooch recovered c. 800m south of the site (EXG 114).

Anglo-Saxon and medieval

- 1.3.4 Excavations in 2015, immediately north of the site, revealed a significant Early Anglo-Saxon cemetery with 20 graves containing 21 individuals (EXG 101). An Anglo-Saxon metalwork scatter, including a bow brooch and strap end has also been recorded c. 600m to the north-west (EXG 078), whilst other Saxon brooches have been found c. 800m to the south of the site (EXG 114).
- 1.3.5 The historic core of Exning (EXG 098) lies c. 400m to the east of the site and contains a series of listed buildings including the Church of St Martin (EXG 031). Medieval fish ponds (EXG 040) are recorded c. 700m to the south-east, and a scatter of medieval pottery, tile and metalwork, including a coin and seal (EXE 051) have been recovered from fields c. 500m to the south-east.

Post-medieval and modern

- 1.3.6 Historic mapping shows the core of the village of Exning and the development of properties along the southern side of Burwell Road. A ditch recorded by the geophysical survey within the proposed development area (EXG 112, see below) is not present on historic Ordnance Survey mapping, suggesting it pre-dates the 1880s. However, Lidar imagery for the site suggests that this ditch belongs to a wider alignment of former field boundaries which cross the site on a different axis to that shown on the post-medieval and modern mapping.

Geophysical Survey (Roseveare 2017)

- 1.3.7 A magnetic survey was conducted prior to the archaeological evaluation and identified a possible ditch on a north-east to south-west alignment in the northwest corner of the development area. Other anomalies identified were thought to be geological in origin or related to land drains. Trial trench evaluation (Blackbourn 2019)
- 1.3.8 A total of 80 trenches were excavated across the proposed development area. Only nine of the trenches contained archaeological features, however a number of the trenches contained irregular periglacial features, hollows and striations.
- 1.3.9 In the north-west part of the site a large ditch aligned north-east to south-west was revealed. No finds were recovered and the ditch remains undated. A small number of other features were recorded in the north-west part of the site, including a pit and post-hole yielding Early Neolithic pottery and a post-medieval ditch.
- 1.3.10 At the south-eastern limit of the site two small pits and a ditch terminus were uncovered. Although the pits contained no finds, one pit was found to contain fragments of hazelnut. The ditch terminus contained animal bone, Early Neolithic pottery and Early Neolithic worked flints.

2 EXCAVATION AIMS AND METHODOLOGY

2.1 Aims

- 2.1.1 The overall aim of the investigation was 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.
- 2.1.2 Based on the results of the evaluation and the recommendations of the brief, the following more specific aims and research questions were formulated:
- Revealing and understanding prehistoric land use and occupation
 - What is the nature of Early Neolithic occupation at the site? Do the remains constitute evidence for settlement?

2.2 Fieldwork Methodology

- 2.2.1 The methodology used followed that outlined in the brief (SCCAS 2022) and detailed in the Written Scheme of Investigation (Kwiatkowska 2022).
- 2.2.2 Machine excavation was carried out by a 13 tonne 360° mechanical excavator using a 0.9m wide flat-bladed ditching bucket provided by Tamdown. All machine excavation was carried out under constant supervision of a suitably qualified and experienced archaeologist.
- 2.2.3 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.
- 2.2.4 All archaeological features and deposits were recorded using OA's pro-forma sheets. Trench locations, plans and sections were recorded at appropriate scales and digital photographs were taken of all relevant features and deposits.
- 2.2.5 Site survey was carried out by RTK GPS with SmartNET.
- 2.2.6 A total of 6 bulk soil samples and 1 monolith sample were taken in order to assess the quality of preservation of plant remains and their potential to provide useful micro- and macro- botanical data.

3 RESULTS

3.1 Introduction and presentation of results

- 3.1.1 The results of the excavation are presented below and include a stratigraphic description of the archaeological remains. Details of all contexts are included in App. A, with finds and environmental reports presented in Apps B and C respectively.
- 3.1.2 Cut numbers appear in **bold** and contexts from the evaluation phase are prefixed with 'EV'.

3.2 General soils and ground conditions

- 3.2.1 The natural geology of degraded chalk was overlain by a thin layer of subsoil (101) consisting of a mid orangey brown sandy silt; this had formed a thicker layer above the periglacial hollows. The topsoil (100) consisted of a dark brownish grey silt which had a fairly uniform thickness across the site of c.0.3m.
- 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 Phase 1: Early to Middle Neolithic (c. 4,000-3,000 BC)

- 3.3.1 The features revealed across the site were predominantly formed by natural processes although some had been utilised during the Early to Middle Neolithic and these have been attributed to Phase 1. The utilised natural features consisted of two natural hollows located within the eastern part of the site (Fig. 3). A monolith sample taken from hollow **104** confirmed that it had been infilled by the natural accumulation of surrounding sediments (App. C.2).

Natural hollow 102

- 3.3.2 Natural hollow **102** was located towards the south-eastern corner of the excavation area. It was sub-circular in plan and measured 3m long, 0.92m wide and 0.32m deep, with steep sides and an irregular base (Fig. 4). It contained a single fill (103) of mid greyish brown sandy silt. From the upper part of this fill one hundred and fifty-six sherds (924g) of Early Neolithic pottery was recovered (Plate 1). This fill also contained four small flint flakes and a small amount of animal bone (20g). An environmental sample from this fill contained a single poorly preserved cereal grain, a negligible quantity of charcoal and frequent snail shells.

Natural hollow 104

- 3.3.3 Located in the north-eastern corner of the site was a large, irregularly shaped natural hollow measuring 17m by 19m (Plate 2). A total of seven test pits/interventions (**104, 108, 111, 117, 122, 124, 137**) were excavated within the hollow, both at the edge and in centre (Table 1). Hollow **104** had gently sloping sides and an irregular, undulating base. It had a maximum depth of 1m and contained between three and four fills.
- 3.3.4 The basal fill (105, 109, 125, 135, 140, 141, 144) consisted of a mid orangey brown sandy silt c.0.2m thick. Seven small, retouched flakes and an Early Neolithic leaf-

shaped arrowhead were recovered from context 105. Towards the centre of the hollow, the basal fill was overlain by a dark reddish or greyish brown sandy silt containing frequent gravel inclusions (112, 118, 123, 134, 138), measuring on average 0.22m thick. This fill contained twenty-three sherds (119g) of Early Neolithic pottery, six flint flakes (36g) and some animal bone (190g). The environmental sample from fill 112 produced a single field gromwell (*Lithospermum arvense*) seed.

- 3.3.5 The next deposit in the sequence was concentrated at the southern edge of the hollow, within test pit **104** (Fig. 5, Section 61). This test pit had been targeted to locate the ditch terminus identified during the evaluation in Trench 80. The excavation revealed that this feature was in fact part of a distinct, darker, deposit within the natural hollow, and the test pit was extended to expose its full extent (Plate 3, Fig. 4). Deposit 107 (142, 145) was irregular in plan and measured approximately 3.2m by 4m, with a maximum depth of 0.15m. It consisted of a mottled dark greyish brown sandy silt. A total of one hundred and forty-one sherds (878g) of Early Neolithic pottery, two sherds (5g) of Middle Neolithic pottery, sixty-three worked flints (including a leaf-shaped arrowhead) and animal bone (300g) were recovered from this deposit. The majority of the Early Neolithic pottery appeared to come from one vessel (App. B.2; Fig. 8). An environmental sample taken from this deposit produced a single wheat (*Triticum sp.*) grain and occasional charcoal fragments.
- 3.3.6 The uppermost fill (106, 110, 113, 119, 126, 136, 139) consisted of a mid greyish brown sandy silt and measured 0.74m at its deepest point, shallowing out towards the edges of the feature. Finds from this fill included forty-three sherds (187g) of Early Neolithic pottery, three sherds (10g) of prehistoric pottery (not closely dateable), thirty-seven worked flints (154g), some of which had been retouched, and animal bone (70g). Three poorly preserved cereal grains were recovered from fill (113).

Test pit No.	Depth (m)	Location	Fills	Finds
104	0.63	Southern edge	105, 106, 107, 134, 135, 142, 144, 145	ENE0/MNE0 pottery, animal bone, flint flakes
108	0.32	Northern edge	109, 110	ENE0 pottery, animal bone, flint flakes
111	1	Centre	112, 113, 140	ENE0 pottery, animal bone
117	0.5	Southern edge	118, 119	
122	0.18	Western edge	123	
124	0.27	Western edge	125, 126	ENE0/Prehist pottery, animal bone
137	0.83	Centre	138, 139	ENE0 pottery, animal bone, flint flakes

Table 1: Summary of test pits into natural hollow **104**

3.4 Undated features and other natural features

Pit 114

- 3.4.1 Towards the western edge of the excavation area, a single small pit was revealed. This was located just to the north-west of two small pits (EV **63** and EV **65**) uncovered in

evaluation trench 79. Pits EV **63** and EV **65** were circular in plan and measured 0.62m wide and 0.2m deep and 0.6m wide and 0.26m deep respectively. Neither contained any finds but an environmental sample taken from the fill of EV **63** contained a moderate quantity of hazelnut shell fragments. Pit **114** was circular in plan and measured 0.53m in diameter and 0.3m deep (Fig. 5; Section 54). It contained two fills although it is possible that the lower fill was a natural deposit into which the feature was cut. The lower fill consisted of a light yellowish brown chalky silt, 0.3m thick. This was overlain by a dark greyish brown silty sand, 0.2m thick. An environmental sample taken from this fill produced a small amount of charcoal and frequent snail shells.

Possible pit 129

- 3.4.2 On the eastern edge of natural feature **127** lay possible pit **129** (Plate 4; Fig. 5, Section 59). This was not visible of the surface but was revealed within an intervention excavated into natural feature **127** (see below). It appeared to be sub-circular with moderate sides and an irregular base. It measured 1.8m wide and 0.38m deep. It was filled with a mid greyish brown sandy silt from which no finds were recovered.

Natural features

- 3.4.3 Three interventions were excavated in natural features, **120**, **127** and **131**. Natural features **120** and **127** had gently sloping sides and irregular bases. Natural feature **131** had irregular, undercutting sides and an irregular base. All three were filled with a mid orangey brown silty sand devoid of finds.

3.5 Finds and environmental summary

Flint (App. B.1)

- 3.5.1 During the excavations, a total of 118 struck flints and one small fragment (2g) of unworked burnt flint were recovered from 13 individual contexts within targeted interventions into two natural hollows. Of these 102 flints were recovered from nine contexts within the same hollow (**104**). The flint can be assigned to the Early Neolithic period (4000 to 3400/ 3300 cal BC) on typological and technological grounds and by its close association with Early Neolithic pottery.

Prehistoric pottery (App. B.2)

- 3.5.2 The evaluation and excavation yielded 379 sherds (2177g) of Early and Middle Neolithic pottery. The pottery belongs to the Carinated Bowl, Decorated Bowl and Impressed Ware ceramic traditions and is in fabrics typically associated with these ceramic traditions.
- 3.5.3 Although the overall pottery assemblage is not very large, it is significant. The Neolithic assemblage was recovered almost entirely from deposits infilling natural features. These deposits are likely to represent accumulations of 'midden-like' material. In the case of the material from deposit 107 in particular, the fresh condition and multiple re-fits between sherds from a single vessel strongly suggest this material has not moved since it was deposited.

Fired clay (App. B.3)

- 3.5.4 A single fragment of fired clay (17g) was collected from the surface of hollow **104** (136). Its origins are unclear and it is undated but one flattened face points to it being part of an object or a structure.

Environmental samples (App. C.1)

- 3.5.5 A total of six bulk samples were taken during the excavation, but only very sparse Environmental remains were recovered. These consisted of carbonised (charred) plant remains which were in a poor state of preservation, small quantities of charcoal and frequent snail shells. The limited density and diversity of plant remains recovered means that it is difficult to infer much information regarding plant usage at the site.

Monolith samples (App. C.2)

- 3.5.6 Two overlapping monolith samples were taken from natural hollow **104**. The crumbly texture of the sediments and the large voids within the samples meant that both were unsuitable for micromorphological analysis. At best, it is possible to state that this series of silt loam fills are likely the result of localised colluvial processes (i.e., a very small-scale version of more typical hillwash deposits), leading to the gradual infill of the natural hollow **104** by means of the redeposition of surrounding sediments.

Animal bone (App. C.3)

- 3.5.7 A total of 32 fragments of animal bone were recovered from the site, of which 17 were identifiable to taxon. Cow was the main species represented with only single fragments attributed to both sheep/goat and pig. A few of the pieces of bone recovered had been burnt. This small and highly fragmentary assemblage has minimal potential for providing further information about the site.

4 DISCUSSION

4.1 Reliability of field investigation

4.1.1 Other than the small size of the excavation area, there were no significant factors affecting the reliability of the investigation. The archaeological horizon was protected by at least 0.3m of over burden and there had been no modern truncation. The sampling strategy for the large natural hollows was agreed with the SCCAS. Deposit 107 was not sieved but carefully trowelled by hand and sampled to retrieve any flint debitage.

4.2 Early Neolithic activity

4.2.1 Early Neolithic activity in the area is commonly represented by pit clusters. At sites such as Kilverstone and Hurst Fen, hundreds of pits grouped into distinct clusters have been revealed (Garrow *et al.* 2006; Clark *et al.* 1960). These pits usually contain 'midden-like' material made up of broken pottery, flint-knapping waste and burnt hazelnut shells (Garrow *et al.* 2006, 12). It is debated where the deposition of waste was the primary function of these pits or whether they were originally used for an unknown purpose and the deposition of waste was a secondary function (Garrow *et al.* 2006, 75). The lack of evidence for structures on Early Neolithic sites has led to the interpretation that the population was mobile and used impermanent structures which left very little impact on the land. The accumulation of midden material and its deposition is therefore a potential indicator of settlement sites (Garrow *et al.* 2006, p.9).

