

**East of England Co-op Dairy Site
Boss Hall, Sproughton Road
Ipswich, Suffolk
IPS 735**

Archaeological Evaluation Report

SCCAS Report No. 2014/101

Client: David Clarke & Associates

Author: M. Sommers

January 2015

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Author: M. Sommers

Contributions by: S. Anderson, R. Goffin, E. Hillen, C. Tester,

A. West and B. Wiczorek-Olesky

Editor: Dr. R. Gardner

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Disclaimer

Any opinions expressed in this report about the need for further archaeological work are those of the Field Projects Team alone. Ultimately the need for further work will be determined by the Local Planning Authority and its Archaeological Advisors when a planning application is registered. Suffolk County Council's archaeological contracting services cannot accept responsibility for inconvenience caused to the clients should the Planning Authority take a different view to that expressed in the report.

Prepared By: M. Sommers
Date: 13th January 2015

Approved By: Dr. R. Gardner
Position: Contracts Manager
Date:
Signed:

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Summary

An archaeological evaluation was carried out within an area of land formerly occupied by the Co-operative Society's Dairy at Boss Hall, Sproughton Road, Ipswich. A series of eleven trial trenches were excavated across the site, three of which contained human burials that have been dated to the Early Anglo-Saxon period (specifically the 6th to early 8th century). The burials consisted of inhumations and urned cremations. They are undoubtedly a continuation of the previously recorded Anglo-Saxon cemetery at Boss Hall, which was discovered and partly excavated in 1990. The burials were restricted to trenches adjacent to the south-western boundary of the site and did not extend across the evaluation area indicating an eastern limit to the cemetery although no formal boundary or marker was identified.

Following the initial trenching exercise an additional five trenches were cut with the aim of confirming the limits of the cemetery. No further burials were located suggesting the cemetery is confined to the area of the three western trenches. Trenches were also excavated within the footprint of the former dairy building. No archaeological features were exposed but, other than occasional localised intrusions, the surface of the natural subsoil was generally undisturbed confirming the potential for archaeological features to survive.

A pair of parallel ditches on an approximate north to south alignment was recorded in two trenches to the east. No dating evidence was recovered from the excavated sections although the western ditch is coincidental with a boundary marked on 19th century maps suggesting at least one of these features is relatively late. (Suffolk County Council Archaeological Service Field Team for David Clarke & Associates).

1. Introduction

An archaeological evaluation by trial trenching was undertaken within the site of the former East of England Co-operative Society's dairy at the Boss Hall Industrial Estate, Sproughton Road, Ipswich, during June 2014. An additional phase of trial trenching was undertaken in December 2014 to further explore the results of the initial trenching. At the time of writing there are no specific plans for development of the site but the landowner is looking to possible future redevelopment or disposal.

Significant archaeological remains, primarily a cemetery containing pagan Saxon inhumations and cremation burials, have been recorded immediately adjacent to the site. In order to fully understand the archaeological potential of the site, with regards to future planning implications, the landowner was advised by the planning authority to undertake a trenched evaluation to ascertain precisely what levels of archaeological evidence are present and to inform any mitigation strategies that may then be deemed necessary.

To outline the work required to fulfil planning considerations at this stage a Brief was produced by Dr. Richard Hoggett of the Suffolk County Council Conservation Team. A Written Scheme of Investigation (WSI), detailing the methods to be used to fulfil the Brief, was produced and was subsequently approved by the County Conservation Team (Appendix 1). Following the initial phase of evaluation a second brief was issued to detail the requirement for the additional trenching and for this a second WSI was produced and approved (Appendix 2).

The National Grid Reference for the approximate centre of the site is TM 1417 4536. Figure 1 shows a location plan of the development area.

The two phases of archaeological evaluation were carried out from the 2nd to the 11th June 2014 and the 8th to the 11th December 2014 by Suffolk County Council Archaeological Service's Field Team who were commissioned and funded by David Clarke & Associates, acting on the behalf of their client, The East of England Co-operative Society Limited.

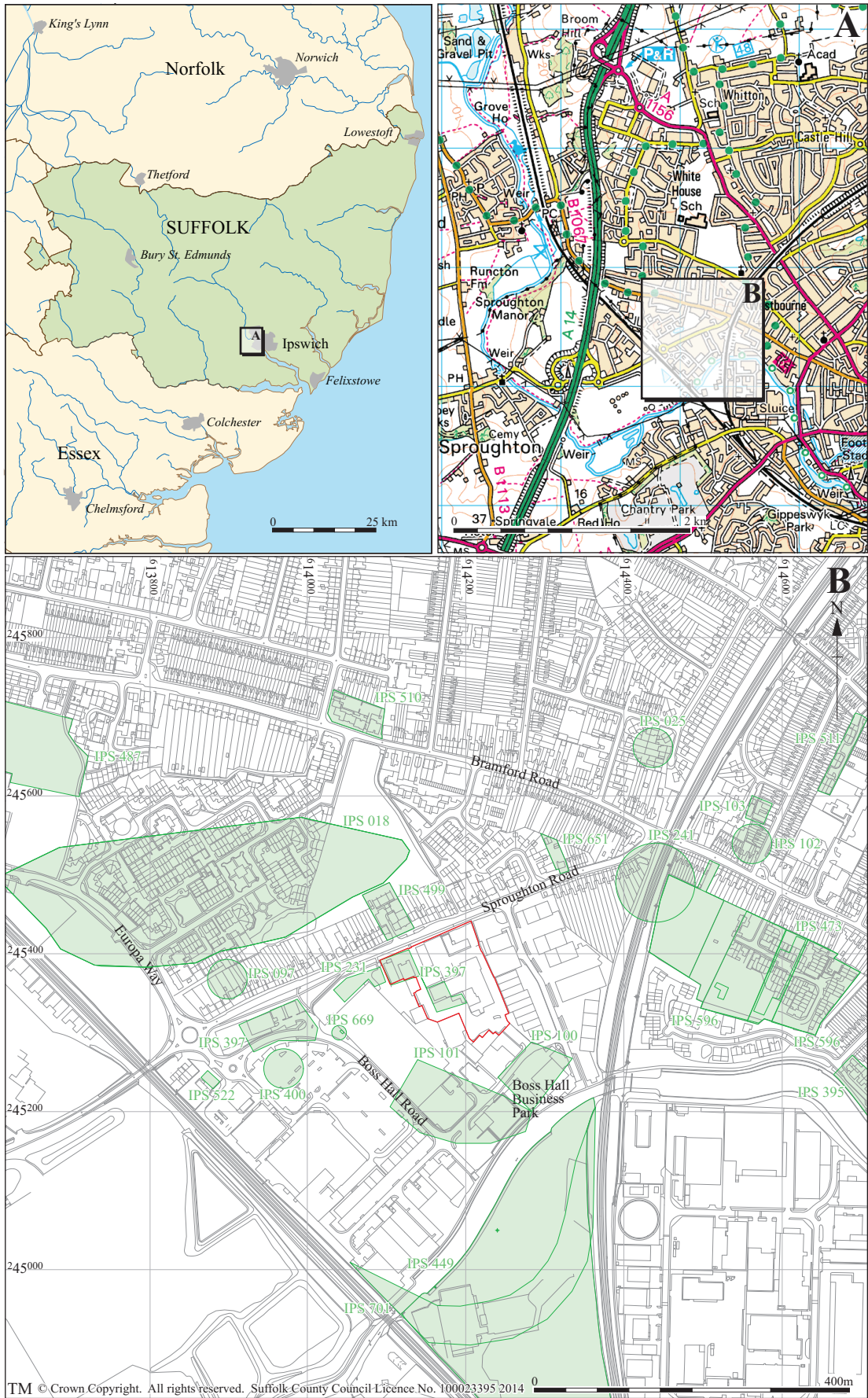


Figure 1. Location plan, showing development area (red) and HER entries (green)

2. Geology and topography

The development site consists of an irregular shaped parcel of land with an area of just under 1.3ha. It lies to the southeast of Sproughton Road but is accessed from the south via Boss Hall Road. It is situated within the flood plain of the River Gipping, which is now canalised and runs in a channel approximately 120m to the southeast of the site boundary.

The site comprises a former industrial complex and is largely under a thick concrete slab. A small number of standing structures are present close to the Sproughton Road frontage and the raised base and floor slab of a large, recently demolished, building is present in the centre of the site. The site slopes down gently to the east and south from c.6.3m OD in the northwest corner down to a low of c.5.5m close to the southern entrance. The area of the former central building stands approximately 1.1m higher than the surrounding land.

The superficial geology of the site, as recorded by the British Geological Society (BGS), consists of sand with subangular and rounded flint gravel. The area of the river channel is recorded as a silty clay alluvium. The BGS mapping shows an area of this alluvium also runs along the eastern boundary of the evaluation area indicating the probable site of a former tributary to the main channel. The underlying bedrock geology is recorded as chalk, part of the Newhaven Chalk Foundation.

3. Archaeology and historical background

A number of archaeological sites or findspots are recorded on the Historic Environment Record (HER) within the vicinity of the development site. A summary of these entries is presented in Table 1; the recorded locations of which are marked on the large scale map in Figure 1.

HER Ref	Name	Period	Summary
IPS 018	Bramford Road Pit (disused)	Neo	Pottery, including rim of ?Peterborough ware found in Warren Livingstone's gravel pits.
		BA	Pottery, urn, fragments of very coarse, gritty red ware with vertical incised lines.
		Pal	Pal implements, including cordate flint hand-axes, blade flakes, crusted flake, gouge flake, tongue-shaped implements, Mousterian hand-axe and flakes, 4 Coombe-Chapelle hand-axes, Solutrean leaf shaped implement, various flake implements (S1).
IPS 025	63 Eustace Road	Sax	Bronze circular brooch, backward looking animal, C9 - C11.
IPS 097	116 Sproughton Road	Neo	Flint axe head, chipped and re-worked, pale grey with inclusions of chert.
IPS 100	Boss Hall, Sproughton Road.	Med	Moat, largely filled in, slight indication on N side.
IPS 101	Sproughton Road/Boss Hall Estate	Sax	Hand-made pot, one base sherd, none decorated, on balance pagan Saxon (SEW), (but could be IA).
IPS 102	5-7 Kingston Road	Sax	Ipswich ware pot, found circa 2 feet 6 inches down, no visible pit or other pottery.
IPS 103	17-31 Kingston Road	PMed	Excavation on site of C19 demolished houses.
IPS 231	Sproughton Road, Boss Hall Industrial Estate	Sax	ESax mixed cremation/inhumation cemetery revealed during watching brief followed by rapid salvage excavation.
IPS 241	St Alburts Chapel	Sax	Approximate position of St Alburts (Aethelbeorht's) chapel.
IPS 395	The Tannery, Sacker's Yard, Bramford Road	Sax	Evaluation trenching in three areas - activity possibly dating to the 7th century was found to the west of the former industrial site in the form of postholes and two large features, possibly either pits, ditches or SFBs.
		PMed	Evaluation trenching revealed a number of undated features, probably relating to late 19th century land use as an allotment.
IPS 397	Ipswich and Norwich Co-Operative Society, Boss Hall	Sax	Monitoring of works revealed a single pit with a sherd on Early Saxon pottery.
		Un	1995: Evaluation identified four undated ditches and a pit (S1).
IPS 400	Morrison's Supermarket, Boss Hall, Ipswich	BA	Double/concentric ring ditch with four intersecting graves at the centre.
IPS 449	Prehistoric feature, Former Harris Meat Factory, Ipswich	Preh	Evaluation revealed a small area of probable prehistoric ground surface, two modern ditches and made ground overlying river terrace gravels, following the diversion of the River Gipping in the 1970s.
IPS 473	333a - 389 Bramford Road, Ipswich	Pmed	Evaluation in this area identified an undated ditch and 19th century quarry pits.
IPS 499	former Kings Head PH	Med	Trial trenching of former pub site revealed only modern features. A single coin of Henry III (1251-1272) was the only find.
IPS 510	WWII shelter, Bramford Road, Ipswich	Mod	A WWII air raid shelter was encountered and recorded during monitoring of groundworks.
IPS 511	243 Bramford Lane, Ipswich		Monitoring of the groundworks for seven semi-detached houses, revealed no archaeological features or finds.
IPS 522	Boss Hall Road		Monitoring of the groundworks revealed no archaeological features or finds.

IPS 596	333a - 389 Bramford Road, Ipswich	Preh	Evaluation and excavation in these areas identified a concentration of 47 small pits or post-holes and a ditch.
IPS 628	403-439 Bramford Road, Ipswich	Neo	Trenched evaluation revealed a single undated ditch and Late Neolithic pit.
IPS 651	16 Sproughton Road		Two trial trenches excavated at the back of this property revealed no evidence of archaeological activity or of past occupation or use
IPS 669	22-31 Boss Hall Road		A small excavation trench revealed no archaeological features, deposits or finds.
IPS 696	junction of Bramford and Sproughton Roads	mod	World war 2 tank traps
IPS 701	Ipswich chord railway		No significant archaeological remains were identified during the monitoring of the trial pits

Table 1. Summary of HER entries

There are a large number of findspots and sites recorded on the County HER in the vicinity of the evaluation area representing historic activity that ranges from the early prehistoric period, as represented by the Neolithic finds from the former quarry pit and adjacent garden (IPS 018 and 097), through to an air-raid shelter from the Second World War (IPS 510).

The site of greatest interest in relation to the evaluation area is the Early Anglo-Saxon cemetery discovered in 1990 during a watching brief undertaken during construction work associated with a large warehouse (IPS 231). A small number of cremation burials were initially identified leading to a rapid excavation of the site in conjunction with archaeological monitoring during which a total of twenty-two inhumations and four cremations were recorded. The extent of the site, as recorded on the HER, also includes the location of a further two inhumations and a badly damaged cremation that were recorded during later works in 2001 (results and analysis of the fieldwork to date is published in Scull 2009). This cemetery site and the later discoveries lie immediately to the west of the evaluation area. The area to the west of the cemetery site has been archaeologically investigated and no further Anglo-Saxon burials were discovered suggesting the western limit has been reached (IPS 397) although the full extent of the cemetery in the southern and eastern directions is yet to be determined. It is therefore likely that further burials associated with this cemetery exist in the vicinity. The northern boundary of the cemetery is also unknown but there have been no reports of burials being identified during roadworks or the construction of housing to the north.

Other sites of significant of interest is the Bronze Age double ring-ditch and burials (IPS 400), located c. 200m to the west of the evaluation area, and the site of the medieval moated site of Boss Hall (IPS 100), after which the industrial estate is named, situated about 80m to the southeast.

4. Methodology

The trial trenches were machine excavated down to the level of the natural subsoil using a large tracked excavator fitted with a 1.8m wide toothless ditching bucket, after the concrete surface had been broken and removed from the footprint of the trench. The location of the trenches was in accordance with the trench plan approved by the County Conservation Team.

A number of Anglo-Saxon burials were identified in the western trenches excavated during the initial phase of the evaluation. In order to define the eastern limit of the burial area further trenches were excavated. These comprised east-west trenches located, as far as possible, to the east of the trenches containing burials. A large former dairy building stood in the central area of the site and additional trenches were also undertaken to assess the make-up of the raised area within the building's footprint and any related underlying constructions.

The machining of the trenches was closely observed throughout in order to identify any archaeological features and deposits and to recover any artefacts that might be revealed. Excavation continued until archaeological features were identified or undisturbed natural deposits were encountered. The exposed surface of the natural subsoil was then hand cleaned, if required, and examined for cut features. Any features or significant deposits identified were then sampled through hand excavation in order to determine their depth and shape and to recover datable artefacts.

Unique context numbers were allocated to all cuts fills, deposits etc.; the full list of numbers used can be found in Appendix 4. Metal or other delicate artefacts recovered during the evaluation were allocated Small Find (SF) numbers as an aid to post-excavation treatment and analysis.

A number of possible inhumations were revealed but only a token number were formally examined in order to confirm the initial identification as burials. The cremation burials that were encountered were fully excavated. The contents of the excavated graves were planned at 1:10 or 1:1 if required.

Levels were taken on all features and artefacts. These were related to a temporary bench mark set up just outside the main gate to the site. It was arbitrarily attributed a height of 5m. Its absolute height (in relation to Ordnance Datum) is recorded as 5.48m on a topographic survey by Survey Solutions (drawing no. 6503se-02), as supplied by the client.

A metal detector handled by an experienced operator was used throughout the work in order to maximise the recovery of metal artefacts. This included surveying of the trenches during excavation, scans of the resultant spoil (although this was often foiled by the presence of reinforcement in the concrete slab) and detailed surveying of the fills of the exposed burials.

Bulk soil samples were taken from all significant features for environmental analysis. The entire fills of the cremation burials were retained to maximise the recovery of bone or associated pyre debris. Samples were allocated individual Sample Numbers (S1, S2 etc.)

Following excavation of the trenches, the nature of the overburden was recorded.

A photographic record of the work undertaken was also compiled using a 14 megapixel digital camera.

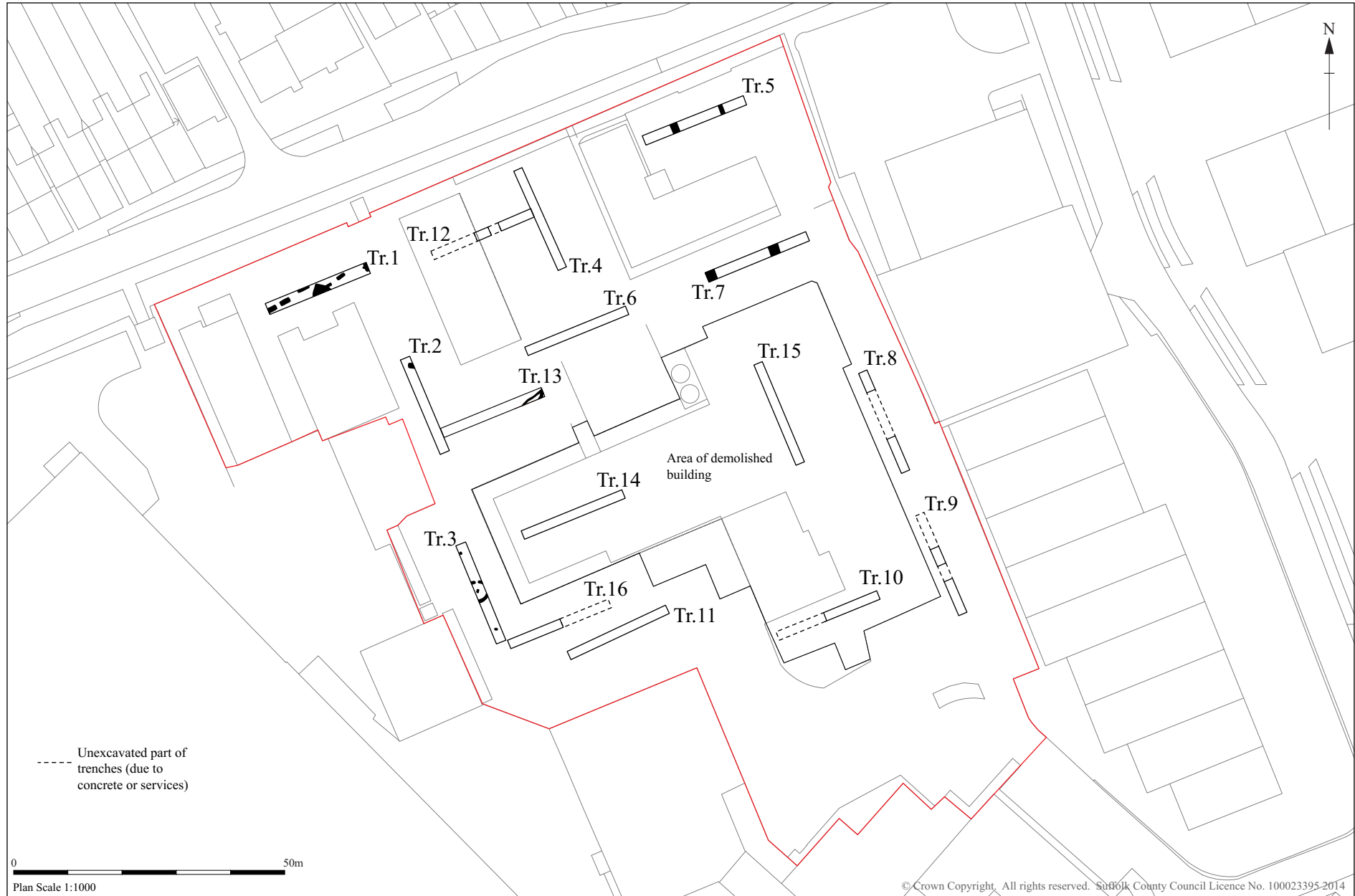


Figure 2. Trench location plan, showing features (black)

5. Results

A total of eleven evaluation trenches, on two differing alignments, were initially excavated (numbered Trenches 1 to 11) and a further five trenches were excavated during the second phase of evaluation (Trenches 12 to 16). The location of all trenches and a summary of the recorded archaeological features are presented in Figure 2; larger scale plans of the trenches that contained features (Trenches 1, 2, 3, 5, 7 and 13) are reproduced further into the following section. A plan of Trench 15 (Fig. 12) is also included to demonstrate the levels of modern disturbance present with one area of the former dairy building. The full context list can be found in Appendix 4.

The stratigraphic soil profile as revealed in each trench was similar across the site and is recorded in the individual trench sections included in the large scale trench plans or, for the trenches devoid of archaeological features, in Figure 13 (an example of the stratigraphy can be seen in Plate 13 and Plate 30). In general, the soil profile comprised of the concrete slab over a make-up layer of hardcore (sand and gravel), which in turn overlay a layer of dark grey to brown/black silt and sand (0048) that was interpreted as the former topsoil layer that was present prior to the site's development in the early to mid 20th century. This overlay a deposit of mid brown, slightly silty, sand with frequent rounded and broken flint pebbles (0049) that directly overlay the natural subsoil. The interface between layers 0048 and 0049 was quite sharp, which is probably a result of 0048 having been cultivated. The Anglo-Saxon features appeared to be cut through this lower layer although the cuts were not always visible. The cremation urns excavated in Trench 3 were located within this deposit. It was interpreted as a probable early topsoil. The depths of each cut as stated below are in relation to the surface of the natural subsoil.

