**Report 2417**

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# An Archaeological Evaluation at Barrow Water Treatment Works, Barton on Humber, North Lincolnshire

BRCP

**Prepared for**

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June 2010

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| Signed Off | David Whitmore | 28/05/2010 |
| Amended | Jayne Bown | 10/06/2010 |
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| *Issue 3* | | |

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| District: | North Lincolnshire |
| Grid Ref.: | TA 0609 2037 |
| North Lincolnshire Museum Site Code: | BRCP |
| Client: | Anglian Water Services Ltd |
| Dates of Fieldwork: | 11 to 13 May 2010 |


## *Summary*

*An archaeological evaluation was conducted for Anglian Water Services Ltd ahead of the proposed construction of a new Chryptospiridium removal plant and associated hardstanding at Barrow Water Treatment Works. The archaeological project was undertaken prior to the submission of a planning application.*

*There were archaeological features present in all three trial trenches. Trenches 1 and 2 contained several undated possible post-holes which had probably been modified by root disturbance. Trench 3 contained a ditch and a large possible quarry pit, which had in-filled in the Roman period (this was the only feature that contained dating evidence). The evaluation confirms the presence of archaeological activity, and suggests a continuation of the Romano-British site observed to the north in the excavation by Lindsey Archaeological Services in 1999*. (OASIS Reference Number: 78183)


## 1.0 INTRODUCTION

The site situated on the east side of an existing Water Treatment Works, covering an area of approximately 0.5ha in size, within a secure complex which is located off Caistor Road, south of Barrow on Humber. Prior to the present work, the site was an enclosed field with a cover of recently grown scrubby turf and some trees around the perimeter. The site had been subjected to levelling, dumping and the installation of a large water pipe on its western side.

This pre-determination evaluation was requested by the North Lincolnshire Sites and Monuments Record Office, in line with local plan policy HE9 and in accordance with the guidelines set out in *Planning Policy Statement 5: Planning for the Historic Environment* (Department for Communities and Local Government 2010) which seeks to define the character and extent of any archaeological remains within the proposed redevelopment area.

The evaluation was in advance of the construction of a Chryptospiridium removal plant and associated hardstanding. The results of the evaluation will enable an informed decision by North Lincolnshire Sites and Monuments Record Office to be made on necessary mitigation proposals to preserve, manage or record any threatened archaeological remains. The work was also conducted in accordance with a Project Design and Method Statement prepared by NAU Archaeology (Ref. NAU/BAU2417/DW). This work was commissioned by and funded by Anglian Water Services Ltd.

The site archive is currently held by NAU Archaeology and on completion of the project will be deposited with the North Lincolnshire Museums Service, following the relevant policies on archiving standards.

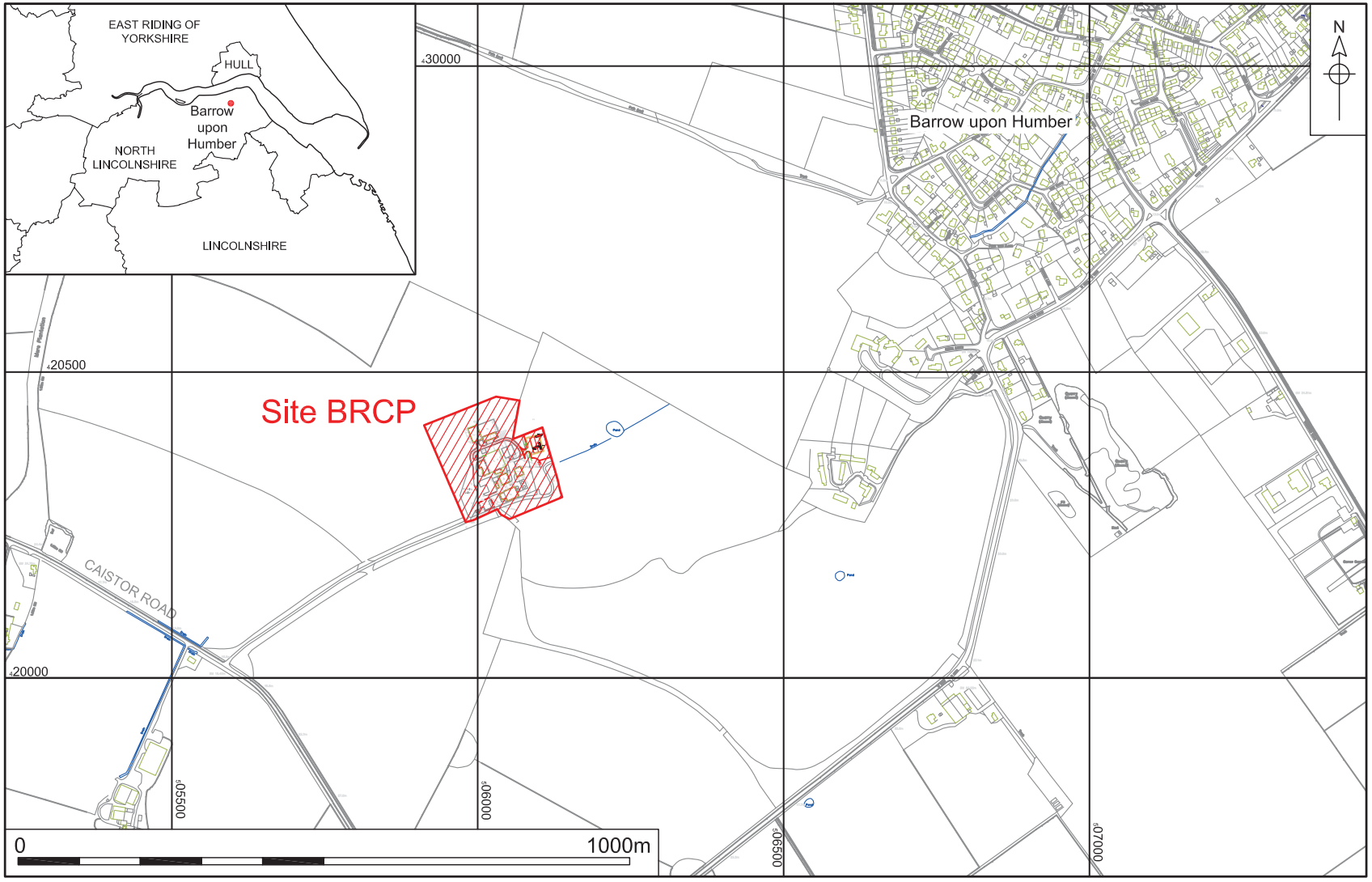




Figure 1. Site location. Scale 1:10,000

Basemap derived from Anglian Water drawing No. WAT_05172-BARRWW-SS-PLG-0001

## 2.0 GEOLOGY AND TOPOGRAPHY

The underlying solid geology is part of the Burnham Chalk Formation. The superficial geology is currently unclassified by The British Geological Survey, although immediately to the north it is recorded as Head Clay, Sand and Gravel, a type of boulder clay. (British Geological Survey).