4.2.2 Clearly the site at Burwell Road does not match the pattern for a 'pit-cluster site' although the three pits in the western part of the excavation area, (114, EV63, EV65) could potentially be considered as a cluster of pits contemporary with the Neolithic activity at the site. The pits did not contain any 'midden-like' waste, with just one hazelnut shell recovered from pit EV63. Whilst the majority of pits at Kilverstone contained finds, there were also a few 'empty' ones (Garrow *et al.* 2006, 13). The steep sided nature of the pits found at Burwell Road is also consistent with pits found on other sites so although they are undated there is tentative evidence to tie them to this Early Neolithic tradition of pit-clusters.

4.2.3 Another commonly found feature on Early Neolithic sites are utilised natural hollows. These naturally formed features may have served a number of different functions. They might have provided easier access to natural flint deposits or they may simply have been convenient places to shelter whilst working (Bishop 2012, 132). Sites such as the Fordham Bypass and Stow-Cum-Quy have revealed comparable hollows to that uncovered at Burwell Road (Bishop 2012; Thatcher 2007). Some sites in the region have been identified as 'specialist activity' sites; for example at Stow-Cum-Quy the flint assemblage suggests that blade and narrow flake production was the principal activity (Bishop, in Thatcher 2007). The flint assemblage recovered from Burwell Road does not suggest a particular specialist activity, the majority being unretouched but utilised flakes suggesting the use of flint tools in a range of tasks (Booth App. B.1).

4.2.4 Analysis of the contents of pit clusters such as those at Kilverstone suggests that the waste material was accumulated for a period of time before being deposited into the pits as there were re-fits of pottery and flint across multiple pits and no complete pottery or flint assemblages were found (Garrow *et al.* 2006, 73-74). The pottery from deposit 107 at Burwell Road appears to represent the majority of a single vessel (Gilmour, App. C). The fresh nature of the sherds suggest that the pot had not travelled far from the site of its use to where it was deposited. It is therefore possible that deposit 107 represents a 'pre-pit accumulation' of midden waste. The flint assemblage doesn't refute this interpretation; with the majority being utilised or broken flakes. The presence of the arrowheads could hint towards ritualised deposition but as they appear to be unfinished and have been deposited along with flakes exhibiting knapping errors, it seems more probable that the assemblage as whole represents domestic waste.

4.3 Significance

4.3.1 Despite the small size of the excavation area and the scarcity of features, the excavation at Burwell Road produced a significant amount of un-abraded Early Neolithic pottery and a small but remarkably coherent flint assemblage. It is difficult to make inferences from such a small area of investigation but considering Garrow's theory of 'pre-pit accumulations' being a potential indicator for settlement activity when evidence for structures is lacking (Garrow *et al.* 2006, 74), it is at least possible to say that there was an Early Neolithic population in the vicinity.

4.3.2 The fresh condition of the pottery and the number of re-fits suggest that it had not travelled far. Whilst it seems unlikely that the relatively small assemblages of material from hollows 102 and 104 represent sustained settlement activity, they could relate to a specific type of small-scale/short term activity that required few specialised flint tools, perhaps more akin to a stopover site, where food was prepared and consumed, and repairs to tools or clothes were carried out.

4.3.3 The presence of two sherds of Middle Neolithic pottery within the same context potentially indicates a longer period of occupation in the locality, perhaps as seasonal camp that was re-visited over multiple years.

5 PUBLICATION AND ARCHIVING

5.1 Publication

- 5.1.1 This report contains the full analysis of all the artefactual and stratigraphic data. Publication of the results has not yet been determined and will be at the discretion of Suffolk County Council Archaeological Service.

5.2 Archiving, Retention and Dispersal

- 5.2.1 OA East will maintain the archive to the standards recommended by the Chartered Institute for Archaeologists (CIfA 2014b), the Archaeological Archives Forum (Brown 2011) and all standards specified by SCCAS. Excavated material and records will be deposited with, and curated by, Suffolk County Council Stores under the Site Code EXG112. A digital archive will be deposited with OA Library/ADS.
- 5.2.2 The physical archive for the evaluation and excavation combined comprises a maximum of three bulk finds boxes and two document boxes including an A3 permatrace file.

APPENDIX A CONTEXT INVENTORY

Context	Category	Feature Type	Cut	Phase	Pottery spot date	Breadth (m)	Depth (m)	Colour	Fine component	Shape in Plan	Side	Base
100	layer	topsoil	-					dark brownish grey	clayey silt			
101	layer	subsoil	-					mid orangey brown	sandy silt			
102	cut	natural hollow	102	1		0.97	0.32			sub-circular	steep w edge, moderate e edge	irregular
103	fill	natural hollow	102	1	ENE0	0.97	0.32	mid brown	sandy silt			
104	cut	natural hollow	104	1			0.63			irregular	gentle	partially flat, slopes down to irregular
105	fill	natural hollow	104	1			0.24	mid reddish brown	silty sand			
106	fill	natural hollow	104	1	ENE0		0.46	mid greyish brown	silty sand			
107	fill	natural hollow	104	1	ENE0-MNE0	1.22	0.1	dark greyish brown	silty sand			
108	cut	natural hollow	108	1			0.32			irregular	gentle	irregular
109	Fill	natural hollow	108	1			0.12	mid orangey brown	sandy silt			
110	fill	natural hollow	108	1	ENE0		0.1	mid greyish brown	sandy silt			
111	cut	natural hollow	111	1			1			irregular		irregular
112	fill	natural hollow	111	1	ENE0		0.2	dark greyish brown	silty sand			
113	fill	natural hollow	111	1			0.74	mid greyish brown	silty sand			
114	cut	possible pit	114			0.53	0.3			circular	moderate	irregular
115	fill	possible pit	114			0.53	0.3	light yellow brown	silty chalk			
116	fill	possible pit	114				0.2	dark black brown	silty sand			
117	cut	natural hollow	117	1			0.5			irregular	gradual	irregular

Context	Category	Feature Type	Cut	Phase	Pottery spot date	Breadth (m)	Depth (m)	Colour	Fine component	Shape in Plan	Side	Base
118	fill	natural hollow	117	1			0.2	dark reddish brown	silty sand			
119	fill	natural hollow	117	1			0.3	mid greyish brown	silty sand			
120	cut	natural hollow	120				0.54			unclear	gradual	irregular
121	fill	natural hollow	120				0.54	light yellow brown	silty chalk			
122	cut	natural hollow	122	1			0.18			irregular	gradual	irregular
123	fill	natural hollow	122	1		2.3	0.18	mid grey brown	sandy silt			
124	cut	natural hollow	124	1			0.27			irregular	gentle	irregular
125	fill	natural hollow	124	1			0.1	mid orangey brown	silty clay			
126	fill	natural hollow	124	1	ENE0		0.17	dark greyish brown	sandy clay			
127	cut	natural hollow	127				0.2			irregular	gradual	irregular
128	fill	natural hollow	127				0.2	mid brown orange	sandy silt			
129	cut	possible pit	129			1.8	0.38			unclear	moderate	concave-irregular
130	fill	possible pit	129			1.8	0.38	mid greyish brown	sandy silt			
131	cut	natural hollow	131			1.2	0.3			unclear linear	left gradual, right steep	flat-irregular
132	fill	natural hollow	131			1.2	0.3	mid orange brown	silty sand			
133	VOID											
134	fill	natural hollow	104	1			0.22	dark reddish brown	sandy silt			
135	fill	natural hollow	104	1			0.07	light greyish brown	chalky silt			
136	fill	natural hollow	104	1								
137	cut	natural hollow	137	1			0.83			irregular		irregular
138	fill	natural hollow	137	1			0.3	dark greyish brown	clayey sand			

Context	Category	Feature Type	Cut	Phase	Pottery spot date	Breadth (m)	Depth (m)	Colour	Fine component	Shape in Plan	Side	Base
139	fill	natural hollow	137	1	ENE0		0.56	dark greyish brown	clayey sand			
140	fill	natural hollow	111	1			0.14	mid orangey brown	silty sand			
141	fill	natural hollow	104	1			0.26	mid orangey brown	clayey sand			
142	fill	natural hollow	104	1	ENE0	1.46	0.12	dark greyish brown	clayey sand			
143	VOID											
144	fill	natural hollow	104	1		1.2	0.2	mid orangey brown	clayey sand			
145	fill	natural hollow	104	1	ENE0	1.2	0.15	dark greyish brown	clayey sand			

APPENDIX B FINDS REPORTS

B.1 Flint

By Rona Booth

Introduction

- B.1.1 This report details a remarkably coherent Neolithic flint assemblage recovered during the evaluation and excavation stages of works at Burwell Road, Exning.
- B.1.2 During the excavations, a total of 118 struck flints and two small fragments (2g) of unworked burnt flint were recovered from 13 individual contexts within targeted interventions into two natural hollows present at the site. Of these, 102 flints were recovered from nine contexts within the same hollow (104).
- B.1.3 The evaluation phase produced a total of ten flints from context EV73, Trench 80. This context corresponds to natural hollow 104 (contexts 142 and 145) and the finds were in close proximity to those recovered during the excavation. A scraper was also recovered from the topsoil (1) in Trench 35, which lay outside the excavation area.
- B.1.4 The assemblage was recorded on an Excel spreadsheet, a copy of which is retained in the site archive. This includes a complete breakdown of flint from individual contexts and detailed recording of retouched pieces. A summary table of the catalogue is presented in Table 2, with a full catalogue retained in the project archive.
- B.1.5 The worked flint assemblage has been recorded/catalogued according to technological and typological classes based largely on the approach of Inzian and colleagues (1999) and follows standard practice for the analysis and classification of post glacial British lithic assemblages (Bamford 1985; Butler 2005).
- B.1.6 A modest refitting exercise was undertaken but unfortunately no refitting flakes were found. The contemporaneity of the material from each context can only be attested to based on the colour and form of the flint, which with few exceptions exhibits a high degree of homogeneity.

Context	Cut	Context type	Irregular Waste	Flake	Narrow flake	Blade	Bladelet	Blade-like flake	Rejuvenation	Scraper	Leaf arrowhead	Miscellaneous retouched flake	Edge trimmed flake	Core	Unworked burnt	Total
103	102	natural hollow		3				1								4
105	104	natural hollow	1	1	2			3			1					8
106	104	natural hollow	1	9	8			5	2			1			1	27
107	104	natural hollow		12	7	1	1	8	1			1	1		1	33
110	108	natural hollow		1	1											2
112	111	natural hollow		2				1				1				4

Context	Cut	Context type	Irregular Waste	Flake	Narrow flake	Blade	Bladelet	Blade-like flake	Rejuvenation	Scraper	Leaf arrowhead	Miscellaneous retouched flake	Edge trimmed flake	Core	Unworked burnt	Total
134	104	natural hollow		2												2
136	104	natural hollow		3	1			3								7
139	137	natural hollow		1												1
142	104 spit 1	natural hollow		5	3			1	1		1	1				12
142	104 spit 2	natural hollow		1												1
145	104 Spit 1	natural hollow		9	6			1								16
145	104 Spit 2	natural hollow			1											1
73		natural hollow	1	5	2								1	1		10
35		topsoil								1						1
		Total	3	54	31	1	1	23	4	1	2	4	2	1	2	129

Table 2: Quantification of the flint assemblage by context

Raw materials and condition

- B.1.7 All the struck material is of a fine-grained chalk flint that has undergone various degrees of re-cortication. The patination ranges from a light cloudy sheen through to a light bluish grey with a few pieces deeply patinated to a yellowish cream and an off-white colour. Where flints have broken and not re-corticated, it is possible to see the parent material is dark grey, near black flint.
- B.1.8 Thirty-two of the unretouched flakes and two of the retouched flakes retain cortical surfaces. Where cortex is present, it is minimal in all but six of the total number of cortical flakes, and it is mostly confined to the proximal and distal ends of the flakes, very occasionally extending along one edge. The cortex is of variable thickness but is mostly thin and relatively unworn suggesting a source close to the parent chalk.
- B.1.9 The underlying geology at Burwell Road is chalk and suitable knapping material would have been available from within the immediate locality; however, it cannot be ruled out that suitable nodules were imported from further afield. The assemblage included only one completely cortical flake, just four flakes with around 50% cortical coverage, and very few pieces of general knapping waste in the assemblage, which suggests procurement and preparation of nodules might have taken place elsewhere.
- B.1.10 As a general rule the flints are in a fresh condition, although some exhibit light edge damage and approximately 40% are broken. Some edge wear is present that is consistent with utilisation. It is entirely possible that much of the assemblage was incorporated into the hollows relatively quickly after production and/or use.

- B.1.11 The unworked burnt flint was found in contexts 106 and 107 in hollow **104** (Table 2). It is heavily burnt with crazed and spalled surfaces. The material is not diagnostic but given the relative coherence of the flint in the deposits within the hollow, and the presence of three flakes of lightly burnt struck flint recovered from context 106, it is potentially contemporary with the rest of the assemblage.