Trench 1

Approximately east - west aligned trench within which a natural subsoil of yellow sand and gravel was encountered at a depth of 0.7m below the concrete slab. A number of features were identified within this trench, six of which were interpreted as inhumations (Fig. 3). Only one of the inhumations was subjected to further excavation in order to confirm its interpretation as a burial and to ascertain the levels of bone preservation. The features are as follows:

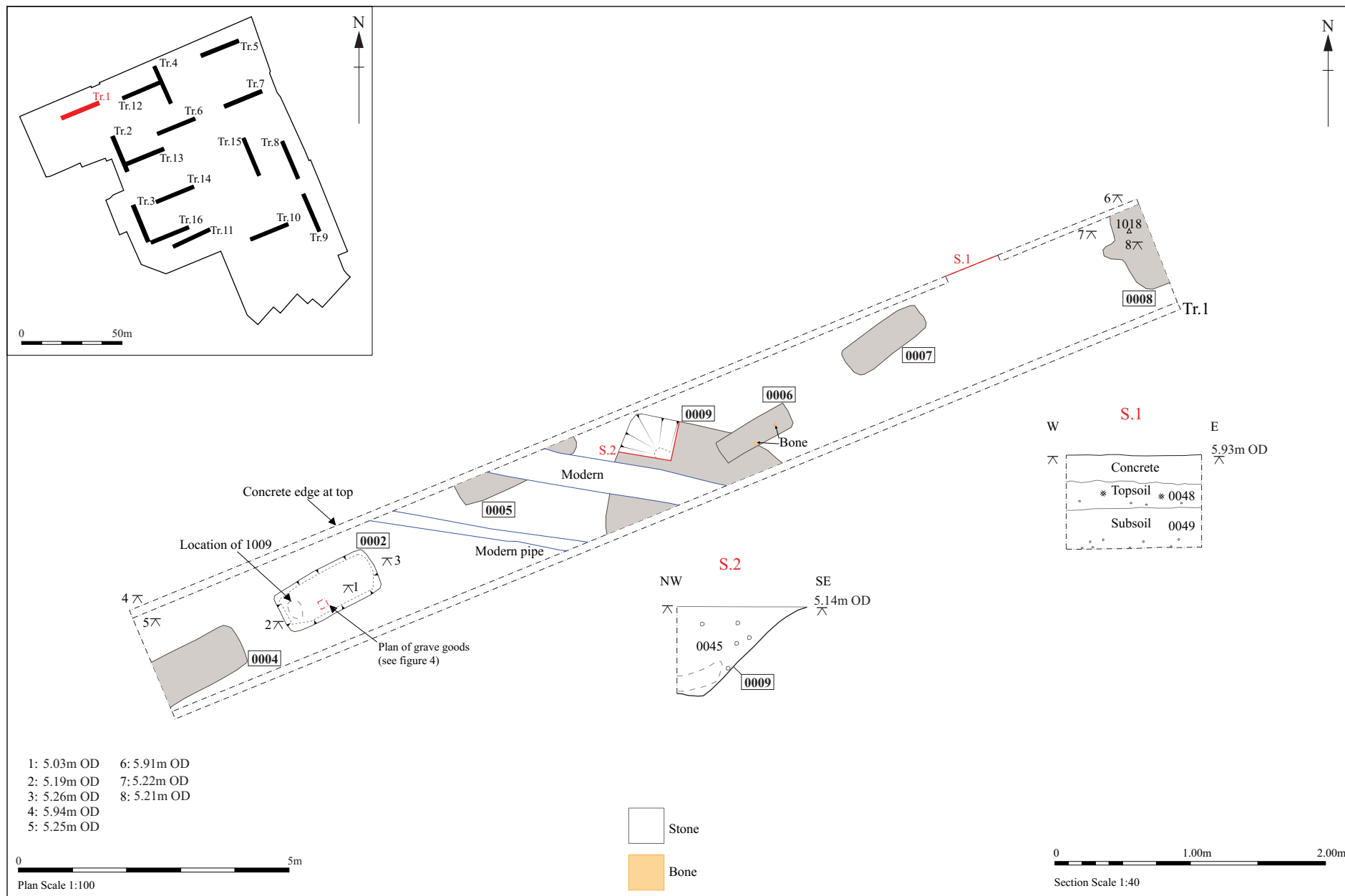


Figure 3. Trench 1, plan and sections

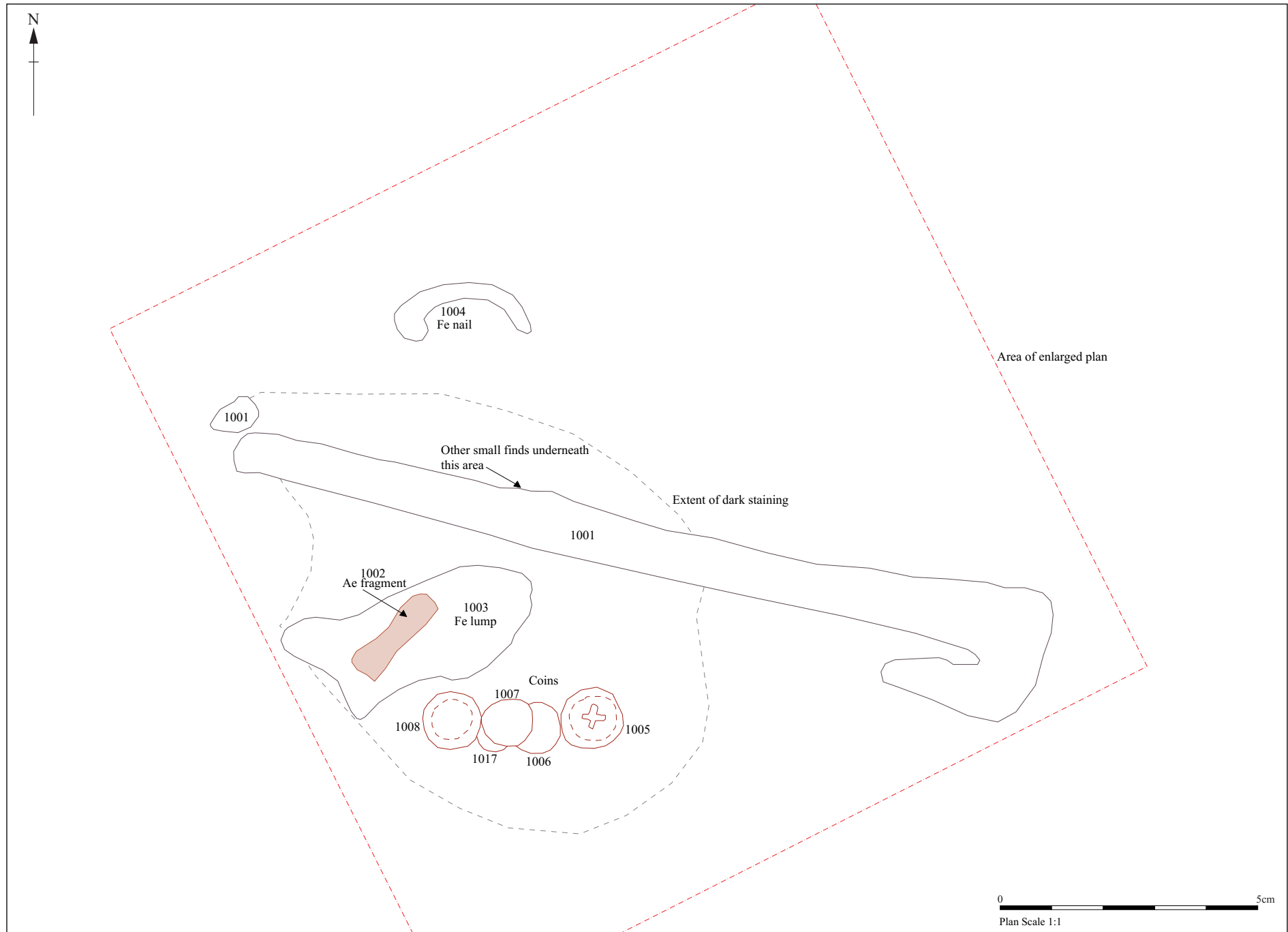


Figure 4. Plan of grave goods from grave 0002

Grave 0002: A rectangular cut with slightly rounded corners aligned approximately northeast to southwest (Plate 11). It measured 1.95m by 0.85m and 0.2m deep with vertical sides and a flat base. It contained a single fill (0003) of mid brown sand with frequent rounded and broken flint pebbles similar to subsoil layer 0049 (Bulk soil sample taken- S1).

100% of the fill was removed but no human remains present although a number of artefacts interpreted as grave goods were recorded (Plate 12). These consisted of fragments of a silver sliding ring (SF No. 1009), which were discovered whilst trowelling at the west end of the cut, and a group of metal artefacts, including silver coins, recovered from a position approximately 0.75m from the west end of the cut and 0.25m from the southern edge (SF Nos 1001 to 1008 and 1010 to 1018 – see Fig. 4).

Grave 0004: A rectangular cut with slightly rounded corners, aligned approximately northeast to southwest and located at the west end of the trench. The portion present within the trench measured 1.65m by 0.85m. The cut and fill was of very similar appearance to Grave 0002. Consequently it was interpreted as an inhumation and was not excavated. These two features, 0002 and 0004, were clearly aligned with each other along the same line. No metal artefacts could be detected from the surface of the fill.

Grave 0005: A rectangular cut with slightly rounded corners aligned approximately northeast to southwest located along the northern edge of the trench. A modern service trench of unknown depth cut across the feature at a roughly 45 degree angle. The feature appeared to have a length of 2.55m and a width of at least by 0.5m. This feature was not excavated as it was interpreted as a probable inhumation due to its similarity to Grave 0002. No metal artefacts could be detected from the surface of the fill.

Grave 0006: A rectangular cut with slightly rounded corners, aligned approximately northeast to southwest. It measured 1.45m by 0.45m. This feature had the alignment and appearance of Grave 0002 and was interpreted as an inhumation and not excavated. Appeared to be located on a parallel line to that of Graves 0002 and 0004 and was on a similar alignment to Grave 0007. No metal artefacts could be detected from the surface of the fill. The west end of this feature was cut into the edge of an adjacent large feature interpreted as a pit (0009).

Grave 0007: A rectangular cut with slightly rounded corners, aligned approximately northeast to southwest. It measured 1.65m by 0.6m. This feature had the alignment and appearance of Grave 0002 and was interpreted as an inhumation and not excavated. Appeared to be located on a parallel line to that of Graves 0002 and 0004 and was on a similar alignment to Grave 0006. No metal artefacts could be detected from the surface of the fill.

Grave 0008: A roughly rectangular shaped cut located at the east end of the trench. The cut clearly continued to the east and possibly to the north. Dimensions of the portion within the trench were 1.55m, north to south, by 0.65m. Similar fill to Grave 0002 and consequently interpreted as a probable inhumation. The feature was wider than the other grave cuts wide suggesting a possible multiple burial.

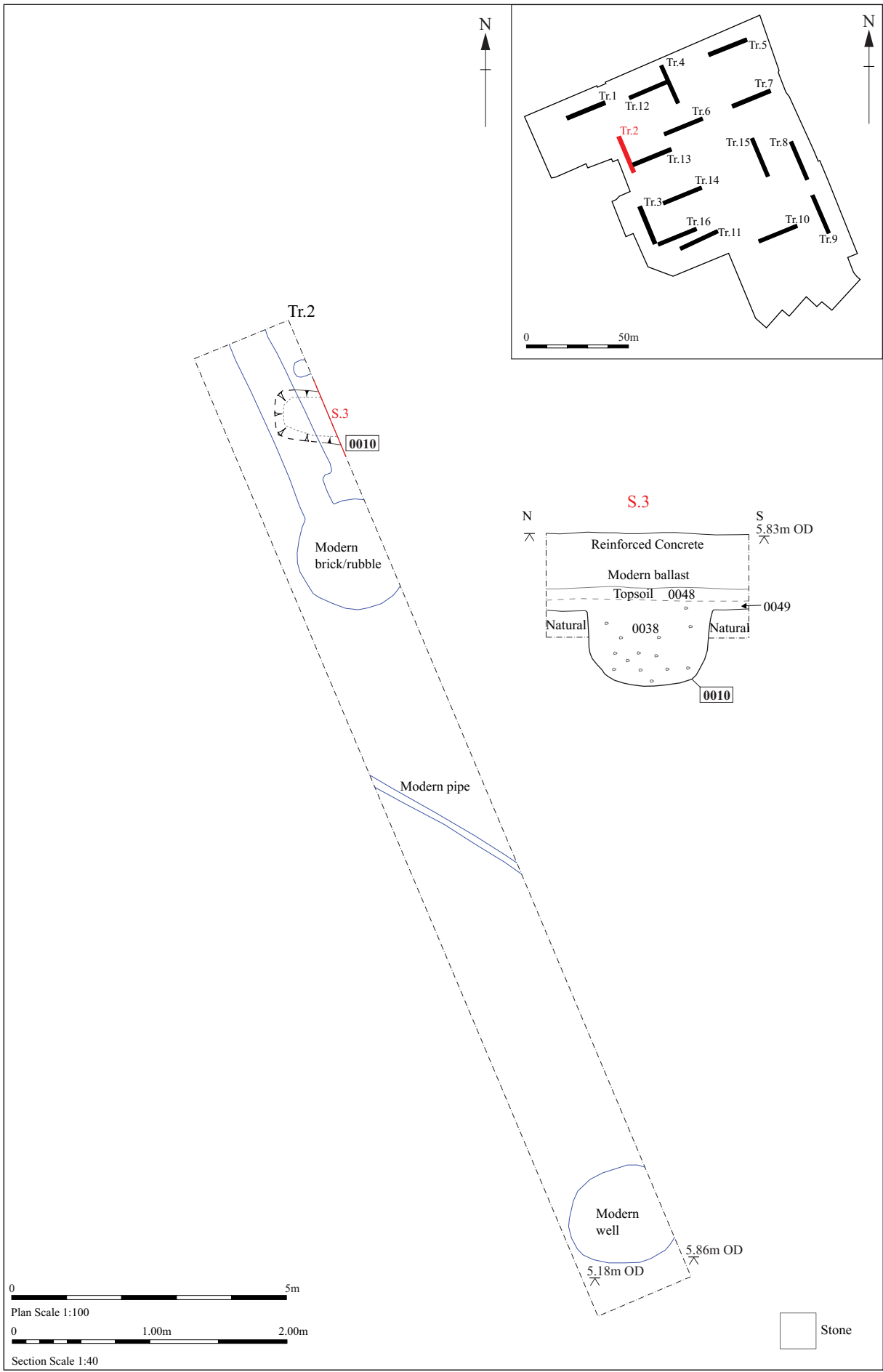


Figure 5. Trench 2, plan and section

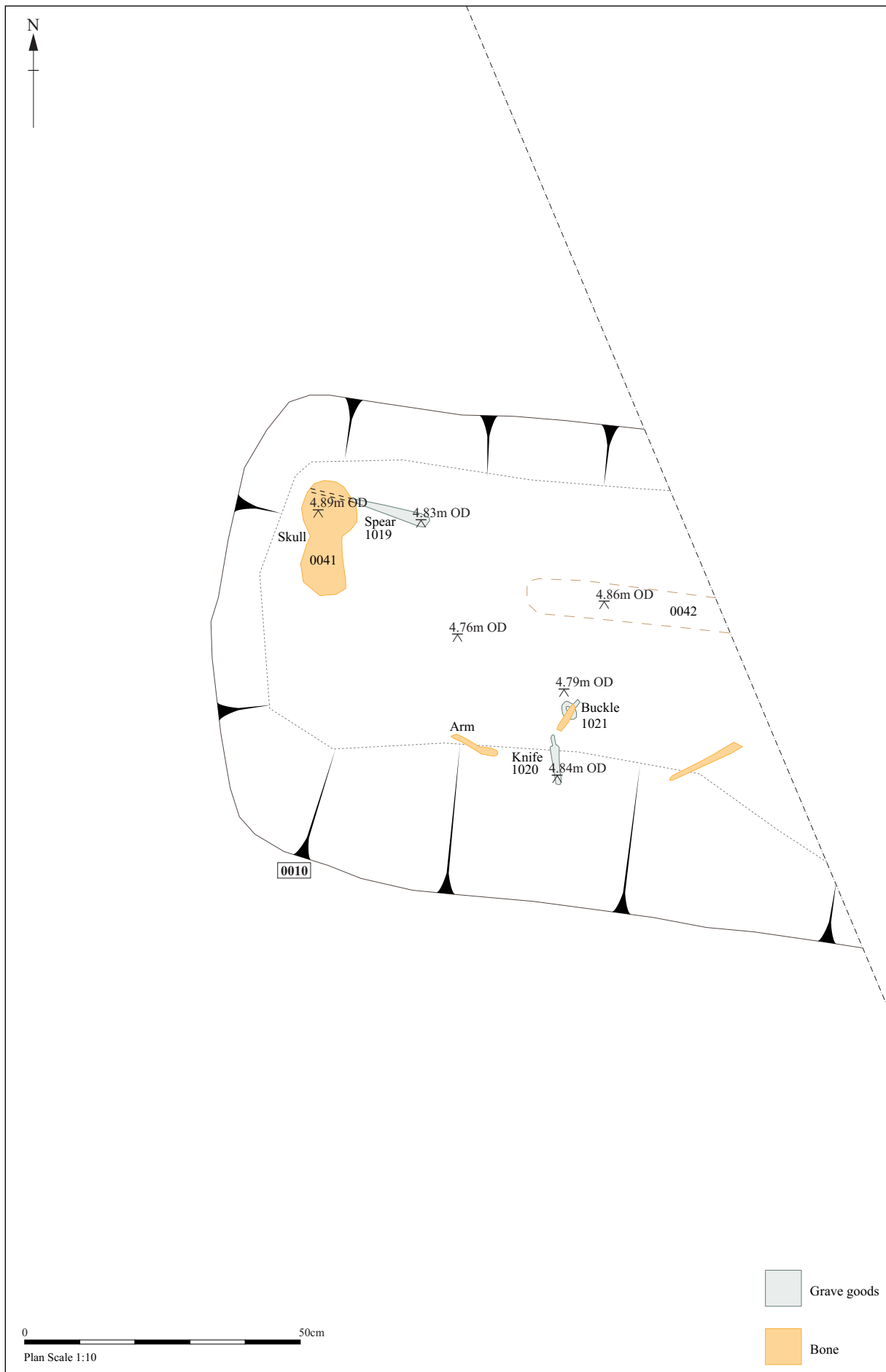


Figure 6. Plan for grave 0010

Metal detecting of the surface revealed a small fragment of a copper-alloy brooch at a depth of c.0.05m (SF No. 1018).

Pit 0009: A large cut, part of which lay beyond the limits of the trench. It consisted of two, roughly perpendicular, sides that meet to form a fairly sharp although slightly rounded corner. Minimum dimensions were 2.85m by 2.25m. Sample section excavated in northern corner revealed sloping sides down to a possibly flat base at a depth of 0.65m. The fill (0045) consists of light to mid brown sand becoming mid grey towards base (Bulk soil sample taken- S15). No dating evidence recovered during excavation or from metal detecting but from the surface this feature appeared to be cut by the probable grave 0006.

Trench 2

Approximately north - south aligned trench. Natural subsoil of yellow sand and gravel lay at a depth of 0.4m below the concrete slab. Some modern disturbance was present in this trench in the form of two circular brick lined soakways, each 2m in diameter; one of these was associated with a brick lined drain (Fig. 5). Part of a single inhumation was identified and excavated; it is described below:

Grave 0010: A rectangular cut with slightly rounded corners aligned approximately east to west. Continues beyond the eastern edge of the trench. Portion within trench measured 1.2m by 0.9m and was 0.52m deep. The sides of the cut were near vertical before curving in to meet a very slightly dished base. It contained a single fill (0038) consisting of mid brown silty sand with frequent rounded and brown flint pebbles (Bulk soil sample taken- S13).

Fragments of a human skeleton were found at the base of the cut along with some grave goods (Fig. 6). The bone consisted of a skull fragment and sections of two long bones, probable parts of the right arm (assuming the burial was laid face up). The grave goods comprised, an iron spearhead (SF No. 1019) located adjacent to the skull, an iron knife blade (SF No.1020) and a copper alloy buckle (SF No. 1021), both of which were located to the east, near the southern side in the vicinity of the arm. A small fragment of what is probably a rib was resting on the buckle, having been preserved by the presence of the copper alloy. A slightly raised linear area of dark staining was present towards the northern edge of the grave (0042), which was possibly the remains of an organic object. It measured approximately 0.07m in width and was at least 0.36m in length; it continued beyond the eastern edge of the trench (Sampled – S14). Not recognised at the time but visible in the photographs is that the skull, the spearhead and bone fragments lie within a slighter darker rectangular area in the bottom of the grave (Plate 14), which is possibly the remains of a wooden board bier and could suggest this burial was in a coffin.

Trench 3

Approximately north - south aligned trench. Natural subsoil of yellow sand and gravel lay at a depth of 0.75m below the concrete slab. Three urned cremation burials were recorded, one of which was concentric to a surrounding ring ditch (Figs. 7 and 8). It should be noted that all three of the cremation burials were wholly or partly located within the layer (0049) immediately above the natural subsoil, which has been interpreted as possible earlier topsoil. These features are described below:

Pit 0011: Sub-circular feature cut interpreted as a pit or possible post hole. Measured 0.40m in diameter and was cut to a depth of 0.38m. This feature is cut by an adjacent pit (0013) containing a cremation burial. The fill (0012) consisted of mid brown grey silty sand. Occasional charcoal was present but this was only in the vicinity of cutting feature from which it possibly originated (Bulk soil sample taken- S3).

Cremation Burial 0013: Consisted of a circular pit 0.39m in diameter that was cut to a depth of 0.21m. This contained a near complete pottery vessel or urn (0015) within a fill (0014) of mid grey silty sand (Bulk soil sample taken - S2). The urn was near complete except for part of the rim which was lost (Plate 15). It was lifted with the fill intact for further processing. Calcined bone was clearly evident within the fill of the urn (0016). Analysis suggests this was burial of young male See Section 6 below for further detail.

The top of the urn was at a depth of 0.65m below the surface of the concrete slab, approximately 0.15m above the level of the natural subsoil. The upper level of the pit cut was located within layer 0049 although it was not possible to see the actual cut as the make-up of this layer and pit fill were very similar.

Segments of a curving linear ditch were noted in the area of this burial (cuts 0027, 0031 and 0033) which appear to be parts of a concentric ring-ditch (Plate 16). The ditch had a width of 0.6m and a depth of 0.15m; the internal diameter of the ring measured just over 3m. A 0.45m wide gap in the ring was present at a point almost directly north of the central burial.