The specific natural substratum of the site ([7]) consisted of mixed chalk and flint glacial gravels, which are known to overlay the boulder clay (Field 2001), although the boulder clay was not observed during the evaluation. A subsoil ([4]) was present on the site, formed of a mid brown silty sand. It was 0.30m thick on average. There was no original topsoil present, as the site appeared to have been modified and several recently dumped levelling layers deposited prior to a modern growth of scrub turf.

The site is situated around 11m OD on a gentle slope running down from west to east, towards a hollow and pond situated in the adjacent field. The gravel substratum probably allowed for good drainage, although this wasn't tested during the fine weather of the evaluation. The Humber estuary is situated 2 miles to the north.

## 3.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

A search of the Sites and Monuments Records specific to this site was undertaken by the author at Scunthorpe Museum. The most relevant entries are presented below.

The immediate vicinity of the site been subjected to a series of fieldwalking projects and several individual prehistoric finds, found during those projects, suggest there was activity nearby. These sites are summarised below (the site codes are from the North Lincolnshire Museum accession database). BRAD 2 close to the site records the position of a prehistoric flake, as does BRAC 2. A Mesolithic flake is recorded at BRBL and a flint scraper was found at BRAE 3. The fieldwalking also found artefacts of Roman-British through to medieval date. BRAM 3 represents a Roman sherd findspot and BRAK 2 records the position of a medieval sherd.

Site MLS20655, located in Barrow Vale to the south-west of the water treatment works, represents two ring ditches which are thought to date from before the Neolithic period. It was noted that many of the cropmarks seem to be confined to the higher ground.

On the north side of Barrow Vale the water treatment works lay within the area defined by SMR record MLS384 which showed cropmarks of a D-shaped enclosure and other linear features which may be more recent. Also faintly visible were possible ring ditches alongside possible hut circles. A large arc may form part of an enclosure. A collection of flint tools, flint scrapers and flakes, and Romano-British grey ware pottery was found in the vicinity of MLS384. A cast bronze 'dress fastener' with plain disc head was one of the more unusual finds also found as part of site MLS384.

The settlement of Barrow on Humber itself, to the north-east of the site was first mentioned in the 7th century when there was a gift of land to by King Wulhere to

St. Chad in order that a monastery could be constructed *Ad Barvae* ('at the wood'). This gift was later reinforced by a royal charter in 971A.D where the limits of the plot were set out. The village of Barrow and much of the other lands around were in an area called Lindsey, most of which passed to the Saxon Lord Morcar, Earl of Northumberland. At the time of the Domesday survey in the late 11th century, the lands had been given by William 1 to Drogo De Beuvriere, Count of Aumale. Thornton Abbey to the south of the site was constructed by a later Count of Aumale (Grey and Wilkyn 1994).

The area of Barrow on Humber is notable for its medieval field systems, and one is recorded at MLS20073, situated to the east of the site.

There were two areas subject to geophysical survey in the vicinity of the site. To the east of the water treatment works a geophysical survey was undertaken along the line of a new pipe trench at ELS1906. Some field boundaries were found towards the eastern end of the strip and other features were seen closer to the site.

In June 1999 a magnetometer survey (ELS3031) was carried out on a part of the water treatment works directly to the north-west of the present site. A series of aligned features were deemed to represent part of a former agricultural landscape and there were some denser anomalies identified as in filled hollows or pits (Johnson 1999). Evaluation and subsequent excavation (ELS3032 and ELS3034) by Lindsey Archaeological Services (LAS) followed in 2001, which posited that although there was no evidence of occupation at the site, the focus of a Romano-British settlement or farmstead may have lain nearby, beyond the southern limit of the excavation. A field system evidenced by intercutting ditches forming enclosures suggests a stable, organised landscape of Romano-British date (Field 2001). Four 2nd- to 3rd-century burials were present and Field suggests that the shallow grave cuts indicate that others may have been ploughed away. Pits and post-holes (which did not form coherent structures), an oven (most likely a corn drier), quarry pits and environmental evidence in the form of charred cereal grains all imply that the site excavated in 2001 was located on the fringes of a settlement.

## 4.0 METHODOLOGY

The objective of this evaluation was to determine as far as reasonably possible the presence or absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits within the development area.

The Brief required that three 10m by 1.80m trenches be excavated across the footprint of the proposed Chryptospiridium removal plant, in order to give a 5% sample of the development plot as a whole and in particular to examine the area that would be most affected by the development.

Machine excavation was carried out with a wheeled JCB-type excavator equipped with a toothless ditching bucket and operated under constant archaeological supervision (Plate 1). All three trenches had probable archaeological features present. Trench 2 was originally positioned closer to the entrance to the site, but due to the presence of a large water pipe at the trench's western end, it was moved further to the east.