Characterisation and technology

- B.1.12 The flint from all contexts is technologically consistent and the assemblage is dominated by flakes (42%) and narrow (24%) and blade-like flakes (18%), all of which are characteristic of Early Neolithic flint working. There is a possibility that some of these flakes and the two narrow blades (context 107), represent residual Late Mesolithic material, but distinguishing these with no secure contextual information or diagnostic implement types, such as microliths, is not possible owing to the continued production of narrow flakes and blade-like flakes during the Early Neolithic.
- B.1.13 A total of nine retouched flints were recovered from six separate fills within hollow **104** (contexts: EV73, 105, 106, 107, 111, 136, 142). Several contexts also produced flakes which were made and utilised in an expedient fashion. In total, nearly 27% of the assemblage is either formally retouched or shows obvious signs of utilisation.

Hollow 102

- B.1.14 Four small flakes, including a small blade-like flake, were recovered from context 103, the only intervention into this feature (**102**). Three of the flakes are broken and of these, two were potentially utilised as piercing implements. The small assemblage from this feature was found in association with early Neolithic pottery and it is probable that all the flints are of the same date.

Hollow 104

- B.1.15 A total of ten contexts within this feature produced Early Neolithic flintwork. Whilst it was not possible to ascertain any chronological distinction between depositional episodes, a series of fills were identified during the excavations. The flint recovered from the hollow is described here, starting from those in the basal fill, working up through the sequence. The flint was again found in association with Early Neolithic pottery.
- B.1.16 Context 105, a constituent of the basal fill of hollow **104**, produced seven, small unretouched flakes, three of which are broken. Two of the complete flakes are potentially utilised and perhaps functioned as expedient points or piercers.
- B.1.17 An Early Neolithic leaf shaped arrowhead (Fig. 6, no. 1) was also recovered from fill 105. It is made on an elongated blade-like blank, and bifacial, invasive retouch has been applied from the mid-point of the blank toward the distal end. It is potentially unfinished and perhaps represents deliberate discard rather than a chance loss.
- B.1.18 The second fill of hollow **104** produced just six flakes. Context 112 (intervention **111**) produced four flakes. A large thin flake, modified at its distal end by utilisation, with use wear along its cortical edge, is potentially a worn serrate and was probably used on a relatively hard material. A second flake has approximately 10mm of semi abrupt retouch at its proximal end applied through cloudy patination, whilst a third flake is

- potentially notched but is too burnt to formally identify. Two unretouched flakes, one broken and one complete, were recovered from context 134 (intervention **104**).
- B.1.19 The penultimate fill of hollow **104** produced 73 flints from contexts EV73, 107, 142 and 145.
- B.1.20 Context EV73 (**EV71**, Trench 80) was excavated during the evaluation phase. Based on their typo-technological traits and degree of patination, this small assemblage of ten flints is consistent with those recovered from contexts 142 and 145 from the same fill in hollow **104** during the excavation.
- B.1.21 A small core (Fig. 7, no. 5) from context EV73 has multiple flake removals and is almost certainly Early Neolithic in date. It has at least two non-opposing platforms but most of the narrow removals are from the same platform and roughly unidirectional. Stepped removals on one of the core faces indicates that the core was probably discarded at a point when it became too much effort to refresh the core.
- B.1.22 Eight flakes were also recovered from this context, including a core rejuvenation flake with use wear, that might have functioned as a burin-like tool, but cannot be formally categorised as such. The only certain tool type present is a worn serrate made on a secondary flake (Fig. 6, no. 2). A chunk of irregular waste also has a worn utilised edge.
- B.1.23 Context 107 produced two retouched items. These are a piercer made on a flake modified at its distal end by unilateral, abrupt retouch and a small core rejuvenation flake, with fine continuous, abrupt retouch at the distal end, which was potentially utilised as a knife.
- B.1.24 Context 142 (intervention **104**) was excavated in two spits. Spit 1 produced 11 flakes, five of which were broken and one of which was a core rejuvenation flake. Two of the narrow flakes appeared to have light use wear. A broken, core rejuvenation flake has a tiny amount of semi-abrupt retouch at its distal end and was possibly utilised as a burin-like tool, taking advantage of a platform remnant at the distal end of the piece.
- B.1.25 The same context 142 spit 1 (intervention **104**) produced a slightly asymmetric, leaf shaped arrowhead (Fig. 6, no. 3), retouched at the edge through its patinated surface. One end of the extremely thin flake appears to have been broken, possibly indicating a failed removal which possibly led to the ultimate discard of the arrowhead before completion.
- B.1.26 A single, small, thick, broken flake was recovered from spit 2 (context 142, intervention **104**).
- B.1.27 Seventeen flakes were recovered from spit 1, context 145, (intervention **104**). Out of six broken flakes, three were also lightly burnt. The largest flake (10.3cm in length) in the assemblage was recovered from this context; slightly plunging, it is edge damaged along one lateral, possibly the result of utilisation. A further four of the flakes also have edge damage that is regular enough for them to also be utilised.
- B.1.28 Spit 2 (context 145, intervention **104**) also produced a long, slightly plunging flake with use wear along one lateral.
- B.1.29 The upper fill of hollow **104** included four contexts that produced flints (106, 110, 136 and 139). Context 106 produced a total of 26 flakes and a small chip sized piece of

irregular waste. Two core rejuvenation flakes were recovered from this intervention as well as three burnt flakes, one of which exhibits possible abrupt retouch at its proximal end, though the flint is too burnt to surmise further.

- B.1.30 A slightly plunging, tertiary flake from context 106 (Fig. 6, no. 4) has steeply retouch applied to its distal end but it is not particularly clear if it was meant to be a scraper. There is also some bifacial invasive retouch applied to the proximal end of the flake which extends along one lateral on the dorsal surface and the reverse lateral on the ventral surface, the latter is particularly fine, and the piece also displays a few naturally occurring removals. This piece is also perhaps a case of more weight given to expediency than style. A lightly burnt miscellaneous retouched blade-like flake was also recovered from context 106.
- B.1.31 Two unretouched flakes were recovered from context 110 (intervention **108**), and a further seven flakes, six of which were broken, were recovered from context 136 (intervention **104**). Context 139 (intervention **137**) produced a single broken flake with the remains of approximately 11 mm of fine abrupt retouch applied, along one lateral through the deep white patination.

Other contexts

- B.1.32 A deeply patinated, and steeply retouched, convex end scraper, made on a thick flake, was recovered from the topsoil (1) in trench 35. Although difficult to date scrapers closely when in isolation, the blank used has a prepared platform and fine dorsal scars and is probably Neolithic.

Catalogue of illustrated flint (Figs 7 and 8)

1. Leaf shaped arrowhead. Potentially unfinished. Context 105
2. Serrated flake. Context 73
3. Leaf shaped arrowhead. Context 142
4. Misc. retouched flake. Context 106
5. Core. Context 73

Discussion

- B.1.33 The Burwell Road flint can be broadly assigned to the Early Neolithic period (c. 4000 to 3400/ 3300 cal BC) both owing to its tendency toward a narrow flake and blade-like flake-based technology, the presence of typologically diagnostic pieces (principally the leaf-shaped arrowheads) and by its close association with Early Neolithic pottery (Gilmour, App. B.2).
- B.1.34 Overall, the assemblage is remarkably coherent in terms of its typo-technological traits and general condition with only some variance in its overall condition, which might be attributed to its final depositional context. It is broadly comparable to other Early Neolithic assemblages in East Anglia, although it is noticeably smaller than many in the region. It is difficult however to ascertain whether the flint recovered is broadly representative of densities across the full extent of the hollow as the excavation targeted specific areas based on the results of the evaluation. Most of the flints were recovered from the southern-most interventions into hollow **104**, from the

- penultimate fill (contexts EV73, 142 and 145). These are markedly consistent in form and patination and may represent a single episode of discard within a larger framework of deposition that took place during periodic visits to the site.
- B.1.35 Early Neolithic material is generally found in two types of depositional context in the region. At those such as the Early Neolithic type site of Hurst Fen, Suffolk where c. 16,000 flints were recovered (Clark 1960), and at Kilverstone, Norfolk (c. 12,000 flints) (Beadsmoore 2006), flint was frequently deposited into pits. At these sites pit groups occurred in clusters and flints were often discarded alongside other cultural material such as pottery. Both the Hurst Fen and Kilverstone sites represent long term, albeit not necessarily continuous, occupation and the assemblages contained a variety of tool types, such as arrowheads, scrapers and serrates.
- B.1.36 At other sites, including Stow-Cum-Quy (697 flints) (Thatcher 2007) and the Fordham Bypass (4295 flints) (Mortimer 2005), both within 20 kilometres of the Burwell Road site, flint was frequently deposited into naturally occurring hollows.
- B.1.37 Whilst several interpretations are possible to explain the presence of Early Neolithic material in these naturally occurring hollows, such as those at Stow-Cum-Quy and Fordham (see Thatcher 2007, Mortimer 2005), it seems possible that the flint assemblage from the hollows at Burwell Road were the result of short and transient visits to the site. They were places from which suitable nodules of flint might be obtained and worked and suitable places for discard and deposition. But as only one core and one good primary flake were recovered, during the excavations it is perhaps possible that nodules were obtained elsewhere and small-scale core reduction and tool use were the main activities associated with the use of flint at the site. Some formal tools were produced, such as the scraper, serrated flake and the two arrowheads, but most were fairly expedient, as evidenced by the high proportion of utilised but not formally retouched flakes. There was no evidence of intensive procurement and processing of flint in the immediate vicinity obtained from the excavations.
- B.1.38 This is a relatively small assemblage compared to many in the wider area. The flints appear to have been discarded either after use or unmodified, as the result of core reduction. It is possible then that the Burwell Road site was a significant place for a specific type of small scale task that required few specialised flint tools perhaps more akin to a stopover site, where food was prepared and consumed, and repairs to tools or clothes were carried out, rather than a place where more intensive specialist activities were carried out at on a larger scale, as seen with the plant processing at Stow-Cum-Quy (Thatcher 2007) and flint procurement at Fordham (2006).
- B.1.39 Arrowheads are an interesting class of artefact as they are often assigned as chance losses or as an element of more formalised depositional practise. In this case they may be both or neither. It is possible that they were partially finished forms, which were discarded before completion. The example from context 142 occurs alongside a high proportion of flakes that exhibit knapping errors, such as hinge and step fractures, some of which are evident on the core. Many of the flakes are broken or have been used expediently. Or it may be that arrowheads were part of ritualised deposition into the hollows, alongside other flint and pottery, as although it is implied here that the

arrowheads may have been discarded before completion, it is not unusual for Early Neolithic leaf types to have invasive retouch applied to their edges only.

- B.1.40 It is difficult to be more than rhetorical, as it is unclear if the flint was discarded into the deposits within the hollow deliberately or if it existed as small 'midden-like' accumulations on the surface, alongside other cultural material, before being incorporated into the deposits. It need not, however, be inferred that the deposition of flint into the hollow was purely the result of casual discard, resulting from, what might be termed 'everyday and informal' activities at Burwell Road, as the site reflects a wider set of discard practises seen at other Early Neolithic sites in the region, albeit on a smaller scale.

B.2 Prehistoric pottery

By Nick Gilmour

Introduction

- B.2.1 The evaluation and excavation yielded 379 sherds (2177g) of Neolithic pottery, with a low mean sherd weight (MSW) of 5.17g. The pottery was largely recovered from natural hollows, with a small amount from a possible posthole and a pit, both excavated during the evaluation phase (Table 3).
- B.2.2 The pottery belongs to the Carinated Bowl, Southern Decorated Bowl and Impressed Ware ceramic traditions and is in fabrics typically associated with these ceramic traditions. It dates to the Early Neolithic and the Middle Neolithic.
- B.2.3 The pottery is in moderate to good condition for its age. While the mean sherd weight is low, the surface condition of the Early Neolithic pottery is generally very fresh.

Context	Cut	Feature Type	Spot Date	No of sherds	Weight (g)
36	26	Posthole	ENE0	1	12
38	37	Pit	ENE0	1	6
42	41	natural hollow	ENE0	1	7
73	71	natural hollow	ENE0	5	15
101	-	Subsoil	ENE0	2	6
101	-	Subsoil	Prehist	1	8
103	102	natural hollow	ENE0	156	924
106	104	natural hollow	ENE0	23	134
106	104	natural hollow	Prehist	2	9
107	104	natural hollow	ENE0	104	733
107	104	natural hollow	MNE0	2	5
110	108	natural hollow	ENE0	8	17
112	111	natural hollow	ENE0	23	119
126	124	natural hollow	ENE0	7	8
126	124	natural hollow	Prehist	1	1
139	137	natural hollow	ENE0	5	28
142	104	natural hollow	ENE0	26	110
145	104	natural hollow	ENE0	11	35
Total				379	2177

Table 3: Quantification of prehistoric pottery

Methodology

- B.2.4 All the 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. 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 (Beaker, Deverel-Rimbury etc.).
- B.2.5 All pottery was subject to sherd size analysis. Sherds less than 4cm in diameter were classified as 'small' (310 sherds); sherds measuring 4-8cm were classified as 'medium' (61 sherds), and sherds over 8cm in diameter would have been classified as 'large' (no sherds). The quantified data is presented on an Excel data sheet held with the site archive.

Prehistoric pottery fabrics

- B.2.6 Six different fabrics were identified, with the majority of the pottery being in a flint fabric (Table 4).

G1: moderate fine grog in a slightly sandy clay matrix.

F1: moderate medium flint (1-3mm) and rare course flint (3-7mm), in a slightly micaceous sandy clay matrix.

F2: frequent poorly sorted flint in a sandy clay matrix.

F3: moderate course flint (>7mm) in slightly sand clay matrix - buff and underfired.

F4: moderate medium flint (1-3mm), in a slightly micaceous sandy clay matrix.

SA1: moderate quartz sand.

