

POST-EXCAVATION ASSESSMENT REPORT

SCCAS REPORT No. 2008/233

Land to the rear of Kessingland Primary School, Kessingland, Suffolk

KSS 080

Kieron Heard
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HER information

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Summary

This report presents the evidence from an archaeological evaluation and subsequent excavation on land to the rear of Kessingland Primary School, Kessingland, Suffolk. It provides a quantification and assessment of the site archive and considers the potential of the archive to answer specific research questions. The significance of the data is assessed and recommendations for dissemination of the results of the fieldwork are made. In this instance it is recommended that no further analysis of the site archive is required but that significant aspects of the finds assemblage should be considered for publication. Also it is recommended that this post-excavation assessment should be made available through the OASIS archaeological database as a 'grey literature' report.

Part of a Middle Bronze Age ditched enclosure or field system was identified in the northern part of the site and traced into the grounds of the neighbouring school. The associated finds assemblage includes a small but important group of domestic pottery together with worked flints and three cylindrical loomweights, all indicative of occupation in the immediate area. Carbonised residues on the interiors of two pot sherds have provided calibrated radiocarbon dates of between 1420 and 1260 BC.

A small pit or posthole inside the postulated enclosure and three similar features located outside the enclosed area also contained Middle Bronze Age pottery and represent the only evidence for activity contemporary with the enclosure / field system. Two of the pits/postholes contained moderate to high densities of emmer or spelt wheat grains.

1 Introduction

1.1 Site location

An archaeological trenched evaluation and subsequent open-area excavation took place on land to the rear of Kessingland Primary School, described hereafter as 'the site'. The site was centred at Ordnance Survey National Grid Reference TM 5304 8664 (Fig. 1) and encompassed an area of approximately 6400m². It was bounded by the grounds of Kessingland Primary School to the north, a residential parking area to the south and houses and gardens to the east and west. Access to the site was *via* Hall Road.

1.2 The scope of the project

This report was commissioned by ISG Jackson Ltd. on behalf of their client Flagship Housing Group, and produced by the Suffolk County Council Archaeological Service (SCCAS) Field Team. It has been prepared in accordance with the relevant Brief and Specification (Fletcher, 2008) and is consistent with the principles of Management of Archaeological Projects 2 (MAP2), notably appendices 4 and 5 (English Heritage, 1991). The principal aims of the project are as follows:

- Summarise the results of the archaeological fieldwork
- Quantify the site archive and review the post-excavation work that has been undertaken to date
- Assess the potential of the site archive to answer research aims defined in the Brief and Specification documents
- Assess the significance of the data in relation to the relevant Regional Research Framework (Glazebrook, 1997; Brown & Glazebrook, 2000) and in relation to recently drafted updates to those reports (Medlycott & Brown, 2008)

- Make recommendations for further analysis (if appropriate) and dissemination of the results of the fieldwork

1.3 Circumstances and dates of fieldwork

The fieldwork was carried out by SCCAS Field Team in response to an archaeological condition relating to planning permission for a residential development (Waveney District Council planning application number: DC/07/1827/FUL). Specifically, the proposed development included the construction of thirty-two 'sheltered apartments', a community library and five 'community rooms', together with landscaping of the external areas around the new buildings.

Prior to the archaeological fieldwork the site formed part of a recreational field with public access.

A trenched evaluation took place on 09–10 April 2008, in accordance with a Brief and Specification issued by SCCAS Conservation Team (Tipper, 2008) and a Method Statement produced by SCCAS Field Team (Newman, 2008). Five trenches were excavated using a wheeled JCB mechanical excavator fitted with a 1.5m wide, toothless bucket (Fig. 2). The trenches were between 25m and 71m in length and were excavated generally to the surface of the natural stratum at 0.35–0.40m below ground level. Parts of two ditches were identified, and were excavated partially with hand tools; they both produced small amounts of prehistoric pottery and one of them contained a sherd of Roman pottery. The results of the trenched evaluation are described in SCCAS report 2008/138 (Heard, 2008).

Due to the positive results of the evaluation a Brief and Specification for an archaeological excavation was issued by SCCAS Conservation Team (Fletcher, 2008). The excavation took place on 08–30 May 2008. A 360° tracked mechanical excavator fitted with a 1.80m wide, toothless bucket was used to strip the topsoil from an area measuring approximately 3420m² (Fig. 2). The two ditches found during the evaluation were exposed fully, and

another ditch and several small pits/postholes were found. The features were excavated and recorded in accordance with the SCCAS Manual (SCCAS, 2002). Linear features were sample excavated and all other features excavated fully. A SCCAS Field Team surveyor used a GPS system to plan the area of excavation and all archaeological features.

The brief and specification for the excavation called for a public outreach element to the archaeological work, involving the neighbouring primary school. Pupils visited the site on 23 May 2008 and the SCCAS Field Team Outreach Officer arranged several subsequent events in the school. These included the excavation of a small trench in the school grounds to investigate one of the ditches recorded in the excavation (Fig. 2). This took place on 12 June 2008. The ditch was identified and excavated but no detailed records were made.

The primary (paper) archive for both phases of fieldwork is located currently at the SCCAS Ipswich office. The finds are stored at the SCCAS Bury St Edmunds office (box location 1/91/4).



Figure 1. Site location

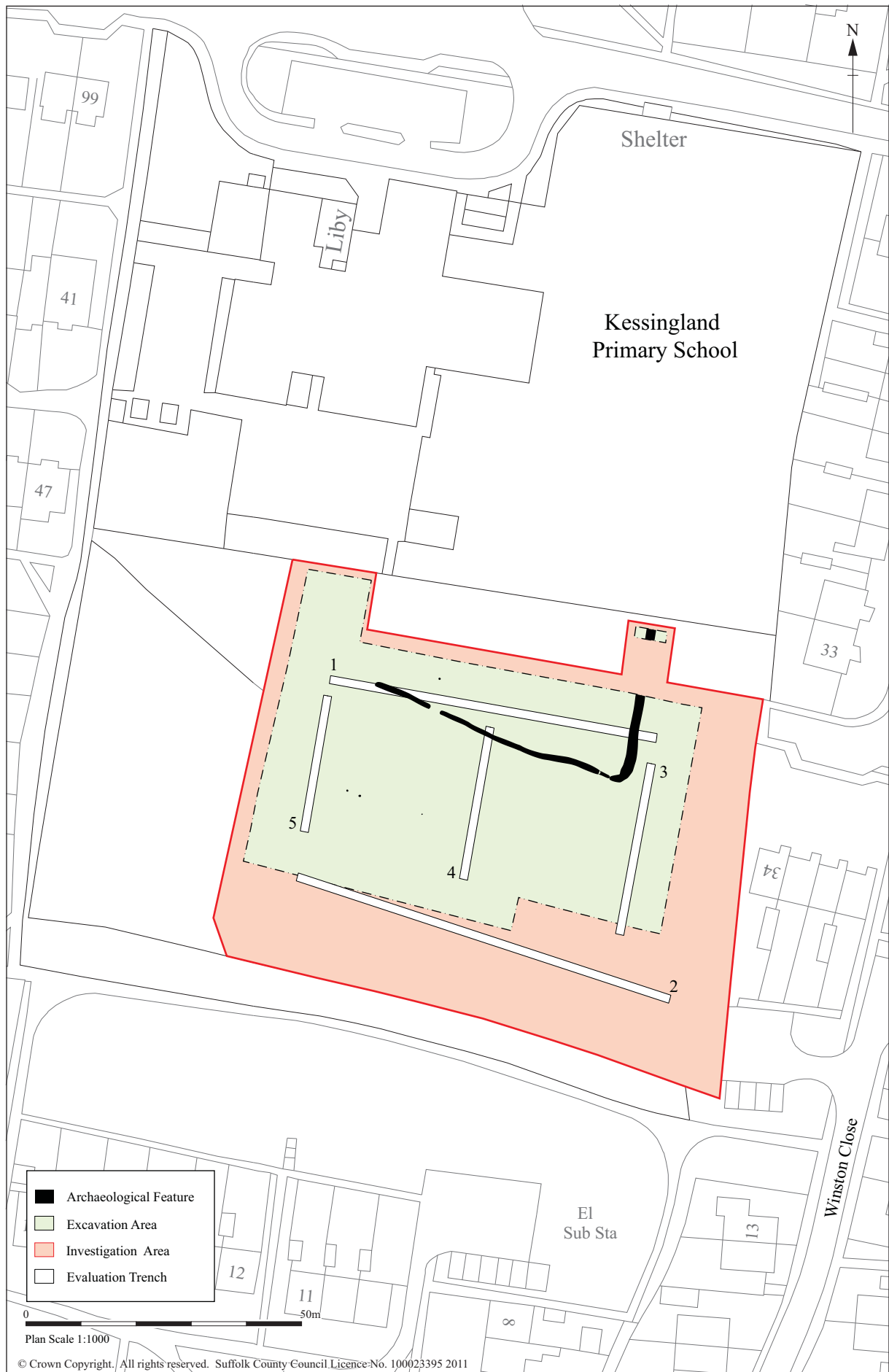


Figure 2. Evaluation trenches and area of excavation

2 Geological, topographic and archaeological background

2.1 Geology and topography

The published surface geology in the area of the site is glaciofluvial drift and chalky till deposits. The trenched evaluation suggested that the principal natural stratum was a glacial till (boulder clay), chalky in places and containing flint pebbles. In the south-eastern corner of the site a natural deposit of clayey sand overlies the till.

Layers of topsoil and turf with a combined thickness of 0.30–0.40m overlay the natural strata. Ground level sloped from c. 15.4m OD at the north-western corner of the site to c. 13.0m at its south-eastern corner.

2.2 Archaeology

The site was located in an area of archaeological interest defined in the County Historic Environment Record. In particular, a hoard of four Bronze Age axes and a Roman coin have been found in the Hall Road / Wash Lane area (KSS 012) and Roman pottery and coins have been found to the east of Wash Lane (KSS 019). Both these find spots are within 350m of the site. The medieval church of St Edmund (KSS 022) is located about 400m southwest of the site (Heard 2008, fig. 2, 5).

Map regression indicates that the site was in agricultural use until the construction of the surrounding housing estate in the 1960s, at which time the site became a recreation ground.

3 Original research aims

The original research aims of the project, as defined in the Brief and Specification for the trenched evaluation (Tipper, 2008), were as follows:

ORA 1: *Establish whether any archaeological deposit exists, with particular regard to any which are of sufficient importance to merit preservation in situ*

ORA 2: *Identify the date, approximate form and purpose of any archaeological deposit together with its likely extent, localised depth and quality of preservation*

ORA 3: *Evaluate the likely impact of past land uses, and the possible presence of masking colluvial/alluvial deposits*

ORA 4: *Establish the potential for the survival of environmental evidence*

A more specific research aim was defined in the Brief and Specification for the excavation (Fletcher, 2008):

ORA 5: *Determine the potential of the site to produce, in particular, evidence for prehistoric occupation in the form of finds and features*

4 Site sequence: results of the fieldwork

4.1 Introduction

The following is a chronological summary of the results of the fieldwork. For the purposes of this post-excavation assessment the archaeological deposits and features have been assigned to *groups* of related contexts (numbered G1001–G1012), and these are summarised below. Further details can be found in Appendix 2.

4.2 Natural strata

Finely bedded, light yellow and yellowish brown sands **G1001** (Fig. 5, S. 14, 0050 & S.15, 0057; Plate 3) occurred at a maximum recorded height of 13.50m OD in the north-eastern part of the site and although seen only in a limited area they are assumed to have extended site wide. At one location (Fig. 5, S. 14, 0049; Plate 4) they were sealed by a deposit of mid brownish yellow slightly clayey sand containing horizontal bands of crushed chalk, to a maximum recorded height of 14.12m OD. These sands were removed partially by natural channel **G1002** (Fig. 5, S.14 & 15, 0066) containing light to mid greyish brown silt with lenses of fine sand.

A site-wide deposit of firm, light yellowish brown clay/silt **G1003** (Fig. 5, S.14, S.15, & S.16, 0012) containing crushed chalk, pebbles and flint nodules sealed natural channel G1002 and underlying alluvial sand G1001. It is interpreted as glacial till. The surface of the deposit sloped from c. 15.0m OD in the northwest corner to c. 12.0m OD in the southeast corner of the site and it had a maximum recorded thickness of 0.80m where it filled the upper part of natural channel G1002. Localised deposits of light yellowish brown clayey sand with pebbles overlay the clay/silt, sometimes filling eroded channels.

4.3 Prehistoric features

Prehistoric activity was represented mainly by three linear ditches G1004, G1005 and G1006. These were separated by narrow causeways and possibly formed the south-eastern corner of a rectangular enclosure. One of the ditches (G1005) was re-cut and extended as G1008. A number of small pits/postholes (one within the postulated enclosure and three located outside the enclosed area) probably represented contemporary activity.

Enclosure ditches

Ditches **G1004** and **G1005** formed the southern boundary of the postulated enclosure (Figs. 3 & 4). They were 10.90m and 31.00m long respectively and were separated by a causeway about 1.90m wide. They were approximately 0.90m wide and between 0.56m and 0.70m deep, and had rounded termini at either end. Ditch profiles varied (G1005 was almost V-shaped in places) but generally they were steep-sided with concave or flat bases (Figs. 3 & 4, S.1 – S.11).

The ditches were filled generally with deposits of compact, greyish brown clayey silt with moderate to frequent pebbles and flint nodules. These are assumed to have derived largely from the weathering/slumping of the boulder clay in which the ditches were dug. Some of the fills were mottled with patches of yellowish brown clayey silt or dark grey sandy silt, and there were patches of red/purple/black scorched soil in the termini on either side of the causeway that separated the ditches. The ditch fills contained occasional small fragments of Middle Bronze Age pottery, two worked flints and small amounts of fired clay and charcoal. A sherd of Roman greyware (found during the evaluation phase, in ditch G1004) is assumed to have been intrusive since it was found close to the interface between the ditch fill and overlying topsoil.

Ditch **G1006** (Fig. 4) defined the eastern side of the postulated enclosure. It was at least 28m long (north–south) and at its southern end it turned to the west for approximately 2.0m. Generally it had an average width of 2.15m although it narrowed abruptly to 1.20m at the point where it turned to the west.

The ditch had a maximum recorded depth of 0.96m although it was much shallower (0.30–0.40m) at its southern end. The profile of the ditch varied from U-shaped with a broad, concave base to almost V-shaped with a narrow, concave base, as shown on Figure 5. It had a rounded terminus at its southern end and was separated from ditch G1005 by a causeway approximately 1.9m wide.