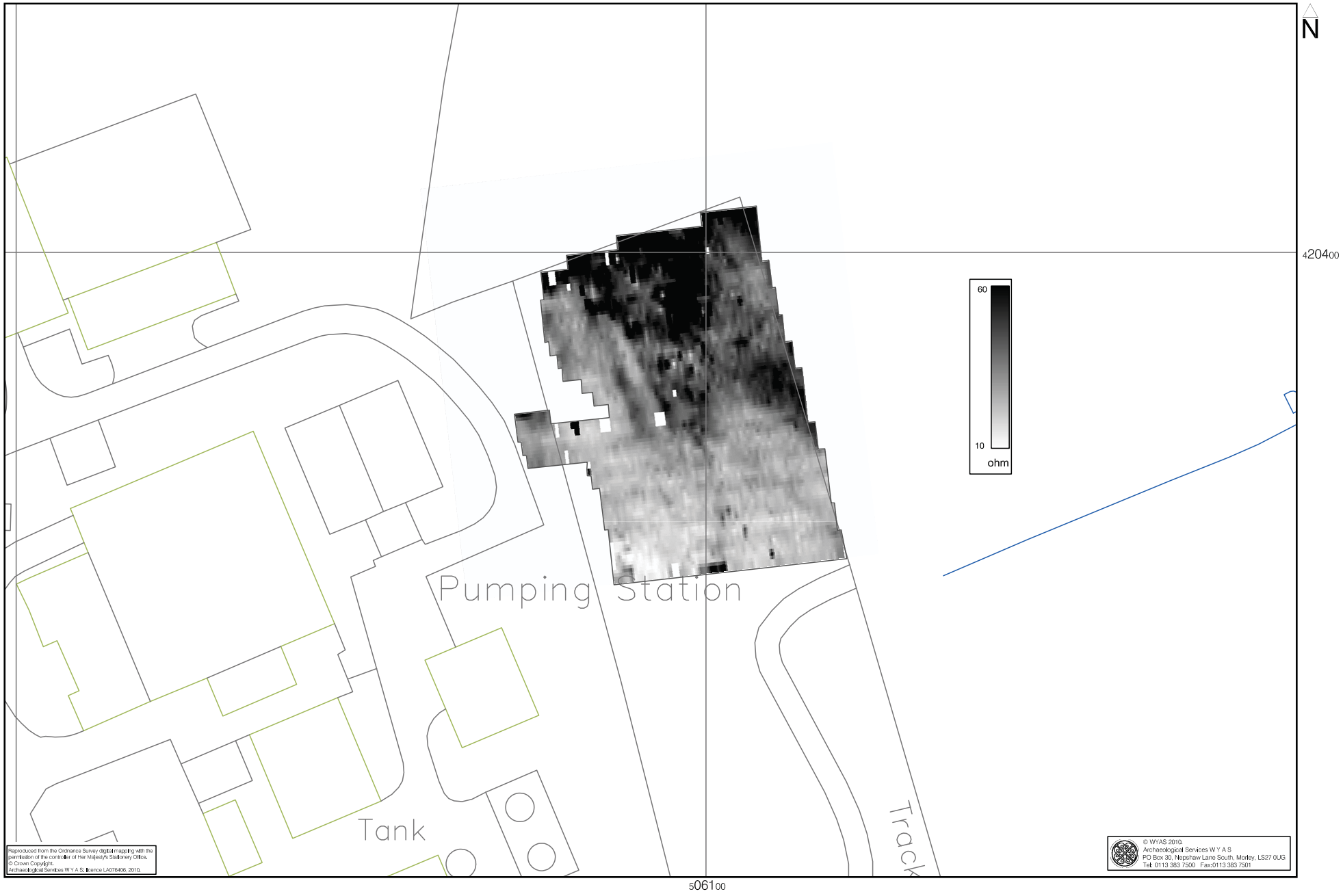


Figure 2. Results of resistivity survey (courtesy of WYAS). Scale 1:750

This trial trench evaluation followed on from a geophysical survey undertaken by Sam Harrison of West Yorkshire Archaeological Service (WYAS) (report forthcoming). The geophysical prospection included both magnetometer and earth resistance surveys. The magnetometer plot presented only ferrous contamination from material in the topsoil. The earth resistance plot did show some linear trends but it was difficult to determine their precise character, given the disturbance on the site. There were no clear 'targets' within the proposed building footprint, to be evaluated (Fig 2).


Plate 1. Machining, looking south-west

Spoil, exposed surfaces and features were scanned with a metal-detector, though there were no finds found during this procedure.

Environmental samples were taken from five discrete archaeological features. The contexts sampled were [6], [9], [12], [26] and [28]

All archaeological features and deposits were recorded using NAU Archaeology pro forma. Trench locations, plans and sections were recorded at appropriate scales. Colour, monochrome and digital photographs were taken of all relevant features and deposits where appropriate.

During the course of this work, each trench had their own temporary benchmarks created as the trenches were located using a portable Trimble R6 GPS device with Trimble TSC2 controller.

Site conditions were good, with the work taking place in fine weather, over a three day period. Access to the site was strictly controlled by Anglian Water Services Ltd.

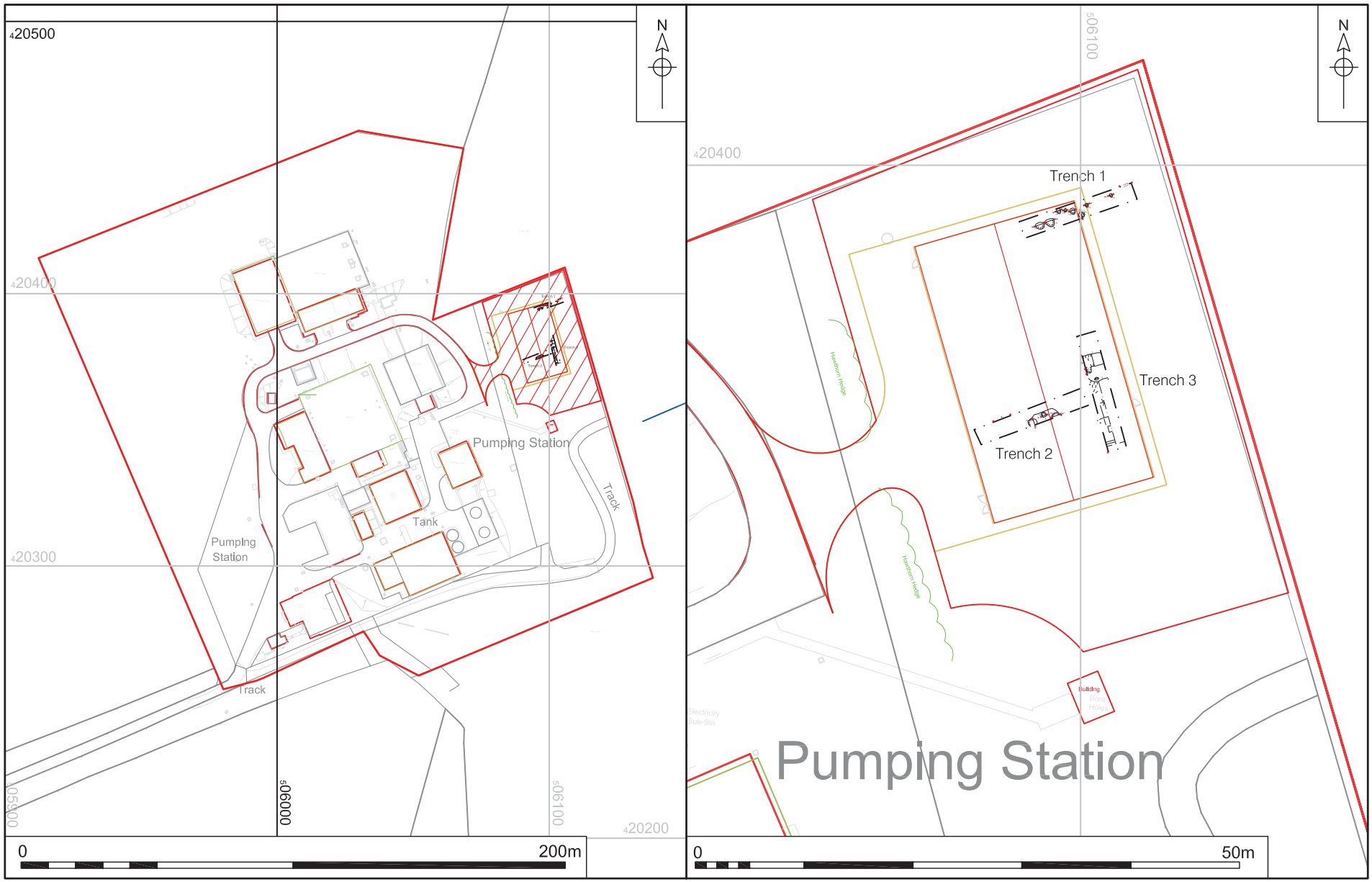




Figure 3. Trench locations. Scale 1:2000 and 1:500

## 5.0 RESULTS

**Trench 1** (Figs 3 and 4; Plates 2 and 3)

Trench 1 was situated in the north-east corner of the site. It measured 10m by 1.80m and was orientated east to west. It was excavated by machine to a maximum depth of 0.60m from ground level. There were 8 features within the trench. From west to east they were [10], [12], [14], [16], [18], [20], [22] and [24]. All of the features were undated. Although some of the features had a slightly irregular profile, their regularity in plan suggested that they were man made rather than the result of tree root action, although none contained any dating evidence.