Cremation Burial 0017: Urned cremation burial encountered during machining. Unfortunately, due to it being located high in the soil profile it was not identified until part had been removed by the machine bucket (Plate 17). What remained comprised an oval shaped cut containing the *in-situ* portions of two pottery vessels (Plate 18) placed side by side and upright within a fill (0018) of mid to dark brown sand with infrequent rounded and broken flint pebbles (Bulk Sample S11). The larger of the two pottery vessels (0020) consisted of the complete base and parts of the body of an urn within which fragments of calcined bone were clearly evident. The smaller vessel lay directly to the east but not much more than the base survived; part of its fill was intact but there was no evidence for it having contained cremated remains. A large number of pottery sherds were recovered from the machine bucket, which presumably originated from both vessels (0023). No rim sherds were recovered indicating the vessels had been previously truncated. A large sample of soil and calcined bone that undoubtedly originated from urn 0019 was also recovered from the bucket (0024). The calcined bone from the urn and from the machine bucket has been

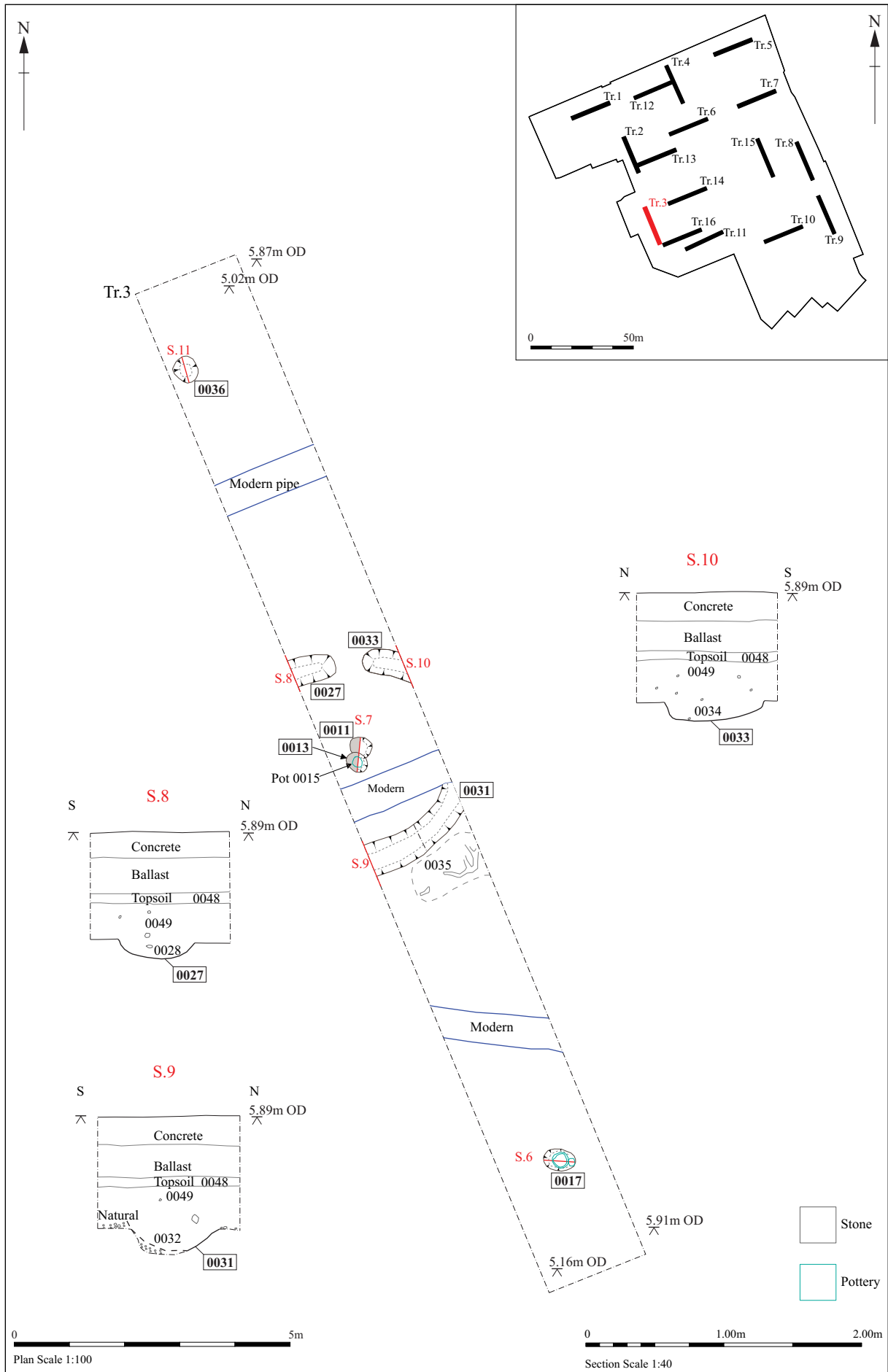


Figure 7. Trench 3, plan and sections

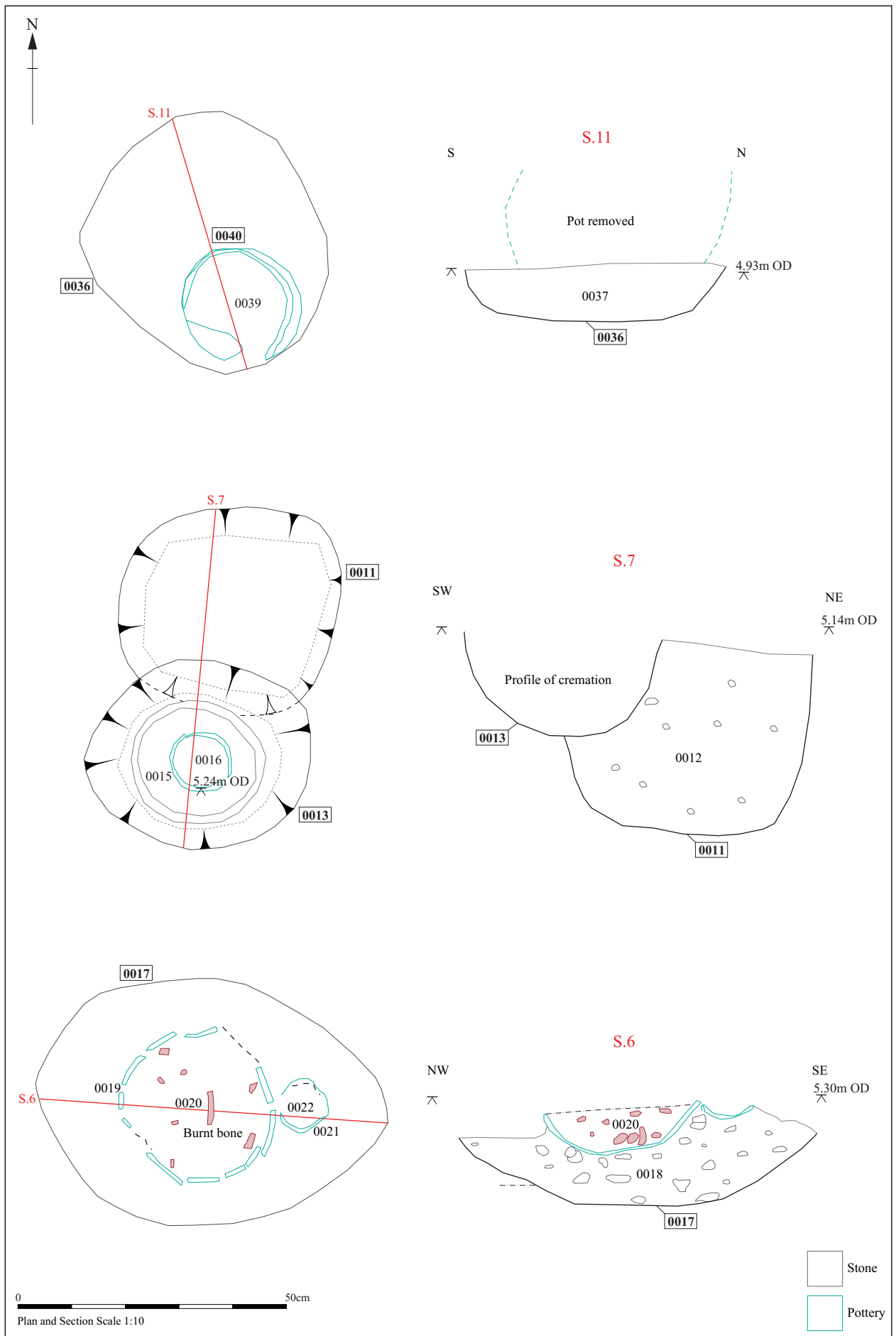


Figure 8. Plans and sections for the cremations from trench 3.

analysed. The results suggest the burial was of a mature female. There was no evidence for the presence of more than one individual (See Section 6 below).

The top of the urn after machining was located at a depth of 0.60m below the surface of the concrete slab, approximately 0.14m above the level of the natural subsoil. The upper surviving edge of the urn prior to machining potentially reached up to the surface of layer 0049, which in the vicinity of this burial was 0.24m thick. Both vessels were located wholly within this layer although the base of the pit was cut into the natural subsoil to a depth of 0.04m.

Cremation Burial 0036: Consisted of a circular pit 0.50m in diameter that was cut to a depth of 0.11m which contained the fragmentary remains of pottery vessel or urn (0040) within a fill (0037) of stony, orange brown sand (Bulk soil sample taken – S12). The urn appeared near complete but was clearly deformed and fractured (Plate 19). It was lifted with the fill intact for further processing. Calcined bone was clearly evident within the fill of the urn (0039). Analysis suggests this was burial of an adult female (See Section 6 below for further detail).

The top of the urn was at a depth of 0.75m below the surface of the concrete slab and approximately 0.19m above the level of the natural subsoil (Plate 20). The upper level of the pit cut was located within layer 0049 although it was not possible to see the actual cut as the make-up of this layer and pit fill were very similar.

Trench 4

Approximately north - south aligned trench. Natural subsoil of yellow sand and gravel was encountered at a depth of 0.85m below the concrete slab (see section 12, Fig 13). No features were identified within this trench and no artefacts recovered.

Trench 5

Approximately east - west aligned trench. Natural subsoil of yellow sand and gravel was encountered at a depth of 0.50m below the tarmac car park surface. Two features interpreted as ditches were identified (Fig. 9), descriptions as follows:

Ditch 0025: Aligned approximately northwest – southeast (parallel to Ditch 0029). Measured 1.5m in width and was cut to a depth of 0.56m (Plate 21). The fill (0026) consisted of brown sand with frequent rounded and broken flint pebbles (Sample 7). Wide 'V' shaped profile, slightly steeper on the northeastern side. No dating evidence recovered.

Ditch 0029: Aligned approximately northwest – southeast (parallel to Ditch 0025). Measured 0.95m in width and was cut to a depth of 0.24m (Plate 22). The fill (0030) consisted of mid brown sand with broken and rounded flint pebbles (Sample 8). Rounded profile. No dating evidence recovered.

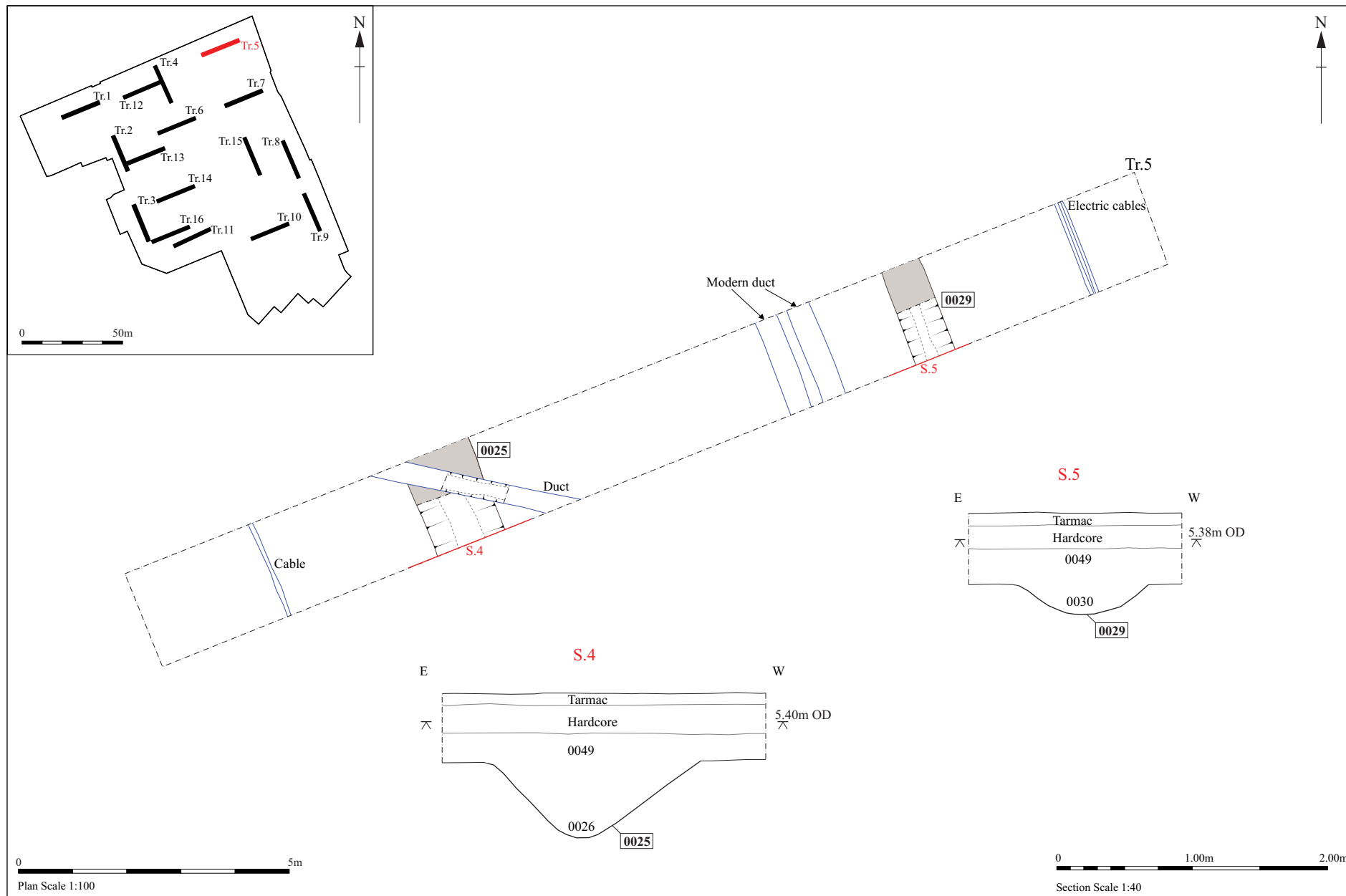


Figure 9. Trench 5, plan and sections

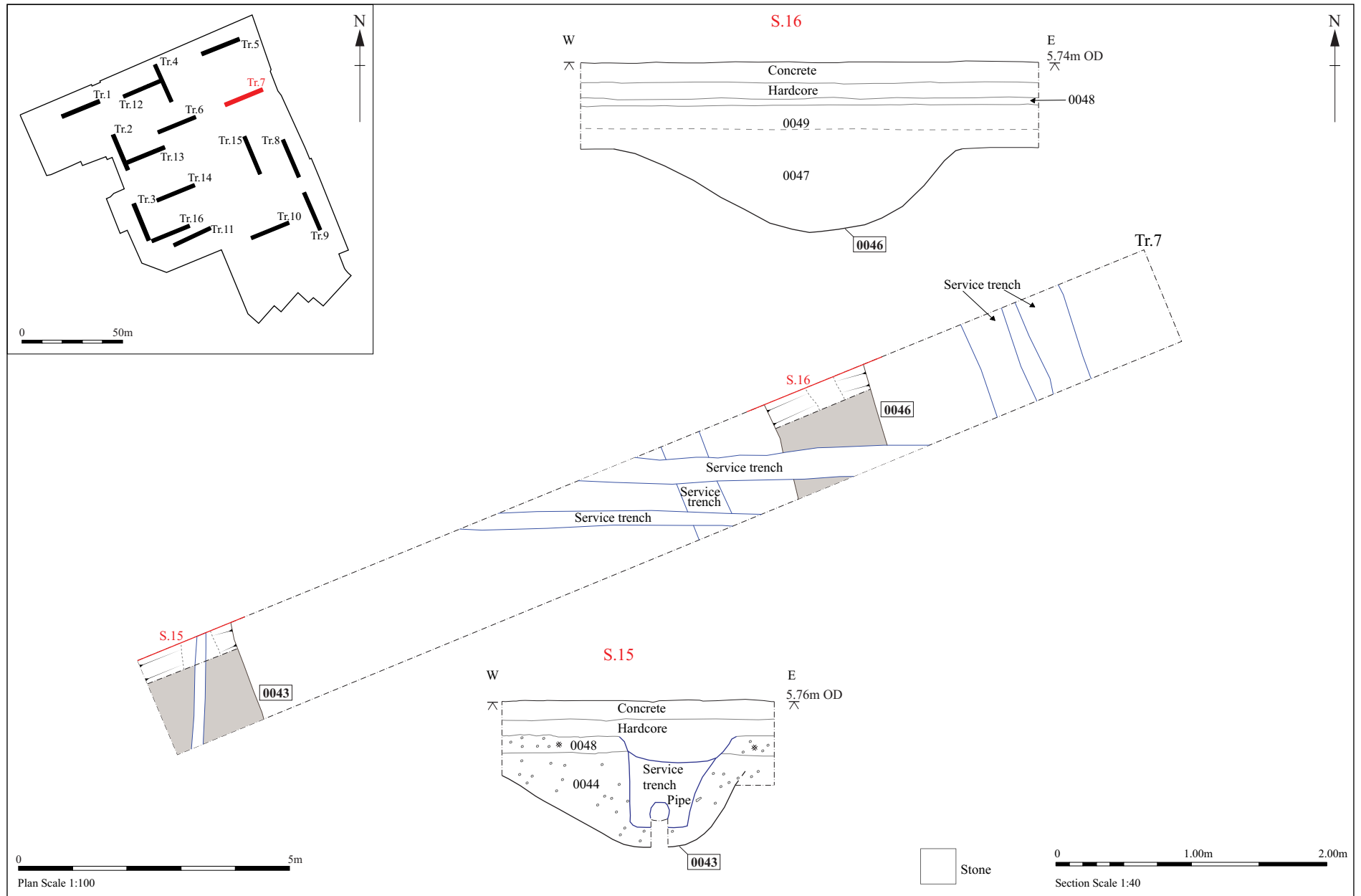


Figure 10 . Trench 7, plan and sections

Trench 6

Approximately east - west aligned trench. Natural subsoil of yellow sand and gravel was encountered at a depth of 0.75m below the concrete slab (see section 13, Fig 13). No features were identified within this trench and no artefacts recovered.

Trench 7

Approximately east - west aligned trench. Natural subsoil of yellow sand and gravel was encountered at a depth of 0.50m below the concrete slab. Two features interpreted as ditches were identified (Fig. 10), descriptions as follows:

Ditch 0043: Aligned approximately northwest – southeast (parallel to Ditch 0046). Measured 1.7m in width and was cut to a depth of 0.58m (Plate 23). The fill (0044) consisted of mid brown sand with frequent rounded and broken flint pebbles. Wide 'V' shaped profile with a narrow flat base, slightly steeper on the northeastern side. No dating evidence recovered. Cut by a modern service trench.

Ditch 0046: Aligned approximately northwest – southeast (parallel to Ditch 0043). Measured 2.50m in width and was cut to a depth of 0.62m (Plate 24). The fill (0030) consisted of mid brown sand with broken and rounded flint pebbles. Rounded profile, steeper on northeast side. No dating evidence recovered.

Trench 8

Approximately north - south aligned trench. Not possible to excavate full length due to presence of extremely thick and well reinforced concrete. Natural subsoil of yellow sand and gravel was encountered at a depth of 1.15m below the concrete slab (see section 17, Fig 13). Thick layer of imported sand and gravel present, presumably deposited to maintain level terrace as height of the natural subsoil drops to the south and east. No features were identified within this trench and no artefacts recovered.

Trench 9

Approximately north - south aligned trench. Not possible to excavate full length due to presence of extremely thick and well reinforced concrete. Natural subsoil of yellow sand and gravel was encountered at a depth of approximately 1.4m below the concrete slab (see section 19, Fig 13). Thick layer of imported sand and gravel present, presumably deposited to maintain level terrace as height of the natural subsoil drops to the south and east. No features were identified within this trench and no artefacts recovered.

Trench 10

Approximately east - west aligned trench. Natural subsoil of yellow sand and gravel was encountered at a depth of approximately 0.55m below the concrete slab (see section 20, Fig 13). No features were identified within this trench and no artefacts recovered.

Trench 11

Approximately east - west aligned trench. Natural subsoil of yellow sand and gravel was encountered at a depth of 0.65m below the concrete slab (see section 18, Fig 13). Large pit noted towards east end of trench, c. 7m wide and 2m deep. Remains of modern timber scaffold plank noted at depth a modern date for this feature. No other features were identified within this trench and no artefacts recovered.

Trench 12

Approximately east - west aligned trench. It was not possible to excavate the full length of this trench due clearance issues with the area within a still extant structure and the presence of an existing service. Natural subsoil of yellow sand and gravel was encountered at a depth of 0.85m below the concrete slab (see section 23, Fig 13). No features were identified within this trench and no artefacts recovered.

Trench 13

Approximately east - west aligned trench. Natural subsoil of yellow sand and gravel was encountered at a depth of 0.75m below the surface of the concrete slab. Two linear features, one interpreted as a gully and the other as a ditch, were identified (Fig. 11), descriptions as follows:

Gully 0050: Aligned approximately southwest – northeast. Measured 0.26m in width and was cut to a depth of 0.10m (Plate 25). The fill (0051) consisted of mid reddish brown soft sandy silt. Rounded profile. No dating evidence recovered. 100% of fill within trench removed. Unknown relationship with Ditch 0052.

Ditch 0052: Aligned approximately north – south. Measured 0.60m in width and was cut to a depth of 0.14m (Plate 26). The fill (0053) consisted of mid reddish brown soft sandy silt. Rounded profile, steeper on west side. No dating evidence recovered. 100% of fill within trench removed. Unknown relationship with Gully 0050.

The two features cut one another but it was not possible to determine the sequence due to the similarity of their fills.

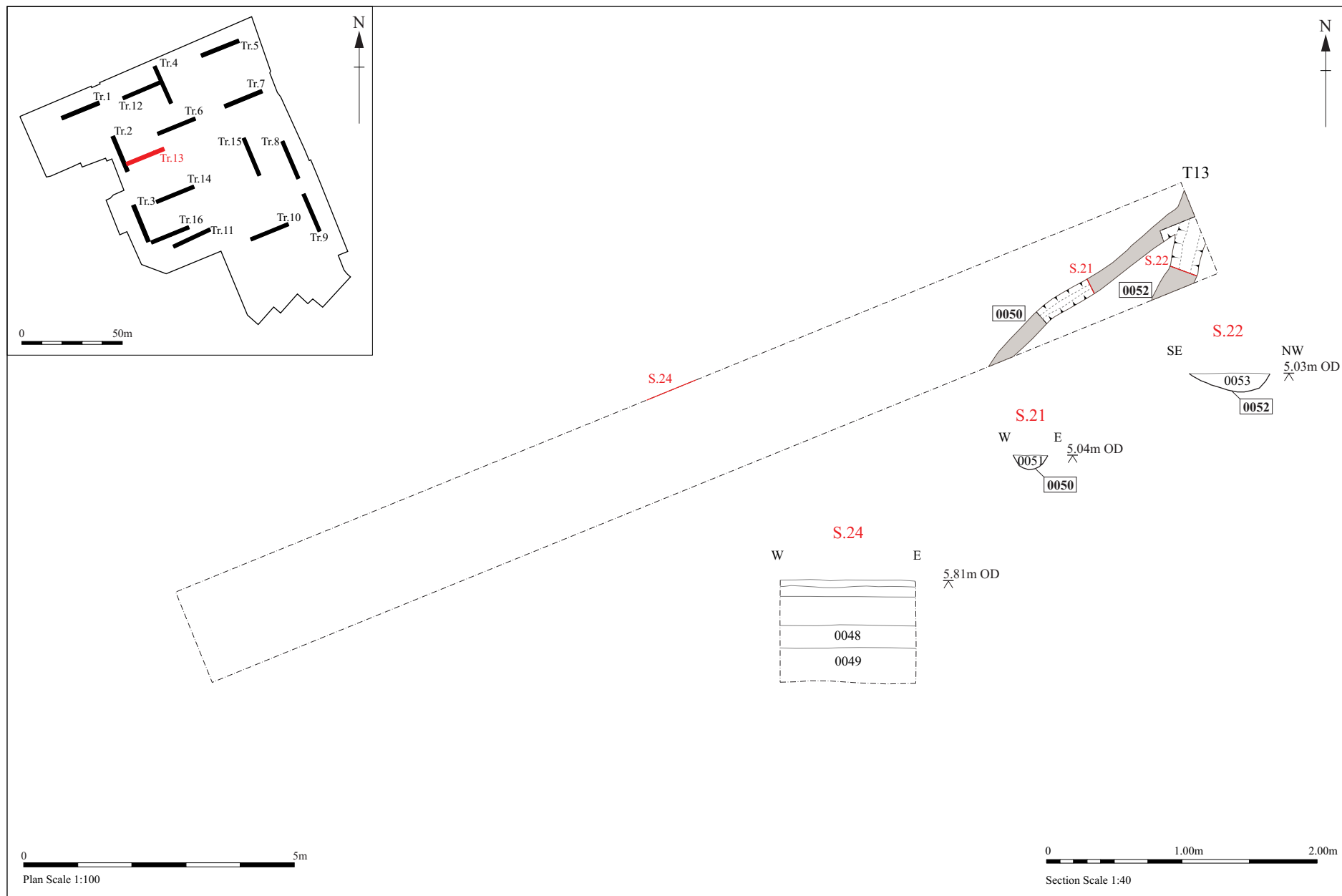


Figure 11. Trench 13, plan and sections.

Trench 14

Approximately east-west aligned trench cut through the raised floor level of former dairy building. Natural subsoil of yellow sand and gravel was encountered at a depth of 1.6m below the floor surface (see section 25, Fig 13). The recorded stratigraphy comprised a thick concrete slab over a c. 0.6m thick deposit of clean yellow sand and gravel (0054) which in turn overlay a buried concrete slab at the approximate level of the ground outside the dairy building (Plate 27). Beneath this the typical soil profile as revealed elsewhere on site, was present. The clean sand and gravel deposit (0054) is imported material that comprises the fill used to raise the floor levels in this area of the dairy building. No features were identified within this trench and no artefacts recovered.