Primary fills (G1006)

Generally, the primary fills of the ditch were represented by layered deposits of sandy silt, clayey sand, sand and redeposited natural clay/silt (Fig. 5, S.14, 0043, S.15, 0058–0060, S.16, 0051–0056) that appeared to indicate gradual infilling of the ditch though the weathering of its sides or perhaps the slumping of an associated bank (of which no evidence survived). Tip lines seemed to indicate that most of these fills were introduced from the west side of the ditch. No cultural material was recovered from these deposits.

Fill 0043 at the southern end of the ditch (where it turned to the west) was a homogenous deposit of compact, mottled mid yellowish brown and mid brownish grey clayey silt containing moderate to frequent pebbles and flint nodules (Fig. 5, S.13, 0043); this deposit was similar to the fills of ditches G1004 and G1005. It contained occasional small fragments of Middle Bronze Age pottery and a worked flint.

Secondary fills (G1007)

The upper part of ditch G1006 contained a sequence of three distinctive deposits that extended for most of the length of the ditch, apart from the southern end where it turned to the west (Fig. 5, S.14, 0040–0042, S.15, 0029–0031, S.16, 0045–0047). These *secondary fills* were quite different from the primary fills (G1006) in terms of their soil matrices and in the nature of their inclusions.

At the base of the sequence of secondary fills was a thin deposit of mid grey clayey silt (0031, 0042 & 0047) containing occasional flecks of charcoal and a few pieces of worked flint. This was sealed by a deposit of dark grey sandy silt

(0030, 0041 & 0046), up to 0.10m thick, containing frequent flecks and small fragments of charcoal and frequent fragments of Middle Bronze Age pottery. Many of the pottery fragments were large and appeared to have come from vessels that were broken *in situ*. There were also worked flints, heat-altered flints, pieces of fired clay and fragments of three cylindrical loomweights. The uppermost fill was a deposit of greyish brown sandy silt or clayey silt (0029, 0040 & 0045), between 0.25–0.35m thick, containing occasional small to medium fragments of Middle Bronze Age pottery and a few worked flints.

Ditch **G1008** was a slightly narrower re-cut of ditch G1005 (Figs. 3 & 4, S.7–S.12). It had a maximum recorded depth of 0.46m (although it was generally about 0.30m deep), and had steep sides and a concave base. Sections revealed that it extended almost the length of ditch G1005, although it was not noted at the western terminus. To the east it extended beyond the terminus of ditch G1005, as far as ditch G1006; in doing so it removed the causeway that had separated ditches G1005 and G1006. Ditch G1008 was filled by a fairly homogenous deposit of mid to dark brownish grey clayey silt with occasional pebbles. Flecks of charcoal and fired clay were present, but no other cultural material.

Other prehistoric activity

There was little evidence for other prehistoric activity on the site. A small pit or possible posthole, 0.40m in diameter and 0.23m deep (G1009; Fig. 3) was the only feature within the postulated enclosure. Its fill contained frequent charcoal flecks, a few small fragments of Middle Bronze Age pottery, a worked flint and occasional small fragments of burnt animal bone. Three small pits/postholes (0020, 0022 & 0026, G1010; Fig. 6) were located to the south of the enclosed area. They were circular, ranging from 0.24m wide x 0.27m deep to 0.49m wide x 0.42m deep. Two of these features (contexts 0020 & 0026) produced abraded Middle Bronze Age pottery and 0020 also contained a flint flake. Environmental Sample 5 (from 0020) and Sample 6 (from 0022) both produced moderate to high densities of wheat grains plus a large number of fragmented indeterminate cereal grains.

4.4 Post-medieval and modern deposits

A localised deposit of soft, mid brown sandy silt containing moderate pebbles and occasional small fragments of brick and coal (G1011) occurred in the south-eastern corner of the site (Heard 2008, 9). It was up to 0.70m thick, petering out to the north and west. It overlay natural stratum G1003 and was sealed by modern topsoil G1012. It was probably a levelling deposit of relatively recent date.

Topsoil and turf G1012, with a combined thickness of approximately 0.35m, sealed natural stratum G1003 and all archaeological features. There was no underlying subsoil or former ploughsoil, suggesting that there had been extensive horizontal truncation across the site.