Plate 2. Trench 1 after machining, looking east

A sub circular probable post-hole or small pit ([10]) was located at the western end of the trench. It was 0.15m deep and extended 0.80m east to west and 0.60m north to south. There was some undercutting on the south side. The single fill ([11]) was a firm mid brown silty sand, which contained frequent roots.

Immediately to the east there was a further, similar sized probable post hole or small pit ([12]). It was also subcircular in plan. It extended 0.75m north to south by 0.84m east to west and had a depth of 0.28m. The single fill ([13]) was a firm mid

brown silty sand which contained frequent roots which suggested a natural derivation.

A short distance to the east (no more than 0.50m) there was a smaller probable post-hole ([14]). The feature extended 0.50m north to south and 0.40m east to west. The depth was 0.25m. The single fill ([15]) was composed of a firm mid brown silty sand which contained frequent roots.

Plate 3. Post-holes [14], [16] and [18], looking east

Immediately to the east there was a further possible post-hole ([16]). The feature had an extent of 0.24m east to west by 0.30m north to south. The depth was 0.10m. The single fill consisted of a firm mid brown silty sand which had probably built up through natural deposition ([17]). There were frequent small roots in the fill.

A larger probable post-hole ([18]) was situated almost immediately to the south-east. It extended 0.60m north to south and 0.50m east to west and had an oval shape in plan. The depth was 0.50m. The fill ([19]) was formed from a firm mid brown silty sand with frequent roots. The appearance of the fill suggested that it had developed through natural silting.

A short distance to the south-east there was a further similarly sized feature ([20]). It was also a probable post-hole. It was sub circular in shape and had a depth of 0.16m. It extended 0.58m north to south by 0.55m east to west. It had steep sides, which became undercut and a roughly flat base. The single naturally occurring fill ([21]) was also a firm mid brown silty sand which contained frequent roots.

A smaller likely post-hole ([22]) was situated 0.50m to the north-east. It was sub oval in shape and measured 0.40m by 0.30m. It was 0.28m deep with steeply sloping sides. There was a single firm mid brown silty sand fill which also contained frequent small roots ([23]).

The final feature at the eastern end of the trench was also likely to be a post-hole ([24]). It had a sub oval shape in plan and extended 0.34m north to south by 0.28m east to west. The depth was 0.18m. The naturally occurring fill was formed from a firm mid brown silty sand ([25]).

Several layers were observed in the south facing sample section of the trench. The archaeological features appeared to be sealed by a layer of subsoil ([4]) which consisted of mid brown sandy silt. It was 0.30m in depth and was a naturally occurring deposit. Above it was a finely graded grey organic silt ([3]) which may have been the result of recent dumping onto the site. A thin layer of crumbly turf ([1]) capped the sequence. At the top of the sequence there was a thin layer of scrub turf.

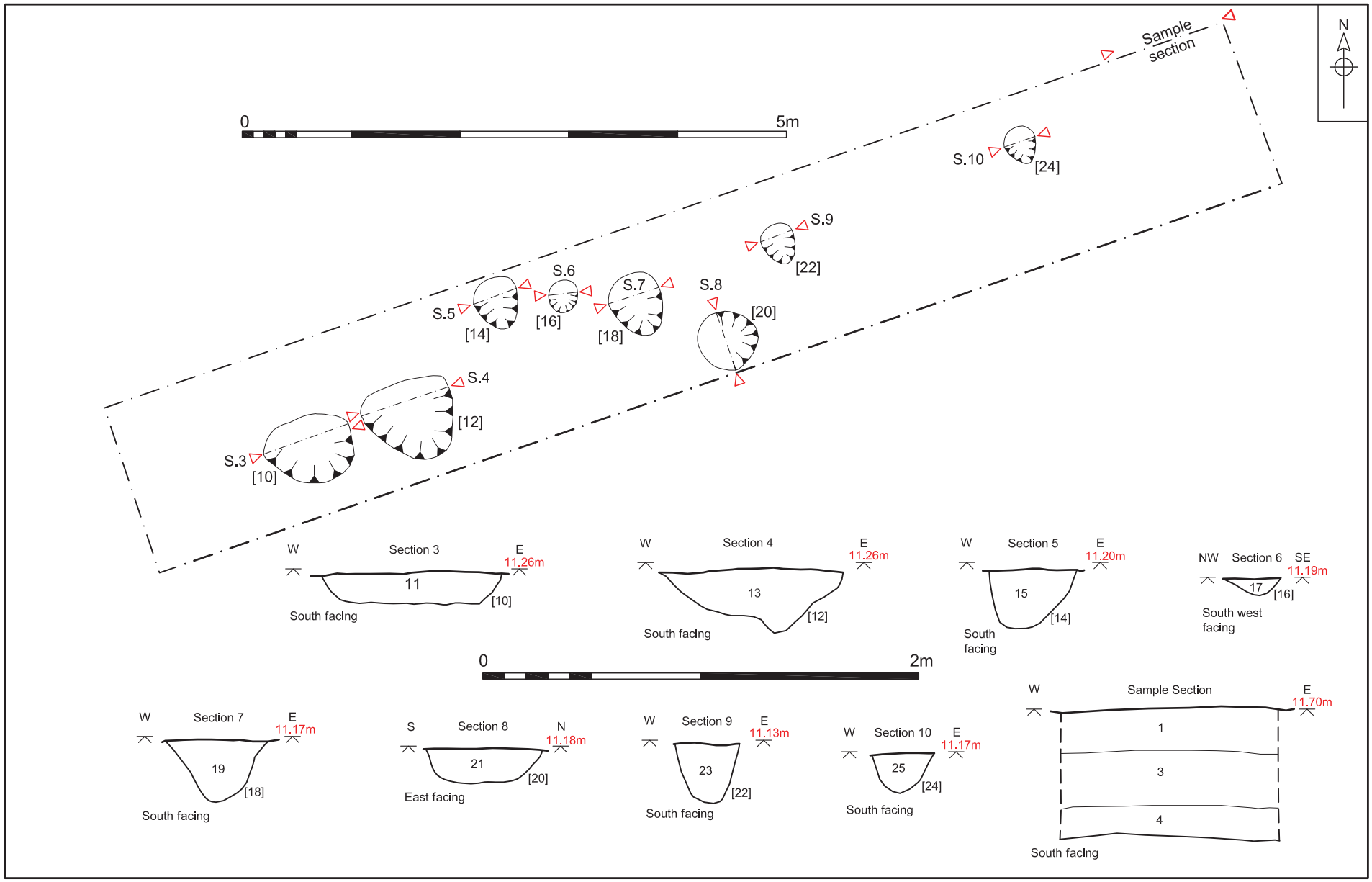




Figure 4. Trench 1 plan and sections. Scale 1:50 and 1:25

**Trench 2** (Figs 3 and 5; Plates 4 and 5))

Trench 2 was situated on the western side of the site. It was 10m by 1.80m and orientated east to west. The trench was positioned several metres further to the east than had been originally planned due to the presence of a large water pipe at the trench's western end. The trench was machine excavated down to a maximum depth of 0.90m. There were 3 possible post-holes within the trench. From east to west they were [26], [28] and [30]. The three features also appeared to be positioned within a deeper area of subsoil ([32]).