Trench 15

Approximately north - south aligned trench cut through raised floor level of former dairy building (Fig. 12). Natural subsoil of yellow sand and gravel was encountered at depths of between 1.3m and 1.4m below the floor surface. The fill used to raise the floor levels in this part of the former dairy building consists of layers of sand, varying in colour from pale yellow to brown and black, which are overlain by a c. 0.2m thick layer of concrete and brick rubble. These make-up deposits are then capped with a thick concrete slab (Plate 28). This part of the former dairy appears to have been altered on more than one occasion as evidenced by at least two phases of apparently redundant wall footings, many of which cut into the surface of the natural subsoil. In two areas within the trench concrete slabs are present at, or just below, the level of the natural subsoil, which appear to be parts of deep revetted pits associated with former activities within the building. Both these areas were backfilled with rubble and sealed beneath what was the building's floor at the time of its demolition (Plate 29). No pre-dairy features were identified within this trench and no early artefacts were recovered.

Trench 16

Approximately east - west aligned trench. It was not possible to excavate the full length as proposed due to the presence of service, thought to be a gas main, which ran lengthways through the eastern half of the trench (this service was also seen in the west end of Trench 13). In the western half of the trench the natural subsoil of yellow sand and gravel was encountered at a depth of c. 0.95m (see section 28, Fig 13 & Plate 30). No features were identified within this trench and no artefacts recovered.

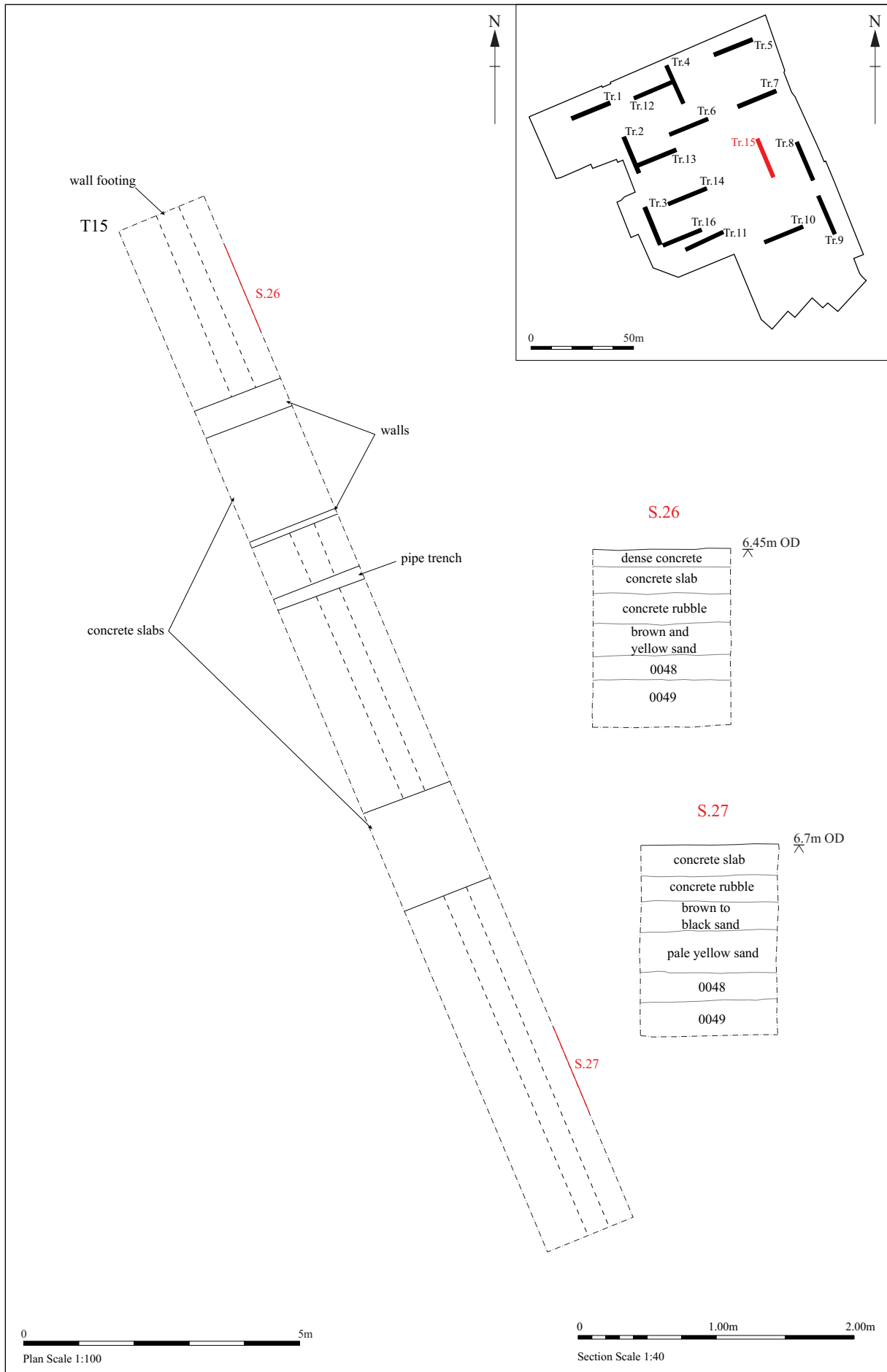


Figure 12. Trench 15, plan and sections.

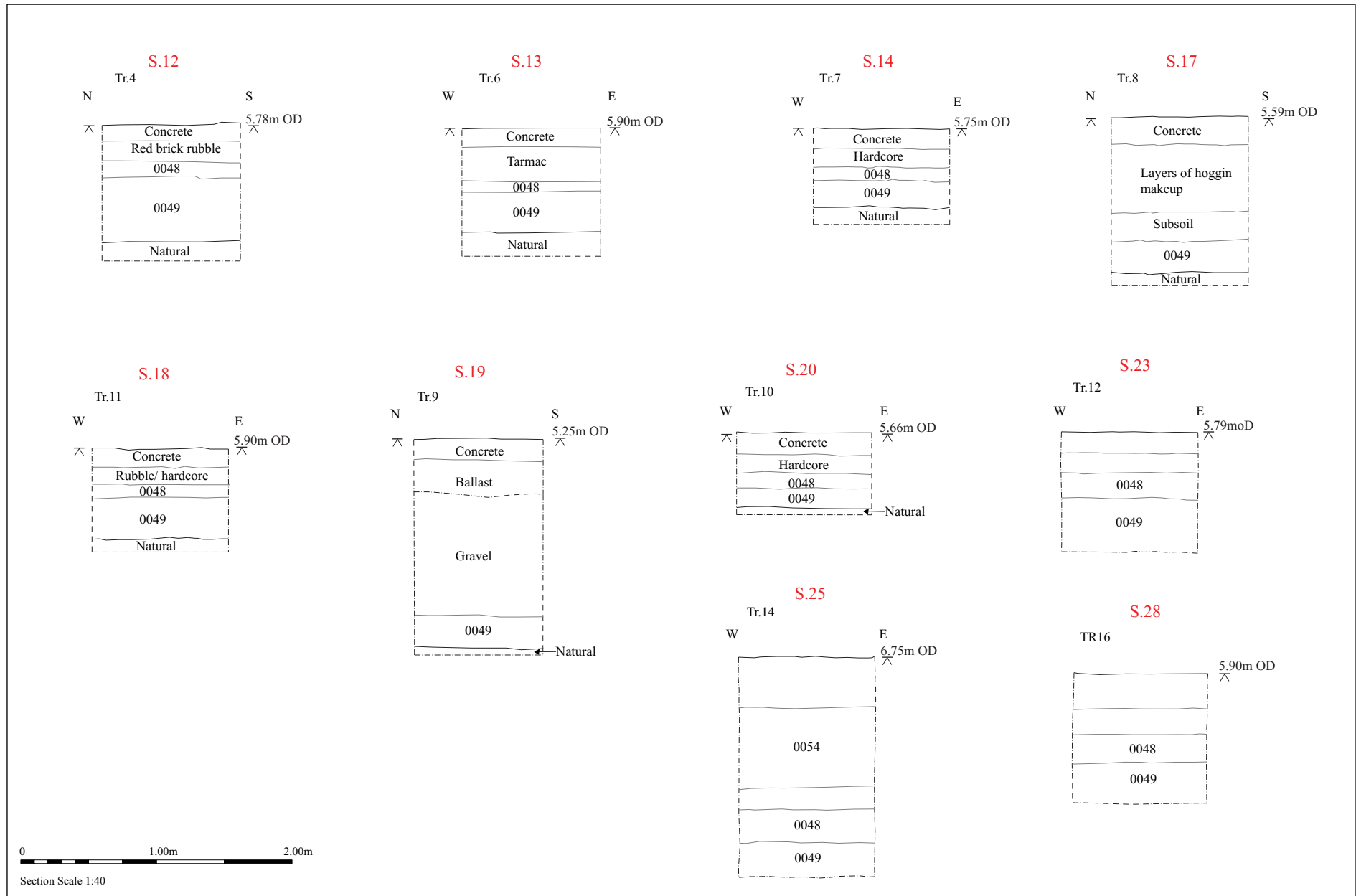


Figure 13. Other trench sections

6. Finds and environmental evidence

Richenda Goffin

6.1 The bulk finds

Few bulk finds were recovered from the evaluation, apart from the Early Anglo-Saxon pottery in Trench 3 and the struck flint from the subsoil. Quantities are shown below:

Context	Feature	Pottery		Flint		Spotdate
		No.	Wt/g	No.	Wt/g	
0000	Subsoil			2	74	Later prehistoric
0013	Cremation burial in Trench 3	12	1564			6th century
0017	Cremation burial in Trench 3	200	2594			6th century
0033	Ditch fill in Trench 3	5	17			6th century
0036	Cremation burial in Trench 3	100	1033			6th century
Total		317	5208	2	74	

Table 2. Finds quantities

6.2 The pottery

The remains of five Early Anglo-Saxon ceramic vessels were identified, three of which are substantially complete. All the pottery was recovered from Trench 3, towards the south-western part of the evaluation. Most of the ceramics came from cremations, although part of a small bowl was found in the fill 0034 of ditch 0033.

Sue Anderson

Introduction and methodology

A total of 317 sherds weighing 5208g was collected from seven contexts during the evaluation. A full catalogue by context is included as Appendix 5.

Quantification was carried out using sherd count, weight and estimated vessel equivalent (eve). The minimum number of vessels (MNV) within each context was also recorded, but cross-fitting was not attempted unless particularly distinctive vessels were observed in more than one context. A full quantification by fabric, context and feature is available in archive. Early Saxon fabric groups have been characterised by major inclusions. Form terminology and dating for Early Saxon pottery follows Myres (1977) and Hamerow (1993). Recording uses a system of letters for fabric codes together with

number codes for ease of sorting in database format, and the results were input directly onto an MS Access table.

The assemblage

Table 3 shows the quantities of Early Saxon pottery from site by fabric.

Description	Fabric	Code	No	Wt/g	eve	MNV
Early Saxon grass-tempered	ESO1	2.01	127	1163		2
Early Saxon sparse shelly	ESSS	2.07	173	2464		1
Early Saxon medium sandy	ESMS	2.22	17	1581	0.82	2
Total			317	5208	0.82	5

Table 3. Early Saxon pottery quantification by fabric.

Three generic fabric groups were distinguished on the basis of major inclusions. However, it should be noted that, as with all handmade pottery, fabrics were extremely variable even within single vessels and categorisation was often difficult. Background scatters of calcareous material, unburnt flint, grog, white mica and other less common inclusions, such as feldspar and ferrous pieces, were present in many of the fabrics. All Saxon wares were handmade, and colours varied throughout from black through grey, buff and brown to red, often within single vessels. General fabric descriptions are listed below.

Quartz tempered

ESMS: Medium sand tempering with few other inclusions (some sparse flint and/or shell), sand grains generally well-sorted.

Calcareous tempered

ESSS: Sparse to moderate fine shell and sand tempering, shell generally leached out.

Organic tempered

ESO1: Predominantly grass-tempered with few other inclusions.

Many sites in East Anglia and the Midlands have produced similar fabric groups, although they occur in different proportions. In general, fine, medium and coarse quartz-tempered pottery tend to be the most common fabric groups at sites in East Anglia, although in the later Early Saxon period these appear to have been replaced to some extent by grass-tempered pottery.

The 317 sherds represent only five vessels, three of which were largely complete. The vessels are described below.



Plate 1. Pot 0015



Plate 2. Pot 0015 stamps

1. ESSS biconical jar, near complete (vessel plus 11 sherds) with only part of the rim missing (Plate 1), rim diameter 120mm. Everted rim and rounded base. Applied strip forming a horizontal pronounced ridge at the carination. Above the carination, two rows of incised lines above a row of rectangular cross stamps (Plate 2). Pot 0015, cremation burial 0013.
2. ESO1 globular jar, fragmented (173 sherds). No rim, flat-rounded base. Decorated with large lentoid bosses forming a chevron pattern on the upper half. Pot 0019/0020/0023, cremation burial 0017.
3. ESMS small globular jar, fragmented (27 sherds). No rim, footstand/pedestal base (55mm diameter). Small vertical bosses with scratched vertical lines in between. Slightly overfired or burnt with almost vitrified external surfaces. Accessory vessel 0021/0020/0023 in cremation burial 0017.
4. ESSS rim and four small body sherds from a small globular bowl with upright rim. Ditch fill 0034.
5. ESMS with sparse shell, base and body fragments of near complete slightly shouldered, rounded jar (c.100 fragments). No rim, with flat-angled base. No decoration but surfaces smoothed, slightly oxidised externally, wear close to base. Pot 0040, cremation burial 0036.

All five vessels are likely to be broadly of 6th-century date, although no. 2 is organic tempered and therefore probably belongs to the later part of that century.

6.3 The struck flint

Cathy Tester

Two struck flints were collected from the subsoil layer (0000). The first is a multiplatform flake core which is patinated and likely to have a relatively early, Mesolithic or Neolithic date. It appears to have had two periods of use as the areas where the three most recent flakes have been removed are unpatinated and one of them is hinge fractured, indicating a later prehistoric date (Bronze Age or Iron Age).

The second piece is an unpatinated flake of later prehistoric date with four retouched notches on one edge and one on the other.

6.4 The small finds

Richenda Goffin

Introduction

Twenty-six small finds were assigned from the evaluation. Many of these were associated with the inhumation 0003, although no skeletal remains had survived from this grave. Finds were also found as grave goods from two other inhumations, an unexcavated grave 0008 and grave 0038. Two additional small finds were recovered from the cremation 0015. The finds from deposit 0049 are later and post-date the lifetime of the Anglo-Saxon cemetery.

Methodology

The small finds were initially recorded on the site Access database with descriptions and measurements. Selected metalwork was x-rayed in the Conservation Lab at Colchester Museum (Plate nos. CX1643-45). Due to the presence of five silver sceattas as well as a probable silver ring, all of the grave goods from Grave 0002 qualified as Treasure under the stipulations of the *Treasure Act 1996*. A report for the Coroner on these artefacts was written by Faye Minter (SCCAS) and Helen Geake with additional information supplied by Chris Scull and John Naylor of the Ashmolean Museum, Oxford. The information presented below on the specific small finds is taken from their catalogue, together with elements of the discussion. Chris Scull also examined and commented some of the iron small finds following radiography.

The assemblage

The majority of the small finds were recovered from three Anglo-Saxon burials in Trenches 1 and 2 and a cremation in Trench 3. In addition, a medieval coin and a number of iron nails were identified in layer 0049, a deposit which was visible in many of the trenches. Table 4 shows the objects recovered from the Anglo-Saxon burials.

Burial type	Iron	Silver	Copper alloy	Other
Inhumation 0002	1 key or girdle hanger, 10 iron fragments, most of which are parts of a chatelaine	5 coins and 1 ring		
Inhumation cut 0008			1 small-long brooch	
Inhumation 0038	1 spearhead, 1 knife		1 buckle	
Cremation 0015	Small rivet, part of comb?			1 fragment of bone/ antler comb

Table 4. Breakdown of artefacts relating to burials



Plate 3. Silver sceat from Grave 0002 (SF 1005)



Plate 4. Silver sceat from Grave 0002 (SF 1006)



Plate 5. Silver sceat from Grave 0002 (SF 1007)



Plate 6. Silver sceat from Grave 0002 (SF 1008)



Plate 7. Silver sceat from Grave 0002 (SF 1017)



Plate 8. Iron spearhead from Grave 0038 (SF 1019)



Plate 9. Iron knife blade from Grave 0038 (SF 1020)



Plate 10. Copper alloy buckle from Grave 038 (SF 1021)

Burial 0002 (Trench 1)

A number of grave goods were found within the fill 0003 of Grave 0002, although no human skeletal remains had survived. The artefacts include a silver sliding-knot ring (SF 1009) discovered in the area of the grave where the head would have been. Five silver coins were recovered from the south side of the grave towards the lower chest/waist/hip area (SFs 1005-1008 and 1017). They are all the same type, and are primary series

sceattas dated to AD 680-710 (Plates.3-7). The coin group, along with the silver ring (SF 1009) has been classified as a hoard and declared a treasure item.

The following identifications and the discussion on these grave goods have been included from the Coroner's report:

SF 1009

A complete probably silver ring now in four adjoining fragments, most of these breaks appear to be old rather than recent, the ring will be described as if complete. The terminals of this ring are tapering and formed into slipknots, the knotted area has an oval to circular section, as is common in such rings, however, this is then flattened and the hoop of the ring has a more rectangular section. External diameter 25.40mm, thickness of hoop 0.79mm, 1.18g in weight.

Such rings appear to have had multiple functions; they have been interpreted as finger-rings, ear-rings, or rings to secure a veil or cap (Walton Rogers 2007, 159, fig 5.21) as well as part of necklaces (Geake 1997, 49, 274-275, fig 4.10 and 4.11) or as rings belonging to a chatelaine to hold small personal items such as toilet equipment (Geake 1997, 57, 282, fig 4.18).

SF 1005

A silver Primary Phase sceat of Series BIb (c. AD 685-95).

Obverse- Diademed bust right; pellet border.

Legend: VII[]AVmA[] (A unbarred).

Reverse- Bird right on cross facing right; cross flanked by annulets above the arms and pellets below, within a pellet serpent border.

Legend: oooV~AVmVANV (A unbarred).

Dimensions: 1.18g and 12.37mm in diameter.

SF 1006

A silver Primary Phase sceat of Series BIb (c. AD 685-95).

Obverse- Diademed bust right; pellet border.

Legend: []VmVIIVAII (A unbarred).

Reverse- Bird on cross facing right; cross flanked by annulets above the arms and pellets below, within a pellet serpent border.

Legend: oooV~AVmV[]AV (A unbarred).

Dimensions: 1.20g and 12.32mm in diameter.

SF 1007

A silver Primary Phase sceat of Series BIa (c. AD 695-700).

Obverse- Diademed head right, within a pellet serpent border.

Legend: 00TAVmVAHVAIT (A unbarred).

Reverse- Bird on a cross facing right; cross flanked by annulets and a group of 8 pellets representing berries in front of the bird, all within a pellet serpent border.

Legend: oooTAVHmVAhVT-

Dimensions: 1.23g and 13.15mm in diameter.

SF 1008

A base silver contemporary imitation of a Primary Phase sceat of Series BI. Martin Allen comments (pers. comm. 28/7/14) "that Rigold [1960, 21 & pl. 3] illustrates two coins with very similar obverses as his subtype BI G, but the reverse is unusual". The closest parallels for the reverse are two examples of Series BIIIA with left-facing birds (pers. comm. 28/7/14 Chris Scull, cf A. Gannon 2013, nos. 115 and 116).

Obverse-Diademed bust (with single pellet diadem) right with cross pattée in front, within a pellet border, legend illegible.

Reverse-Bird on cross facing left, four pellets representing berries by the beak and beneath the tail, within a pellet serpent border (mouth facing right)

Legend: oooo [].

Dimensions: 1.19g and 11.84mm in diameter.

SF 1017

A silver Primary Phase sceat of Series BIa (c. AD 695-700).

Obverse-Diademed bust right within a pellet serpent border.

Legend: []AVmVAHVA (A unbarred).

Reverse-Bird on a cross facing right ; cross flanked by annulets, all within a pellet serpent border.

Legend: oooTAVHVMV[] (A unbarred).

Dimensions: 1.23g and 12.26mm in diameter.

A number of other objects were also recovered from the grave, and are listed below:

SF 1001

An incomplete iron T-shaped key. The shank and one ward of the terminal survive and the rest of the shank is now in two adjoining fragments, due to recent breaks. One face of the shank has adhering textile fragments.

The key measures c154mm in total length, 40.36g in weight, and the terminal with one ward is 25.03mm in width, the shank is 9.94mm in width; it is 10.43mm in thickness. There is also an irregular, roughly oval fragment, which may be from the top of the shank; it has preserved textile adhering to it and a copper-alloy circular-sectioned piece of wire projecting from it, which is possibly the remains of the wire ring the key hung from. This fragment measures 19.99mm in length and 14.81mm in width, 12.34mm in thickness, and 1.62g in weight. Similar iron early Anglo-Saxon keys are not common, but are known from elsewhere, such as Dover Buckland (Evison, 1987, 300, fig 29, grave 54/2a), and Lakenheath (West 1998, 231, fig 113, 5).

SF 1002

A copper alloy complete figure-of-eight shaped link, with fragmentary iron loops through either loop.

The copper alloy link is 14.48mm in length, and 6.88mm in width, 2.82mm in thickness, but when measured with the surrounding iron loops and corrosion it is 24.38mm in length, 9.90mm in width and 9.99mm in thickness, it is 2.18g in weight. Links such as these are found on the chains linking the top and bottom of workboxes, dated to the second half of seventh century, and also occasionally on chatelaine chains (Geake 1997, 34, 266, fig 4.2.).

SF 1003

Iron concreted lump possibly several fragments or objects, 46.71mm by 28.35mm in size and 23.48mm in thickness, 21.36g in weight. Radiography shows that it is a bundle of figure-of-eight chain links, part of a chatelaine (Chris Scull, pers. comm).

SF 1004

An iron incomplete shaft, curvilinear, possibly a ring, measuring 28.47mm in length, 9.03mm in width and 3.11g in thickness and 1.29g in weight. Part of a ring which is a chatelaine component (Chris Scull, pers. comm).

SF 1010

An iron fragment with a circular sectioned shaft, possibly a nail or ring fragment, 12.88mm in length, 5.30mm in width, 5.16mm in thickness and 0.40g in weight. Probable chatelaine rod shaft or key rather than nail (Chris Scull, pers. comm).

SF 1011

An iron shaft with circular section with another shaft wrapped or adhering to, it possibly nails or rings, 29.72mm in length, 9.63mm in width and 7.35mm in thickness, 2.02g in weight. Probable chatelaine rod shaft or key rather than nail (Chris Scull, pers. comm).

SF 1012

An iron shaft, circular section, possibly from a nail, 27.58mm in length, 6.65mm in width and 4.49mm thickness, 1.48g in weight. Probable chatelaine rod shaft or key rather than nail (Chris Scull, pers. comm).

SF 1013

An iron shaft, circular section, with textile adhering to it, possibly nail shaft, 27.04mm in length, 9.67mm in width, 6.55mm in thickness, 1.92g in weight. Probable chatelaine rod shaft or key rather than nail (Chris Scull, pers. comm).

SF 1014

An iron shaft fragment, circular section, possibly a nail, 32.41mm in length and 4.57mm in width, 1.49g in weight. Probable chatelaine rod shaft or key rather than nail (Chris Scull, pers. comm).

SF 1015

An iron curvilinear fragment, possibly from a ring, oval section with one tapering end, measuring 26.37mm in length, 3.43mm in width and 3.32mm in thickness, 0.71g in weight.

SF 1016

Iron concreted lump with a projecting bent circular sectioned shaft and other broken shafts, fragments of textile adhering. 32.65mm by 21.92mm and 12.27mm in thickness, 3.71g. Radiography shows that it is part of an iron ring with fragmentary iron loops, either heads of looped rods or chain-links (Chris Scull, pers. comm).