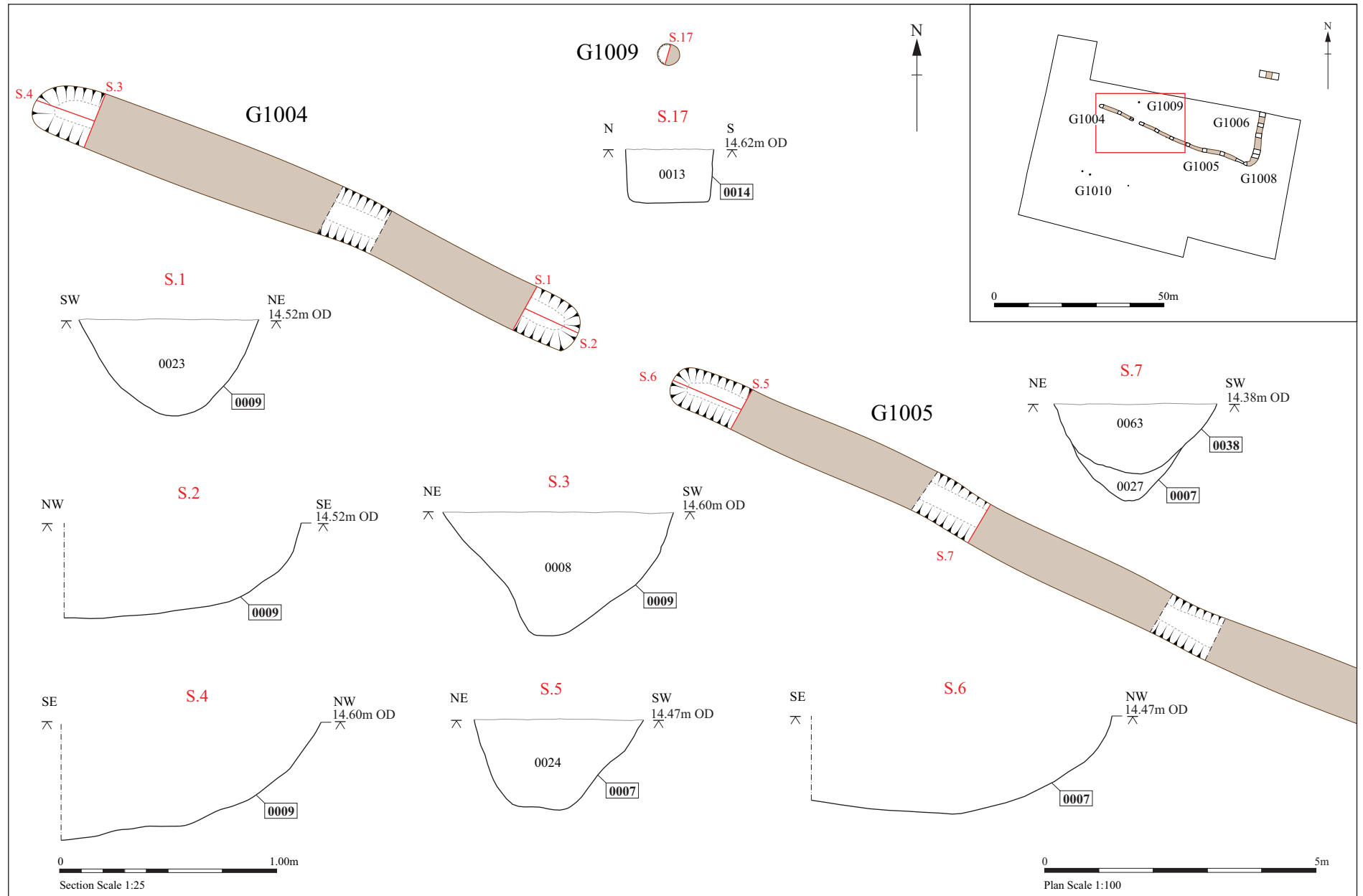


Figure 3. Plan and sections, part 1

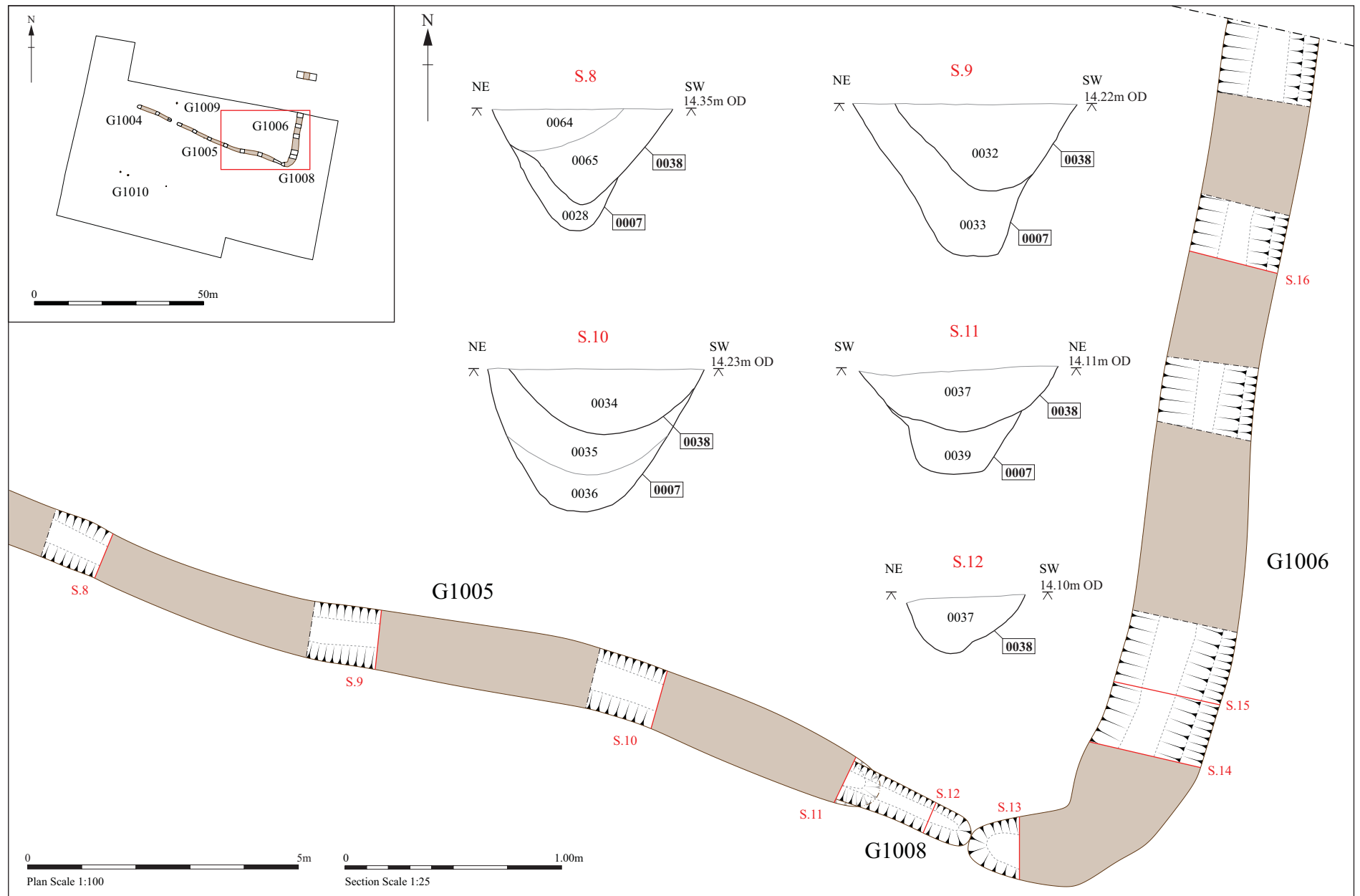


Figure 4. Plan and sections, part 2

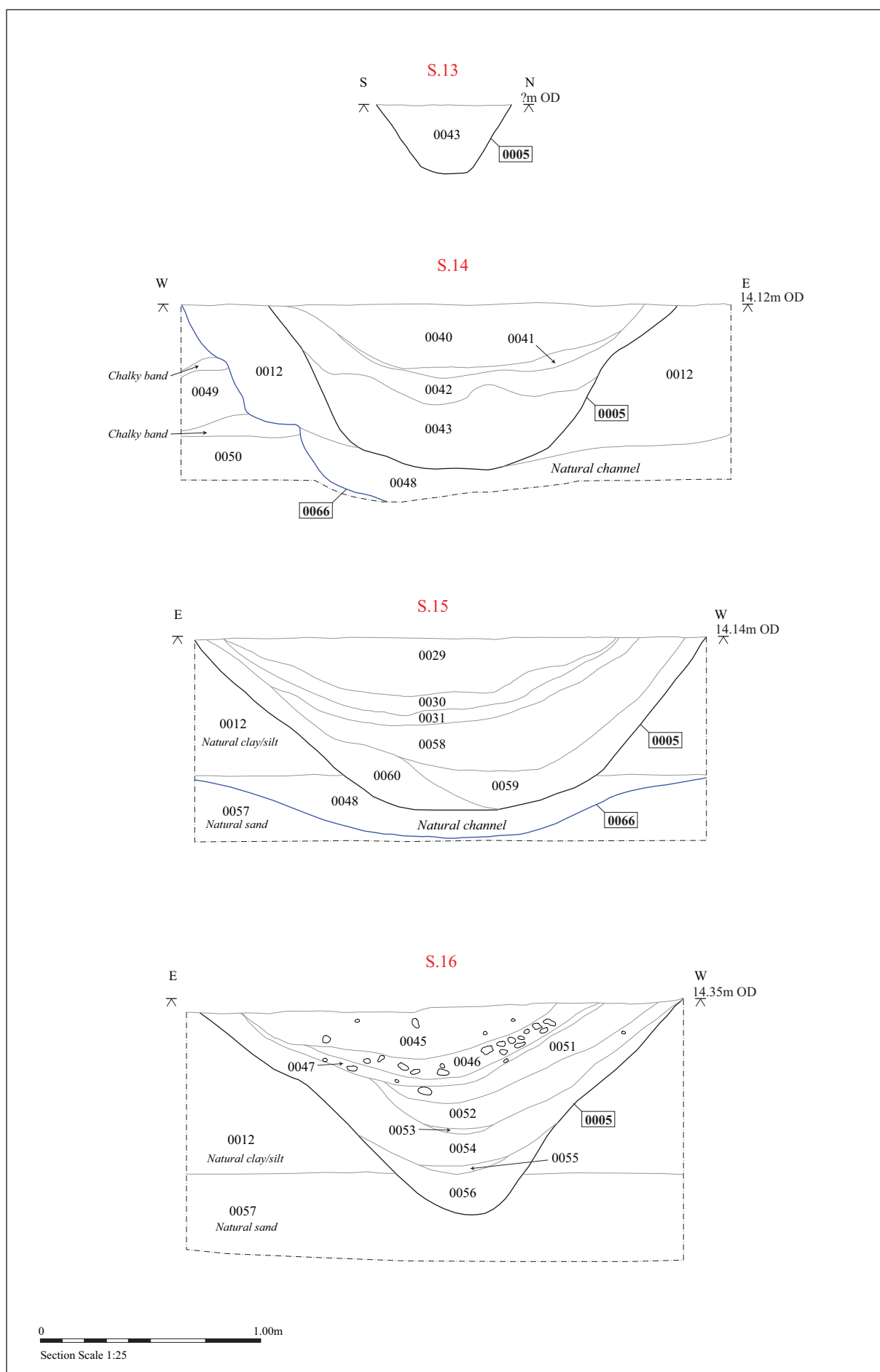


Figure 5. Sections through ditch 0005

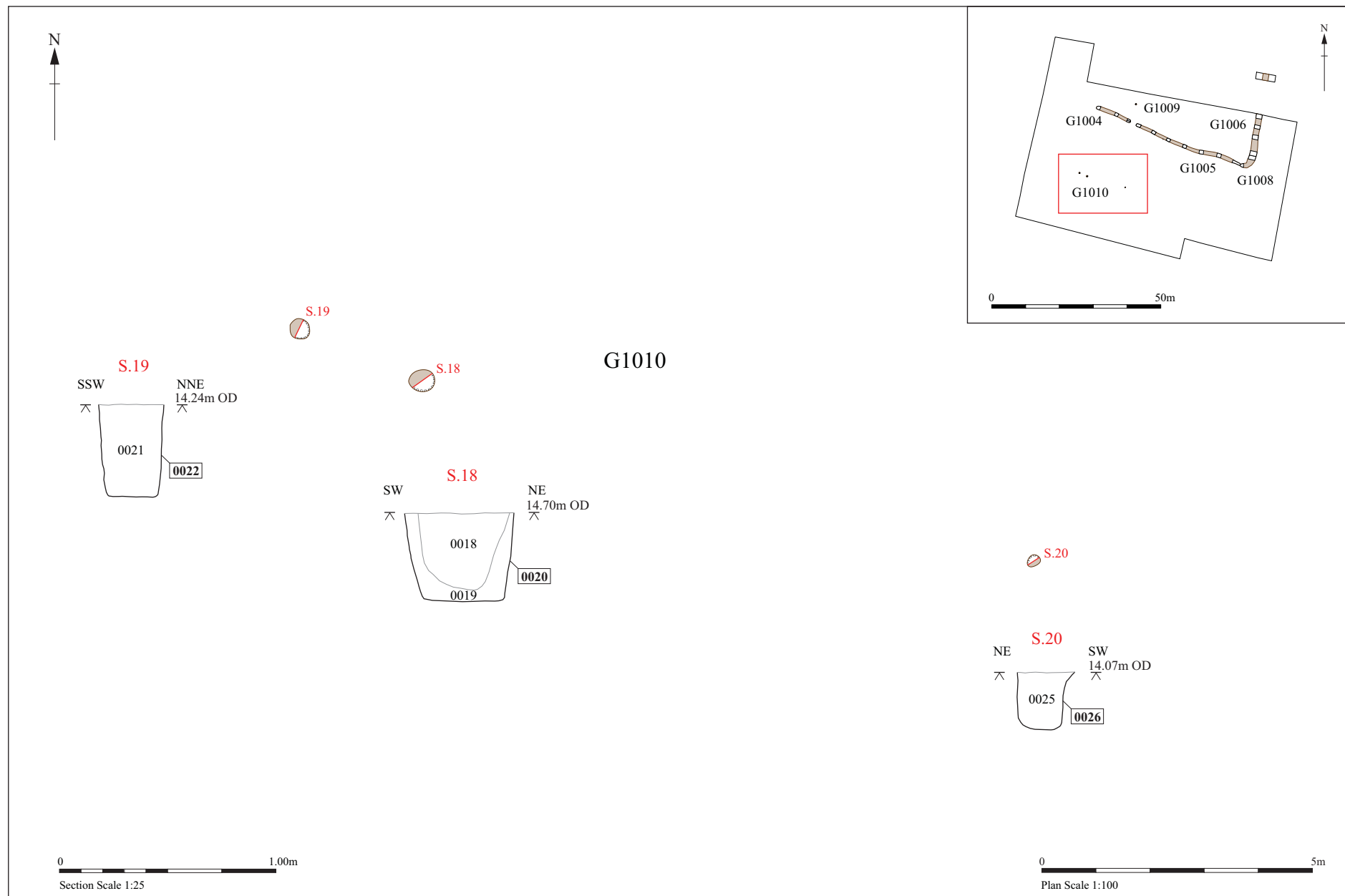


Figure 6. Plan and sections, part 3



Plate 1. The northwest terminus of ditch G1005, looking east (0.5m scale)



Plate 2. Causeway between ditches G1004 & G1005, looking north (1m scale)



Plate 3. Section (S.16) through ditch G1006 and underlying natural strata, looking south (1m scale)



Plate 4. Section (S.14) through ditch G1006 and underlying natural strata, looking north (1m scale)



Plate 5. Excavating Middle Bronze Age pottery in ditch G1006



Plate 6. Small pit/posthole 0020 (G1010), looking south (0.20m scale)

5 Quantification and assessment

5.1 Post-excavation review

The following post-excavation tasks have been completed for the stratigraphic, finds and environmental archive:

Task 01: Completion and checking of the primary (paper and digital) archive

Task 02: Microsoft Access database of the stratigraphic archive

Task 03: Microsoft Access database of the finds archive

Task 04: Catalogue and archiving of digital colour images

Task 05: Catalogue and archiving of monochrome prints

Task 06: Contexts allocated to Groups

Task 07: Group description/discussion text

Task 08: GPS survey data converted to MapInfo tables

Task 09: Plans digitised and integrated with GPS survey data

Task 10: Processing, dating and assessment of finds

Task 11: Assessment of environmental samples

5.2 Quantification of the stratigraphic archive

The stratigraphic archive is quantified in Table 1:

Type	Quantity	Format
Context register sheets	4	A4 paper
Context recording sheets	82	A4 paper
Environmental sample register sheets	1	A4 paper
Environmental sample recording sheets	15	A4 paper
Small finds register	1	A4 paper
Plan and section drawing sheets	17	290 x 320mm film
Digital images (film code FTI 042–086)	45	3008 x 2000 pixel .jpg
Digital image register sheets	2	A4 paper
B/W contact sheets ((film code FXH 001–023)	1	photographic contact sheet
B/W image register sheets	1	A4 paper
Report (SCCAS report no. 2008/138)	1	A4 ring-bound
Report (SCCAS report no. 2008/233)	1	A4 wire-bound

Table 1. Quantification of the stratigraphic archive

5.3 Quantification and assessment of the finds archive

Richenda Goffin

5.3.1 Introduction

Finds were collected from seventeen contexts from the excavation, as shown in Table 2.

Context	Pottery		Fired clay		Worked flint		Heat altered flint		Miscellaneous	Spotdate
	No.	Wt/g	No.	Wt/g	No.	Wt/g	No.	Wt/g		
0008	6	124								MBA
0013	4	36	20	75	1	13			1 stone @ 56g, 9 frags animal bone @ 6g	MBA
0015	23	168	5	29	5	76	1	8		MBA
0016			1	4						Undated
0017					1	21				MBA?
0018	8	27			2	18				MBA
0021	7	12	6	92	1	6				MBA
0023							2	25		Undated
0025	9	25			2	12				MBA
0028	5	78								MBA
0029	2	104								MBA
0030	28	864	2	16	15	321				MBA
0040	1	21			2	14				MBA
0041	5	81	1	74	1	5				MBA
0043	9	103								MBA
0046	32	603	2	30	7	112			2 frags stone @ 33g 8 frags stone @ 70g	MBA
0061	38	1590								MBA
Total	200	4103	37	320	37	598	3	33		

Table 2. Bulk finds

MBA = Middle Bronze Age

Finds were also recovered from three contexts during the evaluation stage (Heard, 2008). Thirty-two fragments of prehistoric pottery were identified from two ditches. The assemblage consisted of twenty-seven sherds of flint-tempered wares and five grog and sand-tempered sherds. Small quantities of worked flint, fired clay and heat-altered flint and stone were also collected. A single fragment of Roman greyware was also found in the fill of ditch 0009 (G1004), although this is thought to have been intrusive (Kieron Heard, *pers comm*).

5.3.2 *The prehistoric pottery*

Sarah Percival

Introduction

Two hundred sherds weighing 4103kg were recovered from six excavated features comprising three ditches and three pits/postholes. The pottery from all features is of the Deverel–Rimbury tradition and dates from the Middle Bronze Age, c.1500–1150 BC (Needham 1996, 133). The pottery is fragmentary, but in good condition. The average sherd weight for the assemblage is 20g.

Methodology

The assemblage was analysed in accordance with the guidelines for analysis and publication laid down by the Prehistoric Ceramic Research Group (PCRG 1997). The total assemblage was studied and a full catalogue prepared. The sherds were examined using a binocular microscope (x10 magnification) and were divided into fabric groups defined on the basis of inclusion types. Fabric codes were prefixed by a letter code representing the main inclusion type: F representing flint, G representing grog and Q representing quartz. Vessel form was recorded: R representing rim sherds, B representing base sherds, D representing decorated sherds and U representing undecorated body sherds. The sherds were counted and weighed to the nearest whole gram. Decoration and abrasion were also noted. The pottery and archive are curated by SCCAS.

Fabric

The assemblage is predominantly flint tempered, as shown in Table 3. Crushed heat-altered flint is the main inclusion in 82% of the sherds (3364g). A further 17% of the sherds are made of grog-tempered fabrics (736g). The remaining sherds, each representing less than 1% of the assemblage, contain sub-angular pieces of chalk (1g) or elongated voids indicative of vegetable temper, perhaps chopped grass (2g).

Fabric Group	Fabric	Description	Quantity	% quantity	Weight (g)	% weight
Flint	F1	Common white angular flint up to 5mm.	141	70.5%	2969	72.4%
	F2	Common white angular flint up to 5mm; moderate medium sub-rounded grog	16	8.0%	243	5.9%
	F3	Common small white angular flints; moderate quartz sand	8	4.0%	152	3.7%
Grog	G1	Common sub-angular grog up to 8mm; sparse small angular flint	17	8.5%	569	13.9%
	G2	Common sub-angular grog well sorted around 3mm; sparse small angular flint	5	2.5%	70	1.7%
	G3	Common fine grog pieces, common quartz sand	10	5.0%	58	1.4%
	G4	Common sub-angular grog up to 8mm; common large sub-rounded angular flint	1	0.5%	39	1.0%
Vegetable	V1	Numerous elongated voids	1	0.5%	2	0.0%
Chalk	C1	Common sub-angular chalk pieces; common quartz sand	1	0.5%	1	0.0%
<i>Total</i>			<i>200</i>	<i>100.0%</i>	<i>4103</i>	<i>100.0%</i>

Table 3. Quantity and weight of prehistoric pottery by fabric

The range of fabrics represented is very similar to those found at the contemporary site at Grimes Graves, Norfolk (Longworth *et al.* 1988, 41) where the main inclusions found were flint, shell and grog. No shell-tempered fabrics were found at KSS 080, perhaps indicating that fossiliferous shell rich clays were not available close to the site and were therefore not utilised by the potters there, or that the use of shell tempering was not part of the local tradition. A small number of fabrics with chalk inclusions were also found at Grimes Graves, but no vegetable-tempered sherds were present.

Recent excavations at Kirton Lodge Farm, near Ipswich, Suffolk (KIR 055) also produced a small assemblage of Deverel–Rimbury pottery. There 65% of the assemblage was flint-tempered with 34% containing grog and less than 1% being sand tempered (Percival, 2008). Other contemporary sites include Little Melton on the line of the Norwich Southern Bypass (Percival, 2000), again displaying a dominance of flint-rich fabrics.

Form and decoration

The assemblage contains the remains of a minimum of fourteen vessels, as shown on Table 4. The majority of the pots are bucket-shaped jars highly characteristic of Deverel–Rimbury pottery and also found both at Grimes Graves (Longworth *et al.* 1988, fig. 33, 276) and at Kirton Lodge Farm (Percival 2008). Three jars with closed profile (Fig. 7, Nos.1 & 3), a neutral jar with a cordon below the neck (Fig. 7, No. 6) and a fragmentary rim from a vessel with open profile were also found. Two vessels, including one large rim, are decorated with fingertip impressions to the rim top (Fig. 7, No.2; Longworth *et al.* 1988, fig. 8, 154). Three further bucket-shaped vessels have undecorated applied cordons around the girth (Fig. 7, No. 5) a form which again finds parallel at Grimes Graves (Longworth *et al.* 1988, fig. 34, 294). One highly fragmentary sherd has a pre-firing perforation piercing the body of vessel (not illustrated). Rows of perforations are highly characteristic of Deverel–Rimbury pottery and were found on numerous vessels from Grimes Graves (Longworth *et al.* fig. 34, 279) and at Kirton Lodge Farm (Percival 2008, P18). Base sherds from three vessels were found. The base angles suggest bucket-like forms and are either simple or may have a thin, pinched lip. One complete base was found in a fill of ditch 0005 (G1006).

Vessel type	No. of vessels
Bucket shaped	9
Closed vessel	3
Cordoned jar	1
Open vessel	1
Total	14

Table 4. Number of vessels by vessel type

Deposition

Deverel–Rimbury pottery is found throughout southern Britain in both funerary and domestic contexts (Gibson 2002, 104). The assemblage from Kessingland is almost certainly domestic. The utilitarian nature of the pottery is suggested both by the presence of carbonised residues on a small number of the sherds (eight examples) and the deposition of the sherds that mostly came from the upper fills (G1007) of ditch G1006, which produced nearly 90%

by weight of the assemblage (3684g). A small amount of pottery came from the primary fill 0043 (G1006) at the extreme south end of the same ditch. A further two ditches each contained small quantities of pottery (Table 5) with this type of feature contributing 97.8% of the total assemblage (4,011g). The remainder of the pottery was found in three small pits or postholes (G1009 & G1010; Table 5). The sherds found within the ditches have a large ASW (average sherd weight) of 23g and include the complete base (from context 0061) and all the rim and body sherds found. In contrast the pottery from the pits/postholes is small, with an ASW of a little over 3g. All the sherds found in the pits/postholes are undecorated body sherds, with the exception of one abraded example that has the remains of a possible cordon. This suggests that the sherds from the ditches had been deposited fairly soon after breakage and had remained undisturbed whilst those from the pits/postholes represent residual material accidentally incorporated as the postholes were backfilled.