Fabric type	Spot Date	No sherds	Weight (g)	% fabric (by wt.)	MNV
G1	MNEO	2	5	0.2	-
G1	Prehist	2	9	0.4	1
F1	ENE0	282	1616	74.2	6
F2	ENE0	65	424	19.5	4
F3	ENE0	20	96	4.4	1
F4	ENE0	6	18	0.8	1
SA1	Prehist	2	9	0.4	-
Total		379	2177		13

Table 4: Quantification of prehistoric pottery by fabric. MNV (minimum number of vessels) - calculated as the total number of different rims and bases: 13 rims, no bases.

The Early Neolithic pottery

B.2.7 Most of the pottery assemblage (373 sherds, 2154g) is from the Early Neolithic period. Some of this pottery is diagnostic of the Carinated Bowl ceramic tradition, while others are characteristic of the Southern Decorated Bowl (Mildenhall) ceramic tradition. The remainder of the Early Neolithic pottery is also likely to belong to one of these traditions but lacks diagnostic features. There is ongoing discussion on the relative dating of Early Neolithic pottery in England (e.g. Barclay *et al*/2018), but Carinated Bowl is considered earlier (probably starting c.4000 cal BC), with Decorated Bowl developing after from this c.3,700 cal BC.

Pottery from natural feature 104 (104, 108, 111, 117, 122, 124, 137)

B.2.8 The majority of the pottery was recovered from the various interventions (104, 108, 111, 117, 122, 124, 137) within natural feature 104. In total 207 sherds (1184g) of pottery was collected from this feature, all of which is Early Neolithic.

B.2.9 Of particular note within the wider assemblage from this feature is the material from deposit 107, which consists of 104 sherds (733g). It is highly likely that, with the exception of single sherd in a different fabric, all of this material is from the same vessel (Fig. 8). Much of the upper portion of this vessel (including c.40% of the rim diameter) survive and can be re-fitted. This vessel belongs to the Carinated Bowl tradition. It has a simple pointed rim, with a slightly curved neck. The carination is sharp, with a small step. It is in fabric F1.

B.2.10 A single sherd (10g), from deposit 112, is diagnostic of the Southern Decorated bowl tradition. It is from the rim of a vessel, which is rounded and internally thickened. The rim top is decorated with incised diagonal lines. Just below the rim on the exterior is a row of incised diagonal lines. With just a single sherd present from this vessel it is difficult to be certain, but the rim form and decoration would be consistent with Mildenhall Ware (a part of the wider Southern Decorated Bowl ceramic tradition). It is significant that this sherd is in fabric F4 – which is rare in this assemblage. There are only four other sherds (8g) in this fabric, all from deposit 112.

The Middle Neolithic pottery

B.2.11 Just two sherds (5g) of pottery are of Middle Neolithic origin. This pottery was recovered from deposit 107, within natural hollow 104. The two sherds Both sherds are in fabric G1 and are body sherds. One sherd is decorated with whipped cord impressions. The second sherd is decorated with fine fingernail impressions. Unfortunately both sherds are too small to record if these decorative techniques had been used to form a pattern.

B.2.12 The assemblage is too small to confidently assign it to a style within the Impressed Ware ceramic tradition. However, given the use of whipped cord and the site's location, it is likely that these sherds are from the Peterborough Ware style. Peterborough Ware ceramics largely date to the period c.3,400-2,800 BC (Vincent and Darvill 2015), although outlying radiocarbon dates are known.

Other prehistoric pottery

B.2.13 A total of four sherds (18g) of pottery could not be closely dated. These are all small, undecorated, body sherds in fabrics G1 and SA1. The two sherds (9g) in fabric G1 may

be of Middle Neolithic origin, based solely on the only other two sherd in this fabric being identifiable as Impressed Ware. The other two sherds (9g) are in fabric SA1, which is not specific to a particular ceramic tradition in this region and the lack of feature sherds prevents more accurate attribution.

Discussion

Early Neolithic

- B.2.14 Although the overall pottery assemblage is not very large, it is significant. The Early Neolithic assemblage was largely recovered from deposits within a natural feature. These deposits are likely to represent accumulations of midden material. Particularly in the case of vessel 1 (deposit 107), the fresh condition and multiple re-fits between sherds strongly suggest this material has not moved since it was deposited.
- B.2.15 Outside of causewayed enclosures, the majority of Early Neolithic pottery is recovered from pits. It has been suggested that this material (from pits) was gathered from 'pre-pit accumulations' (Garrow 2006). The pottery recovered from this site probably represents one such accumulation; either a deliberate dump of waste material (a midden), or a living/working area.
- B.2.16 The Early Neolithic pottery from this site is also of interest in terms of discussions of the chronology and development of ceramic styles. The sequence here, with sherds of Southern Decorated Bowl from a deposit stratigraphically later than one from which Carinated Bowl was recovered is in keeping with current understandings of the development of Early Neolithic pottery styles.

Middle Neolithic

- B.2.17 The Middle Neolithic material consists of just two abraded sherds, which prevents detailed discussion of it. However, the presence of this material is important in showing that activity in this area continued beyond the Early Neolithic.

B.3 Fired clay

By Ted Levermore

- B.3.1 A single fragment of fired clay (17g) was collected from layer 136. It presents with a flattened face and a possible wattle/rod impression in the body clay (c.5mm). It is made in a compact fine silty clay with rare mica flecks and quartz grains and was fired to a dull light brown with a dark grey core. Its origins are unclear but the flattened face points to it being part of an object or a structure.

APPENDIX C ENVIRONMENTAL REPORTS

C.1 Environmental Samples

By Martha Craven

Introduction

- C.1.1 This report details the results of the processing of environmental samples from the excavation of 'Land South of Burwell Road', Exning, Suffolk. Six samples were taken from features within this excavation area, and these are thought to date to the Early Neolithic period. The purpose of this assessment is to determine whether plant remains and other environmental indicators are present, their mode of preservation and what information can be inferred about such things as diet, economy, agricultural practices and trade.
- C.1.2 Eight samples were taken during an evaluation at this site by Oxford Archaeology in 2019 (Blackbourn 2019). This evaluation revealed a small area of Early Neolithic activity in the south-east of the site. Plant remains from this evaluation were quite sparse; consisting largely of small quantities of charcoal fragments. Ditch 32 was found to contain occasional cereal grains and a moderate quantity of hazelnut (*Corylus avellana*) shell fragments.

Methodology

- C.1.3 Each sample was processed by tank flotation using modified Siraf-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.1.4 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.1.5 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 1.
- C.1.6 Identification of plant remains is with reference to the Digital Seed Atlas of the Netherlands (Cappers et al. 2006) and OAE's 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 as described by Jacomet (2006).

Quantification

- C.1.7 For the purpose of this assessment, items such as cereal grains have been scanned and recorded qualitatively according to the following categories:

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

C.1.8 Items that cannot be easily quantified such as snail shells have been scored for abundance

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

Key to tables:

U=untransformed

Results

C.1.9 The plant material from this site consists primarily of carbonised (charred) plant remains which are in a poor state of preservation. It should be remembered that carbonised plants remains are only a fraction of the original material that was burnt and lighter material (such as straw) will not usually survive this process (Boardman and Jones 1990, 1).

Natural hollows 104 and 102

C.1.10 Several samples were taken from tests pits within natural hollow **104**. Sample 14, 15 and 16 were taken from test pit **111**. These samples were found to contain small quantities of charcoal. Three poorly preserved cereal grains were also recovered from Sample 14. Sample 11, fill **107** of test pit **104**, was similarly composed containing a single wheat (*Triticum sp.*) grain and occasional charcoal fragments. Frequent, well-preserved snail shells were noted in all the samples taken from hollow **104**. Weed seeds are very rare and consist of a single field gromwell (*Lithospermum arvense*) recovered from deposit **112**.

C.1.11 Sample 10, fill **103** of hollow **102**, contains a single poorly preserved cereal grain and a negligible quantity of charcoal. This sample also contains frequent snail shells.

Pit 114

C.1.12 Sample 12, fill 116 of pit **114**, produced a small amount of charcoal and frequent snail shells.

Sample No.	Context No.	Cut No.	Feature Type	Volume Processed (L)	Flot Volume (ml)	Cereals	Weed Seeds	Snail Shells	Charcoal Volume (ml)
10	103	102	Tree Throw	11	20	#	0	+++	4
11	107	104	Natural Feature	16	50	#	0	+++	9
12	116	114	Pit	7	5	0	0	+++	3
14	113	111	Natural Feature	18	20	#	0	+++	2
15	112	111	Natural Feature	17	30	0	#	+++	2
16	140	111	Natural Feature	8	5	0	0	+++	2

Table 5: Summary of environmental samples

Discussion

C.1.13 Unfortunately, due the limited density and diversity of plant remains recovered it is difficult to infer much information regarding plant usage at this site. The paucity of plant remains within the features at this site could suggest that the nature of Early Neolithic activity in this area was quite ephemeral. The occasional cereal grains recovered likely represent a background scatter of refuse which has accidentally been incorporated into these features. It is also possible that these grains are not contemporary and instead derive from more recent stubble burning. The presence of charred hazelnut fragments from Early Neolithic features within the evaluation phase is unsurprising; gathered wild resources formed a significant part of the Neolithic diet.

Retention, dispersal and display

C.1.14 The samples from this excavation have now been fully processed, assessed and warrant no further work. The sample flots will be retained in the project archive.

C.2 Monolith Samples

By David Kay

Introduction

C.2.1 Two overlapping monoliths were submitted for assessment from the excavations of 'Land South of Burwell Road, Exning' (site code: EXG 112). The monoliths were taken from Section 53 of Test Pit 111, located within Feature 104, identified in-field as a large natural hollow. The upper monolith (<13.1>) is situated about halfway down the fill of this hollow within Context 113 at approx. 0.3 m below ground level, and crosses the boundary into the lower fill of Context 112. The second monolith (<13.2>) overlaps the higher one by 0.253 m, and thus also samples Context 112 whilst further encompassing the lowermost fill of Context 140. Judging by the section diagram, it also appears to effectively cut the very base of Context 140, and thus that of the hollow fill itself. The list of monoliths and associated contexts is presented in Table 6.

Monolith	Elevation Top (m bgl)	Elevation Base (m bgl)	Length (m)	Section	Contexts
<13.1>	0.3	0.6	0.3	53	113, 112
<13.2>	0.487	0.787	0.3	53	112, 140

Table 6: Summary of monoliths from Test Pit 111

Methodology

C.2.2 The monoliths were cleaned, photographed, and recorded in the lab by a geoarchaeologist (the report author). The sedimentary sequence was recorded on a summary proforma in accordance with Historic England guidelines for geoarchaeology (HE 2015), following standard methodologies based on Jones *et al.* (1999). This includes a description of colour, compaction, texture, sorting, structure, and inclusions. A Munsell Colour Chart was used for the sediment colours. Comment was also made on the nature of observable contacts/boundaries indicative of erosion or truncation. The full logs are provided in Table 7.

Results

C.2.3 The three contexts here sampled all appear to be variations on a silt loam fill, with the lower two contexts (especially Context 140) appearing slightly more rubified and thus perhaps subject to greater oxidation than Context 113 above. Apart from this slight difference in colouration, the only other variance of note is the greater quantity of gravel inclusions in Contexts 112 and 140 relative to 113, especially the larger pebbles present within the lower part of Context 112 sampled by Monolith <13.2>. The section of Context 112 present within the lower half of Monolith <13.1> also appears slightly darker and more compacted than its lower counterpart in Monolith <13.2>, though largely as a result of the former maintaining greater soil moisture within its sample casing and not from any genuine lithological distinction.

Discussion and potential

C.2.4 Both monoliths were in very poor condition, not least due to the difficult nature of the sediments being sampled. Their extreme friability and the presence of large void spaces has meant that the separate sedimentary units are now very hard to distinguish and have likely admixed during initial sampling and subsequent transportation. Unfortunately, this renders both samples unsuitable for micromorphological analysis, or indeed for any other paleoenvironmental assays by means of sequential sub-sampling.

C.2.5 At best, it is possible to state that this series of silt loam fills are likely the result of localised colluvial processes (i.e., a very small-scale version of more typical hillwash deposits), leading to the gradual infill of the natural hollow of Feature 104 by means of the redeposition of surrounding sediments. Given the slight rubification and greater frequency of larger gravel inclusions in the lower fills, it may also be presumed that these were deposited under slightly higher-energy conditions and exposed to more frequent wetting/drying episodes than the uppermost fill represented by Context 113.

C.2.6 Though there is no particular evidence that direct anthropogenic factors were involved in any of these processes, it may perhaps be inferred as such from the presence of Neolithic activity across the broader site, for instance initiated by the clearance of vegetation and the subsequent destabilisation of underlying soils. However, without further micromorphological analysis of the samples themselves (alongside the consideration of further contextual evidence) this supposition remains entirely hypothetical. Given the poor state of sample preservation, such analysis is unfeasible, and it is not recommended that these samples are subjected to further geoarchaeological investigation.