Discussion of the finds assemblage from Grave 0002

Although it is not possible to say with accuracy where the grave-goods were in relation to the body, because no human skeletal material survived, the grave goods were situated together along the south side of the grave around a third to half the way down, i.e. probably alongside the lower chest/waist/hip area. This location and the nature of the grave goods makes it likely that they were part of a chatelaine, defined as one or more chains which hung from a woman's waist which carried a variety of objects. Although chatelaines of this type were occasionally buried in graves as early as the 6th century AD, they only became popular later, their use peaking in the later 7th century (Geake 1997, 57-58).

The discovery of the five silver primary sceattas within the grave makes this assemblage especially significant. All five sceattas are of primary Series BI; their presence in combination with the other grave goods, might allow the grave to be dated to as early as the c. 680s. They were possibly deposited within a bag or pouch, and textile fragments, which may be related, were also found adhering to most of the adjacent iron finds; this bag may have been suspended as part of the chatelaine. A new

set of numismatic dates for a furnished grave is particularly interesting in view of recent work on carbon-dating furnished graves, which has suggested a cessation of the practice in the 670s or 680s AD (Hines and Bayliss 2013, 464-73).

Inhumation cut 0008 (Trench 1)

A single small find was found on the surface of the fill within the unexcavated grave cut, 0008. The small find consists of the foot of a small-long copper alloy brooch (SF 1018), which is decorated with transverse mouldings.

SF1018

Copper alloy foot of small-long brooch. Decorated. Length 14mm, Width 7mm. Weight 1.9g.

Burial 0038 (Trench 2)

Three objects were recovered from grave fill 0038 (Fig. 6). An almost complete iron spearhead (SF1019) was found close to the skull area (Plate 8). Lower down the grave, on one side close to the remains of an arm were the remains of an iron knife blade (SF 1020) (Plate 9). Close by was a well-preserved copper alloy buckle (SF 1021) complete with the attached buckle plate and pin (Plate 10). It is kidney-shaped and has been provisionally classified as a Type 11.6 'Buckles with square/rectangular copper alloy plate and kidney or bean-shaped loop' (Marzinzik 37 2003). The object shows evidence of minerally preserved organics which will be recorded at a later date.

SF 1019

An iron spearhead, with long cleft socket and blade with slender tip. Lateral nail 24mm from base. Length 225mm, width (spearhead part) 29mm. Weight 179.96g.

SF 1020

An iron knife blade, length 95mm, width 9mm in width (max). Weight 19.07g. Small tang (?incomplete) with back and cutting edge of blade tapering evenly to a point.

SF 1021

A complete copper alloy kidney-shaped buckle, with attached pin and buckle plate. Length of buckle 42mm, width of buckle 26mm (max). Overall length of object with plate and pin 51mm. Weight 30.51g.

Cremation 0015 (Trench 3)

Two further artefacts were found with the cremated bone in the urn 0015. A small piece of bone and antler from the connecting plate of a comb was found (SF1025), together

with several 'teeth' fragments, and an iron rivet (SF 1026) which may have belonged to the connecting plate of the same comb.

Non-cemetery small finds

Small finds which are not associated with the burials consist of a worn silver penny spanning the reigns of Edward II-Richard III (AD 1327-1485) (SF 1023) and four iron nails, all found in layer 0049. A small fragment of copper alloy wire (SF1026) was recovered from sampled material in deposit 0035.

Recommendations

A costing has been provided for all aspects of further work on the small finds from the burials. This will include investigative conservation of the small finds before full recording of the grave goods is undertaken. Specialist analytical work should include detailed recording of the minerally preserved organics on the metalwork. Further photography and illustration will also be needed. A catalogue of the finds, together with a comparative discussion and analysis of the dating will be provided by Chris Scull.

6.5 Human skeletal remains

Sue Anderson

A single skeleton (0041) was recovered during the evaluation from Trench 2. Only the western half of the grave (0010) was exposed and this contained a few fragments of human bone. The bone is in very poor condition but the position of fragments on site was recorded.

Several fragments are pieces of skull, including part of the frontal/right parietal with coronal and sagittal sutures, and part of the posterior-inferior right parietal with lambdoid suture. The coronal suture is closed and fully obliterated internally. Fragments of right arm included a piece of the humerus, although the external surface was lost. Other fragments, labelled 'R. rib' were green stained and had presumably survived due to the presence of a copper alloy object.

The coronal sutural fusion indicates that the fragments were part of a mature adult, but sex is indeterminate from the osteological evidence. No pathological conditions were observed in the sparse remains.

6.6 Human cremated bone

Sue Anderson

Introduction

Groups of cremated bone from three urned burials and related contexts were analysed, all from Trench 3. The burials are of Early Anglo-Saxon date.

Methodology

Bone was collected as bulk samples and flotation-sieved, the entire residue being retained as a single group for each context with the exception of urn burial 0013 which was excavated in spits. The residues were divided into >10mm, >4mm, >2mm and <2mm fractions. The bone from each of the two larger fractions was sorted into five categories: skull, axial, upper limb, lower limb, and unidentified. All fragment groups were weighed to the nearest tenth of a gram. Measurements of maximum skull and long bone fragment sizes were also recorded. Observations were made, where possible, concerning bone colour, age, sex, dental remains and pathology. Identifiable fragments were noted. Methods used follow the Workshop of European Anthropologists (WEA 1980) and McKinley (1994 and 2004). The data was recorded on an excel spreadsheet available in the archive.

Quantification, identification, collection and survival

Table 5 shows the bone weights, percentages of identified bone from the features containing human remains, and the proportions of bone identified from the four areas of the skeleton (skull, axial, upper limb, lower limb). Expected proportions are provided in the first row.

Burial	Total wt(g)	% ident	% skull	% axial	% upper limb	% lower limb
<i>Expected*</i>			18.2	20.6	23.1	38.1
0013	1098.0	52.3	32.4	12.6	13.1	43.6
0017	846.2	56.7	30.3	9.6	18.6	41.5
0036	149.0	25.2	19.5	15.2	26.9	38.4

Table 5. Percentages of identified fragments out of total identified to area of skeleton
(*expected proportions from McKinley 1994, 6)

The largest collection of bone was from an urn which was substantially complete (burial 0013), but the other two had been broken and truncated.

This shows that in all but the two smallest groups, skull and lower limb fragments were over-represented amongst the identifiable material, and that other areas of the skeleton were generally under-represented with the exception of the upper limb in one burial. There is always some bias in the identification of elements, with cranial vault fragments being particularly easy to identify, as are most axial fragments. Separation of arm and leg bones is not always possible, particularly in burials where more than one individual is present. Most of the larger unidentified material in this assemblage were pieces of long bone of uncertain type. These figures therefore provide only a rough guide to what was originally collected following the cremation process.

Mays (1998, Table 11.2) notes that the combusted weight of an adult skeleton has a mean of around 1500g for females and 2300g for males. None of these burials attain anything like the quantity expected for a large adult; even the group from the complete urn is only approximately 50% of the expected adult male weight. The quantity of bone in this assemblage therefore represents only a small proportion of the combusted weight of an average adult skeleton.

The majority of bone in this group was fully oxidised and cream to white in colour, although a few inner fragments of thicker long bones, particularly the femur, were grey-blue in colour. The presence of a high proportion of white bone indicates firing temperatures in excess of c. 600°C (McKinley 2004, 11)

The cremation burials

The burials are summarised in Table 6.

Burial	Age	Sex	Notes
0013	?Young	Male	Most of the bone was recovered from inside the urn, but 3.5g came from the fill of the cremation pit, and 4.4g was recovered from a pit 0011 which was cut by the burial. The bone is in good condition and includes many large fragments. The individual was male, based on the robusticity of the occipital and glabella, and young, based on the presence of open sutures of the skull. At least two large wormian bones were present. A fragment of right maxilla showed that the anterior teeth were present at death, although no tooth roots were present in the assemblage. There was no evidence for any pathological conditions, including degenerative joint disease (DJD). Fragments of animal bone (24.1g) were also recovered from this burial, including at least two near-complete sheep ribs and some pieces of mandible of unknown species.
0017	Mature	Female	The burial was partially removed by machine and the contents recovered from the spoil, but samples from the urn and the recovered material were combined for sieving. A small quantity of bone (0.6g) came from the pit fill. The fragments are in good condition and several large pieces are present. The bones appear gracile, particularly the fragments of facial bone, suggesting a female. One cervical vertebra shows slight osteophytes around the body, suggesting that she was mature or old, but there is no other evidence for DJD despite a number of joints being present. Most of the mandibular teeth appear to have been present in the jaw at the time of death, although only six root fragments of 4-5 teeth survive.
0036	Adult	?Female	Only a small quantity of bone survives, most from the urn, but also 7.7g from the pit fill. The bone is in good condition but significantly more fragmented than the other two burials. The individual was an adult, and the small size of the finger phalanges suggest a possible female.

Table 6. Summary of urned cremation burials

As noted above, all three burials were very incomplete. The surviving evidence suggests that the three urns each contained individual burials representing two females and a male. The inclusion of small pieces such as tooth roots and finger phalanges indicates that collection from the pyre site was thorough, although it seems likely – based on the most complete urn – that the entire body was not routinely collected (or that it was included in a separate urn?).

The urn from burial 0013 was excavated in spits of c.5cm depth, starting with spit 1 at the top of the vessel. Data collected in this way can be used to compare the relative proportions of the four main skeletal areas throughout the container and perhaps gain some insight into the collection techniques following cremation. The distribution of elements within the four spits of 0016 is shown in Fig. 12. This shows there was more of the lower limb towards the base of the vessel, and more of the upper limb at the top, with axial material generally spread throughout and skull slightly less frequent towards the base. This may indicate systematic collection of fragments from the feet upwards, although the evidence for this is not strong.

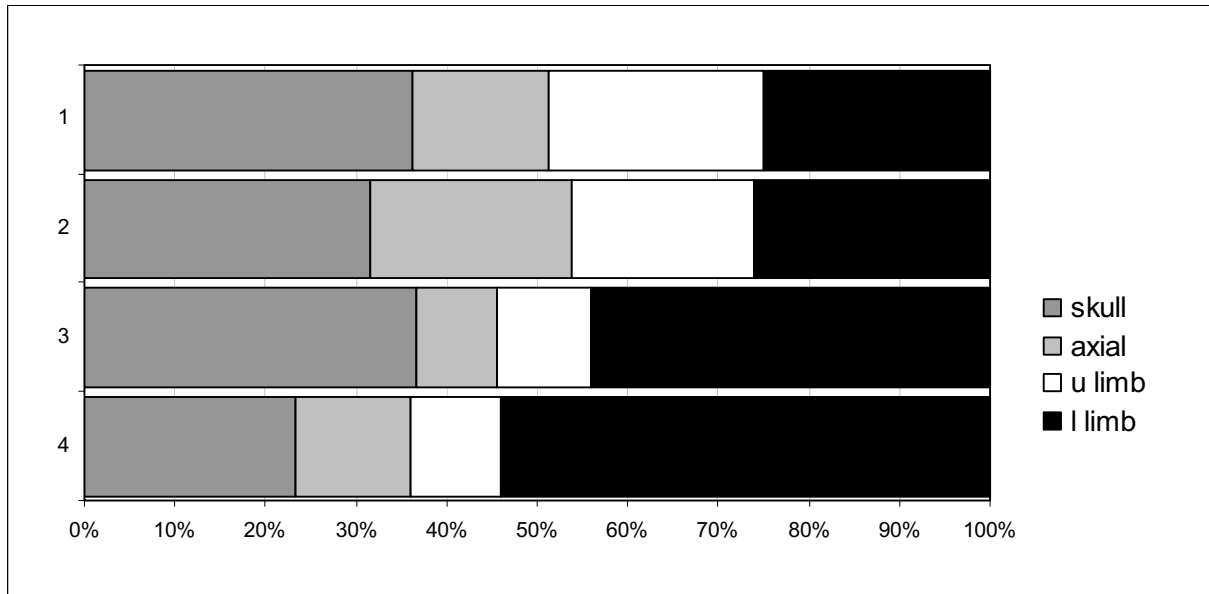


Figure 14. Distribution of bones from the four main skeletal areas through 0016

The two larger burials both contained many large fragments, which is reflected in the relatively high identification rates of over 50%. The maximum lengths of long bone fragments recorded were 71mm in 0017 and 65mm in 0013, compared with only 38mm in 0039. However, the longest complete piece was a fragment of sheep rib from 0013, at 129mm.

Radiocarbon dating

Three samples of bone, one from each burial, have been selected for submission to SUERC for AMS dating.

Summary and discussion

The three deposits of human bone represent a minimum of three individuals, all adults with both sexes represented. Very little pathology was recorded in this group. One individual had signs of degenerative joint disease and one had a congenital anomaly (wormian bone).

None of the burials can be considered complete in terms of bone weight. In the case of two of the urned burials it is clear from the site evidence that the low weights could be accounted for by disturbance or plough truncation, but this was not the case for the

intact urn. At least two of the burials contained animal remains which, presumably, represent joints of meat which were included on the pyre.

Most of the bone from this site is white or cream-coloured, and indicates that firing probably reached the high temperatures normally associated with cremation. The many large fragments suggest that the bone was not deliberately pulverised prior to insertion in the urns.

Recommendations for further work

The burials have been fully recorded and a full catalogue has been produced. The cremated remains have not yet been discussed in terms of their context – i.e. how they fit in with the larger Boss Hall cemetery, or in comparison with other Early Anglo-Saxon cremation cemeteries in East Anglia. This work would be required if the group is to be published, or if further excavation of the cemetery is carried out.

6.7 Discussion of material evidence

Inhumations were present in two of the trenches excavated on the north-west part of the site, whilst the cremations were found in Trench 3 which were further south.

Although very little skeletal evidence survives, it appears from the grave goods associated with the burials that one male and one female are represented. The female was buried with a significant group of five sceattas which have been provisionally dated to c. AD 680-710. Preservation of the cremated bone was variable, but enough survived to determine that both sexes are represented. Radiocarbon dating of the bone from each of the cremations will be undertaken.

In addition to conservation of the artefacts it is intended that considerable further work will be undertaken which will provide a full catalogue, a comparative discussion of the finds and their dating, and an interpretative discussion of the burials which considers them against the published graves and their broader contexts. Also included will be a discussion of the coins as elements of the grave assemblage and on their numismatic significance. As discussed above, the dating of the furnished grave which contains the

coins is of particular significance in the research on when the practice of accompanying inhumations with grave goods ceased.

6.8 Environmental evidence

Assessment of the plant macrofossils

Anna West

Introduction and Methods

A total of fourteen bulk samples were taken from archaeological features on the site. All the samples were processed at this stage in order to assess the quality of preservation of plant remains and their potential to provide useful insight into the utilisation of local plant resources, agricultural activity and economic evidence from this site. Further material was collected from two cremation urns which were lifted en-bloc and excavated in spits. The excavated material was then dry sieved to recover the cremated human remains and any artefacts that may be present. Following this the sieved residues were processed in the same way as the bulk soil samples, along with the excavated fill of cremation urn 0021 to recover any remaining cremated bone and to examine any evidence of pyre material or other organic remains that may be present.

The samples were processed using manual water flotation/washover and the flots were collected in a 300 micron mesh sieve. Once dried the flots were scanned using a binocular microscope at x16 magnification and the presence of any plant macro remains or artefacts were recorded in Table 7. Identification of plant remains is with reference to New Flora of the British Isles, (Stace 2010).

The non-floating residues were collected in a 1mm mesh and sorted when dry. All artefacts/ecofacts were retained for inclusion in the finds total.

Quantification

For this initial assessment, macro remains such as seeds, cereal grains and small animal bones were scanned and recorded qualitatively according to the following categories

= 1-10, ## = 11-50, ### = 51+ specimens

Sample Number	1	2	3	4	5	6	7	8	9	10	11	12	13	15	16
Context Number	0003	0014	0012	0022	0024	0020	0026	0030	0028	0035	0018	0037	0038	0045	0047
Cut Number	0002	0013	0011	0017	0017	0019	0025	0029	0027		0017	0036	0010	0009	0046
Feature type	Grave	Crem	Pit	Pot fill	Crem	Crem	Ditch	Ditch	Ditch	Deposit	Crem	Crem	Grave	?	Ditch
Date															
Charred crops and food plants															
Hordeum sp. (grain)	#														
Triticum sp. (grains)							#								
Cereal indet. (grains)												#			
Charred weeds/other															
Fabaceae indet.							#								
Un- Charred weeds/other															
<i>Sambucus nigra L.</i>								x			#	#	#		#
<i>Fumaria sp.</i>	#														
<i>Trifolium sp.</i>					#				#		#	#	#		
<i>Malva sp.</i>								x							
<i>Veronica sp.</i>							#	x	#				#	#	
<i>Solanum sp.</i>											#	#	#		
<i>Chenopodium sp.</i>	#	x			xx	xx	x	x	x		x		x	x	xxx
Other plant macrofossils															
Charcoal 0-5 mm	xx	xx	xxx		xx	xx		xxx	xxx	xx	xx	xx	xx	xx	xx
Charcoal 5-10 mm		x	xxx			x		x	x	x	x	x	x	x	x
Root/stem							xxx								
Other remains															
Bone fragments	#					x		x	x			x	x	x	x
Burnt bone fragments					xxx	xx									
Small mammal/amphibian bones															x
Snail shells	xxx		x					x			x	x	x	xx	
Sample Number	1	2	3	4	5	6	7	8	9	10	11	12	13	15	16
Ferrous spheroids/globules									#	#	x	x		x	
Coal/coke fragments		xx					x			x	x	x	x	x	x
Sample volume (litres)	20	10	40	0.5	10	3	40	40	30	5	20	5	30	40	40
Volume of flot (ml)	20	5	50	0	5	10	300	25	50	5	10	5	5	10	10
% flot sorted	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 7. plant macro remains or artefacts

Remains that cannot be easily quantified such as charcoal, magnetic residues and fragmented bone have been scored for abundance

x = rare, xx = moderate, xxx = abundant

Results

Bulk Samples

The preservation of the macro fossils within the samples processed was through charring and is generally poor. Wood charcoal fragments were present in most of the flots in small quantities but were rather comminuted, making them of little use for radiocarbon dating or species identification, only a single fragment from Sample 6, fill (0020) of 0019, is identifiable as being from a ring-porous, therefore deciduous hardwood species. Modern rootlets were rare but where they were present they can be regarded as intrusive modern contaminants.

Charred cereal grains were very rare and only occurred as single specimens within bulk Sample 1, fill (0003) of grave [0002], Sample 7, fill (0026) of ditch [0027] being a single Barley (*Hordeum* sp.) grain and a single Wheat (*Triticum* sp.) grain respectively. Sample 12, fill (0037) from pit [0036] and fill (0039) of urn 0040 also contained a single fragment of cereal caryopsis each, but these were both too fragmented and abraded to identify at this stage.

A single charred legume (Fabaceae) fragment was observed within Sample 7, fill (0026) of ditch [0025]. It was too small and abraded to identify to species at this stage but could represent either a pea (*Pisum sativum* L.) or a wild vetch (*Vicia* sp.). As pulses do not need to be processed using heat in the same way that cereals do, they are less likely to be exposed to chance preservation through charring and are often under represented within archaeological deposits, not reflecting the important role that legumes played as a source of carbohydrates and protein for both humans and livestock throughout history.

A small suite of uncharred weed seeds were observed within most of the bulk samples Elder (*Sambucus nigra* L.), Mallows (*Malva* sp.), Clovers (*Trifolium* sp.), Nightshades (*Solanum* sp.), Speedwells (*Veronica* sp.), Goosefoots (*Chenopodium* sp.) and Fumitory (*Fumaria* sp.) were all present but in very small numbers. These are common wayside

and segetal weeds that could have been accidentally harvested along with a crop. The sparse nature of cereals within these samples however and the fact that these seeds are all uncharred and unabraded suggest that in this case they could be considered as modern contaminants intrusive within the archaeological deposits.

Coke like vitrified material and coal fragments were present in small quantities in a number of the samples. Ferrous spheroids were also observed within the flots of five samples, but no magnetic material, in the form of ferrous spheroids or hammer scale, was recovered from the non-floating residues. Ferrous spheroids/globules are formed during primary smithing as hot droplets of slag are expelled and their presence suggest that some sort of metal working or small scale industrial activity could have been taking place in the vicinity. However taken in conjunction with the coke and coal fragments observed within the samples, which indicate the use of coal powered industrial or agricultural machinery or manuring in the area, it is possible again that this material could also be intrusive through the effects of bioturbation.

Urn fills

The sieved residues of the urned cremations produced very little material. All the flot samples were 5ml or less. Calcined bone was present in all but one of the spits but in very small quantities. The charcoal present is highly commuted and of little use for radiocarbon dates or species identification. Plant macro fossils were absent other than the cereal grain fragment from fill (0039) of urn 0040. The two Clover family (*Trifolium* sp.) seeds observed could, as with the bulk samples, possibly be considered intrusive as no preservation process such as charring or waterlogging was present.

Sample 4, fill (0022) of pot 0017 was processed following excavation but failed to produce any flot material or non-floating residue suitable for assessment.

Conclusions and recommendations for further work

In general the samples were poor in terms of identifiable material. Charred remains were sparse and the uncharred remains were suggestive of modern contaminants within the archaeological deposits. Charred material is itself robust and can be deposited and re-deposited within archaeological features.

It is not recommended that any further work is carried out on the material from these samples at this stage, as it would offer little information of use to the current archaeological investigations. However if further interventions are planned on this site it is recommended that further bulk sampling should be undertaken in order to try and investigate the nature of the cereal and metalworking waste and to retrieve material that hopefully could expand the knowledge of the species utilized during the burial rites and practices taking place on this site. New flint material may also provide the potential for samples suitable for radiocarbon dating for any archaeological contexts that remain undated.

7. Discussion

The inhumation and cremation burials identified have been confidently dated to the 6th and 7th centuries AD. They are undoubtedly part of the same burial ground associated with the Anglo-Saxon burials excavated in 1990 immediately to the west of the evaluation area (see Fig. 15 for a summary of all recorded burials).

The burials were located in the three trenches along the southwestern edge of the evaluation area whilst there was no evidence for burials within the other trenches, including the additional trenches excavated during phase 2 of the evaluation. This would suggest that the eastern limit of the burial ground lies within the site, in the area to the west of Trenches 4 and 6, although no formal boundary markers were positively identified.

In the area of the burials the natural subsoil was situated at depths of between 0.4m and 0.7m. This was overlain by a layer of mid brown sand (0049) that was interpreted as a possible early topsoil. The urns within the three cremation burials recorded in Trench 3 were partly, and in the case of Burial 0017, wholly, located within this layer. The inhumations also would have been cut through this layer although the cuts were not identified until the level of the natural subsoil had been reached.

The lack of rim sherds from the urn in Burial 0017, the upper level of which probably coincided with the surface of layer 0049, suggests the site has suffered a limited degree



Figure 15. Summary of all recorded burials (evaluation results in red; previously recorded burials and areas investigated in blue)

of truncation. This is probably a result of agricultural cultivation in this area prior to, but more likely during, the Co-operative Society's occupation of the land. This area was part of the farm estate associated with Boss Hall during the post-medieval period and was later part of the Co-operative Society's market garden.

A remnant of what was probably topsoil prior to the laying of the concrete slab (0048) was identified overlying layer 0049. The majority of this was probably stripped in preparation for the concrete slab.

The large pit (0009) in Trench 1 is cut by a probable grave suggesting it predates the cemetery. No artefacts were recovered from the limited sample section. Interpretation is problematic, given the little information gleaned during the evaluation, but based on its apparent dimensions the possibility of it being a sunken featured building cannot be entirely ruled out.