Feature type	Feature	Group	Quantity	% quantity	Weight (g)	% weight
Ditch	0005	G1007	150	75	3684	89.8
	0005	G1006	9	4.5	96	2.3
	0007	G1005	3	1.5	74	1.8
	0009	G1004	10	5.0	157	3.8
Pit/Posthole	0014	G1009	5	2.5	34	0.8
	0020	G1010	13	6.5	34	0.8
	0026	G1010	10	5.0	24	0.6
Total			200	100	4103	100

Table 5. Quantity and weight of prehistoric pottery by feature type

Discussion

The pottery is extremely similar to the large contemporary assemblage from Grimes Graves (Longworth *et al.* 1988) and also the recently excavated pottery found at Kirton Lodge Farm (Percival, 2008). Deverel–Rimbury pottery has a suggested date range of around 1500–1150 BC (Needham 1996, 133). Thirteen radiocarbon determinations on samples associated with the pottery from Grimes Graves suggest that the Deverel–Rimbury occupation spanned the period from c.1375–845 BC (Longworth *et al.* 1988, 48).

Two radiocarbon determinations were produced from the carbonised residues on two of the KSS 080 vessels, from two separate fills 0030 and 0046 of ditch 0005 (G1006). Both are very similar in their dating which is within the Middle Bronze Age period (Appendix 4).

A domestic function is suggested for the assemblage, indicated by the presence of carbonised residues and lime-scaling and by the range of vessel sizes and finishes, almost certainly designed to perform a variety of utilitarian tasks (Longworth *et al.* 1988, 49). Deposition of the assemblage, mostly within the upper fills of a single ditch, suggests that the pottery had not been arranged or placed but was dumped into the feature soon after use, where it had remained largely undisturbed until excavation.

Catalogue of illustrated sherds

Six sherds of Middle Bronze Age pottery have been illustrated (Fig. 7), and these are listed in Table 6.

Drawing No.	Type	Fabric	Context	Feature	Group
1	Closed jar	F2	0002	0005	Ditch G1007
2	Bucket shaped	F1	0008	0009	Ditch G1004
3	Closed vessel	F1	0015	0005	Ditch G1007
4	Bucket shaped	G1	0029	0005	Ditch G1007
5	Bucket shaped	F1	0030	0005	Ditch G1007
6	Cordoned jar	G1	0030	0005	Ditch G1007

Table 6. Catalogue of illustrated Middle Bronze Age sherds

5.3.3 Fired clay

Introduction

A total of thirty-seven fragments of fired clay was recovered (32g). The assemblage has been fully catalogued by fabric and a table can be seen in the archive. It consists for the most part of small and abraded fragments, which have few diagnostic features that could suggest how the material was used.

The assemblage

Nearly all of the fired clay is made in medium sandy fabrics, some of which have flint inclusions up to 4mm, whilst others have red clay pellets in addition to the flint. Three fragments from the secondary ditch fills 0030 and 0046 (G1007) were made from poorly mixed clays that contained sparse small calcareous inclusions (1mm). Two fragments with flat possibly 'real' surfaces were recorded in ditch fill 0015 (G1007). The largest quantities of this material were found in pit/posthole 0014 (G1009) that contained twenty fragments weighing 75g, and pit/posthole 0020 (G1010) that had a further six fragments (92g). There was no significant difference in the fabrics and overall appearance of the fired clay recovered from the ditch fills and those found in the pits/postholes.

5.3.4 Worked flint

Sarah Bates

Introduction

A total of thirty-six pieces of flint was recovered from two ditches and two pits/postholes. The irregular nature and quite sharp condition of the material suggest it is probably contemporary with the Middle Bronze Age pottery found with it. A small fragment of heat-altered flint was found also.

Methodology

Each piece of flint was examined and recorded by context in a Microsoft Access database. The material was classified by *category* and *type* with numbers of pieces and numbers of complete, corticated, patinated and hinge-fractured pieces being recorded; the condition of the flint was commented on and additional descriptive comments were made as necessary. A full catalogue is included as part of the site archive. Non-struck flint was included in a separate column (*Non-struck*) in the database but has now been discarded and is not included in this report. Retouched and utilised flints and pieces selected for possible illustration have been bagged separately and the pieces for illustration extracted from the main bags.

The assemblage

The flint ranges from dark to pale grey with some irregular flawed and mottled patches. Cortex includes cream to dark orange cortex, some of it quite thick, thinner, quite smooth grey cortex and some patinated cortex or patinated former flint surfaces. The flint is summarised by type in Table 7.

Type	No.
multi platform flake core	2
shatter	4
flake	18
blade-like flake	2
end scraper	1
end/side scraper	1
scraper	1
spurred piece	1
retouched flake	1
retouched blade	1
utilised blade	1
utilised flake	3
Total	36

Table 7. Summary of worked flint by type

Two flake cores are present. One is very small (from 0046, G1007) and has some patinated former surfaces. The larger core is very irregular with overhangs along the platform edge showing that no platform preparation occurred (Butler 2005, 29–30) and incipient percussion cones from being repeatedly mis-struck (from ditch fill 0030, G1007) (Fig. 8, No.1). One side has fractured and one edge of the broken surface has then been used as a new platform with further mis-hits and incipient cones occurring. Part of the rounded cortical surface, with thin grey cortex, is battered where it has been used as a hammer.

Eighteen flakes were found, all of them sharp or quite sharp. They are generally irregular in nature, hard hammer struck and often squat or broad in shape although some flakes are longer. Two pieces have hinge fractures of their distal edges and several have cortical and/or patinated surfaces on their platform. Two irregular blade-like flakes and four shatter pieces are also present.

Three scrapers are present. A quite small flake fragment from 0043 (G1006) is minimally retouched across its broken edge, a quite thick cortical flake is coarsely retouched around its distal end and both sides and has a number of incipient percussion cones where it has also been hit on the cortical surface along the right side (0015, G1007). A neatly retouched end scraper is also present from ditch fill 0030 (G1007) (Fig. 8, No. 2). It has no percussion bulb and its 'proximal' and 'ventral' faces are probably thermal fractures. It has a patinated white cortex and neatly retouched rounded end.

A small hard hammer struck primary flake is retouched along its right side and has a tiny protruding spur (ditch fill 0046, G1007).

A retouched flake, a retouched blade, two utilised flakes and an utilised blade are present also. The utilised blade is quite long and straight with thin, smooth cortex on part of its surface and edge; its edges may have been used as a knife (ditch fill 0017, G1007). An irregular flake(?) or fragment (from 0046) is pinkish in colour, probably heat-altered, and has a notch in one side that might be deliberate although it is also broken/damaged.

Flint by stratigraphic group

Most of the flint came from the fills of postulated enclosure ditches in the northern part of the site.

Ditch G1004

Two utilised flakes (from 0023), both squat and with patinated cortex, were found in ditch 0009 – one of the ditches on the south side of the enclosure.

Ditch G1006 and its primary fills

A small, squat flake and a small scraper, made on a broken flake, were found in the primary fill 0043 of ditch 0005, on the east side of the enclosure.

Secondary fills (G1007) of ditch G1006

A total of thirty flints came from secondary fills of the same ditch, fifteen of them from context 0030. A range of flakes is present, all sharp and generally

quite irregular. There is also an irregular mis-hit core (see above, Fig. 8, No. 1) a retouched flake and a neat, round-ended scraper, probably made on a thermal fragment (Fig. 8, No. 2). Six flints came from secondary ditch fill 0046. They include a very small core, a broad flake, a shatter piece, the small spurred piece (see above) a small, retouched blade and a heat-altered and possibly utilised flake or fragment. There are also three flakes, a shatter piece and an end/side scraper from fill 0015 (all are somewhat irregular), a utilised blade, probably used as a knife, from context 0017, a broad short flake and a blade-like flake from context 0040 and an irregular blade-like flake from fill 0041.

Pits/postholes

An irregular flake and a small heat-altered fragment came from pit/posthole 0014 (G1009) inside the postulated enclosure, and a small heat-altered flake fragment was found in pit/posthole 0020 (G1010) to the south of the enclosed area.

Discussion

Most of the flint was recovered from the upper fills G1007 of a probable enclosure ditch G1006 and was found alongside ceramic material of Middle Bronze Age date. The rather irregular hard hammer struck flakes and the use of a variety of raw material, including patinated flint, are certainly consistent with its being of contemporary date, representing the gradual decline of flint-working as metal became available (Ford *et al.* 1984). The use of naturally fractured flint and the limited range of retouched pieces as well as the irregular core, unprepared and frequently mis-hit, and subsequently used as a hammer are all also characteristic of this later prehistoric period (Butler 2005, 181). The sharpness of the flint suggests that it was dumped into the ditch, with the pottery, soon after knapping/use. It may be significant, considering the abraded nature of the pottery from the pits/postholes, that two of the three flints found in these features were burnt and might have been residual there.

5.3.5 Heat-altered flint and other stone

Thirteen small fragments of rounded, heated-altered stone and flint were recovered from four contexts (159g). They were all found in contexts that contained pottery dating to the Middle Bronze Age and are likely to be associated with activities such as heating water or cooking.

5.3.6 Small finds

Nine small finds were recovered. Three loomweight fragments that date to the Middle to Late Bronze Age are described below, whilst six metal-detected finds (a Roman coin and five post-medieval or later objects) are listed briefly.

Loomweights

Sarah Percival & Richenda Goffin

The assemblage

Fragments from three cylindrical ceramic loomweights were recovered from three of the secondary fills of ditch G1006 (0030, 0041 and 0046; G1007). The weights are made of a dense, sandy fabric with occasional inclusions of rounded flint and quartzite up to 7mm. It is likely that these inclusions represent detrital material occurring naturally within the clay source, suggesting that the clay had been poorly cleaned and prepared before use.

SF 1002 (0030)

Fragment of a cylindrical(?) loomweight with central perforation of 16mm in diameter. The weight is decorated with parallel fingernail impressions applied vertically (Fig 9, No.1).

SF 1003 (0046)

Fragment of a cylindrical loomweight (diameter c. 90mm) with a tapering central perforation with a maximum diameter of 24mm. The weight is decorated on the outer face with rows of comb impressions (Fig 9, No. 2). These appear at an angle on the side of the weight impressed diagonally, and in rows on the flat surface. As the overall surface is so worn the details of the decoration are slightly conjectural as some of the impressions may not be deliberate but may be the result of abrasion.

SF 1010 (0041)

Fragment of a cylindrical(?) loomweight, with only a curved part of the outer edge surviving (not illustrated).

Discussion of the loomweights

The loomweights are almost identical in shape to examples from Kent's Low Floor and the Black Hole at Grimes Graves (Longworth et al. 1988, fig. 43, L1–4) that are contemporary with the mid Bronze Age Deverel–Rimbury pottery also found there.

Decorated examples are rare and until recently have not been found in the East Anglian region. The nearest geographical parallel for decorated loomweights of this type and date can be found in a small group excavated recently at Flixton Quarry, Suffolk (FLN 088). The remains of a cylindrical loomweight with shallow finger tip impressions on one end was identified (SF 1007), and a fragment of a probable loomweight with a row of dense comb impressions (SF 1012) was recovered also. A ceramic object of a similar shape to a later Bronze Age loomweight, with deep fingertip impressions on the upper surface but no central perforation, was recorded recently from a site at Hollesley, Suffolk (Percival, 2009).

Undecorated loomweight fragments dating to the Middle to Late Bronze Age were recovered from a ditch during an evaluation at Stow Park, Bungay (BUN 041; Meredith, 2000). To the south of the region, a small group of undecorated cylindrical weights of the Middle to Late Bronze Age was identified from a recent excavation at Colchester (Crummy, forthcoming).

Other parallels can be found from sites beyond East Anglia. Out of the twelve Middle Bronze Age loomweights recovered from Billingborough in Lincolnshire, one was decorated with fingertip impressions around the top and at intervals around the body in vertical rows (Bacon 2001, 67, and fig 35, no 8). A cylindrical loomweight decorated with comb impressions dating to the Early or Middle Bronze Age was recovered from a watching brief at Latton Lands Gravel Pit, North Wiltshire (Edwards, 2008). The base of the weight had been impressed with four rows of comb impressions. A cylindrical

loomweight decorated with lattice patterns using an impressed toothed comb was recovered from Blackbird Leys, Oxford (Barclay, 2003).

The unstratified metal small finds

(Identified by Andrew Brown)

Roman

SF 1004: Extremely worn copper alloy coin, diameter 15mm. Probably a radiate dating to the late 3rd–4th century.

Post-medieval, modern and undated

SF 1005: Lead disc, slightly dished, diameter 20mm. Probably modern.

SF 1006: Lead mount(?). Octagonal shaped with figure. Probably modern.

SF 1007: Fragment of irregular iron, length 43mm. Possible nail, undated.

SF 1008: Fragment of lead scrap. Undated.

SF 1009: Small copper alloy spoon, decorated on the underside near the top of the handle. Incomplete. 18th century or later.

5.3.7 Animal bone

Nine very small fragments of undiagnostic burnt bone were recovered from 0013 (pit/posthole G1009).