Monolith	Top (m)	Base (m)	Lithology	Context	Description
<13.1>	0	0.2	Silt loam	113	Well sorted silt loam of greyish mid-brown colour (Munsell: 7 YR 3/4). Moderate fine sand fraction. Very few inclusions of coarse sand and sub-angular to sub-rounded granules, no larger inclusions visible within sample. Rare rootlets. Very friable, with crumb ped structure. Interpretation: localised colluvial fill

Monolith	Top (m)	Base (m)	Lithology	Context	Description
<13.1>	0.2	0.3	Silt loam	112	Moderately sorted silt loam of reddish-grey dark brown colour (Munsell: 5 YR 3/3). Moderate fine/medium sand fraction. Few inclusions of coarse sand and frequent sub-angular granules, no larger inclusions visible within sample. Rare rootlets. Retains crumb ped structure, but less friable than context above as sediment seems overall damper. Interpretation: localised colluvial fill
<13.2>	0	0.14	Silt loam	112	Moderately sorted silt loam of reddish-grey mid-brown colour (Munsell: 5 YR 4/4). Moderate fine/medium sand fraction. Few inclusions of coarse sand, frequent sub-angular granules and pebbles. Very friable, with crumb ped structure. Interpretation: localised colluvial fill
<13.2>	0.14	0.3	Silt loam	140	Moderately sorted silt loam of orangey-grey mid-brown (Munsell: 5 YR 4/3). Moderate fine/medium sand fraction. Few inclusions of coarse sand, frequent sub-angular granules, and few sub-angular pebbles. Very friable, with crumb ped structure. Interpretation: localised colluvial fill

Table 7: Monolith descriptions

C.3 Animal Bone

By Zoë Uí Choileáin

Introduction and Methodology

- C.3.1 A total of 32 fragments of animal bone were recorded from the excavation at Burwell Rd, Exning. The site itself is dated by pottery to the Early Neolithic period. All features which contained bone were natural hollows.
- C.3.2 Species identified were primarily cow with a single fragment of both sheep/goat and pig being recorded. All other bone is recorded as large or medium mammal.
- C.3.3 The method used to quantify this assemblage was a modified version of that devised by Albarella and Davis (1996). Due to the small size and early date of the assemblage identification has been attempted on all fragments. Identification of the faunal remains was carried out at Oxford Archaeology East.
- C.3.4 References to Hillson (1992) and Schmid (1972) were made where necessary.
- C.3.5 The condition of the cortical bone was recorded using the 0-5 scale devised by McKinley (2004, 14-15).
- C.3.6 Tooth wear analysis was carried out using the classifications laid out by Grant (1982).
- C.3.7 The assemblage includes hand collected material only.

Results of analysis

- C.3.8 The bone was highly fragmented and in very poor condition measuring a 4 on the McKinley scale (2004, 14-15). This means that all of the cortical surface of the bone has been marked by erosion.
- C.3.9 Only 17 fragments of bone were identifiable to taxon. Table 8 listing the NISP (number of identifiable specimens) is presented below.

Taxon	NISP
Cattle (<i>Bos taurus</i>)	15
Pig (<i>Sus sp.</i>)	1
Sheep/goat <i>Ovis/Capra</i>	1
Total	17

Table 8: NISP (number of identifiable specimens) per taxon

- C.3.10 The minimum number of individuals for each taxon is one. The minimum number of individuals or MNI represents the lowest number of individuals this assemblage could possibly represent.
- C.3.11 Three features contained burnt bone. Features 102, 104 and 124 all contained fragments of burnt bone with feature 104 containing the highest quantity.
- C.3.12 Four fragments of bone contained aging data. All fragments represent cattle. An unfused distal radius suggests an animal of less than 3.5 years (Silver 1970). Tooth wear analysis for cattle mandibles from features 104 and 111 suggest a mandibular wear stage (MWS) of 36 giving an age between 3-4 years.

Discussion

- C.3.13 This is a very small and highly fragmentary assemblage and has minimal potential for providing further information about the site. The assemblage primarily represents cattle, but this is likely to be partially reflective of the poor preservation levels with a bias towards the preservation of more robust bone. The burnt bone is representative of domestic activity – either cooking or the incidental burning of refuse.

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APPENDIX E OASIS REPORT FORM

Project Details

OASIS Number	oxfordar3-504941		
Project Name	Land south of Burwell Road, Exning Suffolk		
Start of Fieldwork	26-05-2022	End of Fieldwork	16-06-2022
Previous Work	Yes	Future Work	No

Project Reference Codes

Site Code	EXG112	Planning App. No.	Unknown
HER Number	EXG112	Related Numbers	

Prompt	NPPF
Development Type	Housing
Place in Planning Process	After full determination (eg. As a condition)

Techniques used (tick all that apply)

- | | | |
|--|--|---|
| <input type="checkbox"/> Aerial Photography – interpretation | <input checked="" type="checkbox"/> Open-area excavation | <input type="checkbox"/> Salvage Record |
| <input type="checkbox"/> Aerial Photography - new | <input type="checkbox"/> Part Excavation | <input type="checkbox"/> Systematic Field Walking |
| <input type="checkbox"/> Field Observation | <input type="checkbox"/> Part Survey | <input type="checkbox"/> Systematic Metal Detector Survey |
| <input type="checkbox"/> Full Excavation | <input type="checkbox"/> Recorded Observation | <input type="checkbox"/> Test-pit Survey |
| <input type="checkbox"/> Full Survey | <input type="checkbox"/> Remote Operated Vehicle Survey | <input type="checkbox"/> Watching Brief |
| <input type="checkbox"/> Geophysical Survey | <input type="checkbox"/> Salvage Excavation | |

Monument	Period	Object	Period
Natural hollow	Early Neolithic (- 4000 to - 3000)	Pot	Early Neolithic (- 4000 to - 3000)
Pit	Uncertain	Pot	Middle Neolithic (- 3500 to - 2700)
	Choose an item.	Animal bone	Early Neolithic (- 4000 to - 3000)
		Flint	Early Neolithic (- 4000 to - 3000)
		CBM	Uncertain

Insert more lines as appropriate.

Project Location

County	Suffolk	Address (including Postcode) Land south of Burwell Road, Exning, Suffolk, CB8 7EY
District	Forest Heath	
Parish	Exning	
HER office	Suffolk	
Size of Study Area	0.3ha	
National Grid Ref	TL 61396 65518	

Project Originators

Organisation	Oxford Archaeology East
Project Brief Originator	James Rolfe (Suffolk CC)
Project Design Originator	Chris Thatcher (OA East)

Project Manager	Chris Thatcher (OA East)
Project Supervisor	Emily Abrehart (OA East)

Project Archives

	Location	ID
Physical Archive (Finds)	SCCAS	EXG112
Digital Archive	ADS	EXG112
Paper Archive	SCCAS	EXG112

Physical Contents	Present?	Digital files associated with Finds	Paperwork associated with Finds
Animal Bones	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ceramics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Environmental	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human Remains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stratigraphic		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Survey		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Textiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked Bone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked Stone/Lithic	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Digital Media

Database	<input checked="" type="checkbox"/>
GIS	<input checked="" type="checkbox"/>
Geophysics	<input type="checkbox"/>
Images (Digital photos)	<input checked="" type="checkbox"/>
Illustrations (Figures/Plates)	<input checked="" type="checkbox"/>
Moving Image	<input type="checkbox"/>
Spreadsheets	<input type="checkbox"/>
Survey	<input checked="" type="checkbox"/>
Text	<input checked="" type="checkbox"/>
Virtual Reality	<input type="checkbox"/>

Paper Media

Aerial Photos	<input type="checkbox"/>
Context Sheets	<input checked="" type="checkbox"/>
Correspondence	<input type="checkbox"/>
Diary	<input type="checkbox"/>
Drawing	<input checked="" type="checkbox"/>
Manuscript	<input type="checkbox"/>
Map	<input type="checkbox"/>
Matrices	<input type="checkbox"/>
Microfiche	<input type="checkbox"/>
Miscellaneous	<input type="checkbox"/>
Research/Notes	<input type="checkbox"/>
Photos (negatives/prints/slides)	<input type="checkbox"/>
Plans	<input type="checkbox"/>
Report	<input checked="" type="checkbox"/>
Sections	<input checked="" type="checkbox"/>
Survey	<input type="checkbox"/>

WRITTEN SCHEME OF INVESTIGATION

WRITTEN SCHEME OF INVESTIGATION FOR AN ARCHAEOLOGICAL EXCAVATION

Land South of Burwell Road, Exning, Suffolk

JAC27885
Land South of Burwell Road
Written Scheme of
Investigation
Version 01
11 March 2022

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1 GENERAL BACKGROUND

- 1.1.1 This 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*.
- 1.1.2 All work will be conducted in accordance with the Chartered Institute for Archaeologists *Code of Conduct* and *Standard and Guidance for Archaeological Excavation* (2014).
- 1.1.3 This document represents a Written Scheme of Investigation (WSI) for the archaeological excavation only. This document alone will not result in the discharge of any archaeological condition.
- 1.1.4 This WSI also incorporates the requirements of the EAA Standards for Field Archaeology in the East of England (Gurney 2003).

1.2 Circumstances of the project

- 1.2.1 Oxford Archaeology East (OA East) have been commissioned by RPS on behalf of Persimmon Homes to undertake a programme of archaeological excavation on land proposed for residential development at land south of Burwell Road, Exning, Suffolk.
- 1.2.2 This WSI has been prepared in response to a Brief for Archaeological Excavation issued by James Rolfe of the Suffolk County Council Archaeological Service (SCCAS), dated 27/01/2022, and is required, by Forest Heath District Council, to inform the planning process in advance of the submission of a Planning Application.
- 1.2.3 This work follows on from a programme of geophysical survey conducted in 2017 (Roseveare 2017) and a programme of metal detecting and trenched evaluation conducted on site in 2019 (Blackbourn 2019, OAE Report 2301). The evaluation revealed a site primarily devoid of archaeological remains, with a small area of Early Neolithic activity uncovered along the south-east limit of the proposed development area.

1.3 The proposed archaeological strategy

- 1.3.1 Excavations will occur in a single 0.3ha area of the site identified by the SCCAS (Figure 1). This targets an area of archaeological interest identified in the evaluation of the site by trenches 79 and 80 (Blackbourn 2019, OAE Report 2301).

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 features be identified continuing beyond the limit of excavation.
- 1.4.3 In this instance, the stripped area will be increased until a 10m 'blank buffer' is exposed beyond the area of archaeological remains.
- 1.4.4 Any decision to extend areas will be discussed and formally agreed by SCCAS and RPS, on behalf of the Client, before further work is undertaken.
- 1.4.5 SCCAS will be regularly informed about developments both during the site works and subsequent post-excavation work.

1.5 Liaison with the Archaeological Planning Advisor

- 1.5.1 SCCAS will be informed at least 1 week in advance of the start of fieldwork, and will be kept informed during the site work and following report writing.
- 1.5.2 The excavation area will not be backfilled or released for development without written approval of the SCCAS. Further stripping or deposit testing may be a requirement of the site monitoring visit if unclear archaeological remains or geomorphological features present difficulties of interpretation, or to assist with the formulation of a mitigation strategy.

2 THE GEOLOGY, TOPOGRAPHY AND OTHER FEATURES OF THE SITE

- 2.1.1 The development site comprises an L-shaped block of land, c. 13ha in extent, located on the western edge of Exning, on land south of Burwell Road, centred TL 6093 6577. The site is bounded to the north by Burwell Road and residential properties, and to the south and west by agricultural land. The excavation area is located in the south-east corner of the development site.
- 2.1.2 The underlying geology comprises bedrock chalk of the Zig Zag Chalk Formation, formed during the Cretaceous Period. The overlying soils are freely draining lime-rich loams (British Geological Survey 2014, (BGS map viewer <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>))
- 2.1.3 The site sits at an elevation of 20m OD.

3 ARCHAEOLOGICAL BACKGROUND

3.1.1 The following section provides a brief summary of the archaeological background for the area surrounding the site. This draws on information obtained from the following sources:

- Archaeological Solutions Ltd, 2013, Land to the South of Burwell Road, Exning, Suffolk: An Archaeological Evaluation. Unpublished Report No 4236
- Archaeological Solutions Ltd, 2015, Burwell Road, Exning, Suffolk: Archaeological Assessment and Updated Project Report. Unpublished Report No 4872
- Blatherwick, S, 2018, An Archaeological Baseline & Impact Assessment. Land South of Burwell Road, Exning Suffolk. CgMs Heritage Report ref JAC 23710.
- Roseveare, H.J, 2017, Land South of Burwell Road, Exning, Suffolk: Geophysical Survey Report. Unpublished Tigergeo Report Ref EXS171
- The Suffolk Historic Environment Record (SHER).

3.2 Prehistoric

3.2.1 A series of prehistoric finds have been made within the vicinity of the site. The earliest comprises a Mesolithic artefact scatter located on fields c.500m to the south-east of the site (EXG 051). These were recovered alongside other generic prehistoric worked flints. An Iron Age artefact scatter, including a small quantity of hand-made burnished pottery, was recovered c.600m to the north-west of the site (EXG 013), whilst struck flint was recovered from investigations immediately north (EXG 101). Some of these flints derived from a possible four-post structure suggesting settlement activity in the vicinity. More significantly, the excavation immediately north revealed a ring-ditch, likely to be the remains of a Bronze Age barrow.

3.3 Roman

3.3.1 Small quantities of 2nd to 4th century AD Roman pottery were recovered from a series of ditches and gullies in the excavations immediately north of the site (EXG 101), some of which appeared to respect the location of the ring-ditch (see above). Two other notable scatters of Roman material have been recorded in the areas surrounding the site. To the north-west, c. 600m from the site, pottery, tile and Roman metalwork have been recovered (EXG 078). A similar artefact scatter has been recorded in fields c. 500m to the south-east of the site, with finds including Roman pottery, a disc brooch and coin (EXG 051; 055). Other Roman finds include residual sherds recovered from investigations c. 700m to the east of the site (EXG 091) and a Roman plate brooch recovered c. 800m south of the site (EXG 114).