Plate 4. Trench 2 after machining, looking east

Subsoil [32] was a firm mid brown silty sand, which appeared to have built up within a natural hollow. All three of the possible post-holes within the trench were confined to this area of subsoil.

The most easterly of the features ([30]) was sub circular in plan. It had reasonably concave sides and a flat base. This probable post-hole was 0.20m deep and 0.40m east to west by 0.77m north to south. Its single fill ([31]) was composed of firm mid brown silty sand which contained moderate amounts of small flint pebbles. The fill was probably the result of natural infilling.

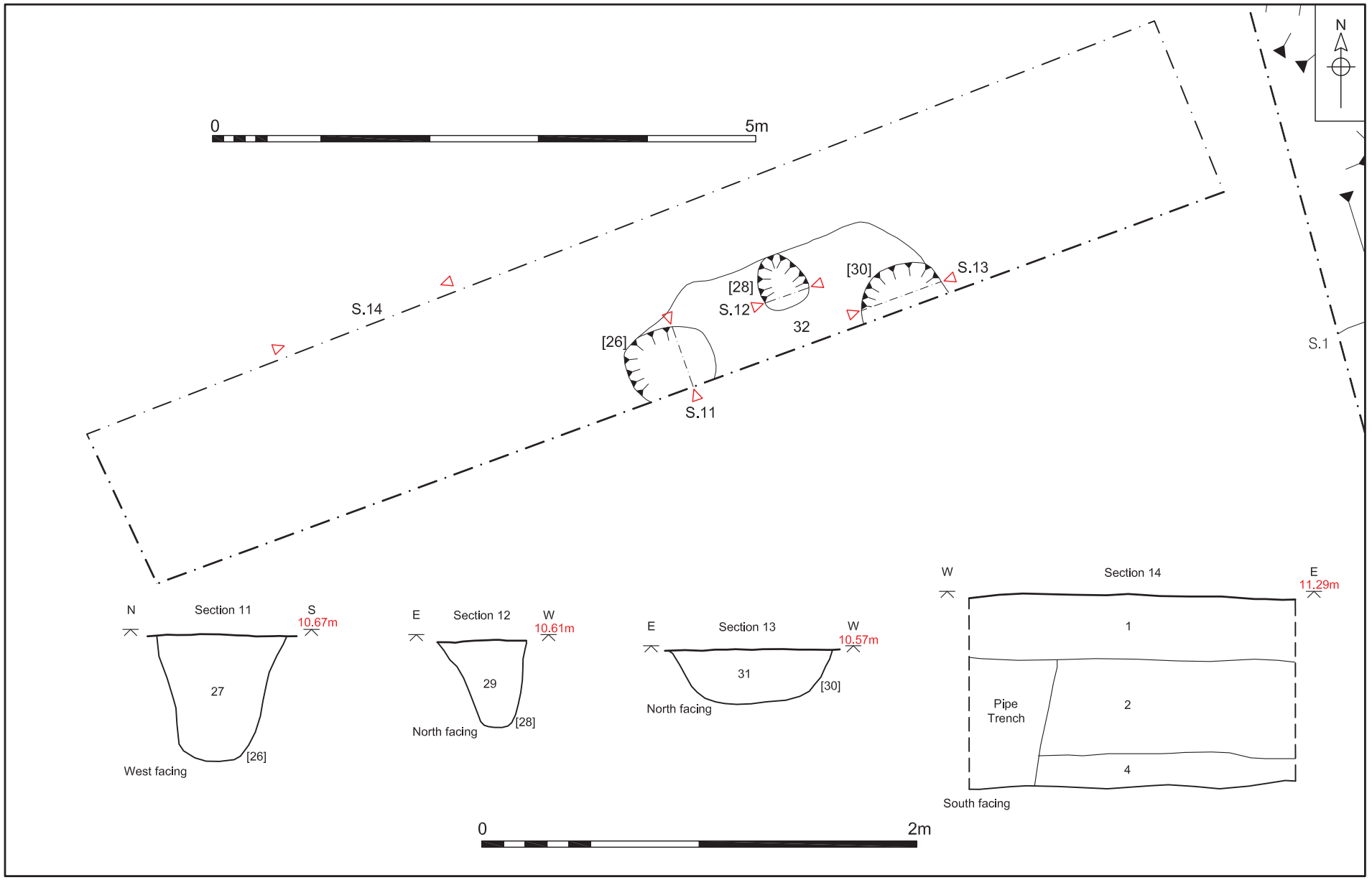




Figure 5. Trench 2 plan and sections. Scale 1:50 and 1:25

A smaller subcircular probable post-hole ([28]) was situated 0.50m to the west. It extended 0.50m north to south by 0.40m east to west. It was 0.40m deep and had near vertical sides. There was essentially a single fill ([29]) within the feature, although the top part of the fill had been partially covered by some redeposited natural gravel. The fill consisted of a firm mid brown silty sand, and was probably located within the feature.

The third probable post-hole or small pit ([26]) was situated 0.60m to the west. It had a similar subcircular shape in plan to the other two features in the trench and extended 0.80m east to west by 0.60m north to south. The feature was 0.80m deep and the base was concave. The base of the western side was slightly undercut. The fill ([27]) consisted of a firm mid brown silty sand with moderate numbers of small flints. The appearance of the fill suggested that it had built up through natural processes.

Plate 5. Post-holes [26] and [28], looking east

Several layers were observed in the south-facing section. The archaeological features appeared to be sealed by a layer of subsoil ([4]) which consisted of mid brown sandy silt which in this trench contained frequent fragments of chalk. It was 0.15m in depth. It appears to be essentially a naturally occurring deposit on average 0.40m thick. Above it was a mix of the grey silt ([3]) and chalky make up layer [2] which was also observed in Trench 3, evidence of recent dumping of

material onto the site. A layer of crumbly turf ([1]) capped the sequence. The turf was scrubby and had probably formed recently, as it was combined with hard-core make-up and lay on a Terram sheet.

**Trench 3** (Figs 3, 6 and 7; Plates 6, 7 and 8)

Trench 3 was situated on the eastern side of the site. It was 10m by 1.80m and orientated north to south. It was machine excavated down to a maximum depth of 0.80m. There were 2 features within the trench. From north to south they were a probable ditch [8] and a possible quarry pit [5].

Plate 6. Trench 3 after machining, looking north

At the northern end of the trench there was a probable ditch ([8]) which was orientated roughly east to west. There was a suggestion that the eastern end of this feature was starting to curve inwards, and this could indicate that the ditch was beginning to terminate; alternatively it could be an elongated pit. Due to the confines of the trench it was impossible to establish which was the correct interpretation. The ditch was at least 1.80m long and had a width of 1.08m. The depth was 0.40m. There was an irregular natural hollow on the south side of the trench which had been truncated by the ditch. The single fill ([9]) was a loose mid brown silty sand which had probably built up gradually.