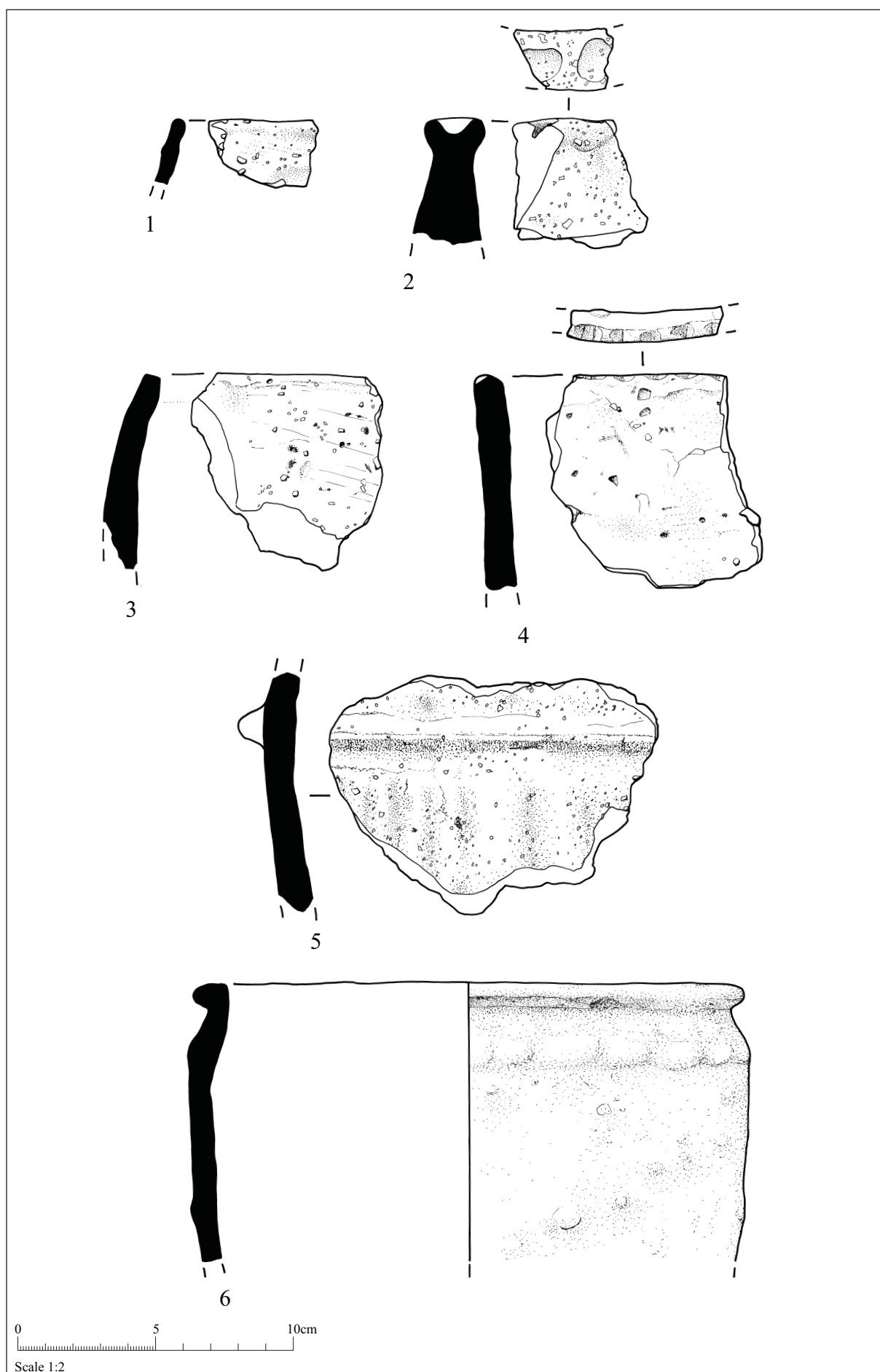


Figure 7. Middle Bronze Age pottery from ditches 0005 and 0009

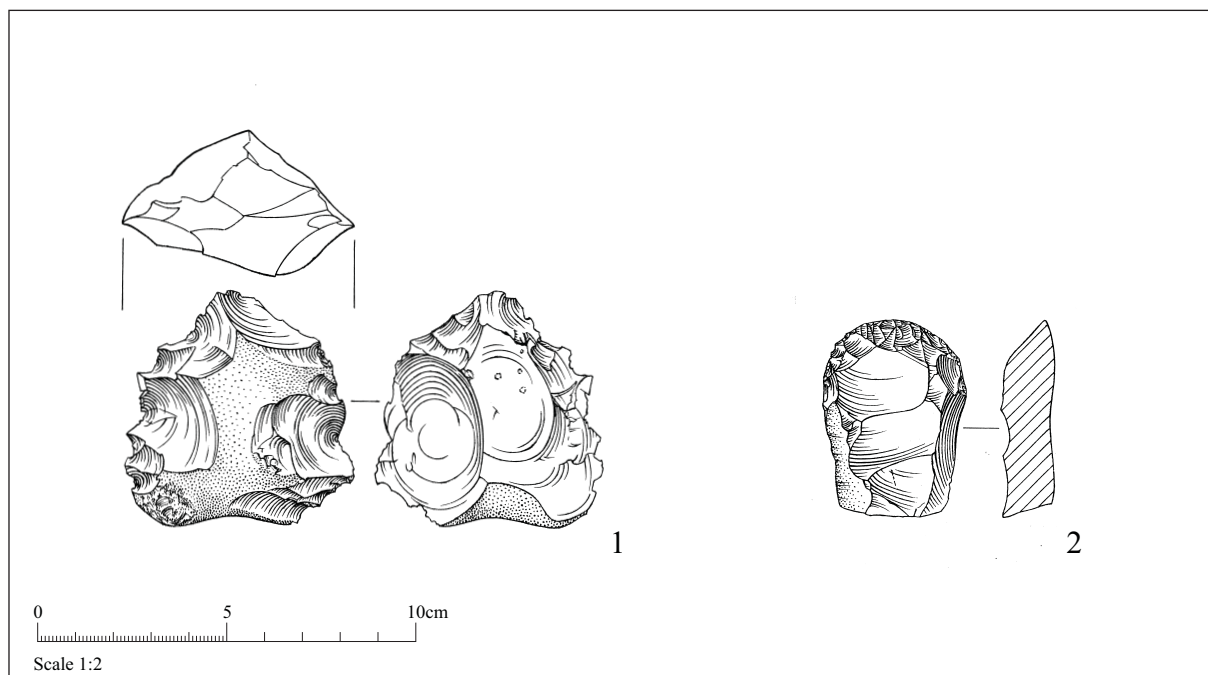


Figure 8. Worked flint from context 0030, ditch 0005
1. Multi platform core 2. End scraper on probable thermal fragment

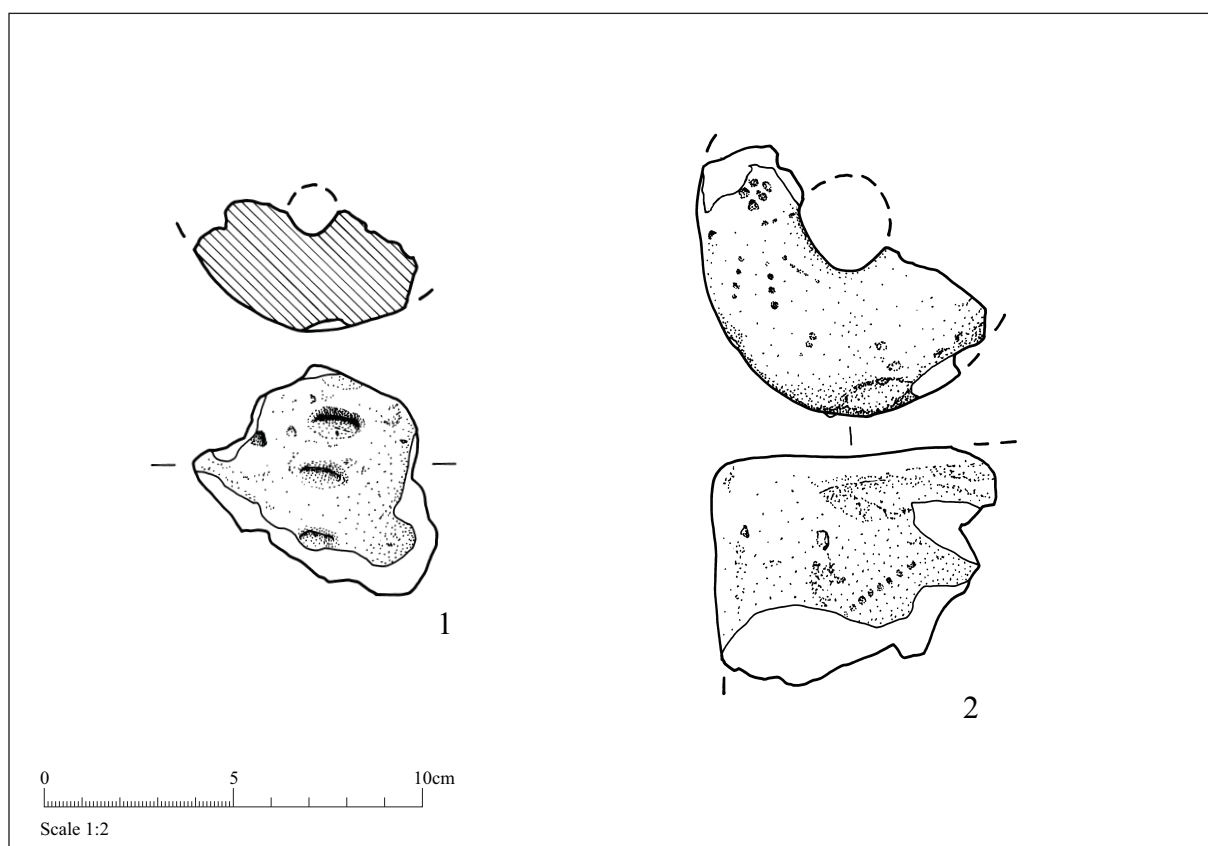


Figure 9. Decorated loomweight fragments

5.4 Quantification and assessment of the environmental archive

Val Fryer

5.4.1 Introduction and method statement

Samples for the retrieval of the plant macrofossil assemblages were taken, and fourteen were submitted for assessment.

The samples were processed by manual water flotation/washover and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x16 and the plant macrofossils and other remains noted are listed in Appendix 3. Nomenclature within the tables follows Stace (1997). All plant remains were charred. Modern contaminants, including fibrous roots and seeds, were present throughout.

The non-floating residues were collected in a 1mm mesh sieve and sorted when dry. All artefacts/ecofacts were retained for further specialist analysis.

Cereal grains and nutshell fragments suitable for AMS/C14 dating were taken from Sample 4 (pit/posthole fill 0013, G1009) and Sample 5 (pit/posthole fill 0018, G1010) and placed in separate glass tubes within the sample bags.

5.4.2 Results

Cereal grains, chaff and seeds of common weeds were recorded, mostly at a very low density, within six of the assemblages studied. Preservation was generally good, although a high number of the grains within Samples 5 and 6 (pit/postholes 0020 and 0022 respectively; G1010) were fragmented.

Barley (*Hordeum* sp.) and wheat (*Triticum* sp.) grains were noted, with wheat occurring most frequently. All identified wheat grains were of an elongated 'drop-form' shape typical of emmer (*T. dicoccum*) or spelt (*T. spelta*), and glume bases of both species were also recorded. A single, poorly preserved rachis node of barley or rye (*Secale cereale*) type was recorded within the

assemblage from Sample 9 (0029, ditch G1006). Weed seeds were very scarce. All were of common segetal species including fat hen (*Chenopodium album*), black bindweed (*Fallopia convolvulus*) and chickweed (*Stellaria media*). Small fragments of hazel (*Corylus avellana*) nutshell were noted within Sample 4 (posthole fill 0013, G1009) and Sample 5 (pit/posthole fill 0018, G1010), and a single elderberry (*Sambucus nigra*) seed was present within the assemblage from Sample 3 (ditch fill 0004, G1007).

Charcoal/charred wood fragments were common or abundant throughout, and formed the major component of many of the assemblages. Other plant macrofossils were scarce, although occasional pieces of charred root or stem were recorded.

Fragments of black porous and tarry material were noted within all but Sample 2. Whilst most were probable residues of the combustion of organic materials at very high temperatures, others had a more 'industrial' appearance. It was assumed that these, along with the small pieces of coal and possibly the vitreous globules, were probably modern contaminants within the contexts, derived from the recent deep cultivation of the land with steam ploughs. Other remains were scarce, although bone fragments, some of which were burnt, were noted within three assemblages.

5.4.3 Discussion

Of the fourteen assemblages studied, only two (Samples 5 & 6), from pit/postholes outside the postulated enclosure, are of particular merit. Although small (<0.1 litres in volume), both contain moderate to high densities of wheat grains plus a large number of fragmented indeterminate cereal grains. Why this material should be confined to two possible postholes is unclear, although it might have been that the features constitute the relicts of a small granary or storehouse. The high density of fragmented grains may indicate that the fills had been subjected to considerable disturbance after the initial deposition of the material. It is possibly of note that a small number of grains also occur within the single (possible) posthole G1009 (Sample 4) found within the enclosed area. Small scatters of grain, chaff and weed seeds are also

recorded within three fills of the enclosure ditches, although it would appear most likely that these remains were accidental inclusions within the deposits.

The remaining assemblages are largely composed of charcoal/charred wood fragments. Although probably derived from small deposits of hearth waste, domestic detritus (for example bone fragments) are scarce, possibly indicating a non-domestic origin for the material.

5.5 Results of radiocarbon analysis

Samples from carbonised residues on the inside of two sherds of prehistoric pottery were submitted to the Scottish Universities Environmental Research Centre (SUERC) for accelerator mass spectrometry (AMS) dating (Appendix 4).

The residue from the sherd from the secondary ditch fill 0030 (G1007) [Laboratory code SUERC-26927 (GU-20414)] produced a radiocarbon age BP (before AD 1950) of 3080 ± 30 , which calibrated at 95.4% probability is between 1420 and 1260 BC.

The residue from the second sherd submitted from secondary ditch fill 0046 (G1007) [Laboratory code SUERC-26931 (GU-20415)] produced a radiocarbon age BP (before AD 1950) of 3070 ± 30 , which calibrated at 95.4% probability is between 1420 and 1260 BC.

6 Potential of the data

6.1 Realisation of the Original Research Aims

ORA 1: *establish whether any archaeological deposit exists, with particular regard to any which are of sufficient importance to merit preservation in situ*

Realisation: The trenched evaluation revealed the presence of archaeological deposits and these were investigated further by open-area excavation. After consultation with SCCAS Conservation Team none of the deposits were deemed of sufficient importance to merit preservation *in situ*.

ORA 2: *Identify the date, approximate form and purpose of any archaeological deposit together with its likely extent, localised depth and quality of preservation*

Realisation: The fieldwork revealed a number of linear ditches that appear to have defined part of a prehistoric enclosure, or perhaps part of a field system. The pottery from the ditches is of Middle Bronze Age date. The postulated enclosure extended beyond the northern boundary of the site, into the grounds of the neighbouring school. The ditches survived to a maximum depth of 1.0m but must have been truncated, since contemporary land surfaces had not survived. There was little evidence for other occupation/activity on the site other than four small pits/postholes, one inside and three outside the enclosed area.

ORA 3: *Evaluate the likely impact of past land uses, and the possible presence of masking colluvial/alluvial deposits*

Realisation: The archaeological features were found immediately below the topsoil, cutting the natural stratum. The general absence of natural soil profiles or even a former ploughsoil indicated that there had been extensive vertical truncation in relatively recent times. The only masking deposit was a

layer of dumped soil, probably of recent date, close to the south-eastern boundary of the site.

ORA 4: *Establish the potential for the survival of environmental evidence*

Realisation: The preservation of environmental remains in ditch- and pit fills was generally good (5.4.2).

ORA 5: *Determine the potential of the site to produce, in particular, evidence for prehistoric occupation in the form of finds and features*

Realisation: The artefactual evidence (supported by radiocarbon dating) demonstrates activity on the site in the Middle Bronze Age. The size and character of the pottery assemblage (notably from G1007 – the secondary fills of ditch G1006) and the presence of loomweights suggest strongly that this activity was of a domestic nature and that the site was occupied during that period.