The ditch sections recorded in Trenches 5 and 7 indicate the presence of what is probably a pair of near parallel ditches, neither of which yielded any datable material. The eastern ditch is coincidental with a roadway that gives access to the house at Boss Hall, as marked on late 19th century maps, which would suggest a post-medieval or possibly medieval origin for this feature. The western ditch, being roughly parallel is possible associated and therefore of a similar date.

Although no further burials were located in the eastern trenches this cannot be seen as conclusive proof as regards their absence. The graves were not densely packed within the excavated portion of the cemetery to the west and it is possible the evaluation trenches could be located in the spaces between burials.

The two features noted in Trench 13 were unfortunately undated. They appear to be the truncated remnants of ditches, presumably boundary markers, and could potential be early features that may have an association with division within the cemetery and, in the case of the north-south feature, a possible cemetery boundary.

The level of the natural subsoil was noticeably lower towards the eastern edge of the evaluation which is likely to be a reflection of the natural topography with the land levels falling off slightly towards the probable tributary channel suggested by the underlying geology.

8. Conclusions and recommendations for further work

The evaluation confirmed that the previously identified Anglo-Saxon cemetery located to the southwest extends into the evaluation but that it does not continue across the entire site. Any proposals for future development that have the potential to disturb the area of burials will undoubtedly require archaeological mitigation.

The Anglo-Saxon cemetery at Boss Hall is an important site of local if not national significance and undoubtedly warrants further work. If the cemetery area is liable to be disturbed by future development it is recommended that a controlled soil strip down to archaeological levels be undertaken, after removal of the concrete slab and any buildings not being retained. This to be followed by the full excavation of any further burials that may be encountered along with sampling of any other archaeological features identified.

No significant archaeological features were identified in the eastern seven trenches to the east of the eastern ends of Trenches 6 and 11. It is therefore unlikely that any major archaeological works would be required for this area although it may be prudent to carry out archaeological monitoring of groundwork to catch any outlying graves or features.

The final decision regards the nature of mitigation and the extent of the areas in which it may be required is at the discretion of the County Conservation Team.

9. Archive deposition

Historic Environment Record reference under which the archive is held: IPS 735.

Digital archive can be found on the SCC servers at the following location:

R:\Environmental Protection\Conservation\Archaeology\Archive\Ipswich\ IPS 735 Evaluation (Boss Hall Co-Op)

Digital photographs are held under the references HXG 01 to HXH 33 and HZG 44 to HZG 67.

A summary for both phases has been entered into OASIS, the online database, reference: suffolkc1-177271

10. Acknowledgements

The evaluation was carried out by Preston Boyles, Roy Damant, Tony Fisher and Mark Sommers from the Suffolk County Council Archaeological Service Field Team.

The finds and environmental work was undertaken by Sue Anderson, Richenda Goffin, Cathy Tester & Anna West, and the illustrations were produced by Ellie Hillen and Beata Wiczorek-Olesky.

The project was directed by Mark Sommers and managed by Dr Rhodri Gardner, who also provided advice during the production of the report.

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12. Additional plates



Plate 11. Trench 1, Grave 0002, camera facing south (ref. HXG 15)



Plate 12. Trench 2, Grave 0002, grave goods group, camera facing south (ref. HXG 12)



Plate 13. Trench 1, general soil profile across site, camera facing north (ref. HXG 30)



Plate 14. Trench 2, Grave 0010, camera facing north (ref. HXG 30)



Plate 15. Trench 3, Cremation 0013, in relation to surface of natural subsoil (ref. HXG 55)



Plate 16. Trench 3, Cremation 0013 and ring ditch, camera facing north (ref. HXG 96)



Plate 17. Trench 3, Cremation 0017, camera facing east (ref. HXG 72)



Plate 18. Trench 3, Cremation 0017, north to top of image (ref. HXG 77)



Plate 19. Trench 3, Cremation 0036, camera facing west (ref. HXH 04)



Plate 20. Trench 3, Cremation 0036, showing relation to soil profile (ref. HXH 04)

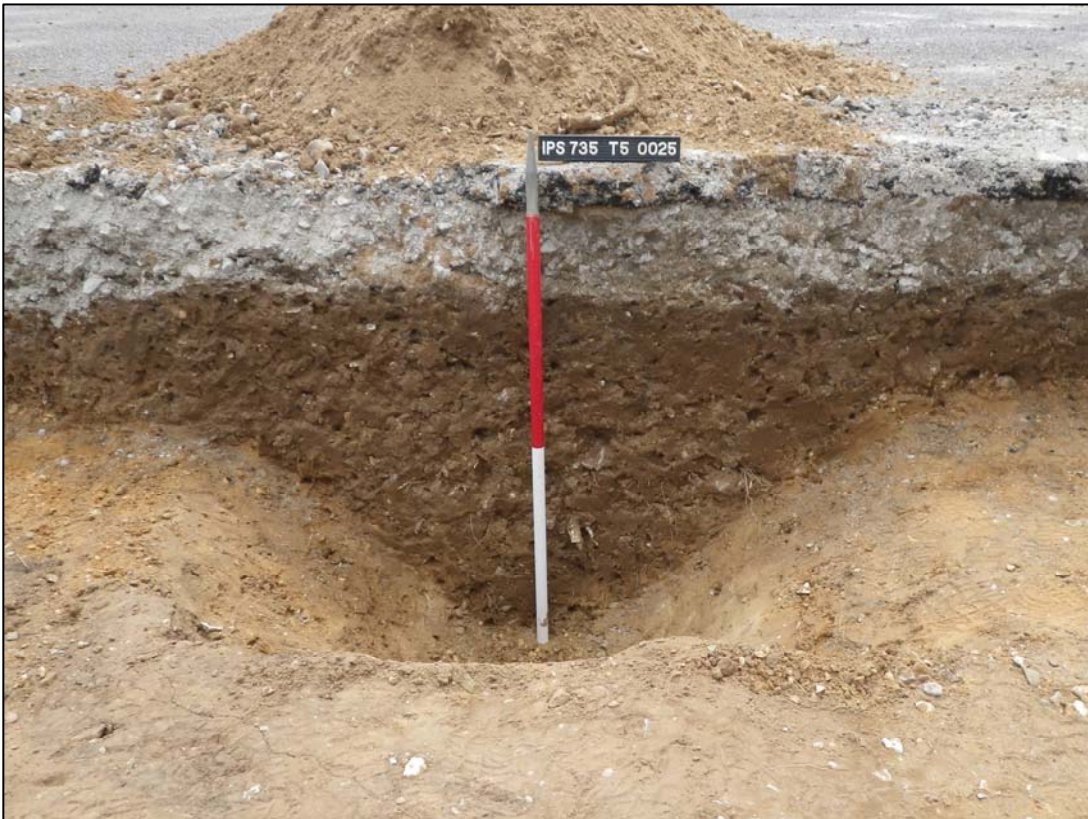


Plate 21. Trench 4, Ditch 0025, camera facing southeast (ref. HXH 15)



Plate 22. Trench 4, Ditch 0029, camera facing southeast (ref. HXH 13)



Plate 23. Trench 7, Ditch 0043, camera facing northwest (ref. HXH 20)



Plate 24. Trench 7, Ditch 0046, camera facing northwest (ref. HXH 19)



Plate 25. Trench 13, Gully 0050, camera facing northeast (ref. HZG 47)



Plate 26. Trench 13, Ditch 0052, camera facing south (ref. HZG 48)



Plate 27. Trench 14, soil profile, camera facing north (ref. HZG 50)



Plate 28. Trench 15, soil profile, camera facing east (ref. HZG 54)



Plate 29. Trench 15, general view, camera facing north (ref. HZG 58)



Plate 30. Trench 16, soil profile, camera facing south (ref. HZG 62)

Appendix 1. Written Scheme of Investigation

**East of England Co-Op Dairy Site, Boss Hall,
Sproughton Road, Ipswich, Suffolk**

Archaeological Evaluation by Trial trench

**Written Scheme of Investigation
&
Safety Statement and Risk Assessment**

**Prepared by Suffolk County Council Archaeological Service
Contracting Team
April 2014**

Document Control

Title: East of England Co-Op Dairy Site, Boss Hall, Sproughton Road, Ipswich, Suffolk: Written Scheme of Investigation

Date: 16th April 2014

Issued by: Suffolk County Council Archaeological Service Field Team

Author: Mark Sommers

Checked by: N/A

Issued to: David Clarke & Associates

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3. Archaeological Method Statement
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3. Risk Assessments

1. Background

- 1.2 The Field Team of the Suffolk County Council Archaeological Service (SCCAS) have been asked by David Clarke & Associates to prepare documentation for a programme of archaeological evaluation by trial trench at the above site (Fig 1). This Written Scheme of Investigation (WSI) covers that work only. Any further stages of archaeological work that might be required in relation to the proposed development would be subject to new documentation.
- 1.3 The site concerned lies centred approximately on NGR TM 1417 4536 and is c. 2.5km to the north west of the historic core of Ipswich.
- 1.4 The work is to be undertaken prior to the deposition of any planning applications for the site's redevelopment.
- 1.5 The archaeological investigation will be conducted in accordance with a Brief produced by Dr Richard Hoggett of the SCCAS Conservation Team (dated 2nd September 2013).
- 1.6 The site's archaeological potential is due to the presence of an important Early Saxon (AD 450–650) inhumation and cremation cemetery, which is located immediately to the west. It was excavated in 1990 and is recorded in the county Historic Environment Record (HER) under the reference IPS 231. The excavated burials were concentrated towards the eastern edge of the excavated site and it is highly likely that the cemetery continues into the western edge of the proposed development site. The majority of the development site has not been the subject of any large-scale archaeological fieldwork although two small-scale investigations have been undertaken within its boundaries. In 1995, a single trench evaluation and monitoring revealed four ditches interpreted as late medieval or post-medieval field boundaries (HER ref. IAS 7919); and monitoring of groundwork associated with building work in 2000/2001 identified a single pit containing Early Anglo-Saxon pottery (HER ref. IPS 397). Additionally, the site of a filled-in medieval moat, which was partially excavated in 1987 (IPS 100) lies to the south. It is outside the site, but any associated settlement evidence may extend within its boundary.
- 1.7 The fieldwork will be carried out by members of SCCAS Field Team under the supervision of a Project Officer.

1.1 Research aims

The research aims of a trial trench evaluation are as follows:

- RA1: Identify the date, approximate form and purpose of any archaeological deposit, together with its likely extent, localised depth and quality of preservation.*
- RA2: Evaluate the likely impact of past land uses, and the possible presence of masking colluvial/alluvial deposits.*
- RA3: Establish the potential for the survival of environmental evidence.*
- RA4: Establish the suitability of the area for development.*
- RA5: Provide sufficient information to construct an archaeological conservation strategy, dealing with preservation, the recording of archaeological deposits, working practices, timetables and orders of cost.*

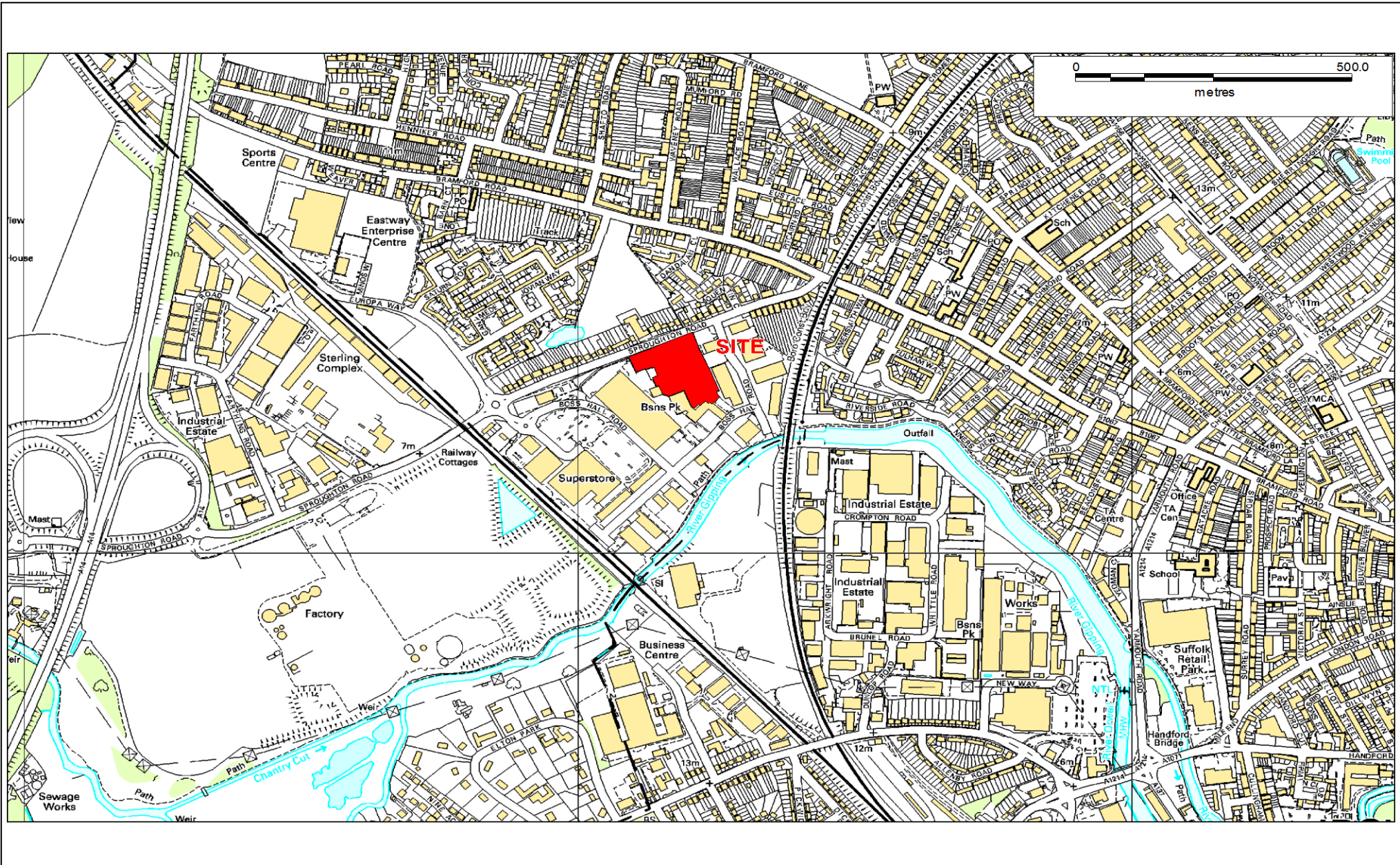


Figure 1. Site Location

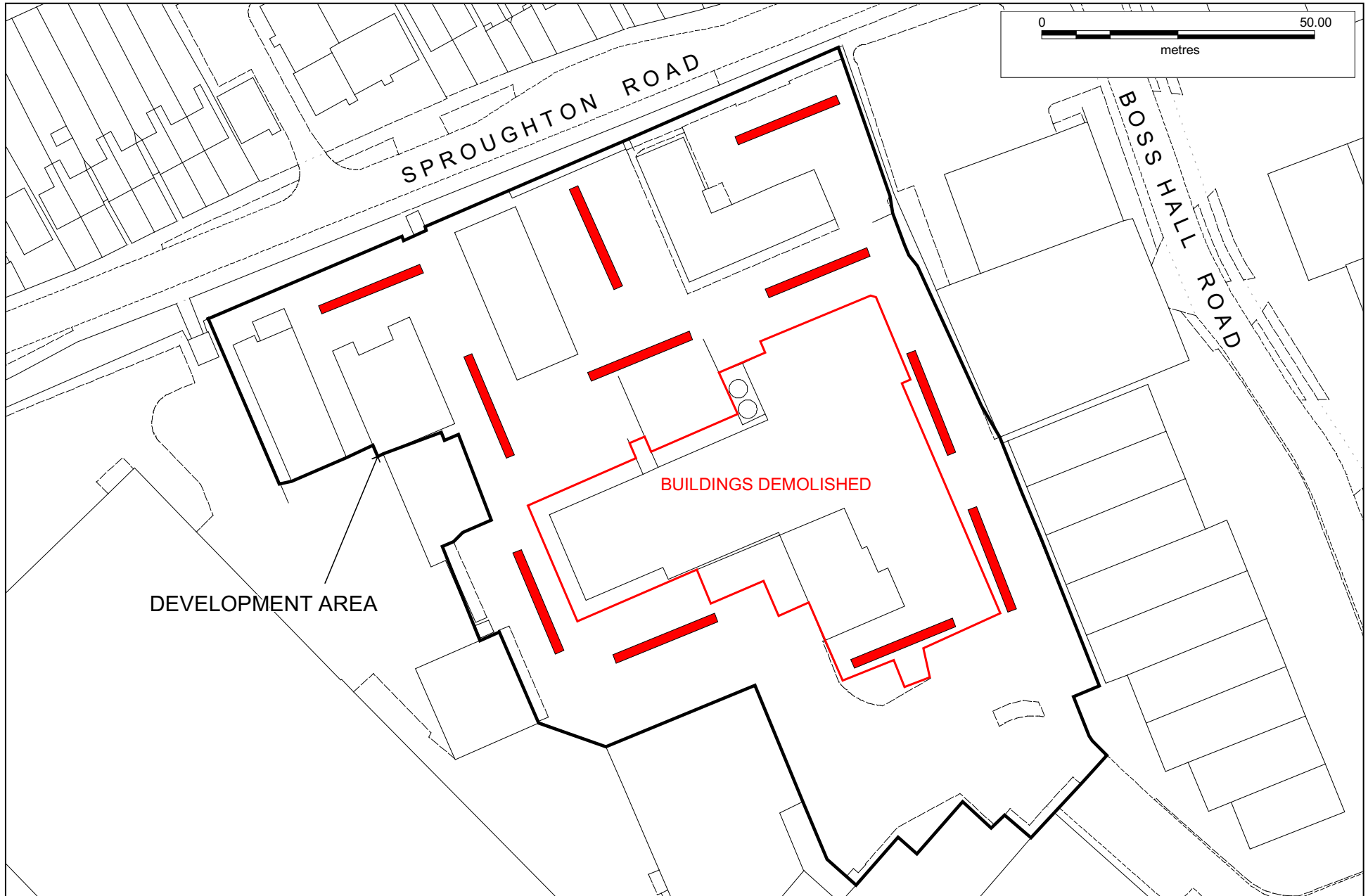


Figure 2. Site detail and proposed trench locations

2 Project details

Site Name	East of England Co-Op Dairy Site, Boss Hall, Sproughton Road
Site Location/Parish	Ipswich
Grid Reference	TM 1417 4536
Access	From Boss Hall Road
Planning No	Pre-application
HER code	IPS 735
OASIS Ref	Suffolkc1-177271
SCCAS Job Code	TBC
Type:	Trial trench evaluation
Area	c. 12,800m ²
Project start date	TBA
Duration	c. 5 days site work
Number of personnel on site	Up to 4

Personnel and contact numbers

Contracts Manager	Rhodri Gardner	01473 265879
Project Officer (first point of on-site contact)	Mark Sommers	07790 420515
Finds Dept	Richenda Goffin	01284 741233
Sub-contractors		
Curatorial Officer	Dr Richard Hoggett	01284 741226
Consultant		
Developer		
Site landowner		

Emergency contacts

Local Police	Ipswich	01473 613500
Local GP		
Location of nearest A&E	Ipswich Hospital, Heath Road, Ipswich, Suffolk IP4 5PD	01473 712233
Qualified First Aiders	Mark Sommers	07790 420515
Base emergency no.	N/A	

Hire details

Plant:	N/A	
Toilet Hire	N/A	
Tool hire:	N/A	

Other Contacts

Suffolk Fleet Maintenance		01359 270777
Suffolk Press Office		01473 264395
SCC EMS (Jezz Meredith)		01473 265883
SCC H&S (Stuart Boulter)		01473 265877

3 Archaeological method statement

3.1 Evaluation by trial trench

- 3.1.1 The archaeological fieldwork will be carried out by members of the SCCAS field team led by an experienced member of staff of Project Officer Grade. The excavation team will comprise up to 3 experienced excavators and surveyors from a pool of suitable staff at SCCAS. Fieldwork standards will be guided by 'Standards for Field Archaeology in the East of England' EAA Occasional Papers 14.
- 3.1.2 Evaluation strategies in Suffolk normally require that 5% of a site's area be evaluated by trial trench. In this case, due to the unavailability of some areas within the the proposed development site, a lower percentage has been allowed by the advisor to the LPA. The proposed locations of eleven trenches has been approved (see Fig 2). All are to be 1.8m wide with a total length of c. 220m.
- 3.1.3 The trench footprints will be CAT scanned to determine if services are present. Trenches can and will be moved where necessary.
- 3.1.4 All mechanised stripping operations will be carried out using a 360° tracked excavator equipped with a breaker to remove tarmac and concrete slab where present. A toothless ditching bucket will then be used to open the trenches to the required level. All machine work will be carried out under the direct supervision of an archaeologist at all times. All overburden will be removed stratigraphically until the first undisturbed archaeological horizon or natural deposit is encountered. Spoil will be temporarily stockpiled next to each trench.
- 3.1.5 Archaeological deposits and features will be sampled by hand excavation and trench bases and sections cleaned as necessary in order to satisfy the project aims and fulfil the requirements of the Brief and Specification.
- 3.1.6 A site plan, which will show all trench locations, feature positions and levels will be recorded using an RTK GPS or TST. A minimum of two sections per trench will be recorded at 1:20. Feature sections and plans will be recorded at 1:20 and trench and feature plans at 1:20 or 1:50 as appropriate. Normal Field Team conventions, compatible with the County HER, will be used during the site recording.
- 3.1.7 The site will be recorded under the HER site code IPS 735 and archaeological contexts will be recorded using standard SCCAS Context Recording sheets.
- 3.1.8 A photographic record (digital and monochrome print) will be made throughout the evaluation.
- 3.1.9 All pre-modern finds will be kept and no discard policy will be considered until all the finds have been processed and assessed. Metal detector searches will take place throughout the evaluation, of both trenches and spoilheaps, by an experienced SCCAS metal-detectorist. Finds on site will be treated according to 'First Aid for Finds' and a conservator will be available for on-site consultation as required. Finds will be processed and receive an initial assessment during the

fieldwork phase and this information will be fed back to site to inform work in progress.

- 3.1.10 All finds will be brought back to the SCCAS Bury St Edmunds office at the end of each day for processing, preliminary conservation and packing. Much of the archive and assessment preparation work will be done at the Bury St Edmunds office, but in some circumstances it may be necessary to send some categories of finds to specialists working in archaeology and university departments in other parts of the country.
- 3.1.11 Bulk environmental soil samples (40 litres each) will be taken from selected archaeological features and retained until an appropriate specialist has assessed their potential for palaeo-environmental remains. Decisions will be made on the need for further analysis following this assessment. If necessary advice will be sought from English Heritage's Regional Advisor in Archaeological Science on the need for specialist environmental sampling.
- 3.1.12 In the event of human remains being encountered on the site, guidelines from the Ministry of Justice will be followed. The evaluation will attempt to establish the extent, depth and date of burials whilst leaving remains *in situ*.

3.2 Post-excavation

- 3.2.1 The post-excavation work will be managed by Richenda Goffin. Specialist finds staff will be used, who are experienced in local and regional types and periods for their field. Members of the project team will be responsible for taking the project to archive and assessment levels.
- 3.2.2 The site archive will be consistent with 'Management of Archaeological Projects' (English Heritage, 1991).
- 3.2.3 All site data will be entered on a computerised database compatible with the County HER. All site plans and sections will be copied to form a permanent archive on archivally stable material. Ordnance Datum levels will be on the section sheets. The photographic archive will be fully catalogued within the County SMR photographic index.
- 3.2.4 All finds will be processed, marked and bagged/boxed to County SMR requirements. Where appropriate finds will be marked with a site code and a context number.
- 3.2.5 Bulk finds will be fully quantified on a computerised database compatible with the County SMR. Quantification will fully cover weights and numbers of finds by OP and context with a clear statement for specialists on the degree of apparent residuality observed.
- 3.2.6 Metal finds on site will be stored in accordance with ICON guidelines, initially recorded assessed for significance before dispatch to a conservation laboratory within 4 weeks of the end of the excavation. All pre-modern silver, copper alloy and ferrous metal artefacts will be x-rayed and coins will be x-rayed if necessary for identification. Sensitive finds will be conserved if necessary and deposited in

bags/boxes suitable for long term storage to ICON standards. All coins will be identified to a standard acceptable to normal numismatic research.