Plate 7. Ditch [8], looking west

At the south end of the trench was a large feature, possibly a quarry pit ([5]). The depth was 0.50m and the pit was at least 6.50m north to south by at least 1.80m east to west. The sides had a shallow irregular slope, which became steeper and more regular towards the base and towards the south. There were occasional natural hollows and root holes towards the top of the cut. The visible shape of the pit suggested that it extended for a reasonable distance to the west, east and south, however there was no sign of it at the eastern end of Trench 2, which indicated that it ended a short distance to the west. In spite of the large size of the pit, the fill ([6]) was reasonably homogeneous and was composed of mid brown silty sand which contained moderate amount of flint gravel and occasional chalk flecks. Towards the base of the pit, at the south end of the trench, the fill became less stony and the fill had almost certainly accumulated slowly through natural build up.

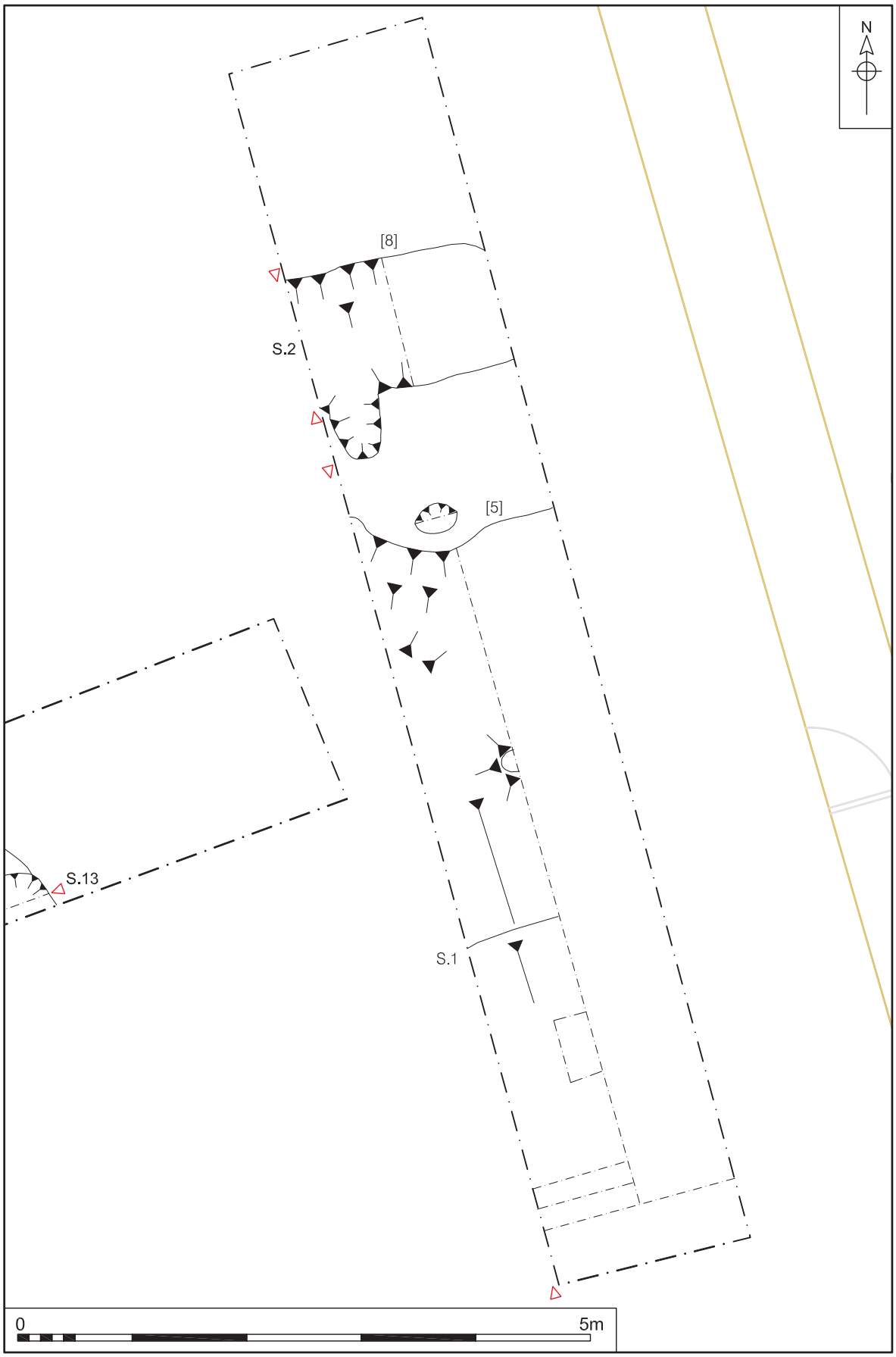




Figure 6. Trench 3, plan. Scale 1:50

Plate 8. Quarry pit [5], looking west

Several layers were observed in the east facing main section of the trench. The archaeological features appeared to be sealed by a layer of subsoil ([4]) which consisted of naturally-occurring mid brown sandy silt 0.15m in depth. Above it was a finely graded grey silt ([3]) which was 0.10m thick. Next in the sequence was a thin layer (0.08m) of dumped chalk ([2]). As in Trench 2, layer [1] the crumbly turf on the surface was growing through hardcore and lay on Terram sheeting.