3.4 Anglo-Saxon and medieval

- 3.4.1 Excavations in 2015, immediately north of the site, revealed a significant Early Anglo-Saxon cemetery with 20 graves containing 21 individuals (EXG 101). An Anglo-Saxon metalwork scatter, including a bow brooch and strap end has also been recorded c. 600m to the north-west (EXG 078), whilst other Saxon brooches have been found c. 800m to the south of the site (EXG 114).
- 3.4.2 The historic core of Exning (EXG 098) lies c. 400m to the east of the site and contains a series of listed buildings including the Church of St Martin (EXG 031). Medieval fishponds (EXG 040) are recorded c. 700m to the south-east, and a scatter of medieval pottery, tile and metalwork, including a coin and seal (EXE 051) have been recovered from fields c. 500m to the south-east.

3.5 Post-medieval and modern

- 3.5.1 Historic mapping shows the core of the village of Exning and the development of properties along the southern side of Burwell Road. The ditch recorded by the geophysical survey (EXG 112, see below) is not present on the historic map series, suggesting it pre-dates the 1880s. However, Lidar imagery for the site suggests that this ditch belongs to a wider alignment of former field boundaries which cross the site on a different axis to that shown on the post-medieval and modern mapping.

3.6 Geophysical Survey (Roseveare 2017)

- 3.6.1 A magnetic survey was conducted at the site prior to the archaeological evaluation and identified a possible ditch with a north-east to south-west alignment in the northwest corner of the site. Other anomalies identified were thought to be geological in origin or related to land drains.

3.7 Trial trench evaluation (Blackbourn 2019, OAE Report 2301)

- 3.7.1 A total of 80 trenches were excavated across the proposed development area. Only nine of the trenches contained archaeological features, however a number of the trenches contained irregular periglacial features, hollows and striations.
- 3.7.2 In the north-west part of the site a large ditch aligned north-east to south-west was revealed. No finds were recovered and the ditch remains undated. A small number of other features were recorded in the north-west part of the site, including a pit and post-hole yielding Early Neolithic pottery and a post-medieval ditch.
- 3.7.3 At the south-eastern limit of the site two small pits and a ditch terminus were uncovered. Although the pits contained no finds, one pit was found to contain fragments of hazelnut. Ditch terminus contained animal bone, Early Neolithic pottery and Early Neolithic worked flints.

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 previous phase of archaeological evaluation and the recommendations of the brief, more specific aims and research questions can be formulated:
- Revealing and understanding prehistoric land use and occupation
 - What is the nature of Early Neolithic occupation at the site? Do the remains constitute settlement?
- 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.

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 Event number

- 5.2.1 An HER parish code (EXG 112) has been obtained from the Suffolk HER, and a unique site code (XSFBRE22) has been assigned to the project.
- 5.2.2 A separate OASIS record number has been obtained for the phase of archaeological excavation (oxfordar3-504941) and reporting.

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* (2012).

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 Power cables are present over the entrance to the field and along the northern and western edge.
- 5.3.7 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

- 5.3.8 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.
- 5.3.9 All machine excavation will take place under the supervision of a suitably qualified and experienced archaeologist. Plant will only ever track on the topsoil and no stripped areas will be traversed by any plant at any point in time until they have been signed off by the SCCAS.
- 5.3.10 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.
- 5.3.11 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.
- 5.3.12 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.

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.

	<i>Feature Class</i>	<i>Proportion</i>
	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	50%
	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	Where deep features cannot be excavated safely, they will be sampled using a hand augur or boreholes, in order to assess their depth and structure.	
5.3.18	Significant archaeological features (e.g., solid or bonded structural remains, building slots or post-holes) will be preserved intact, even if fills are sampled.	
5.3.19	If preservation in situ is required by SCCAS, all exposed surfaces will be cleaned and prepared for reburial beneath construction materials. If appropriate, the areas will be protected with geotextile or other buffering materials.	
5.3.20	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. 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 connected to Leica Smartnet providing an accuracy of 5mm horizontal and 10mm vertical.
- 5.6.3 The site 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 into 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 Metashape (Professional Edition) software, and will be referenced using ground control points measured using a dGPS or total station.

Photographs

- 5.6.12 The photographic record will comprise high resolution digital photographs.
- 5.6.13 Photographs will include both general site shots and photographs of specific features. Every feature will be photographed at least once. Photographs will include a scale, 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.
- 5.6.14

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, 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*.
- 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 with 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 2018. *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 2019. *Animal Bones and Archaeology – Recovery to archive.*
- 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 to 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 flots will be 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 OA East can promote the site to the public via regular updates on the OA website and social media (Facebook, Instagram), once approved by the Client. Interviews may also be given to local radio and newspapers as requested, and with the agreement of the Client.
- 6.1.2 Current COVID-19 H&S requirements and Government guidance mean open days on-site are not currently viable. If this changes during the excavation work, opportunities for site open days will be discussed with SCCAS and the Client.

7 POST-EXCAVATION AND REPORTING

7.1 Post-excavation Assessment Report

- 7.1.1 Post-excavation analysis and reporting will follow guidance in Historic England's *Management of Research Projects in the Historic Environment* (2006, reissued 2015).
- 7.1.2 A post-excavation assessment (PXA) report and updated research design (UPD) will be delivered within nine months of the completion of fieldwork. The PXA report will include a timetable and programme of work for this aspect of the project.

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 and appropriate acknowledgements
 - 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.

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 24 months of the completion of fieldwork.
- 7.3.3 The scope, format and venue of any publication will be proportionate to the significance of the results. Publication will consider the objectives and principles laid out in the OA Publication Policy.
- 7.3.4 If SCCAS requires no further excavation on the site, a summary report will be prepared for the *Proceedings of the Suffolk Institute of Archaeology & History*. Publication of results will follow. The scope, format and venue of publication will be proportionate to the excavated significance of the archaeology, and may comprise a monograph, or an article in *Proceedings of the Suffolk Institute of Archaeology & History* or some other appropriate journal.

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 2020), and *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation* (Brown 2011).

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 (digital photographs will be stored on CD-ROM, 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 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.
- 8.1.6 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.
- 8.1.7 A written transfer of ownership document will be forwarded to SCCAS before the archive is deposited.
- 8.1.8 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 three 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 A site summary, including a site plan, will be provided to SCCAS two weeks after completing the excavation.
- 9.1.4 Post-excavation tasks will take a maximum of 9 months following the end of fieldwork, unless there are exceptional discoveries requiring lengthier analysis.
- 9.1.5 Final publication of the site (whether in a monograph, journal article or some other form agreed with SCCAS) will be completed within 2 years of completing fieldwork.
- 9.1.6 The project archive will be deposited within 12 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)
 - 3 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 Chris Thatcher. 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 post-medieval remains. Environmental remains will also be sampled.
- 10.2.2 Pottery will be assessed by Nick Gilmour (prehistoric), Alice Lyons (Roman) and Carole Fletcher (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 Ipswich and Colchester Museums / 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 the client (RPS Consultancy), Oxford Archaeology East and the SCCAS 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 Oxford Archaeology is covered by Public and Employer's Liability Insurance. The underwriting company is CNA / Hardy, policy number 10347803. 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
Donnelly, 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, <i>etc</i>	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.

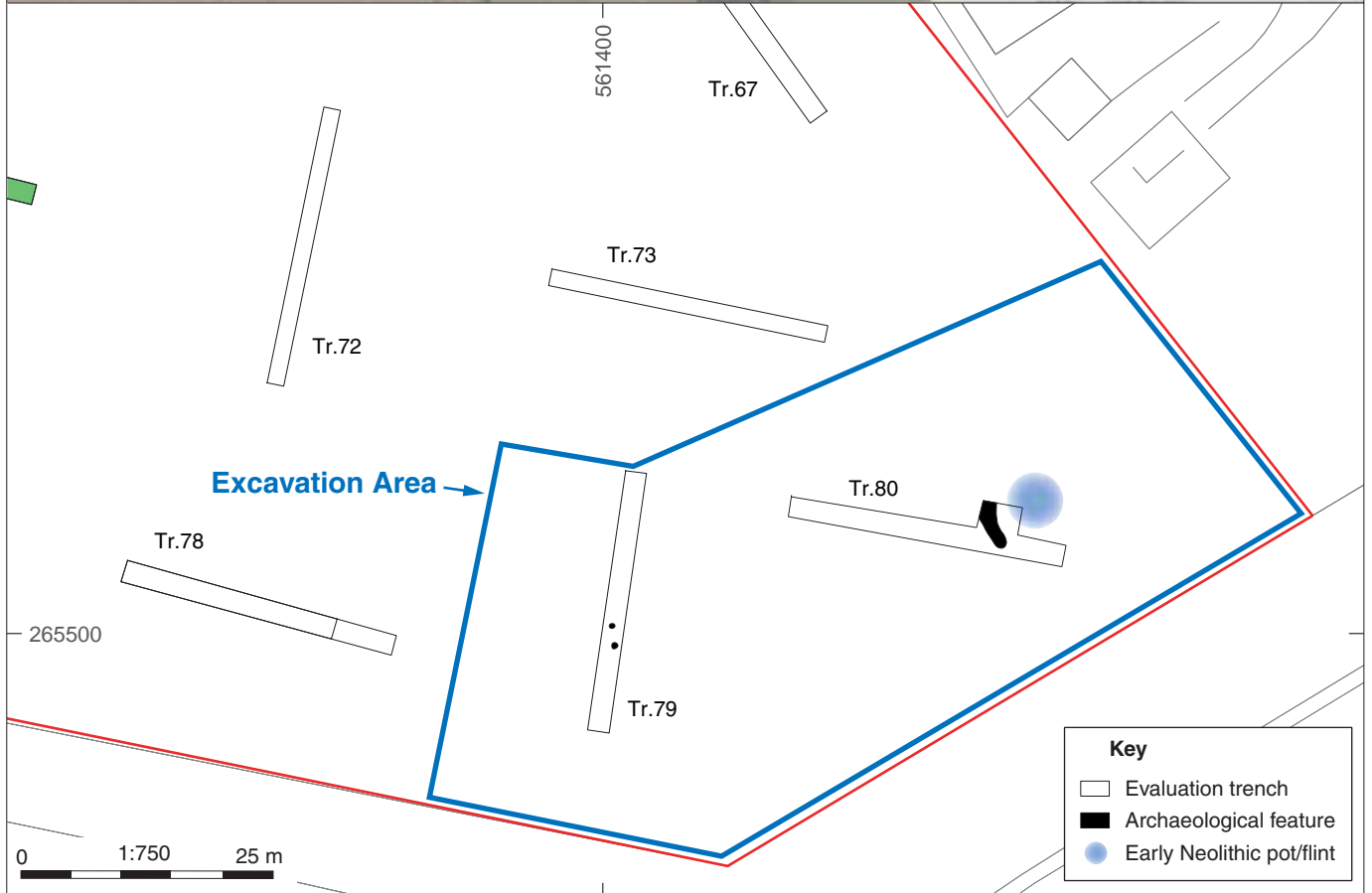
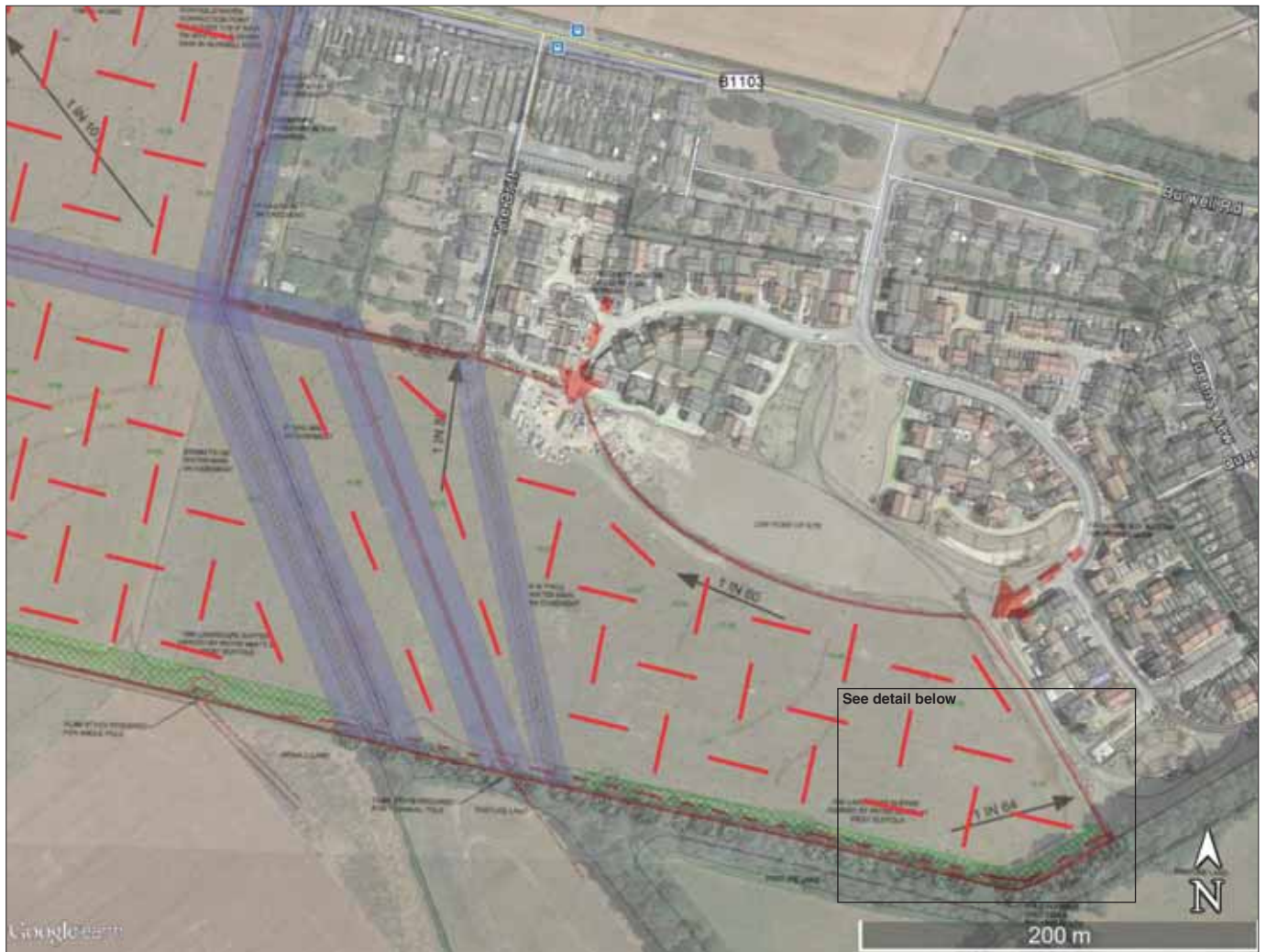
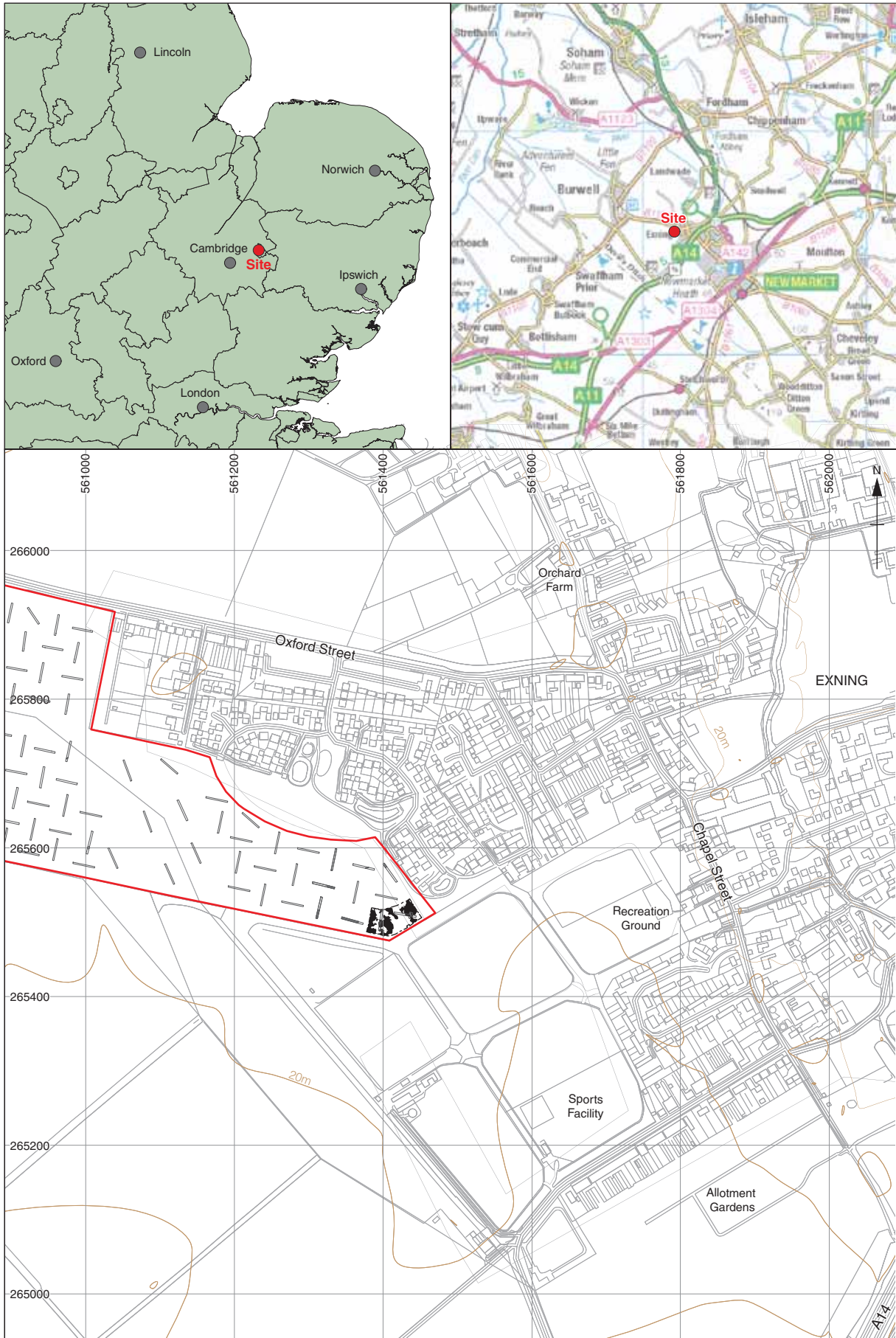