- 3.2.7 Specialist reports will be done in-house or commissioned as necessary to meet the requisite standards at assessment level.
- 3.2.8 The site archive will meet the standards 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 Finds Research Group AD700 - 1700 (1993).
- 3.2.9 The pottery will be recorded and archived to a standard consistent with the Draft Guidelines of the Medieval Pottery Research Group and Guidelines for the archiving of Roman Pottery, SGRP (ed. M.G. Darling, 1994).
- 3.2.10 Environmental samples will be processed and assessed to standards set by the Regional Environmental Archaeologist with a clear statement of potential for further analysis.
- 3.2.11 Animal and human bone will be quantified and assessed to a standard acceptable to national and regional English Heritage specialists.
- 3.2.12 An industrial waste assessment will cover all relevant material (i.e. fired clay finds as well as slag).

4 Risk assessment

The project will be carried out in accordance with the Suffolk County Council statement on Health and Safety at all times. Particular hazards to SCCAS staff and subcontractors identified with this project are as follows:

Outdoor working –hazards to staff from weather conditions and uneven ground.

Manual excavation – the main hazards are to staff from the use of tools, shallow holes and the resultant trip hazards, live services and ground contamination.

Mechanised excavation, site stripping etc. – the most significant hazard from this activity is working in close proximity with plant machinery.

Specific risk assessments for each are provided in Appendix 3.

All SCCAS staff are experienced in working under similar conditions and on similar sites to the present site and are aware of all SCCAS H&S policies. All staff will be issued with a copy of the projects risk assessment and will receive a safety induction from the Project Officer.

From time to time it may be necessary for site visits by external specialists, SCCAS Conservation Team members and other SCC staff. All such staff and visitors will be issued with the appropriate PPE and will undergo the required inductions.

PPE required in this case includes:

- Hard Hat (to EN397)
- High Visibility Clothing (EN471 Class 2 or greater)
- Safety Footwear (EN345/EN ISO 20346 or greater – to include additional penetration-resistant midsole)

Site staff, official visitors and volunteers are all covered by Suffolk County Council insurance policies (see Appendix 2).

In this case welfare facilities are shared with McFletch Demolition.

4.1 Environmental controls

Suffolk County Council is firmly dedicated to following an EMS policy. All our preferred providers and subcontractors have been issued with environmental guidelines. Holmes Plant and Construction, who are providing plant in this instance, are one such provider.

On site the SCCAS Project Officer will police environmental concerns. In the event of spillage or contamination EMS reporting and procedures will be carried out in consultation with Jez Meredith (SCCAS EMS Officer) All rubbish will be bagged and removed either to areas designated by the client or returned to SCC property for disposal.

Appendix 1. Suffolk County Council Health and Safety Policy

Health & Safety Policy – HS01



Health and Safety Policy Section 1 - General Statement of Policy

Suffolk County Council is fully committed to comply with the Health and Safety at Work Act etc 1974 and associated legislation.

We recognise that good health, safety and wellbeing is integral to our organisational and business performance by reducing injuries and ill health, protecting the environment and reducing unnecessary losses and liabilities. Our service delivery decisions will always consider the impact on health, safety and wellbeing.

We aim to be exemplary in all matters relating to the health, safety and welfare of our staff and all those who may be affected by our activities. To this end we will:

- benchmark our health & safety performance against other similar organisations;
- provide adequate control of the health and safety risks arising from our work activities;
- consult with our employees on matters affecting their health and safety;
- provide and maintain safe plant and equipment;
- ensure safe handling and use of substances;
- provide information, instruction and supervision with adequate professional advice;
- ensure all employees are competent to do their tasks, and give them adequate training;
- prevent incidents, injuries and cases of work-related ill health;
- maintain safe and healthy working conditions;
- commit to progressive improvement in health & safety performance using current recognised good practice such as 'HSG65' and similar models of continuous improvement;
- review and revise this policy as necessary at regular intervals.

Signed:  Chief Executive.

Date: 27th January 2012

Signed:  Leader.

Date: 31st January 2012

Review date:

Date: January 2014

If you need help to understand this information in another language or would like this information in another format, including audio tape or large print, please call **08456 066 067**.

Document Control

Name	Comment	Date	Version No.
		Apr 2009	1.0
		June 2010	2.0
Martin Fisher	Update new H&S Mgr.	29 Dec 10	2.1
Martin Fisher	Format change only	19 Jul 11	2.2
Martin Fisher; Nick Wilding; Richard Hart	Review and re-write	Nov 11 – Jan 12	2.3 - 2.6
Heather Foster	Comment	18 Jan 12	2.7
Nick Wilding	Further comments	20 Jan 12	
CHSMB	Approved	19 Jan 12	3.0

Appendix 2. SCC Liability Insurance Certificates



To Whom It May Concern

Our ref: SR/B'HAM

9 July, 2013

Zurich Municipal Customer: Suffolk County Council

This is to confirm that Suffolk County Council have in force with this Company until the policy expiry on 31 July 2014 Insurance incorporating the following essential features:

Policy Number: QLA-19A004-0013

Limit of Indemnity:

Public Liability:	£ 50,000,000	any one event
Products Liability:)	£ 50,000,000	for all claims in the
Pollution:)	aggregate during any one period of insurance	
Employers' Liability: £ 50,000,000		any one event inclusive of costs

Zurich Municipal
Zurich House
2 Gladiator Way
Farnborough
Hampshire
GU14 6GB

Telephone 0870 2418050
Direct Phone 0121 697 4594
Direct Fax 0121 697 8585
E-mail Sally.rose@uk.zurich.com

Communications will be monitored
regularly to improve our service and
for security and regulatory purposes

Zurich Municipal is a trading name of Zurich
Insurance plc.

A public limited company incorporated in
Ireland. Registration No. 13460.
Registered Office: Zurich House, Ballsbridge
Park, Dublin 4, Ireland.
UK Branch registered in England and Wales,
Registration No. 887985.
UK Branch Head Office: The Zurich Centre,
3000 Parkway, Whiteley, Fareham,
Hampshire PO15 7JZ.

Zurich Insurance plc is authorised by the
Central Bank of Ireland and subject to
limited regulation by the Financial Conduct
Authority. Details about the extent of our
regulation by the Financial Conduct
Authority are available from us on request.

These details can be checked on the FCA's
Financial Services register via their website
www.fca.org.uk or by contacting them on
0800 111 6768.
Our FCA Firm Reference Number is 203093.

07/10/13 10:06:30Z 1002 4634

Excess :

Public Liability/Products Liability/Pollution: £ 313,500 any one event
Employers' Liability: £ 313,500 any one claim

Indemnity to Principals :

Covers include a standard Indemnity to Principals Clause in respect of
contractual obligations.

Full Policy :

The policy documents should be referred to for details of full cover.

Yours faithfully

Sally Rose
Underwriting Services
Zurich Municipal

To Whom It May Concern

Our ref: SR/BHAM

15 August, 2013

Zurich Municipal Customer: Suffolk County Council

This is to confirm that Suffolk County Council have in force with this Company until the policy expiry on 31/07/2014 Professional Negligence Insurance incorporating the following essential features:

Policy Number: QLA-19A004-0013

Services covered: Archaeology

Limit of Indemnity: £ 1,000,000 any one claim and *in the aggregate for all claims* first made against the Insured and notified to Zurich Municipal during the period of insurance

Excess : £ 313,500 any one claim

Retroactive Date: 01/08/2006

Exclusions

Standard insurance market exclusions apply, notably exclusion of Pollution other than sudden and accidental; punitive or exemplary damages; express warranties or guarantees; claims the cause of which occurred prior to the Retroactive Date.

This is a brief summary and the full policy should always be referred to for exact details of cover.

Yours faithfully

Sally Rose
Underwriting Services
Zurich Municipal

Zurich Municipal
Zurich House
2 Gladiator Way
Farnborough
Hampshire
GU14 6GB

Telephone 0870 2418050
Direct Phone 0121 697 4594
Direct Fax 0121 694 8585
E-mail sally.rose@uk.zurich.com

Communications will be monitored regularly to improve our service and for security and regulatory purposes

Zurich Municipal is a trading name of Zurich Insurance plc.

A public limited company incorporated in Ireland, Registration No. 13460.
Registered Office: Zurich House, Ballsbridge Park, Dublin 4, Ireland.
JK Branch registered in England and Wales. Registration No. BR7985.
UK Branch Head Office: The Zurich Centre, 3000 Parkway, Whiteley, Fareham, Hampshire PO15 7JZ.

Zurich Insurance plc is authorised by the Central Bank of Ireland and subject to limited regulation by the Financial Conduct Authority. Details about the extent of our regulation by the Financial Conduct Authority are available from us on request.

FCA registration number 203093. These details can be checked on the FCA's register by visiting their website www.fca.org.uk or by contacting them on 0845 606 1234.

Appendix 3. Risk Assessments



Specific Risk Assessments for Archaeological Evaluation: East of England Co-Op Dairy Site, Sproughton Road, Ipswich

- 1 Working with plant machinery
- 2 Physical work in an outdoor setting
- 3 Deep excavations
- 4 Use of hand tools
- 5 Damage to services

1-5 = Low risk

6-12 = Medium risk

20-25 = High risk

Risk Assessment 1 Working with plant machinery

Activity	Location	Hazard	Risks	Persons affected	Initial risk	Control measures	Residual risk	Name	Date	Rescue procedures
Direction and supervision of tracked 360 ^o excavator.	Various.	Staff in close proximity to excavation (operation of bucket & manoeuvre of boom).	Accidental contact with boom/bucket or unexpected movement of machine.	Principally SPO/PO, but at times may involve others.	10	Only PO to supervise machinery. No personnel to be within radius of boom. All staff to wear high visibility clothing, hard hats and safety footwear at all times.	5	R V Gardner	8/11/12	Call emergency services. First Aid if required.

Severity	Likelihood				
	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Initial Risk
Residual Risk

Likelihood	Severity	Risk (likelihood x severity)
1. Highly unlikely	1. Slight inconvenience	1-5 Low
2. May occur but very rarely	2. Minor injury requiring first aid	
3. Does occur but only rarely	3. Medical attention required	6-12 Medium
4. Occurs from time to time	4. Major injury leading to hospitalisation	
5. Likely to occur often	5. Fatality or serious injury leading to disablement	13-25 High

Risk Assessment 2 Physical work in an outdoor setting

Activity	Location	Hazard	Risks	Persons affected	Initial risk	Control measures	Residual risk	Name	Date	Rescue procedures
Excavation in exposed conditions.	Various.	Extremes of heat, cold and wet weather. Trip hazards.	Hypothermia, heat stroke, sunburn. Minor injuries.	All field staff.	9	All staff provided with appropriate clothing for weather conditions. No staff to work alone in extreme conditions.	2	R Gardner	8/11/12	First Aid if required. Call emergency services if necessary.

	Likelihood				
Severity	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
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Initial Risk
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5. Likely to occur often	5. Fatality or serious injury leading to disablement	13-25 High

Risk Assessment 3 Deep excavations

Activity	Location	Hazard	Risks	Persons affected	Initial risk	Control measures	Residual risk	Name	Date	Rescue procedures
Excavation of trial trenches and archaeological features within.	Various.	Trench collapse, falls, and work in confined spaces.	Physical injury (minor to rare major examples), suffocation.	All field staff.	12	No excavation beyond safe depth in any circumstances (not necessary for evaluation stage of works). No excavation of trenches beyond depth where there is risk of collapse in the judgement of the PO if deposits are unconsolidated.	2	R Gardner	8/11/12	Call emergency services. First Aid if required.

Severity	Likelihood				
	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
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Initial Risk
Residual Risk

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1. Highly unlikely	1. Slight inconvenience	1-5 Low
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4. Occurs from time to time	4. Major injury leading to hospitalisation	
5. Likely to occur often	5. Fatality or serious injury leading to disablement	13-25 High

Risk Assessment 4 Use of hand tools

Activity	Location	Hazard	Risks	Persons affected	Initial risk	Control measures	Residual risk	Name	Date	Rescue procedures
Excavation of archaeological features using shovels, mattocks, forks, wheelbarrows and small tools	Various.	Splinters from poorly maintained equipment, trip hazards from unused equipment, accidental striking of personnel in close proximity, some heavy lifting.	Minor injuries.	All field staff.	8	Ensure all tools in serviceable condition. Careful policing of temporarily unused equipment (e.g. no discarded hand tools near trench edges). Ensure all tools carried appropriately.	4	R Gardner	8/11/12	First Aid if required.

Severity	Likelihood				
	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
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Initial Risk
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Risk Assessment 5 Damage to services

Activity	Location	Hazard	Risks	Persons affected	Initial risk	Control measures	Residual risk	Name	Date	Rescue procedures
Machine cutting of trial trenches.	Various.	Accidental damage to cables or services (water, electrical etc.).	Electrocution, environmental damage/pollution, cost implications.	Machine operator and PO.	6	Client to provide survey data/location of any known services. Steady and carefully observed machine excavation under full supervision.	2	R Gardner	8/11/12	Call emergency services. First Aid if required. Any pollution to be reported to Environmental Manager immediately.

Severity	Likelihood				
	1	2	3	4	5
1	1	2	3	4	5
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Appendix 2. Written Scheme of Investigation (Phase 2)

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Sproughton Road, Ipswich, Suffolk**

Archaeological Evaluation by Trial trench – **Phase 2**

**Written Scheme of Investigation
&
Safety Statement and Risk Assessment**

**Prepared by Suffolk County Council Archaeological Service
Contracting Team
December 2014**

Document Control

Title: East of England Co-Op Dairy Site, Boss Hall, Sproughton Road, Ipswich, Suffolk: Written Scheme of Investigation

Date: 1st December 2014

Issued by: Suffolk County Council Archaeological Service Field Team

Author: Rhodri Gardner

Checked by: N/A

Issued to: Martin Curtis (David Clarke & Associates) & Dr Richard Hoggett (Suffolk County Council Archaeology Service Conservation Team).

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- RA4: Establish the suitability of the area for development.*
- RA5: Provide sufficient information to construct an archaeological conservation strategy, dealing with preservation, the recording of archaeological deposits, working practices, timetables and orders of cost.*

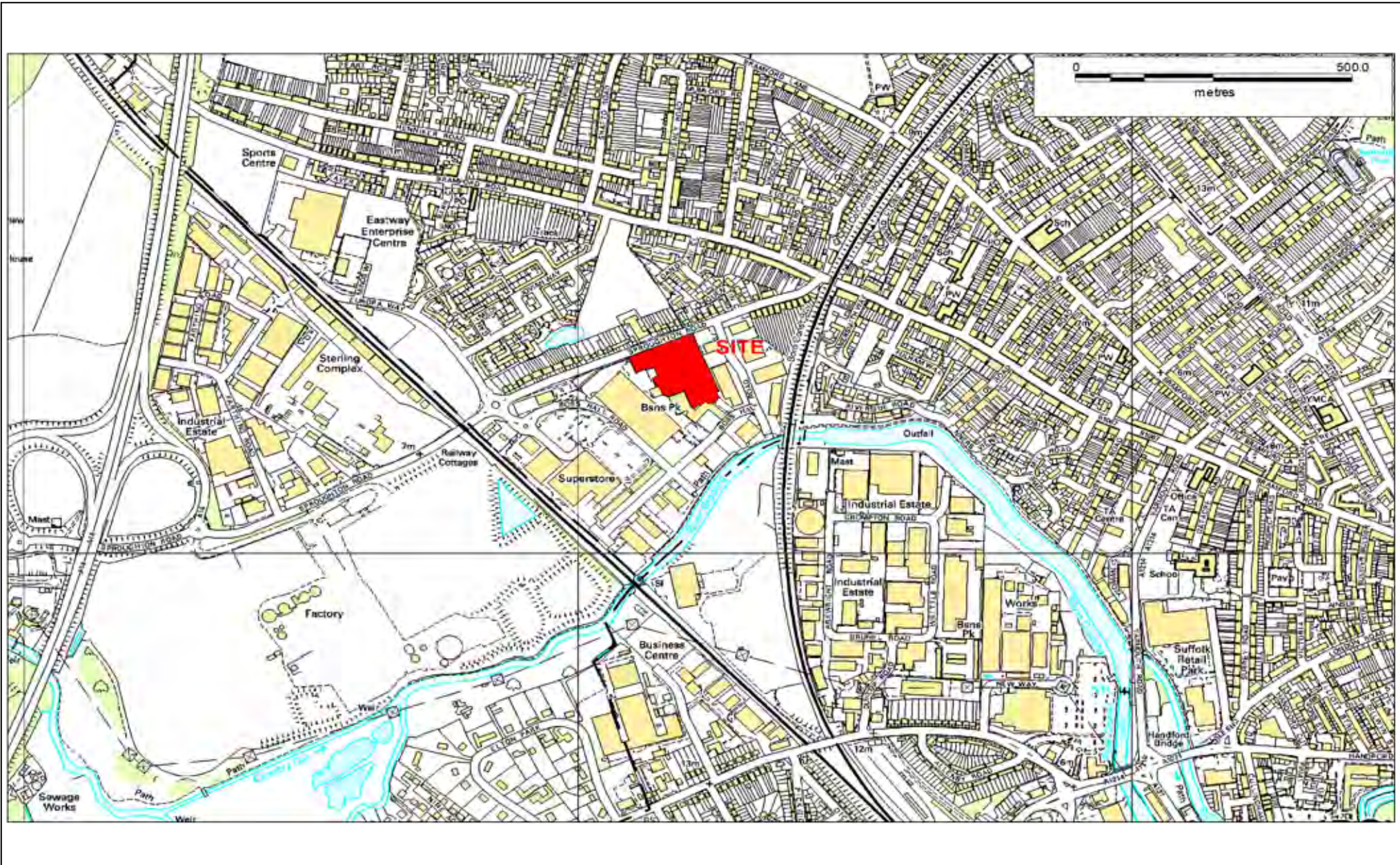


Figure 1. Site Location

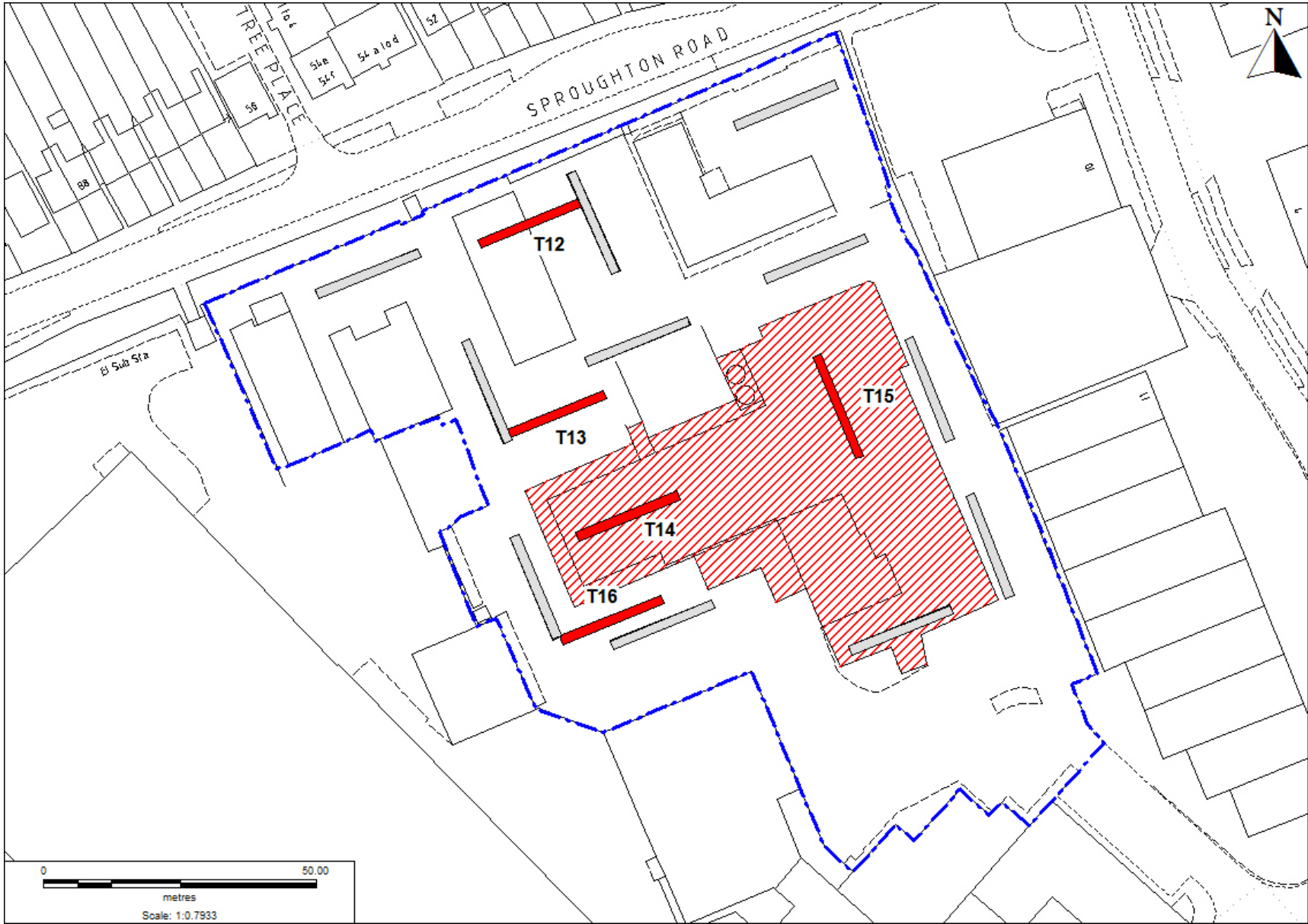


Figure 2. Site detail and proposed trench locations

2 Project details

Site Name	East of England Co-Op Dairy Site, Boss Hall, Sproughton Road
Site Location/Parish	Ipswich
Grid Reference	TM 1417 4536
Access	From Boss Hall Road
Planning No	Pre-application
HER code	IPS 735
OASIS Ref	Suffolkc1-177271
SCCAS Job Code	TBC
Type:	Trial trench evaluation
Area	c. 12,800m ²
Project start date	Monday 8 th December
Duration	c. 5 days site work
Number of personnel on site	Up to 4

Personnel and contact numbers

Contracts Manager	Rhodri Gardner	01473 265879
Project Officer (first point of on-site contact)	Mark Sommers	07790 420515
Finds Dept	Richenda Goffin	01284 741233
Sub-contractors		
Curatorial Officer	Dr Richard Hoggett	01284 741226
Consultant		
Developer		
Site landowner		

Emergency contacts

Local Police	Ipswich	01473 613500
Local GP		
Location of nearest A&E	Ipswich Hospital, Heath Road, Ipswich, Suffolk IP4 5PD	01473 712233
Qualified First Aiders	Mark Sommers	07790 420515
Base emergency no.	N/A	

Hire details

Plant:	N/A	
Toilet Hire	N/A	
Tool hire:	N/A	

Other Contacts

Suffolk Fleet Maintenance		01359 270777
Suffolk Press Office		01473 264395
SCC EMS (Jezz Meredith)		01473 265883
SCC H&S (Stuart Boulter)		01473 265877

3 Archaeological method statement

3.1 Evaluation by trial trench

- 3.1.1 The archaeological fieldwork will be carried out by members of the SCCAS field team led by an experienced member of staff of Project Officer Grade. The excavation team will comprise up to 3 experienced excavators and surveyors from a pool of suitable staff at SCCAS. Fieldwork standards will be guided by 'Standards for Field Archaeology in the East of England' EAA Occasional Papers 14.
- 3.1.2 Evaluation strategies in Suffolk normally require that 5% of a site's area be evaluated by trial trench. In this case, due to the unavailability of some areas within the proposed development site, a lower percentage has been allowed by the advisor to the LPA. The proposed locations of five (5) trenches has been approved (see Fig 2). All are to be **20m long** 1.8m wide with a total length of c. **100m**.
- 3.1.3 The trench footprints will be CAT scanned to determine if services are present. Trenches can and will be moved where necessary.
- 3.1.4 All mechanised stripping operations will be carried out using a 360° tracked excavator equipped with a breaker to remove tarmac and concrete slab where present. A toothless ditching bucket will then be used to open the trenches to the required level. All machine work will be carried out under the direct supervision of an archaeologist at all times. All overburden will be removed stratigraphically until the first undisturbed archaeological horizon or natural deposit is encountered. Spoil will be temporarily stockpiled next to each trench.
- 3.1.5 Archaeological deposits and features will be sampled by hand excavation and trench bases and sections cleaned as necessary in order to satisfy the project aims and fulfil the requirements of the Brief and Specification.
- 3.1.6 A site plan, which will show all trench locations, feature positions and levels will be recorded using an RTK GPS or TST. A minimum of two sections per trench will be recorded at 1:20. Feature sections and plans will be recorded at 1:20 and trench and feature plans at 1:20 or 1:50 as appropriate. Normal Field Team conventions, compatible with the County HER, will be used during the site recording.
- 3.1.7 The site will be recorded under the HER site code IPS 735 and archaeological contexts will be recorded using standard SCCAS Context Recording sheets.
- 3.1.8 A photographic record (digital and monochrome print) will be made throughout the evaluation.
- 3.1.9 All pre-modern finds will be kept and no discard policy will be considered until all the finds have been processed and assessed. Metal detector searches will take place throughout the evaluation, of both trenches and spoilheaps, by an experienced SCCAS metal-detectorist. Finds on site will be treated according to 'First Aid for Finds' and a conservator will be available for on-site consultation as required. Finds will be processed and receive an initial assessment during the

fieldwork phase and this information will be fed back to site to inform work in progress.