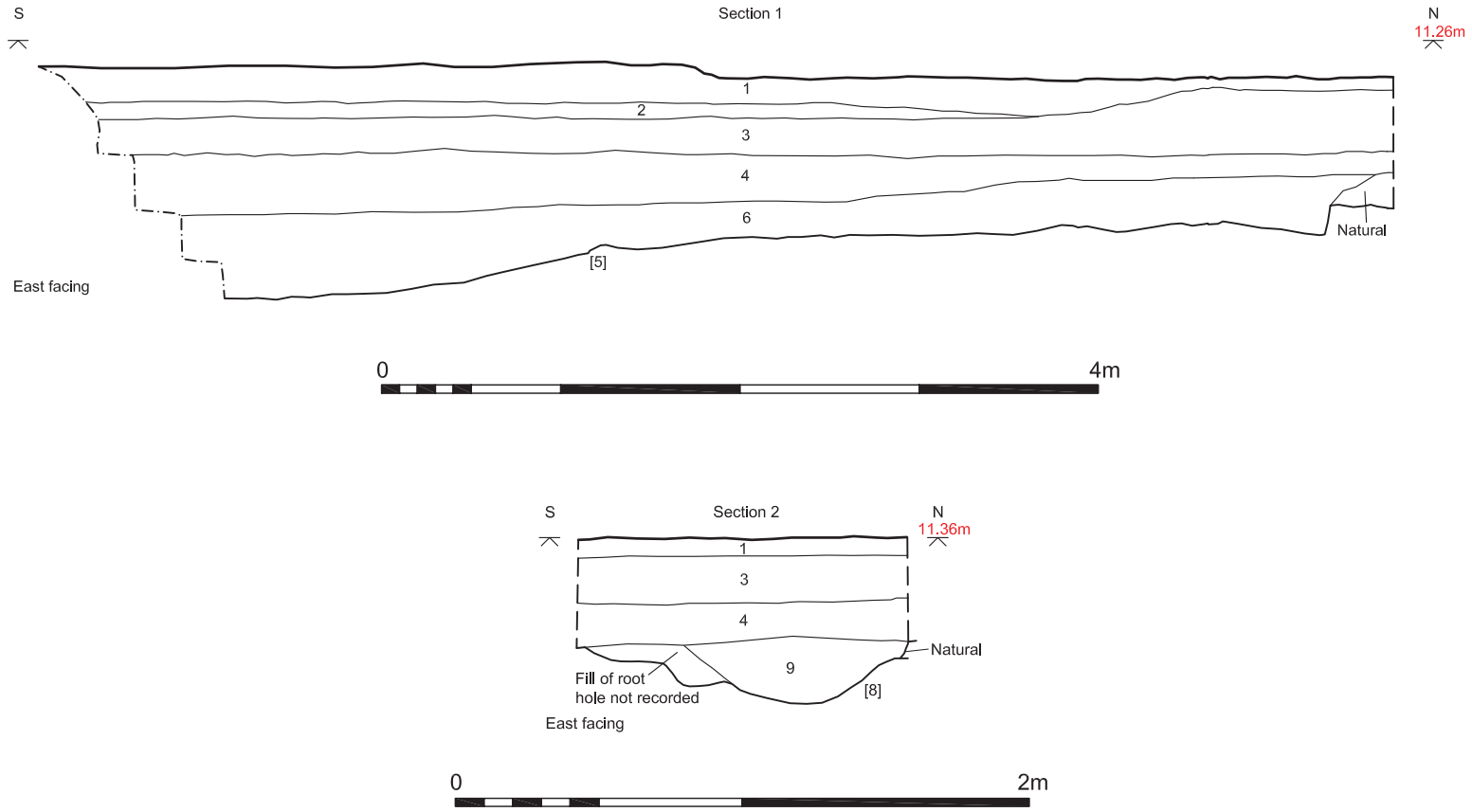


Figure 7. Trench 3, sections. Scale 1:40 and 1:25

# 6.0 THE FINDS

## 6.1 The Pottery

by Alice Lyons

A total of three sherds of pottery weighing 28g were recovered from a single context, the fill of possible quarry pit [5] (Appendix 3). All the sherds are of Romano-British date.

The assemblage comprises a base and body sherd from two jars in unsourced sandy greyware and a Dales Shelly ware bodysherd also from a jar or cooking pot. This coarse, shell-tempered pottery was produced in north Lincolnshire (Tomber and Dore 1998, 157) and can be broadly dated to the late 2nd to mid 4th centuries (Tyers 1996, 190).

# 7.0 THE ENVIRONMENTAL EVIDENCE

by Val Fryer

## 7.1 Plant Macrofossils

### *7.1.1 Introduction and method statement*

Evaluation excavations at the Barrow-on-Humber Water Treatment Works recorded a small number of features of possible Roman date. Samples for the evaluation of the content and preservation of the plant macrofossil assemblages were taken and five were submitted for assessment (Appendix 4).

The samples were processed by manual water flotation/washover and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16 and the plant macrofossils and other remains noted are listed in Appendix 4. Nomenclature within the table follows Stace (1997). All plant remains were charred. Modern contaminants, including fibrous and woody roots and seeds, were present throughout.

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

### *7.1.2 Results*

The recovered flots were all extremely small and sparse, with plant macrofossils being particularly scarce. Single barley (*Hordeum* sp.) and wheat (*Triticum* sp.) grains were recovered, but both were severely puffed and distorted, probably as a result of combustion at very high temperatures. Occasional fragments of charcoal/charred wood were also noted within all five assemblages. Pieces of black porous and tarry material were present throughout, and although some fragments were possibly derived from the high temperature combustion of organic remains, others were particularly hard and brittle, having the appearance of more recent ‘industrial’ residues. Coal fragments were also recorded within all five assemblages.

### *7.1.3 Conclusions*

In summary, plant macrofossils are extremely scarce, and although grains are present, there is insufficient material to be conclusively indicative of either agricultural or domestic refuse. It is, perhaps, most likely that all of the material recovered is derived from scattered refuse, which was accidentally incorporated within the feature fills.

As plant remains are so scarce, it is difficult to make recommendations for a future sampling strategy should any further work be undertaken within the near vicinity. However, as cereal grains are recorded, it is recommended that additional plant macrofossil samples of approximately 30 – 50 litres in volume are taken from any dated contexts recorded during excavation should this take place.

## 8.0 CONCLUSIONS

The results of this evaluation are best seen in relation to the excavation by Lindsey Archaeological Services (LAS) which was undertaken in 1999 nearby (Field 2001).

*The post-holes/ small pits*

There were 11 possible post-holes/small pits seen in Trenches 1 and 2. As the fieldwork progressed from Trench 1 to 2, it became clear that although these features were often slightly irregular in profile and formed no clear pattern, they were likely to be deliberate cuts rather than tree root holes as had been first thought. They were regularly subcircular/suboval in plan, which supports an interpretation of them as post-holes; tree root holes would be likely to show a more disrupted pattern, with 'trails' of separate roots visible. When the profiles, shapes and sizes of the features are compared with those observed in the LAS excavation they are also often slightly undercut and irregular. LAS reported from their work that 'There was a great deal of natural disturbance on the site and this made it difficult in many cases to determine which of the features was genuine' (Field 2001) and this is true of the features identified during the evaluation. All of the features present on the site may have had a high degree of modification to their edges through bioturbation. The post-holes observed in the 1999 excavation, were found in general clusters, and this too appears to be the pattern here, although the limited scope of the present work may present a skewed picture. The post-holes/small pits themselves seem to form some patterns. The three within Trench 2 are all located at the centre of the trench in a patch of subsoil, and of those in Trench 1, the two largest are situated together, and four of the others seem to form a slightly curving line. They may have been part of larger structures, or operated as marker posts erected in different periods, though the small size of the evaluation trenches makes any firm interpretation very difficult.

*The ditch*

The probable ditch [8] in Trench 3 appeared to be broadly on the same alignment as the elements of the Romano-British field system excavated and recorded immediately to the north-west of the site in 1999 although on a slightly more east to west alignment. Although undated, the ditch was situated close to the possible quarry pit [5] of Romano-British date and both features were sealed by the same layer of subsoil ([4]), which could suggest that they are broadly contemporary. The present work, due to its limited scope, can add little further interpretation to the results from the 1999 LAS excavation. It has been suggested that the Romano-

British field system ‘is broadly north-east to south-west orientated, following the local topography, broadly parallel to a stream located to the south, with ditches running parallel to the maximum slope of the hill (Field 2001). The LAS report suggests that this field system was organised to follow the localised topography.

*The quarry pit*

Possible quarry pit [5] appears to have filled up in the Romano-British period through natural silting. The few sherds of pottery suggest a broad 1st- to 4th-century date for this infilling. In the 1999 excavation a large area of pitting in the eastern part of the site contained post-medieval pottery, and others contained no dating evidence. A later date for this feature cannot be ruled out. As the large feature lay in a lower lying area of the site there is the possibility that it represents a large hollow dug as a water hole or similar type of water feature.

*Site significance*

Though only one feature was dated, the close association of that date with the known Romano-British field-system observed in the 1999 excavation by Lindsey Archaeological Services does imply a continuation of Romano-British activity into the survey area. The fragments of coal and possible modern contaminants within the fills of some of the features are probably to be expected in an area where there may have been steam ploughing, and where there is evidence of recent dumping of soils and materials. Many of the features appear to have had modification through root action and this itself could have introduced the contaminants into the fills. It was noted during the work of LAS that ‘all of the soil samples have some level of recent contamination’ (Field 2001).