The stratigraphic evidence can be interpreted in a number of ways. It is most likely that ditches G1004, G1005 and G1006 were contemporary and that they defined part of a Middle Bronze Age enclosure or field system that extended beyond the northern boundary of the site. The western extent of the enclosed area is uncertain, since it does not appear to have been defined by ditches on that side. Perhaps flimsy fences of timber or brushwood, or hedges (that have left no trace) formed its western boundary. The re-cutting of ditch G1005 (as G1008) suggests that the enclosure / field system remained in use for some time and the extension of that ditch across what had been a causeway in the southeast corner of the enclosed area demonstrates modification of the entrances on its south side.

There are several aspects of the stratigraphic evidence that suggest a more complex sequence of events. For example, ditch G1006, forming the eastern side of the postulated enclosure, was considerably wider and deeper than ditches G1004 and G1005. This might have been the result of the assumed

recent truncation of the site, but could suggest also that the ditches were not dug at the same time according to a coherent plan. Furthermore, although ditch G1006 has been described as having a short, right-angled return at its south end, in retrospect it is possible that this was a re-cut or extension of an original linear ditch – it is noted that the east–west return was narrower and shallower than the north–south part of the ditch.

The secondary fills of ditch G1006 contained large amounts of unabraded pottery and domestic material (notably the loomweights), suggesting domestic activity in the immediate area. Moderate to high densities of wheat grains in association with Middle Bronze Age pottery in two of the G1010 pits/postholes provides additional evidence for occupation of the site. However, apart from a single small pit/posthole (G1009) inside the postulated enclosure and the group of three small pits/postholes to the south of the enclosure (G1010) there is no potential structural evidence for settlement.

Most of the Middle Bronze Age finds from the site were from a charcoal-rich deposit within the secondary fills (G1007) of ditch G1006. These secondary fills contrasted so strongly with the underlying (primary) fills of the ditch that a dramatic change of land use is suggested; perhaps the ditch was backfilled with midden material in an act of deliberate closure.

There is no evidence for ground surfaces contemporary with the ditches or for any associated bank. This coupled with the fact that there is no natural soil profile or even a former ploughsoil between the modern topsoil and the natural stratum suggests that there has been widespread truncation of the site, perhaps when the surrounding housing estate was built. Assuming this to be the case, much of the evidence for prehistoric activity on the site could have been destroyed at that time. Such terracing of the site might explain also why east–west ditches G1004 and G1005 became progressively shallower to the west.

6.2 General discussion of potential

Although the stratigraphic evidence can be interpreted in a number of ways there is enough artefactual evidence to indicate that the north–south ditch G1006 was of Middle Bronze Age (or earlier) date. East–west ditches G1004 and G1005 were probably broadly contemporary with G1006, although there is insufficient dating evidence to confirm this.

Despite the problems of interpretation the stratigraphic evidence is relatively straightforward and has been described adequately in this report. There is no potential for further analysis of the stratigraphic archive.

With regard to the finds archive, the small but important group of finds has been catalogued and discussed fully in this report. The significant pottery, flint and loomweights have been illustrated. Two radiocarbon determinations have been produced to confirm the dating of the Middle Bronze Age pottery. Consequently no further analysis of the assemblage is required. Similarly the environmental archive has been described adequately here and there are no recommendations for further analysis.

The finds assemblage is of sufficient importance that an appropriate method of disseminating the results of the work should be considered, such as a short article in the Proceedings of the Suffolk Institute of Archaeology and History.

7 Significance of the data

In this section the significance of the results of the fieldwork is considered mainly in terms of the East Anglian Regional Research Framework (Glazebrook, 1997; Brown & Glazebrook, 2000); reference is made also to a draft update of that document – the Revised Research Framework for the Eastern Region (Medlycott & Brown, 2008).

There is stratigraphic evidence for a ditched enclosure or field system. However the evidence, which is somewhat ambiguous, can be interpreted in various ways and its significance is therefore reduced. Apart from a few possible postholes there is no conclusive stratigraphic evidence for occupation on the site. The stratigraphic archive, in itself, is considered therefore to be of *local significance* only.

The finds archive includes a small but important group of Deverel-Rimbury pottery dating to the Middle Bronze Age. Carbonised remains on the inside of two vessels support this dating, providing radiocarbon dates within the overall range for this period. The flint is less easy to date typologically, and in this instance has been dated mainly by its condition and its association with the ceramics. The presence of the loomweights is significant, since decorated examples of this date are rare, and the two fragments recovered from the excavation are a valuable addition to the number that is known so far in East Anglia. It is also interesting to note that the decorative techniques of fingernail impressions and comb impressions used to decorate Middle Bronze Age pottery were used also on the loomweights of this date. The presence of wheat grains provides useful data for the arable economy during the Middle Bronze Age.

Evidence for Middle Bronze Age settlements within the north-eastern part of the East Anglian region is scarce (Brown & Murphy 1997, 16). Pottery dating to the earlier and Middle Bronze Age periods was recovered at the Household

Waste Recycling Centre site (CAC 035), 3km to the north of KSS 080 (Heard, 2010). There two incomplete Deverel-Rimbury-style urns and other Middle Bronze Age vessels were identified, which have parallels with the assemblage from Ardleigh, Essex (Brown, 1997).

The artefactual and macrofossil remains with the addition of radiocarbon dates for the pottery from KSS 080 have some regional significance therefore in relation to the Research Themes *Origins and development of the agrarian economy* and the *Development of artefacts within the Neolithic and Bronze Age* (Brown & Glazebrook 2000, 44). However, in the absence of a clearly understood stratigraphic context in which to place the artefactual and environmental evidence their significance is reduced.

The importance of these Research Themes is reinforced in the Revised Research Framework for the Eastern Region in which human interaction with landscape and environment is seen as central to archaeological study. Two Future Research Topics proposed by that report have some relevance here:

- The most helpful initiatives for regional Bronze Age studies are those concerning synthesis, or forums that encourage cross-regional dialogue and discussion of on-going projects.
- There is a marked divide in research between the northern and southern parts of the region. This may reflect a Bronze Age cultural or political divide and work needs to be undertaken on artefacts, monuments and burial rites to determine the extent, nature and reasons for this and identify any such boundaries.

8 Recommendations for further work and publication

It has been proposed (6.2) that the site archive has been described adequately in this report and that no further analysis is required. However, there is a recommendation that the Middle Bronze Age pottery and loomweights, together with the associated radiocarbon dates, are of sufficient importance that they require further reporting, possibly as a short article in the Proceedings of the Suffolk Institute of Archaeology and History. In addition, this post-excavation assessment will be disseminated as a 'grey literature' report *via* OASIS (Online AccesS to the Index of archaeological investigationS).

If, in the opinion of the Suffolk County Council Curatorial Team, the Middle Bronze Age pottery assemblage and associated finds are considered to be worthy of publication a proposal for publication will be prepared as an addendum to this assessment report.

9 Acknowledgements

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The project was managed by John Newman and supervised by Kieron Heard. Duncan Allan, Phil Camps and Sabra Hennessy assisted with the fieldwork. Surveying was by Fiona Gamble (all SCCAS Field Team).

The finds assessment is by Richenda Goffin (SCCAS, Finds Manager), with contributions by Sarah Bates (worked flint), Sarah Percival (prehistoric pottery) and Andrew Brown (small finds). The environmental assessment is by Val Fryer.

The illustrations were undertaken by Hazel Martingell (flint) and Sue Holden (pottery and loomweights).

Graphics are by Crane Begg.

10 Bibliography

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Appendix 1. Brief and Specification

SUFFOLK COUNTY COUNCIL ARCHAEOLOGICAL SERVICE, CONSERVATION TEAM

Brief and Specification for an Archaeological Excavation

Land to the rear of Kessingland Primary School, Kessingland, Suffolk

- 1. The nature of the development and archaeological requirements**
 - 1.1 Planning permission for the construction of a sheltered housing development on land to the rear of Kessingland Primary School, Kessingland, Suffolk (TM 5304 8663) has been granted by Suffolk Coastal District Council conditional upon an acceptable programme of archaeological work being carried out (DC/071827/FUL).
 - 1.2 This development comprises the construction of 32 sheltered flats, a community resource, library, an access road, car parking and exterior landscaping. The proposed application area measures c. 0.64ha, and is located on land to the south of Kessingland Primary School. It is situated on glacio-fluvial drift and chalky till deposits (sand and coarse loamy soils) at c. 10 - 15.00m AOD.
 - 1.3 This is an area of archaeological interest, recorded in the County Historic Environment Record with prehistoric and Roman find spots (KSS 012 and KSS 019) indicative of further occupation deposits. Based on this potential an initial Brief and Specification was issued by Dr J. Tipper on 31 January 2008 for a site evaluation. Suffolk County Council Archaeological Service Field Team undertook this work in the week beginning Monday 7th April 2008.
 - 1.4 The evaluation (KSS 080, SCCAS Report 2008/138) defined a series of archaeological features in the northern part of the site, which extending southwards in the form of linear ditches. Extensive finds of Neolithic Flint and Early Bronze Age pottery were located from well-stratified deposits within the ditches. A number of the pottery sherds could be Neolithic, and the location of pottery of this period is unusual particularly in this part of Suffolk. A single sherd of Roman pottery may be indicative of later occupation of the site. The evaluation also suggested that these deposits were lying just below the surface of the field and would be damaged by the development.
 - 1.5 In order to comply with the planning condition, the Conservation Team of the Archaeological Service of Suffolk County Council (SCCAS/CT) has been requested to provide a brief and specification for further archaeological recording of archaeological deposits that will be affected by development. An outline specification, which defines certain minimum criteria, is set out below. This document supersedes any previous Brief and Specifications.
- 2. Brief for Archaeological Investigation**
 - 2.1 An archaeological excavation, as specified in Section 3, is to be carried out prior to development, measuring approximately 0.64ha in total area. It has been agreed with

the developer that the methodology should be tied as closely to the development plan as possible to minimise delays and impacts. This work will take the form of a topsoil strip of the development area under archaeological supervision and conditions (e.g. toothless bucket, controlled tipping runs etc – See 3.2 and 3.3), followed by an archaeological recording of the features recovered. The order in which the site is excavated will be prioritised in conjunction with the development requirements. This is to allow parts of the site to be handed back and the development to commence, but only once the archaeology work has been completed to the level required by this brief and specification.

- 2.2 This Brief and Specification relates to the topsoil stripping and archaeological recording exercise. An additional component of Education and Outreach is to be included as a deliverable objective of the scheme.
- 2.3 The excavation objective will be to provide a record of all archaeological deposits, which would otherwise be damaged or removed by development, including services and landscaping, permitted by the consent. Adequate time is to be allowed for archaeological recording of archaeological deposits during excavation.
- 2.4 The academic objective will centre upon the potential for this site to produce, in particular, evidence for prehistoric occupation, in the form of finds and features.
- 2.5 This project will be carried through in a manner broadly consistent with English Heritage's *Management of Archaeological Projects*, 1991 (MAP2). Excavation is to be followed by the preparation of a full archive, and an assessment of potential for analysis and publication. Analysis and final report preparation will follow assessment and will be the subject of a further brief and updated project design.
- 2.6 In accordance with the standards and guidance produced by the Institute of Field Archaeologists this brief should not be considered sufficient to enable the total execution of the project. A Written Scheme of Investigation (WSI) based upon this brief and the accompanying outline specification of minimum requirements, is an essential requirement. This must be submitted by the developers, or their agent, to SCCAS/CT (Shire Hall, Bury St Edmunds IP33 2AR; telephone/fax: 01284 352443) for approval. The work must not commence until this office has approved both the archaeological contractor as suitable to undertake the work, and the WSI as satisfactory.
- 2.7 The WSI will *provide the basis for measurable standards* and will be used to establish whether the requirements of the planning condition will be adequately met. An important aspect of the WSI will be an assessment of the project in relation to the Regional Research Framework (*East Anglian Archaeology Occasional Papers* 3, 1997, 'Research and Archaeology: A Framework for the Eastern Counties, 1. resource assessment', and 8, 2000, 'Research and Archaeology: A Framework for the Eastern Counties, 2. research agenda and strategy').
- 2.8 Before any archaeological site work can commence it is the responsibility of the developer to provide the archaeological contractor with either the contaminated land report for the site or a written statement that there is no contamination. The developer should be aware that investigative sampling to test for contamination is likely to have an impact on any archaeological deposit, which exists; proposals for sampling should be discussed with SCCAS/CT before execution.
- 2.9 The responsibility for identifying any restraints on archaeological field-work (e.g. Scheduled Monument status, Listed Building status, public utilities or other services, tree preservation orders, SSSIs, wildlife sites &c.) rests with the commissioning body and its archaeological contractor. The existence and content of the archaeological brief does not over-ride such restraints or imply that the target area is freely available.

- 2.10 All arrangements for the excavation of the site, the timing of the work, access to the site, the definition of the precise area of landholding and area for proposed development are to be defined and negotiated with the commissioning body.
 - 2.11 The developer or his archaeologist will give SCCAS/CT ten working days notice of the commencement of ground works on the site, in order that the work of the archaeological contractor may be monitored. The method and form of development will also be monitored to ensure that it conforms to previously agreed locations and techniques upon which this brief is based.
- 3. Specification for Archaeological Excavation (see also Section 4)**
- 3.1 The excavation methodology is to be agreed in detail before the project commences. Certain minimum criteria will however be required.
 - 3.2 Topsoil and subsoil deposits must be removed to the top of the first archaeological level by an appropriate machine with a back-acting arm fitted with a toothless bucket. All machine excavation is to be under the direct control and supervision of an archaeologist.
 - 3.3 If the machine stripping is to be undertaken by the main contractor, all machinery must keep off the stripped areas until they have been fully excavated and recorded, in accordance with this specification. Full construction work must not begin until excavation has been completed and formally confirmed by SCCAS/CT.
 - 3.4 The top of the first archaeological deposit may be cleared by machine, but must then be cleaned off by hand. There is a presumption that excavation of all archaeological deposits will be done by hand unless it can be shown there will not be a loss of evidence by using a machine. The decision as to the proper method of further excavation will be made by the senior project archaeologist with regard to the nature of the deposit.
 - 3.5 All features, which are, or could be interpreted as, structural must be fully excavated. Post-holes and pits must be examined in section and then fully excavated. Fabricated surfaces within the excavation area (e.g. yards and floors) must be fully exposed and cleaned. Any variation from this process can only be made by agreement with SCCAS/CT, and must be confirmed in writing.
 - 3.6 All other features must be sufficiently examined to establish, where possible, their date and function. For guidance:
 - a) A minimum of 50% of the fills of the general features is to be excavated (in some instances 100% may be requested).
 - b) 10% of the fills of substantial linear features (ditches, etc) are to be excavated. The samples must be representative of the available length of the feature and must take into account any variations in the shape or fill of the feature and any concentrations of artefacts. For linear features, 1.00m wide slots (min.) should be excavated across their width.
 - 3.7 Any variation from this process can only be made by agreement [if necessary on site] with a member of SCCAS/CT, and must be confirmed in writing.
 - 3.8 Collect and prepare environmental bulk samples (for flotation and analysis by an environmental specialist). The fills of all archaeological features should be bulk sampled for palaeoenvironmental remains and assessed by an appropriate specialist.