- 3.1.10 All finds will be brought back to the SCCAS Bury St Edmunds office at the end of each day for processing, preliminary conservation and packing. Much of the archive and assessment preparation work will be done at the Bury St Edmunds office, but in some circumstances it may be necessary to send some categories of finds to specialists working in archaeology and university departments in other parts of the country.
- 3.1.11 Bulk environmental soil samples (40 litres each) will be taken from selected archaeological features and retained until an appropriate specialist has assessed their potential for palaeo-environmental remains. Decisions will be made on the need for further analysis following this assessment. If necessary advice will be sought from English Heritage's Regional Advisor in Archaeological Science on the need for specialist environmental sampling.
- 3.1.12 In the event of human remains being encountered on the site, guidelines from the Ministry of Justice will be followed. The evaluation will attempt to establish the extent, depth and date of burials whilst leaving remains *in situ*.

3.2 Post-excavation

- 3.2.1 The post-excavation work will be managed by Richenda Goffin. Specialist finds staff will be used, who are experienced in local and regional types and periods for their field. Members of the project team will be responsible for taking the project to archive and assessment levels.
- 3.2.2 The site archive will be consistent with 'Management of Archaeological Projects' (English Heritage, 1991).
- 3.2.3 All site data will be entered on a computerised database compatible with the County HER. All site plans and sections will be copied to form a permanent archive on archivally stable material. Ordnance Datum levels will be on the section sheets. The photographic archive will be fully catalogued within the County SMR photographic index.
- 3.2.4 All finds will be processed, marked and bagged/boxed to County SMR requirements. Where appropriate finds will be marked with a site code and a context number.
- 3.2.5 Bulk finds will be fully quantified on a computerised database compatible with the County SMR. Quantification will fully cover weights and numbers of finds by OP and context with a clear statement for specialists on the degree of apparent residuality observed.
- 3.2.6 Metal finds on site will be stored in accordance with ICON guidelines, initially recorded assessed for significance before dispatch to a conservation laboratory within 4 weeks of the end of the excavation. All pre-modern silver, copper alloy and ferrous metal artefacts will be x-rayed and coins will be x-rayed if necessary for identification. Sensitive finds will be conserved if necessary and deposited in

bags/boxes suitable for long term storage to ICON standards. All coins will be identified to a standard acceptable to normal numismatic research.

- 3.2.7 Specialist reports will be done in-house or commissioned as necessary to meet the requisite standards at assessment level.
- 3.2.8 The site archive will meet the standards 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 Finds Research Group AD700 - 1700 (1993).
- 3.2.9 The pottery will be recorded and archived to a standard consistent with the Draft Guidelines of the Medieval Pottery Research Group and Guidelines for the archiving of Roman Pottery, SGRP (ed. M.G. Darling, 1994).
- 3.2.10 Environmental samples will be processed and assessed to standards set by the Regional Environmental Archaeologist with a clear statement of potential for further analysis.
- 3.2.11 Animal and human bone will be quantified and assessed to a standard acceptable to national and regional English Heritage specialists.
- 3.2.12 An industrial waste assessment will cover all relevant material (i.e. fired clay finds as well as slag).

4 Risk assessment

Not reproduced here (unchanged from the Risk Assessment included in the initial WSI as presented in Appendix 1 of the main report).

Appendix 3. OASIS data collection form

OASIS ID: [suffolkc1-177271](#)

Project details

Project name	East of England Co-Op Dairy Site, Boss Hall, Sproughton Road, Ipswich
Short description of the project	Trenched evaluation revealed Anglo-Saxon inhumations and cremation burials in an area adjacent to previously recorded burials. Burials located in western trenches only.
Project dates	Start: 02-06-2014 End: 13-01-2015
Previous/future work	Yes / Not known
Any associated project reference codes	IPS397 - Related HER No.
Any associated project reference codes	IAS7919 - Related HER No.
Type of project	Field evaluation
Current Land use	Industry and Commerce 4 - Storage and warehousing
Monument type	INHUMATION Early Medieval
Monument type	CREMATION BURIAL Early Medieval
Monument type	PIT Uncertain
Monument type	DITCH Uncertain
Significant Finds	SPEARHEAD Early Medieval
Significant Finds	BUCKLE Early Medieval
Significant Finds	COIN Early Medieval
Significant Finds	KNIFE Early Medieval
Methods & techniques	"Sample Trenches"
Development type	Urban commercial (e.g. offices, shops, banks, etc.)
Prompt	Voluntary/self-interest
Position in the planning process	Pre-application

Project location

Country	England
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Site location	SUFFOLK IPSWICH IPSWICH East of England Co-Op Dairy Site, Boss Hall, Sproughton Road
Study area	1.30 Hectares
Site coordinates	TM 1417 4536 52.0646061367 1.12490076016 52 03 52 N 001 07 29 E Point

Project creators

Name of Organisation	Suffolk County Council Archaeological Service
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Suffolk County Council Archaeological Service, Field Team
Project director/manager	Rhodri Gardner
Project supervisor	M. Sommers
Type of sponsor/funding body	Landowner

Project archives

Physical Archive recipient	Suffolk County SMR
Physical Archive ID	IPS735
Physical Contents	"Animal Bones","Ceramics","Environmental","Human Bones","Metal","Worked stone/lithics"
Digital Archive recipient	Suffolk County SMR
Digital Archive ID	IPS735
Digital Contents	"other"
Digital Media available	"Database","GIS","Images raster / digital photography","Text"
Paper Archive recipient	Suffolk County SMR
Paper Archive ID	IPS735
Paper Contents	"other"
Paper Media available	"Correspondence","Notebook - Excavation',' Research',' General Notes","Plan","Report","Section"

Project bibliography

Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Evaluation Report: East of England Co-op Dairy Site, Boss Hall, Sproughton Road, Ipswich, Suffolk

Author(s)/Editor(s)	Sommers, M.
Other bibliographic details	SCCAS Report No. 2014/101
Date	2015
Issuer or publisher	SCCAS
Place of issue or publication	Ipswich
Description	printed sheets of A4 paper with card covers or pdf
<hr/>	
Entered by	MS (mark.sommers@suffolk.gov.uk)
Entered on	26 August 2014

Appendix 4. Context list

Context Number	Feature Number	Type	Description/Interpretation	Over	Under	Cut by	Cuts
0001			unstratified finds from across whole site				
0002	0002	Grave Cut	Rectangular cut with slightly rounded corners. Sides are near vertical and the base is flat Grave cut				
0003	0002	Grave Fill	Fill of cut 0002. Consists of a mid brown sand with frequent rounded and broken flint pebbles (gravel) - similar to subsoil layer 0049 (Sample 1) Fill of Grave 0002 - no skeletal remains survive but some grave goods present				
0004	0004	Grave Cut	Rectangular cut with slightly rounded corners. Virtually identical to the initial appearance of Grave 0002. Feature left unexcavated. Possible iron signal detected close to upper centre of feature suggesting grave goods may be present. Probable Grave				
0005	0005	Grave Cut	Rectangular cut with slightly rounded corners. Virtually identical to the initial appearance of Grave 0002. Cut by a modern service trench. Feature left unexcavated. Probable Grave				
0006	0006	Grave Cut	Rectangular cut with slightly rounded corners. Virtually identical to the initial appearance of Grave 0002 but slightly smaller. Some bone evident on surface. Feature left unexcavated. Cuts Pit 0009. Probable Grave				0009
0007	0007	Grave Cut	Rectangular cut with slightly rounded corners. Virtually identical to the initial appearance of Grave 0002 but slightly smaller. Feature left unexcavated. Probable Grave				
0008	0008	Grave Cut	Probably rectangular cut, although slightly irregular. Fill is similar to that of Grave 0002. Feature left unexcavated. Contains SF1018 (a small brooch fragment) Probable Grave although size suggests it may be multiple graves or a pit				
0009	0009	Pit Cut	Large feature cut in Trench 1. Probably rectangular but full extent not visible. Cut by modern service trench and probable Grave 0006. Section excavated in northern corner indicating sloping sides and probable flat base. Large pit? otherwise uncertain - could potentially be a SFB? Fill = 0045			0006	

Context Number	Feature Number	Type	Description/Interpretation	Over	Under	Cut by	Cuts
0010	0010	Grave Cut	Western half of a rectangular cut with slightly rounded corners. Cut by a modern gully/drain but this does not reach to the full depth of the feature Grave cut				
0011	0011	Pit Cut	Sub-circular cut with sheer sides down to a flat base. Cut by Cremation 0013 Small pit			0013	
0012	0011	Pit Fill	Fill of cut 0011. Consists of mid brown grey silty sand. Occasional charcoal present in vicinity of cutting feature (Sample 3)				
0013	0013	Cremation Pit Cut	Small circular cut with bowl shaped profile. Contains fill 0014 and cremation urn 0015 Pit for internment of a cremation urn				0011
0014	0013	Cremation Pit Fill	Fill of cut 0013. Consists of mid grey silty sand (Sample 2) Fill of Cremation Pit				
0015	0013	Urn	Possibly complete Cremation Urn (some rim fragments bagged separately). Urn recovered and sent for processing with contents intact. Cremation Urn				
0016	0013	Urn Fill	Fill of urn 0015 in cut 0013 Urn fill				
0017	0017	Cremation Pit Cut	Oval shaped feature cut containing remains of two small ceramic vessels (0019 & 0021), one of which contained large amounts of burnt bone (presumably a cremation burial). Located very high in the soil sequence with only the base of the feature cutting the natural subsoil. Probably cut from above subsoil layer 0049 Pit cut for the internment of a cremation burial and associated vessel				
0018	0017	Cremation Pit Fill	Fill within cut 0017. Consists of mid to dark brown sand with infrequent rounded and broken flint pebbles (Sample 11). Fill of Cremation pit				
0019	0017	Urn	Fragmentary remains of what was possibly a complete cremation urn found during machining of evaluation trench. Large proportion of the vessel was recovered from the machine bucket (see 0023) prior to excavation of the in-situ remains. No obvious rim fragments were seen suggesting previous truncation (to be confirmed by Finds team). Contained burnt bone Cremation urn				
0020	0017	Urn Fill	Fill of urn 0019 remaining in-situ after machining. Consists of sand and gravel with much burnt bone. Retained as a 100% sample (Sample 6). A large proportion of the remainder of the urn fill was recovered from the machine bucket (see 0024) remaining in-situ fill of urn 0019				

Context Number	Feature Number	Type	Description/Interpretation	Over	Under	Cut by	Cuts
0021	0017	Pottery vessel	Fragmentary remains of a small ceramic vessel located adjacent cremation urn 0019 in cut 0017. Further sherds from this vessel may be within context 0023 Small pottery vessel - possibly a further cremation burial in the same cut as 0019 or an associated deposit/offering.				
0022	0017	Pottery vessel Fill	Remaining in-situ fill of small pottery vessel, 0021, within cut 0017. Retained as a 100% sample (Sample 4). A large proportion of the vessel's fill was lost during machining (see 0024). Remaining fill in the smaller pottery vessel (0021) in cut 0017				
0023	0017	Finds	Large collection of pottery sherds collected from the machining bucket during the machining of Trench 3. All probably originate from the two vessels in cut 0017 (0019 and 0021) Upper sections of pottery vessels 0019 and 0021				
0024	0017	Sample	Fill from cut 0017 and the two pottery vessels within (0019 and 0021). Contains charcoal and burnt bone (and additional pot sherds?). Recovered from the machine bucket during the machining of Trench 3 (Sample 5) Mixed fills of cut 0017 and the two pots within (0019 and 0021)				
0025	0025	Ditch Cut	Linear feature cut aligned North-South with a 'V' shaped profile, slightly steeper on the eastern side. Boundary ditch				
0026	0025	Ditch Fill	Fill of cut 0025 consisting of brown sand with frequent rounded and broken flint pebbles (Sample 7). Similar to 0049 Fill of ditch 0025				
0027	0027	Ditch Cut	Linear feature, butt ends to the east. With steep sides down to a rounded base. Ditch - probably the same as ditches 0031 and 0034 which together form a ring ditch with an internal diameter of 3m that is concentric around cremation 0013				
0028	0027	Ditch Fill	Fill of cut 0027 (Sample 9). Consists of mid brown sand with flints (similar to 0049) Fill of ditch 0027				
0029	0029	Ditch Cut	Linear feature cut aligned North-South. Flattened 'V' shaped profile Boundary ditch				
0030	0029	Ditch Fill	Fill of cut 0029 consisting of mid brown sand with broken and rounded flint pebbles (sample 8) ditch fill				
0031	0031	Ditch Cut	Slightly curving linear feature with a rounded profile Probably part of ditches 0027 and 0033 which together form a ring ditch concentric with cremation 0013				

Context Number	Feature Number	Type	Description/Interpretation	Over	Under	Cut by	Cuts
0032	0031	Ditch Fill	Fill of cut 0031. Consists of mid brown sand with flints (similar to 0049) Ditch fill				
0033	0033	Ditch Cut	Linear feature cut aligned North-South with steep sides and a rounded base. Butt ends to the west. Probably part of ditches 0027 and 0031 which together form a ring ditch concentric with cremation 0013. The butt ends of ditches 0027 and 0033 are associated with a possible 'entrance' causeway				
0034	0033	Ditch Fill	Fill of cut 0033. Consists of mid brown sand with flints (similar to 0049) Ditch fill				
0035		Deposit	Three separate areas of a material within Trench 3 that initially appeared to be bone associated with articulated burials (Sample 10). Upon further investigation these were found to consist entirely of pale grey to white fine silts in cylindrical formations naturally occurring phenomena most likely to be associated with tree roots or possibly animal burrows				
0036	0036	Cremation Pit Cut	Circular feature cut with steep sides and a flat base Pit excavated for the internment of a cremation urn				
0037	0036	Cremation Pit Fill	Fill of cut 0036 consisting of stony, orange brown sand (Sample 12). fill of cut 0036				
0038	0010	Grave Fill	Fill of cut 0010. Consists of mid brown silty sand with frequent rounded and brown flint pebbles (Sample 13). Similar to subsoil 0049 Fill of Grave 0010				
0039	0036	Urn Fill	Fill within urn 0040 from cut 0036 Fill of cremation urn				
0040	0036	Urn	Near complete ceramic vessel in cut 0036. Badly broken. Appears to have suffered post-depositional deformation and damage having been 'pulled apart' and possibly truncated. Cremation urn				
0041	0010	Skeleton	Fragmentary pieces of ?human bone at base of Grave 0010. remains of an inhumation				
0042	0010	Stain	Dark stain in a linear formation on the base of Grave 0010. approx. 7cm wide and extending for at least 36cm (Sample 14). Remains of a spear shaft (see SF1019) or some other organic object deposited in the grave				
0043	0043	Ditch Cut	Linear feature cut aligned North-South with sloping sides down to a rounded base. Eastern side noticeably steeper than the west. Cut by modern service trench on a similar alignment boundary ditch				
0044	0043	Ditch Fill	Fill of cut 0043 consisting of mid brown sand with frequent flints ditch fill				

Context Number	Feature Number	Type	Description/Interpretation	Over	Under	Cut by	Cuts
0045	0009	Pit Fill	Fill of pit 0009. Consists of light to mid brown sand becoming mid grey towards base (Sample 15). Fill of pit 0009				
0046	0046	Ditch Cut	Linear feature cut aligned North-South. Wide with gently sloping sides and a rounded base. Eastern side steeper than the west. boundary ditch				
0047	0046	Ditch Fill	Fill of cut 0046 consisting of brown sand with frequent rounded and broken flint pebbles (Sample 16).				
0048		Layer	layer of dark grey to brown/black sandy loam - visible in most trenches just below make-up layers for the concrete yard surface. Irregular interface with underlying layer 0049 Former topsoil at the time of the dairy's construction				
0049		Layer	layer of mid brown sand with frequent rounded and broken flint pebbles - visible in most trenches overlying the natural subsoil. The Saxon features appear to be cut through this layer. The cuts for the three cremations only just reached through this deposit leaving the urn wholly within it. Weathered natural subsoil or possibly an earlier buried topsoil				
0050	0050	Gully Cut	Shallow gully, meanders slightly. Rounded profile				
0051	0050	Gully Fill	Fill of cut 0050 - mid reddish brown soft sandy silt				
0052	0052	Ditch Cut	Linear feature cut, narrow and shallow. Only a short section seen running across southeast corner of trench Ditch?				
0053	0052	Ditch Fill	Fill of cut 0052 consisting of mid reddish brown soft sandy silt				
0054		Layer	clean yellow/brown sand and gravel - imported fill within raised area of former dairy building				

Appendix 5. Pottery catalogue

Feature	Context	Fabric	Form	Rim	No	Wt/g	MNV	Spot date
0013	0015	ESSS	biconical jar with rounded base	everted	12	1564	1	6th c.
0017	0019	ESO1	?globular jar with flat-rounded base		38	1278	1	L.6th c.?
0017	0020	ESMS			10	14		
0017	0020	ESO1			50	82		
0017	0021	ESMS	globular jar with footstand base		16	113	1	6th c.
0017	0023	ESMS			1	3		
0017	0023	ESO1			85	1104		
0033	0034	ESSS	globular bowl	upright plain	5	17	1	6th c.?
0036	0040	ESMS	slightly shouldered rounded jar with flat-angled base		100	1033	1	6th c.?

Appendix 6. Small Finds catalogue

SF No	Context No	Period	Object Name	Material	No of frags	Description
1001	0003	Anglo-Saxon	Latchlifter	Iron	8	Remains of incomplete latchlifter/key with one terminal turned inwards (other side broken?) and probable suspension loop at the other end curled on same axis as the terminal.
1002	0003	Anglo-Saxon	Chain link?	Composite iron and copper alloy	1	Fragment of bent iron, with thickened head, tapering at other end. Some copper alloy also, possibly a chain link/fastening? Needs x-ray
1003	0003	Anglo-Saxon		Iron	1	Irregular amorphous object, unidentified before radiography
1004	0003	Anglo-Saxon		Iron	1	Small fragment of curved broken iron, circular in section. Possibly part of a buckle as indications of a possible pin, or a suspension loop.
1005	0003	Anglo-Saxon	Coin	Silver	1	One of 5 complete silver sceattas, primary series dated AD 680-710. Treasure, reported via Faye Minter. Plate *.
1006	0003	Anglo-Saxon	Coin	Silver	1	1 of 5 silver sceattas dated AD 680-720. Is part of a hoard and is treasure. Plate *.
1007	0003	Anglo-Saxon	Coin	Silver	1	Complete sceatt from burial, first series AD 680-710. Part of treasure hoard. Plate *
1008	0003	Anglo-Saxon	Coin	Silver	1	Complete sceatt, primary series AD 680-710. Plate *.
1009	0003	Anglo-Saxon	Ring	Silver	4	Small sliding-knot ring made in silver or possibly copper wire. An attachment for the veil? Wire not circular in section, more rounded subrectangular. Found in head area

SF No	Context No	Period	Object Name	Material	No of frags	Description
1010	0003	Anglo-Saxon	?Nail	Iron	1	Fragment of iron with thickened head. Circular in section. Possibly a nail.
1011	0003	Anglo-Saxon	Nail?	Iron	1	Fragment of iron, thickened at one end. ?Circular in section. Could be a nail.
1012	0003	Anglo-Saxon	Nail?	Iron	1	Fragment of shaft, roughly circular in section. Could be the shank of a nail
1013	0003	Anglo-Saxon	Nail?	Iron	1	Fragment of wedge-shaped iron, possibly a nail.
1014	0003	Anglo-Saxon	Nail?	Iron	1	Iron shaft, probably circular in section, could be the shank of a nail.
1015	0003	Anglo-Saxon	Nail?	Iron	1	Small complete nail, tapering at one end and thickened at the other.
1016	0003	Anglo-Saxon	Nail	Iron	1	Small nail similar to 1015 but with flattened and corroded head. Possibly the remains of a second nail attached to the iron at the top. Part of band of iron with nails?
1017	0003	Anglo-Saxon	Coin	Silver	1	Complete sceatt, primary series dated AD 680-710. From group of coins constituting coin hoard from grave. Plate *.
1018	0008	Anglo-Saxon	Brooch	Copper alloy	1	Fragment of the foot of a small-long brooch. Triangular-shaped foot below transverse mouldings.
1019	0038	Anglo-Saxon	Spearhead	Iron	1	Almost complete spearhead, cleft socket visible but obscured by corrosion. Tapers to pointed tip, but overall shape obscured before radiography. Possible MPOs just visible. Plate *

SF No	Context No	Period	Object Name	Material	No of frags	Description
1020	0038	Anglo-Saxon	Knife	Iron	2	Almost complete knife blade, although tip is missing. It is difficult to classify without x-ray, but the back of the blade and the cutting edge are parallel before converging to the tip.
1021	0038	Anglo-Saxon	Buckle	Copper alloy	1	A complete kidney-shaped buckle with pin and buckle plate. Has minerally preserved organics adhering. Marzinik type 11.6 (L5th-E6th C?) Plate *
1022	0049		Nails	Iron	4	4 different nails from Trench 3. One fragment has flattened thickened head and may be a medieval fiddlekey nail belonging to a horseshoe.
1023	0049	Medieval	Coin	Silver	1	Irregular and worn thin long cross stirring penny from Trench 6. Obverse: Head of king, Edward III to Richard III, 1327-1485. Reverse: three pellets in each quarter. Very worn. Coin is missing most of the external circumference.
1024	0016	Anglo-Saxon	Comb	Bone/?antler	5	Fragments of composite bone and antler comb, including four fragments of teeth and part of connecting plate with rivet holes and cut marks.
1025	0016	Anglo-Saxon	Rivet?	Iron	1	Small iron rivet, probably from the connecting plate of the comb fragment SF1024.
1026	0035			Copper alloy	1	Small fragment of wire, broken. Circular in section. From Sample 10

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Rhodri Gardner

Tel: 01473 265879

rhodri.gardner@suffolk.gov.uk

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