Figure 1: Site plan



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Figure 1: Site location showing excavation area (black) in development area (red)

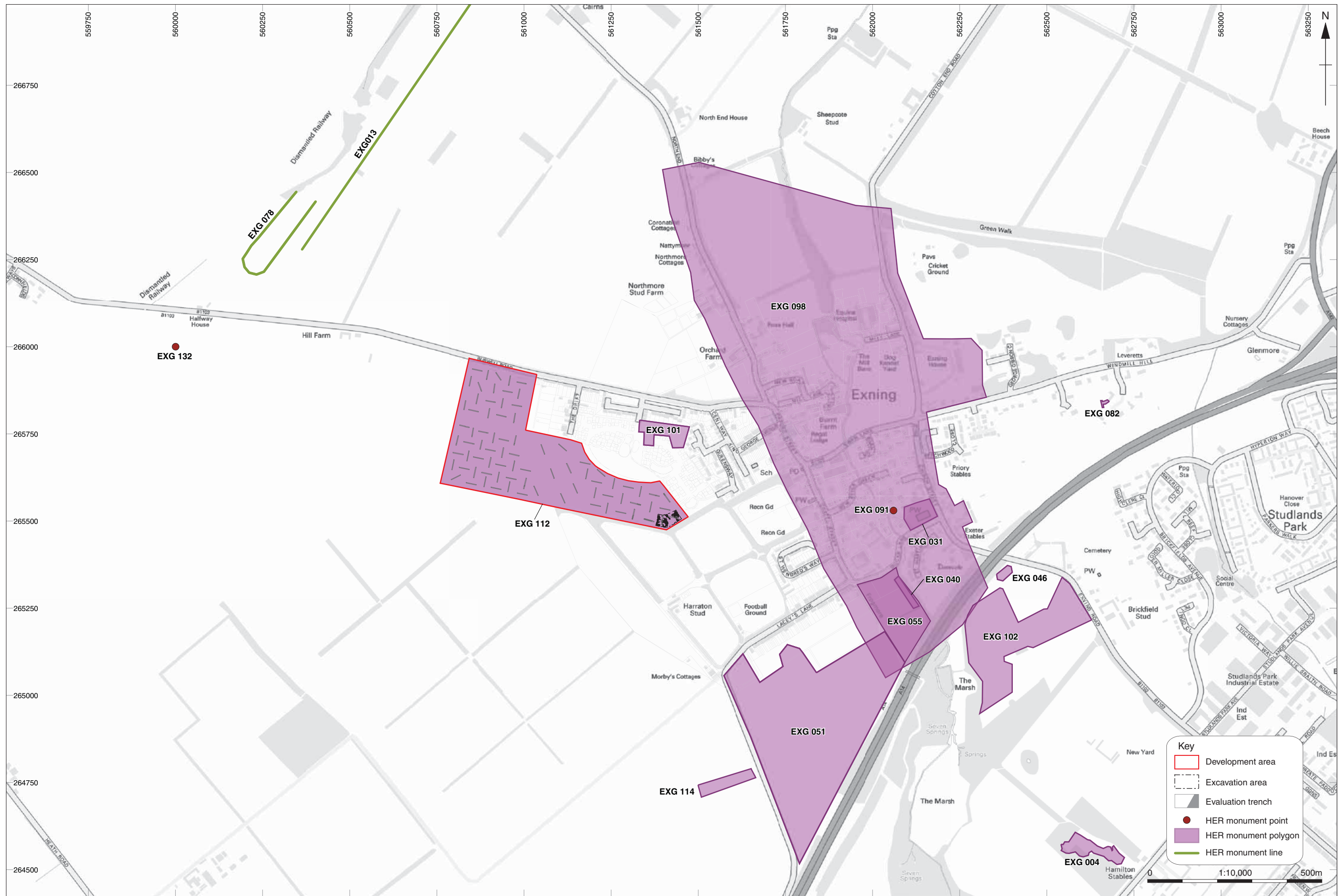


Figure 2: Selected HER data

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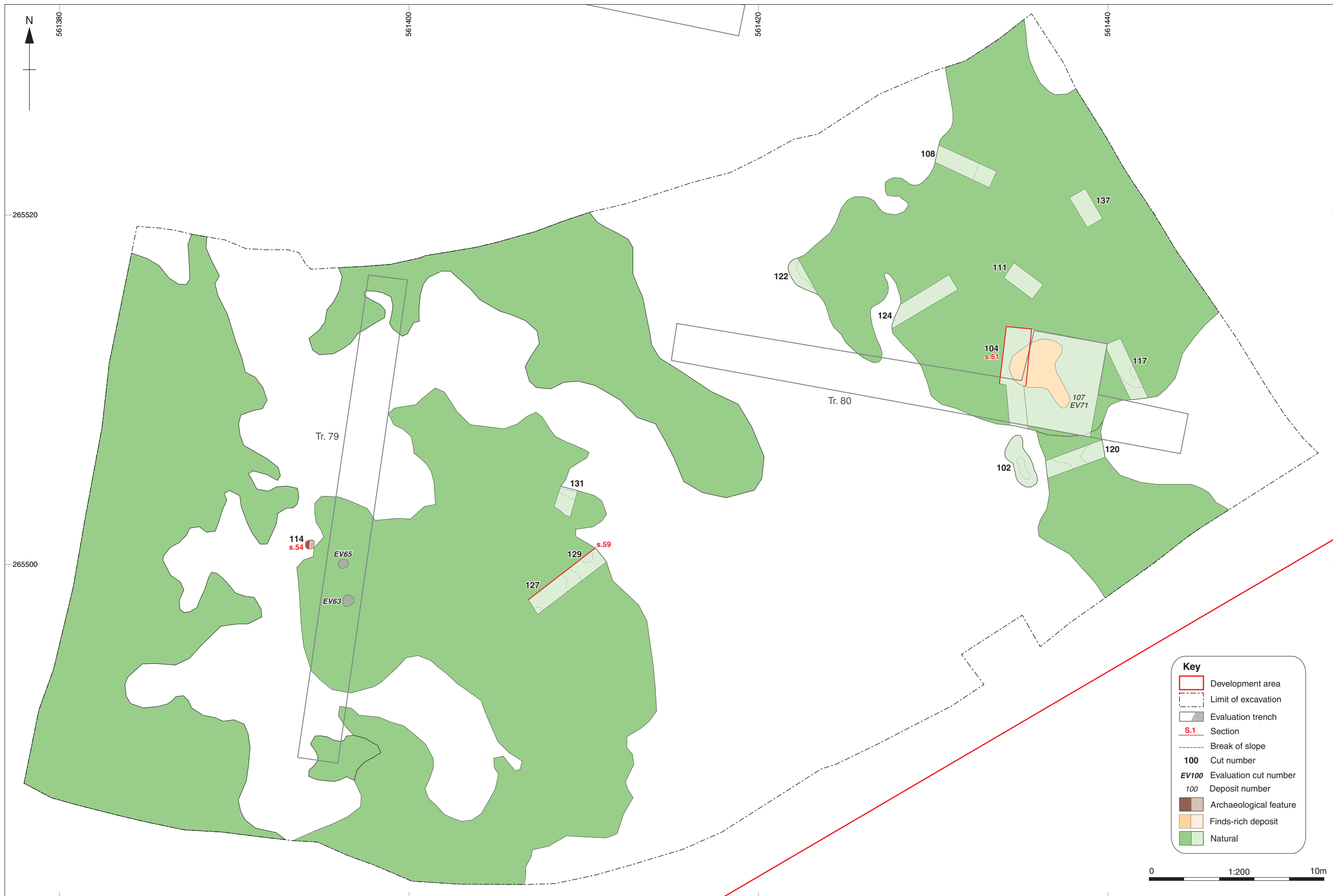


Figure 3: Plan of excavation area

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Figure 4: Deposit 107

Key

- Limit of Excavation
- Top surface
- - - Cut / conjectured
- - - Deposit Horizon conjectured
- - - Intrusion/Truncation
- Stone
- 117 Cut Number
- 116 Deposit Number
- 32.26 m OD Level