The WSI must provide details of a comprehensive sampling strategy for retrieving and processing biological remains (for palaeoenvironmental and palaeoeconomic investigations and also for absolute dating), and samples of sediments and/or soils (for micromorphological and other pedological/sedimentological analyses. All samples should be retained until their potential has been assessed. Advice on the appropriateness of the proposed strategies will be sought from J. Heathcote, English Heritage Regional Adviser in Archaeological Science (East of England). A guide to sampling archaeological deposits (Murphy, P.L. and Wiltshire, P.E.J., 1994, *A guide to sampling archaeological deposits for environmental analysis*) is available for viewing from SCCAS.

- 3.9 A finds recovery policy is to be agreed before the project commences. It should be addressed by the WSI. Sieving of occupation levels and building fills will be expected.
- 3.10 Use of a metal detector will form an essential part of finds recovery. Metal detector searches must take place at all stages of the excavation by an experienced metal detector user.
- 3.11 All finds will be collected and processed. No discard policy will be considered until the whole body of finds has been evaluated.
- 3.12 All ceramic, bone and stone artefacts to be cleaned and processed concurrently with the excavation to allow immediate evaluation and input into decision-making.
- 3.13 Metal artefacts must be stored and managed on site in accordance with *UK Institute of Conservators Guidelines* and evaluated for significant dating and cultural implications before despatch to a conservation laboratory within four weeks of excavation.
- 3.14 Human remains are to be treated at all stages with care and respect, and are to be dealt with in accordance with the law. They must be recorded *in situ* and subsequently lifted, packed and marked to standards compatible with those described in the Institute of Field Archaeologists' *Technical Paper 13: Excavation and post-excavation treatment of Cremated and Inhumed Human Remains*, by McKinley & Roberts. Proposals for the final disposition of remains following study and analysis will be required in the WSI.
- 3.15 Plans of the archaeological features on the site should normally be drawn at 1:20 or 1:50, depending on the complexity of the data to be recorded. Sections should be drawn at 1:10 or 1:20 again depending on the complexity to be recorded. All levels should relate to Ordnance Datum. Any variations from this must be agreed with SCCAS/CT.
- 3.16 A photographic record of the work is to be made, consisting of both monochrome photographs and colour transparencies/high resolution digital images, and documented in a photographic archive.
- 3.17 Excavation record keeping is to be consistent with the requirements the County Historic Environment Record and compatible with its archive. Methods must be agreed with SCCAS/CT.
- 3.18 An outreach component will be included as part of this archaeological work. This is to include either, a school visit by a suitably qualified and experienced archaeologist bringing elements of the sites archaeology to the school, or a visit to the archaeological site from the local school for the purpose of providing direct access to local history. Other elements including a talk to local groups on the results of the archaeological work could be considered if a need was identified. The SCCAS Education officer should contact Sue Starling (01603 255427) who acts as local liaison to the developers before undertaking the work.

4. General Management

- 4.1 A timetable for all stages of the project must be agreed before the first stage of work commences.
- 4.2 Monitoring of the archaeological work will be undertaken by SCCAS/CT. A decision on the monitoring required will be made by SCCAS/CT on submission of the accepted WSI.
- 4.3 The composition of the project staff must be detailed and agreed (this is to include any subcontractors). For the site director and other staff likely to have a major responsibility for the post-excavation processing of this site there must be a statement of their responsibilities for post-excavation work on other archaeological sites.
- 4.4 Provision should be included in the WSI for outreach activities, for example, in the form of an open day and/or local public lecture/talk and/or exhibition of results.
- 4.5 It is the archaeological contractor's responsibility to ensure that adequate resources are available to fulfil the Brief.
- 4.6 A detailed risk assessment and management strategy must be presented for this particular site.
- 4.7 The WSI must include proposed security measures to protect the site and both excavated and unexcavated finds from vandalism and theft.
- 4.8 Provision for the reinstatement of the ground and filling of dangerous holes must be detailed in the WSI. However, trenches should not be backfilled without the approval of SCCAS/CT.
- 4.9 No initial survey to detect public utility or other services has taken place. The responsibility for this rests with the archaeological contractor.
- 4.10 Detailed standards, information and advice to supplement this specification are to be found in *Standards for Field Archaeology in the East of England*, East Anglian Archaeology Occasional Papers 14, 2003. The Institute of Field Archaeologists' *Standard and Guidance for Archaeological Excavation* (revised 2001) should be used for additional guidance in the execution of the project and in drawing up the report.

5. Archive Requirements

- 5.1 Within four weeks of the end of field-work a written timetable for post-excavation work must be produced, which must be approved by SCCAS/CT. Following this a written statement of progress on post-excavation work whether archive, assessment, analysis or final report writing will be required at three monthly intervals.
- 5.2 The project manager must consult the County Historic Environment Record Officer (Dr Colin Pendleton) to obtain a Historic Environment Record number for the work. This number will be unique for the site and must be clearly marked on any documentation relating to the work.
- 5.3 An archive of all records and finds is to be prepared consistent with the principle of English Heritage's *Management of Archaeological Projects*, 1991 (MAP2), particularly Appendix 3. However, the detail of the archive is to be fuller than that implied in MAP2 Appendix 3.2.1. The archive is to be sufficiently detailed to allow comprehension and further interpretation of the site should the project not proceed to detailed analysis and final report preparation. It must be adequate to perform the

function of a final archive for lodgement in the County Historic Environment Record or museum.

- 5.4 A complete copy of the site record archive must be deposited with the County Historic Environment Record within 12 months of the completion of fieldwork. It will then become publicly accessible.
- 5.5 The data recording methods and conventions used must be consistent with, and approved by, the County Historic Environment Record. All record drawings of excavated evidence are to be presented in drawn up form, with overall site plans. All records must be on an archivally stable and suitable base.
- 5.6 The project manager should consult the SCCAS Archive Guidelines 2008 and also the County Historic Environment Record Officer regarding the requirements for the deposition of the archive (conservation, ordering, organisation, labelling, marking and storage) of excavated material and the archive. A clear statement of the form, intended content, and standards of the archive is to be submitted for approval as an essential requirement of the WSI.
- 5.7 Finds must be appropriately conserved and stored in accordance with UK Institute Conservators Guidelines.
- 5.8 The site archive quoted at MAP2 Appendix 3, must satisfy the standard set by the "Guideline for the preparation of site archives and assessments of all finds other than fired clay vessels" of the Roman Finds Group and the Finds Research Group AD700-1700 (1993).
- 5.9 Pottery should be recorded and archived to a standard comparable with 6.3 above, i.e. *The Study of Later Prehistoric Pottery: General Policies and Guidelines for Analysis and Publication*, Prehistoric Ceramics Research Group Occ Paper 1 (1991, rev 1997), the *Guidelines for the archiving of Roman Pottery*, Study Group Roman Pottery (ed M G Darling 1994) and the *Guidelines of the Medieval Pottery Group* (in draft).
- 5.10 All coins must be identified and listed as a minimum archive requirement.
- 5.11 Every effort must be made to get the agreement of the landowner/developer to the deposition of the finds with the County Historic Environment Record or a museum in Suffolk which satisfies Museum and Galleries Commission requirements, as an indissoluble part of the full site archive. If this is not achievable for all or parts of the finds archive then provision must be made for additional recording (e.g. photography, illustration, and analysis) as appropriate.
- 5.12 Where positive conclusions are drawn from a project, a summary report in the established format, suitable for inclusion in the annual 'Archaeology in Suffolk' section of the Proceedings of the Suffolk Institute for Archaeology journal, must be prepared. This should be included in the project report, or submitted to SCCAS/CT by the end of the calendar year in which the evaluation work takes place, whichever is the sooner.
- 5.13 Where appropriate, a digital vector trench plan should be included with the report, which must be compatible with MapInfo GIS software, for integration in the County Historic Environment Record. AutoCAD files should be also exported and saved into a format that can be imported into MapInfo (for example, as a Drawing Interchange File or .dxf) or already transferred to .TAB files.
- 5.14 At the start of work (immediately before fieldwork commences) an OASIS online record <http://ads.ahds.ac.uk/project/oasis/> must be initiated and key fields completed on Details, Location and Creators forms.

- 5.15 All parts of the OASIS online form must be completed for submission to the County Historic Environment Record. This should include an uploaded .pdf version of the entire report (a paper copy should also be included with the archive).

6. Report Requirements

- 6.1 An assessment report on the fieldwork and archive must be provided consistent with the principle of *MAP2*, particularly Appendix 4. The report must be integrated with the archive.
- 6.2 The objective account of the archaeological evidence must be clearly distinguished from its archaeological interpretation.
- 6.3 An important element of the report will be a description of the methodology.
- 6.4 Reports on specific areas of specialist study must include sufficient detail to permit assessment of potential for analysis, including tabulation of data by context, and must include non-technical summaries.
- 6.5 Provision should be made to assess the potential of scientific dating techniques for establishing the date range of significant artefact or ecofact assemblages, features or structures.
- 6.6 The results should be related to the relevant known archaeological information held in the County Historic Environment Record.
- 6.7 The report will give an opinion as to the potential and necessity for further analysis of the excavation data beyond the archive stage, and the suggested requirement for publication; it will refer to the Regional Research Framework (see above, 2.5). Further analysis will not be embarked upon until the primary fieldwork results are assessed and the need for further work is established. Analysis and publication can be neither developed in detail nor costed in detail until this brief and specification is satisfied. However, the developer should be aware that there is a responsibility to provide a publication of the results of the programme of work.
- 6.8 The assessment report must be presented within six months of the completion of fieldwork unless other arrangements are negotiated with the project sponsor and SCCAS/CT.
- 6.9 The involvement of SCCAS/CT should be acknowledged in any report or publication generated by this project.

Specification by: William Fletcher

This brief and specification remains valid for 12 months from the above date. If work is not carried out in full within that time this document will lapse; the authority should be notified and a revised brief and specification may be issued.

If the work defined by this brief forms a part of a programme of archaeological work required by a Planning Condition, the results must be considered by the Conservation Team of the Archaeological Service of Suffolk County Council, who have the responsibility for advising the appropriate Planning Authority.

Appendix 2. Group descriptions

G1001: Natural strata (alluvial sand)

Contexts: 0049, 0050, 0057 (segments 0209, 0213, 0214)

The earliest recorded natural strata are 0050 and 0057. These are deposits of finely laminated light yellow and yellowish brown sand, seen at a maximum height of approximately 13.50m OD in segments 0209, 0213 and 0214. 0049 is a deposit of mid brownish yellow slightly clayey sand containing horizontal bands of crushed chalk that overlies 0050 in segment 0213. It has a maximum height of 14.12m OD.

G1002: Natural erosion feature and its fill

Contexts: 0048, 0066

0066 is a natural erosion feature recorded in segments 0209 and 0213. It is at least 2.50m wide and approximately 0.90m deep, with an irregular western edge and a concave base. It has partially removed natural sand deposits 0049, 0050 and 0057 (G1001).

0048 is a deposit of soft, light–mid greyish brown silt with lenses of fine sand, filling the base of erosion feature 0066 to a depth of approximately 0.28m. It was sampled (Sample 12) in the hope that environmental analysis will indicate how it was deposited.

G1003: Natural strata (glacial till and sand)

Contexts: 0011, 0012

0012 is a deposit of firm, light yellowish brown clay/silt containing varying amounts of crushed chalk, pebbles and flint nodules. It fills the upper part of erosion feature 0066 (G1002) and also extends site-wide. The surface of deposit 0012 slopes from c. 15.0m OD in the northwest corner to c. 12.0m OD in the southeast corner of the site. It has a maximum recorded thickness of 0.80m, in segment 0214. 0012 includes also extensive pockets of soft, light yellowish brown clayey sand with pebbles.

0011 is a more continuous deposit of clayey sand with pebbles recorded as a layer at the east end of Trench 2, overlying chalky till 0012.

G1004: Ditch 0009 and its fills

Contexts: 0008, 0009, 0023 (segments 0201, 0202, 0203)

0009 is an east–west ditch forming part of the southern boundary of a postulated prehistoric enclosure. It is 10.90m long with an average width of 1.00m and a maximum recorded depth of 0.56m. The three excavated segments display varying profiles, although the ditch is generally steep-sided with a rounded base and has a rounded terminus at either end. Ditch 0008 is cut into natural stratum 0012 (G1003) and is sealed by topsoil 0001 (G1012).

Fills 0008 and 0023 are similar deposits of compact, mid grey or greyish brown clayey silt with occasional pebbles. 0008 (segments 0201 and 0203) produced a few fragments of pottery and was sampled for environmental analysis (Sample 13). 0023 (segment 0202, at the eastern terminus of ditch 0009) contained occasional charcoal flecks and some possible worked flints. It contained also some patches of red and black scorched soil, especially towards the base of the ditch.

G1005: Ditch 0007 and its fills

Contexts: 0006, 0007, 0024, 0027, 0028, 0033, 0035, 0036, 0039 (segments 0204–0208, 0211, 0212)

0007 is an east–west ditch forming part of the southern boundary of a postulated prehistoric enclosure. It is on the same alignment as ditch 0009 (G1004) and separated from it by a narrow causeway, about 1.90m wide. Ditch 0007 is approximately 31.0m long (slightly

sinuous) with an average width of 0.89m and a maximum recorded depth of 0.70m. The seven excavated segments display varying profiles (it is almost V-shaped in places), but generally the ditch is steep-sided with a rounded or flat base and has a rounded terminus at either end. Ditch 0007 is cut into natural stratum 0012 (G1003) and is sealed by topsoil 0001 (G1012).

Fills 0006, 0024, 0027, 0028, 0033, 0035, 0036 and 0039 are similar deposits of compact, grey/brown clayey silt with moderate–frequent pebbles and flint nodules. Some of the fills are mottled with patches of yellowish brown clayey silt or dark grey sandy silt. Fill 0024 (segment 0204) at the western terminus of the ditch, contains frequent patches of red or purple scorched soil similar to those in fill 0023 in the eastern terminus of ditch 0009 (G1004). Analysis of environmental Sample 7 might reveal the cause of this scorching. Occasional flecks and small fragments of charcoal are present in most of the fills but only fill 0028 (segment 0207) produced any pottery.

G1006: Ditch 0005 and its primary fills

Contexts: 0005, 0043, 0044, 0051, 0052, 0053, 0054, 0055, 0056, 0058, 0059, 0060 (segments 0200, 0209, 0210, 0213, 0214, 0215)

0005 is an L-shaped ditch forming part of the eastern boundary of a postulated prehistoric enclosure. It is at least 26m long (north-south) and at its southern end turns to the west for approximately 2.0m. Generally it has an average width of 2.15m although it narrows abruptly to 1.20m at the point where it turns to the west. The ditch has a maximum recorded depth of 0.96m (in segment 0214) although it is much shallower (0.30–0.40m) at its southern end. The profile of the ditch varies from almost U-shaped with a broad, concave base (in segment 0213) to almost V-shaped with a narrow, concave base (in segment 0214). It has a rounded terminus at its southern end and is separated from ditch 0007 (G1005) by a narrow causeway approximately 1.88m wide. Note that the south end of ditch 0005 was numbered 0044 originally, but this number was subsequently scrapped.

Although six segments of the ditch were excavated it was dug to its full depth at only three locations (segments 0209, 0213 and 0214). This was because its primary fills were not recognised initially, being so similar to the natural strata (G1003) into which the ditch is dug.

Fill 0043, at the southern end of the ditch (segment 0213 and the ditch terminus) is a deposit of compact, mottled mid yellowish brown and mid brownish grey clayey silt containing moderate–frequent pebbles and flint nodules and occasional small fragments of pottery. This is the only pottery from any of the primary fills of the ditch.

The lack of stratification within fill 0043 suggests rapid accumulation and perhaps the deliberate backfilling of the ditch at this point. Elsewhere there is clear evidence for more gradual accumulation. The best example of this is the sequence of fills 0051–0056 (segment 0214). Thin lenses of sand (0053 and 0055) separate distinctive deposits of sandy silt or clayey sand (0052, 0054 and 0056). 0051, at the top of this particular sequence, appears to be redeposited natural clay/silt (similar to 0012 (G1003) and might have derived from the weathering of the side of the ditch or slumping of the associated bank. It is likely that most of these fills have been introduced from the west side of the ditch.

The sequence of fills 0058, 0059 and 0060 (segment 0209) also suggests gradual accumulation, with basal fill 0060 apparently representing the weathering of the eastern edge of the ditch and 0058/0059 having been introduced from the west side of the ditch.

G1007: Secondary fills of ditch 0005

Contexts: 0002, 0003, 0004, 0015, 0016, 0017, 0029, 0030, 0031, 0040, 0041, 0042, 0045, 0046, 0047, 0061 (segments 0200, 0209, 0210, 0213, 0214, 0215)

All six excavated segments of ditch 0005 contain similar sequences of three distinctive deposits. These are filling a shallow (approximately 0.40m deep), concave depression that extends most of the length of the ditch, although it does not occur at the southern end where the ditch turns to the west. It is likely that the slumping of the primary fills of the ditch (G1006)

created this depression, although it was originally interpreted as a cut feature. It is possible that these deposits originally formed a sequence of layers sealing the ditch.

0004, 0017, 0031, 0042 and 0047 are thin (<0.10m) deposits of clayey silt lining the sides and base of the depression. Occasional flecks of charcoal are present but the only possible dating evidence are some pieces of worked flint from 0017 (segment 0200).

0003, 0016, 0030, 0041, 0046 and 0061 are similar deposits of dark grey sandy silt, up to 0.10m thick, containing frequent flecks and small fragments of charcoal. Most of them contain pottery fragments, ranging from occasional to frequent. Many of the pottery fragments in 0030, 0046 and 0061 are large and appear to have come from vessels that were broken in situ. Some of the deposits produced worked flints, fire-cracked flints and fragment of fired clay. 0030 and 0046 also contained fragments of loomweights.

These charcoal-rich fills of ditch 0005 are the only ones to produce significant quantities of cultural material.

0002, 0015, 0029, 0040 and 0045 fill the upper part of the depression. They are similar deposits of greyish brown sandy silt or clayey silt, between 0.25–0.35m thick. With the exception of 0045 they contain occasional small–medium fragments of pottery; 0015 and 0040 produced a few worked flints.

G1008: Ditch 0038 and its fills

Contexts: 0032, 0034, 0037, 0038, 0062, 0063, 0064, 0065 (segments 0205, 0206, 0207, 0208, 0211, 0212)

0038 is a re-cut of ditch 0007 (G1005). It has a maximum (recorded) depth of 0.46m (although it is generally about 0.30m deep), and has steep sides and a concave base. It extends almost the length of ditch 0007, although it was not observed at the western terminus. To the east, it extends beyond the terminus of ditch 0007, as far as ditch 0005 (G1006). In doing so it blocks the assumed entranceway to the enclosure represented by the former gap between ditches 0005 and 0007.

Most of the excavated segments of ditch re-cut 0038 revealed a single fill, described generally as mid–dark brownish grey clayey silt with occasional pebbles. Flecks of charcoal and fired clay are present, but no other cultural material.

G1009: Possible posthole and fill

Contexts: 0013, 0014

Possible posthole 0014 is circular with a diameter of 0.40m and depth of 0.23m. It has vertical sides and a flat base. Fill 0013 is compact, dark grey clay/silt containing frequent charcoal flecks, moderate small fragments of pottery and occasional small fragments of bone (some possibly burnt). There are no other features associated with 0014, and it is the only known feature within the prehistoric enclosure formed by ditches 0005, 0007, 0009 and 0038.

G1010: Three possible postholes and their fills

Contexts: 0018, 0019, 0020, 0021, 0022, 0025, 0026

There are three possible postholes located outside and at some distance from the prehistoric enclosure. There is no clear evidence to suggest that they were associated with each other or with activity in the enclosure.

0020 is circular with a diameter of 0.49m and depth of 0.42m. It has vertical sides and a flat base. Its upper fill 0018 produced occasional small fragments of pottery.

0022, located approximately 2.0m west of 0020, is oval, measuring 0.42m x 0.36m x 0.43m deep. It has vertical sides and a flat base. Its single fill 0021 produced occasional small fragments of pottery.

0026 is circular with a diameter of 0.24m and depth of 0.27m. It has vertical sides and a flat base. It is located approximately 11.4m east of 0020. Its single fill 0025 produced occasional small fragments of pottery.

G1011: Post-medieval soil horizon

Context: 0010

0010 is a layer of soft, mid brown sandy silt containing moderate pebbles and occasional small fragments of brick and coal. It was recorded only at the east end of Trench 2, where it had a maximum thickness of 0.70m. It becomes thinner to the west, petering out about 40m from the east end of the trench. It overlies natural strata (G1003) and is sealed by modern topsoil/turf 0001 (G1012). The presence of brick and coal indicate that 0010 is a post-medieval deposit.

It is interpreted as either a former agricultural soil or dumping to level the southern edge of the site. The latter seems more likely, given that there is quite a steep slope along the site boundary. If it were a former ploughsoil its absence from the rest of the site would suggest that there has been considerable horizontal truncation in relatively recent times.

G1012: Modern topsoil and turf

Context 0001

The topsoil is generally 0.35m thick and seals the natural strata (G1003) and all archaeological features. The absence of an underlying subsoil or former ploughsoil has been noted, as this suggests that there has been extensive horizontal truncation across the site.

Appendix 3. Plant macrofossils and other remains

Sample No.	2	3	9	10	14	4	5	6
Context No.	0003	0004	0029	0030	0046	0013	0018	0021
Feature No.	0005	0005	0005	0005	0005	0014	0020	0022
Feature type	Ditch	Ditch	Ditch	Ditch	Ditch	Pit/PH	Pit/PH	Pit/PH
Group	G1007	G1007	G1007	G1007	G1007	G1009	G1010	G1010
Cereals								
<i>Hordeum</i> sp. (grains)							x	
<i>Hordeum/Secale cereale</i> type (rachis node)			x					
<i>Triticum</i> sp. (grains)			x			x	xxx	xx
(glume bases)								x
<i>T. dicoccum</i> Schubl (glume bases)							x	
<i>T. spelta</i> L. (glume bases)							x	
Cereal indet. (grains)			x	x		x	xx xxfg	xxx xxfg
Herbs								
<i>Chenopodium album</i> L.							xcf	x
Chenopodiaceae indet.							x	
Fabaceae indet.							xcf	
<i>Fallopia convolvulus</i> (L.)A.Love				x				
Tree/shrub macrofossils								
<i>Corylus avellana</i> L.						xcf	x	
<i>Sambucus nigra</i> L.		x						
Other plant macrofossils								
Charcoal <2mm	xxxx	xxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxx
Charcoal >2mm	xx	xx	x	xxx	x	xxxx	xx	
Charred root/stem		x						
Indet.fruit/nutshell frag.		x						
Indet.seeds		x						
Other remains								
Black porous 'cokey' material			x	x	x	x	x	xx
Black tarry material		x	x			x	x	xx
Bone	x				x	x xb		
Burnt/fired clay		x				x		
Small coal frags.		x	x				x	xx
Vitreous material		x						
Sample volume (litres)	10	10	10	10	10	7	9	10
Volume of flot (litres)	<0.1	<0.1	<0.1	0.1	<0.1	0.5	<0.1	<0.1
% flot sorted	100%	100%	100%	100%	100%	12.50%	100%	100%

Sample No.	12	13	7	8	11	15
Context No.	0048	0008	0024	0028	0043	0056
Feature No.			0007	0007	0005	0005
Feature type	Nat. feature	Ditch	Ditch	Ditch	Ditch	Ditch
Group	1002	1004	1005	1005	1006	1006
Cereals						
Cereal indet. (grains)		x				
Herbs						
<i>Stellaria media</i> (L.)Vill		x				
Other plant macrofossils						
Charcoal <2mm	x	xx	xxx	xxx	xxxx	xxxx
Charcoal >2mm		x	x	x	x	xx
Charred root/stem					x	
Other remains						
Black porous 'cokey' material	x	x	x			
Black tarry material				x	xx	x
Small coal frags.	x	x	x	x		x
Vitreous material				x	x	
Sample volume (litres)	10	10	10	10	10	10
Volume of flot (litres)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
% flot sorted	100%	100%	100%	100%	100%	100%

Key to Appendix 3 tables

x = 1–10 specimens xx = 11–50 specimens xxx = 51–100 specimens xxxx = 100+ specimens; cf = compare fg = fragment b = burnt

Appendix 4. Radiocarbon dating



Scottish Universities Environmental Research Centre

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RADIOCARBON DATING CERTIFICATE

14 December 2009

SUERC-26927 (GU-20414)

10.1 Laboratory Code

Submitter

Richenda Goffin
Archaeological Service
Environment and Transport
Shire Hall, Bury St Edmunds
Suffolk, IP33 2AR

Site Reference

Kessingland Primary School

Sample Reference

KSS 080 0030

Material

Pottery fragment : Carbon residue

$\delta^{13}\text{C}$ relative to VPDB

-25.1 ‰

3080 ± 30

10.2 Radiocarbon Age BP

- N.B.**
1. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.
 2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).
 3. Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

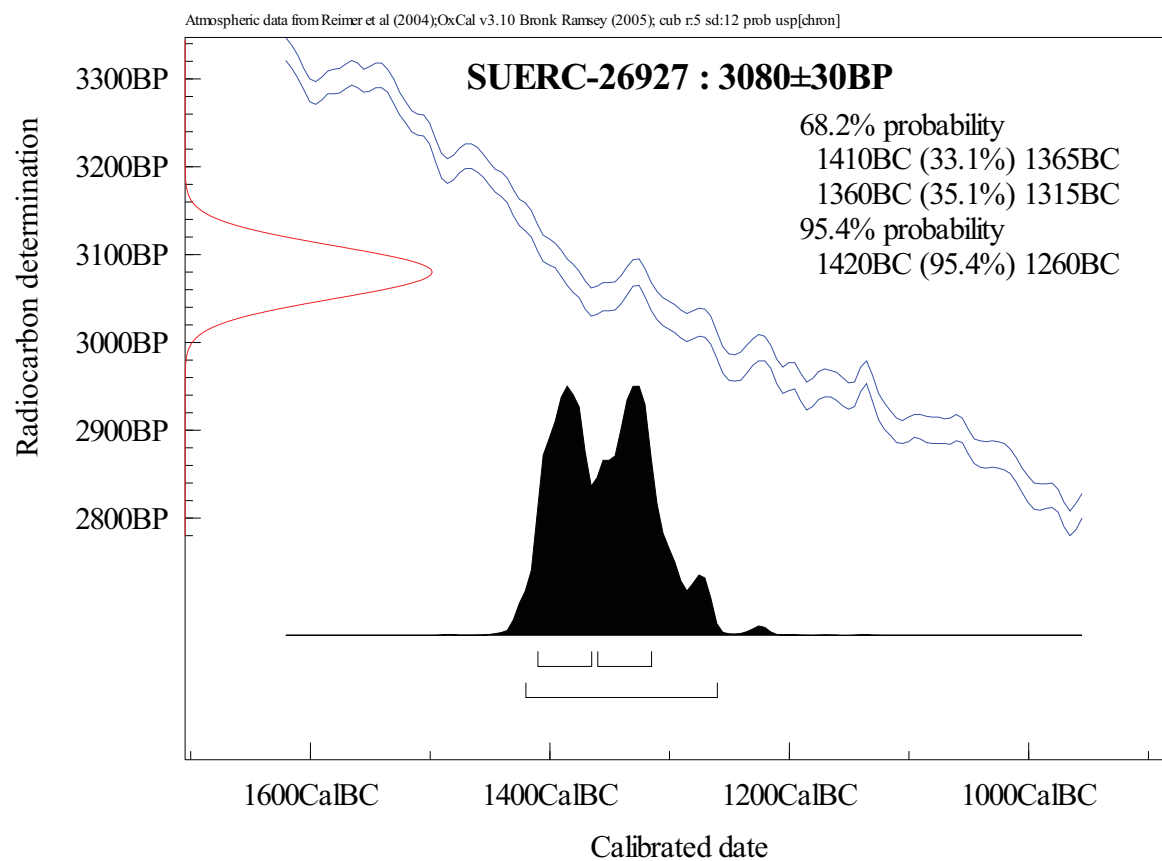
Conventional age and calibration age ranges calculated by :-

Date :-

Checked and signed off by :-

Date :-

Calibration Plot





Scottish Universities Environmental Research Centre

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RADIOCARBON DATING CERTIFICATE

14 December 2009

SUERC-26931 (GU-20415)

10.3 Laboratory Code

Submitter

Richenda Goffin
Archaeological Service
Environment and Transport
Shire Hall, Bury St Edmunds
Suffolk, IP33 2AR

Site Reference

Kessingland Primary School

Sample Reference

KSS 080 0046

Material

Pottery fragment : Carbon residue

$\delta^{13}\text{C}$ relative to VPDB

-26.7 ‰

3070 ± 30

10.4 Radiocarbon Age BP

- N.B.**
1. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.
 2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).
 3. Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :-

Date :-

Checked and signed off by :-

Date :-

Calibration Plot