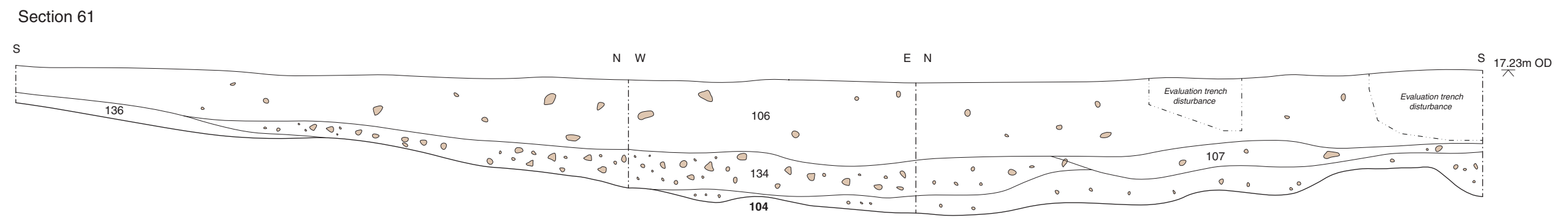
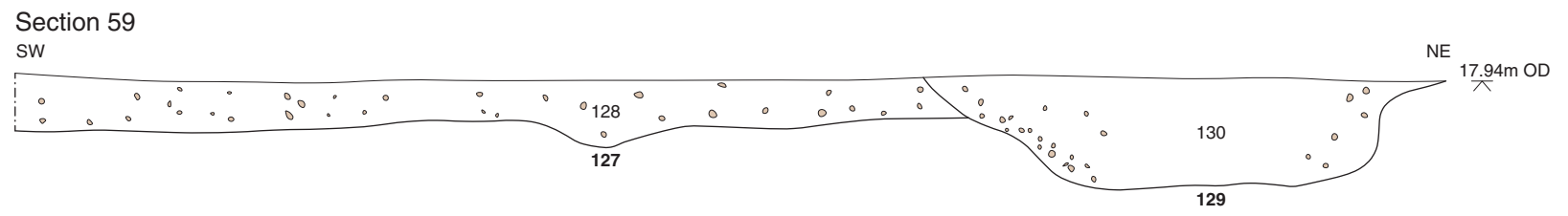
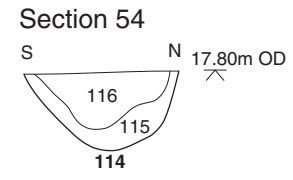


Figure 5: Selected sections

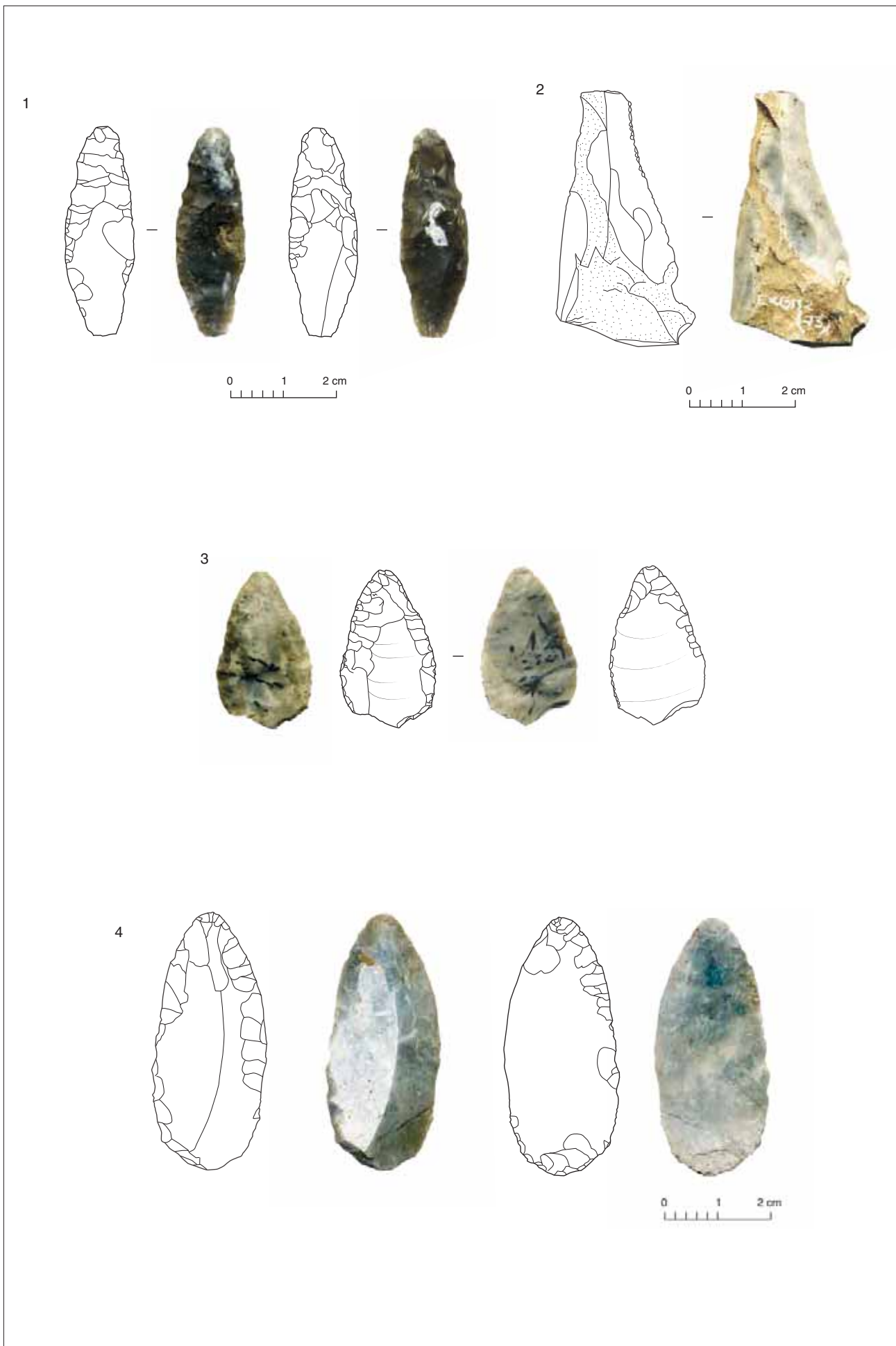


Figure 6: Illustration of worked flint

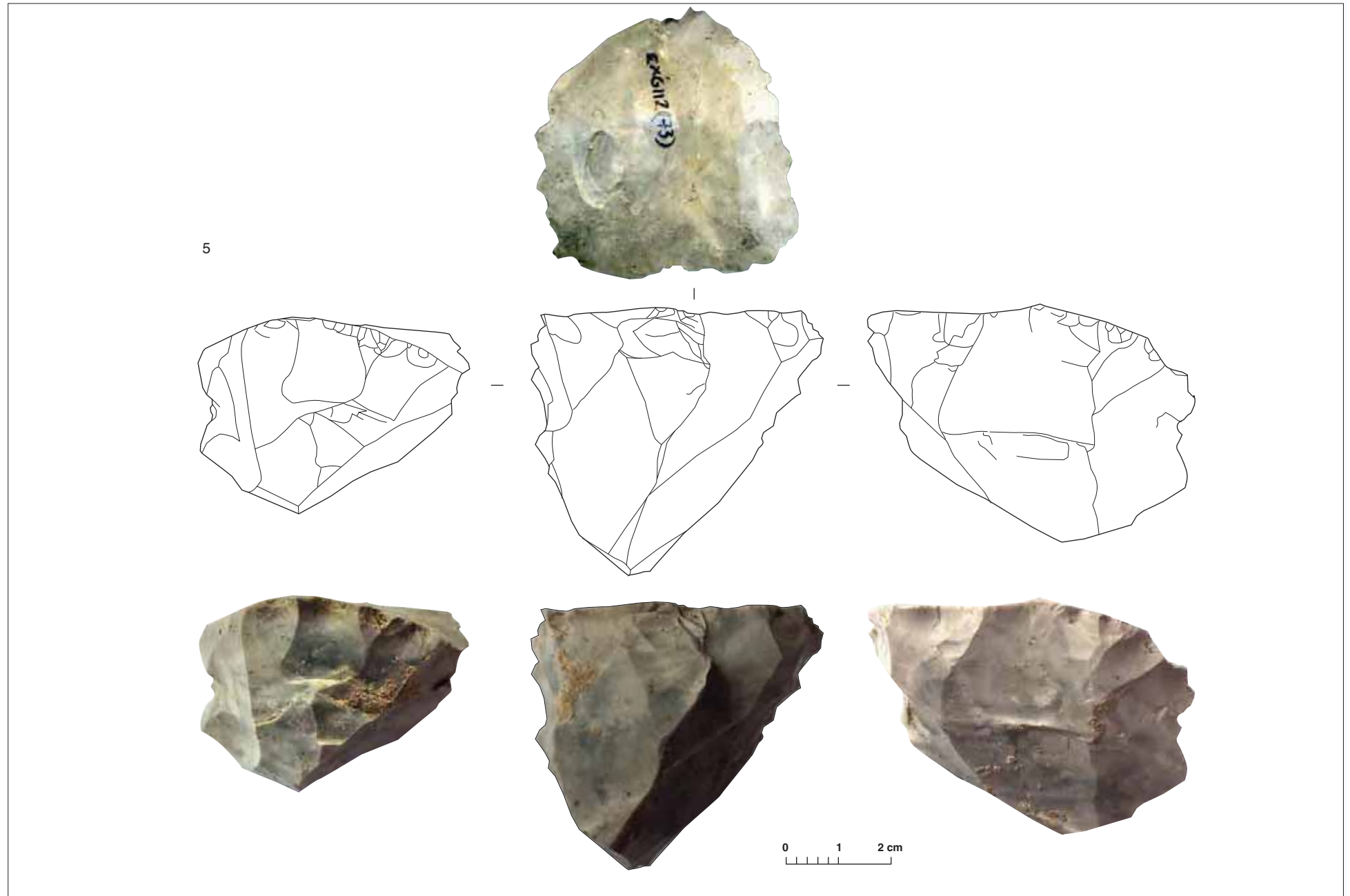


Figure 7: Illustration of worked flint

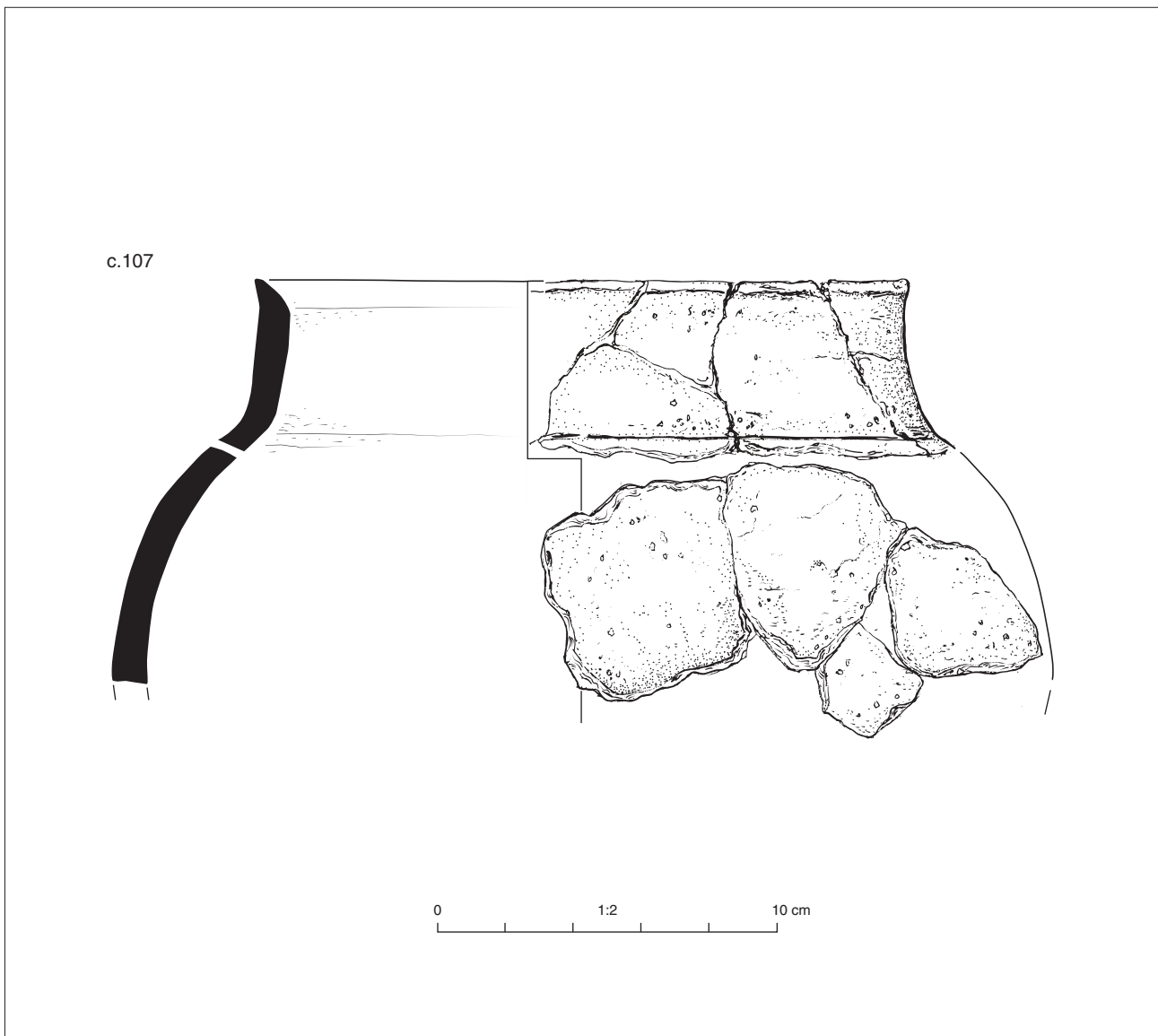


Figure 8: Illustration of pottery from context 107



Plate 1: Pottery on the surface of natural hollow **102**, looking south



Plate 2: Natural hollow **104**, looking south-east



Plate 3: Deposit 107 within natural hollow **104**, looking south-east



Plate 4: Possible pit **129**, looking north-west



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