The archaeological evidence present in the sample of the site investigated in this trial trench evaluation mirrors with what was observed in the 1999 excavation and interpretation has been informed by it. This project does contribute a little more information to a framework of knowledge about Roman agricultural settlement and farming in North Lincolnshire. The data may also tie in with sites such as Deepdale to the south-west which was excavated by the Humberside Archaeological Unit (Atkins, Hatt and Whitwell 1981). A picture may emerge as to how the local area was being utilised during the Roman period by low level farming.

The fact that all three trenches contained archaeological features suggests that the footprint of the new development may disrupt remains of archaeological interest and importance. As the archaeological features were encountered at a depth of 0.60m to 0.90m from the ground surface, there is a high likelihood that any archaeological remains would be damaged or destroyed by the construction of the new Chryptospiridium removal plant and associated hardstanding. The proposed bunding along the northern and western edges of the site is likely to provide, in combination with the depth of overlying soils, protection to any archaeological features present in this area.

Recommendations for future work based upon this report will be made by North Lincolnshire Sites and Monuments Record Office.

**Acknowledgements**

The fieldwork was undertaken by John Ames with the author. The finds were processed by Andrew Barnett and analysed by Sarah Percival. The illustrations were prepared by David Dobson after initial digitising by John Ames and the author. The soil samples were processed by Rob Fryer and the results examined and reported on by Val Fryer. The Romano-British pottery was identified by Alice Lyons. Thanks to Aiden Hickey of One Alliance and Jo Everitt and Dave Brumby of Anglian Water for helping to set up the project and their interest. The machining was undertaken by Keith of Carnaby Civil Engineering. Thanks to Alison Williams, who monitored the site and Mike Hemblade, both of North Lincolnshire County Council, for their assistance using the SMR.

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## Appendix 1a: Context Summary

| Context | Category | Type | Fill Of | Description | Period |
|---|---|---|---|---|---|
| 1 | Deposit | | | Topsoil | Modern |
| 2 | Deposit | | | Crushed chalk dump | Modern |
| 3 | Deposit | | | Finely graded dumped soil | Modern |
| 4 | Deposit | | | Subsoil | Unknown |
| 5 | Cut | Quarry pit | | Quarry pit | Roman |
| 6 | Deposit | | 5 | Pit fill | Roman |
| 7 | Deposit | | | Natural Substratum | Unknown |
| 8 | Cut | Ditch | | Ditch | Unknown |
| 9 | Deposit | | 8 | Ditch fill | Unknown |
| 10 | Cut | Post-hole | | Post-hole | Unknown |
| 11 | Deposit | | 10 | Post-hole fill | Unknown |
| 12 | Cut | Post-hole | | Post-hole | Post-hole |
| 13 | Deposit | | Post-hole fill | Post-hole fill | Unknown |
| 14 | Cut | Post-hole | | Post-hole | Unknown |
| 15 | Deposit | | Post-hole fill | Post-hole fill | Unknown |
| 16 | Cut | Post-hole | | Post-hole | Unknown |
| 17 | Deposit | | 16 | Post-hole fill | Unknown |
| 18 | Cut | Post-hole | | Post-hole | Unknown |
| 19 | Deposit | | 18 | Post-hole fill | Unknown |
| 20 | Cut | Post-hole | | Post-hole | Unknown |
| 21 | Deposit | | 20 | Post-hole fill | Unknown |
| 22 | Cut | Post-hole | | Post-hole | Unknown |
| 23 | Deposit | | 22 | Post-hole fill | Unknown |
| 24 | Cut | Post-hole | | Post-hole | Unknown |
| 25 | Deposit | | 24 | Post-hole fill | Unknown |
| 26 | Cut | Post-hole | | Post-hole | Unknown |
| 27 | Deposit | | 26 | Post-hole fill | Unknown |
| 28 | Cut | Post-hole | | Post-hole | Unknown |
| 29 | Deposit | | 28 | Post-hole fill | Unknown |
| 30 | Cut | Post-hole | | Post-hole | Unknown |
| 31 | Deposit | | 30 | Post-hole fill | Unknown |
| 32 | Deposit | | | Deeper subsoil | Unknown |

## Appendix 1b: OASIS Feature Summary

| Period | Type | Total |
|---|---|---|
| Roman | Quarry pit | 1 |
| Unknown | Ditch | 1 |
| | Post-hole | 11 |

## Appendix 2a: Finds by Context

| Context | Material | Qty | Wt | Period |
|---|---|---|---|---|
| 6 | Pottery | 3 | 28g | Roman |

## Appendix 2b: OASIS Finds Summary

| Period | Material | Total |
|---|---|---|
| Roman | Pottery Sherds | 3 |

## Appendix 3: Pottery

| Context | Fabric description | Fabric code | Dsc | Form | Qty | Wt | Era | date |
|---|---|---|---|---|---|---|---|---|
| 6 | Sandy greyware | SGW | Bodysherd | Jar | 1 | 2 | Roman | MC1 - C4 |
| 6 | Sandy greyware | SGW | Base | Jar | 1 | 25 | Roman | MC1 - C4 |
| 6 | Dales Shelly ware | DAL SH | Bodysherd | Jar | 1 | 1 | Roman | C2 -C3 |

## Appendix 4: Environmental Evidence

| **Sample No.** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| **Context No.** | **6** | **9** | **13** | **26** | **28** |
| **Feature No.** | **5** | **8** | **12** | **24** | |
| **Feature type** | **Q.Pit** | **Ditch** | **?ph** | **?ph** | **?ph** |
| **Plant macrofossils** | | | | | |
| *Hordeum* sp. (grain) | xcf | | | | |
| *Triticum* sp. (grain) | | x | | | |
| Cereal indet. (grains) | xcf | x | | x | |
| Charcoal <2mm | x | x | x | | x |
| Charcoal >2mm | | x | | x | |
| Charred root/stem | x | x | | | |
| **Other remains** | | | | | |
| Black porous 'cokey' material | x | xx | xx | x | xx |
| Black tarry material | | | | x | |
| Bone | x | x | x | | |
| Glass | | | | x | |
| Mineralised soil concretions | xx | xx | | | |
| Small coal frags. | x | xx | xx | xx | xx |
| Small mammal/amphibian bones | | xpmc | | xpmc | xxpmc |
| **Sample volume (litres)** | **10** | **10** | **10** | **10** | **10** |
| **Volume of flot (litres)** | **<0.1** | **<0.1** | **<0.1** | **<0.1** | **<0.1** |
| **% flot sorted** | **100%** | **100%** | **100%** | **100%** | **100%** |

x = 1 – 10 specimens xx = 11 – 20 specimens cf = compare pmc = possible modern contaminant
Q.Pit = quarry pit ?ph = possible post-hole

## Appendix 5: OASIS Data Collection Form: England

## OASIS ID: norfolka1-78183

### Project details

| | |
|---|---|
| Project name | Evaluation at Barrow Water Treatment Works, Barton on Humber, North Lincolnshire 2010 |
| Short description of the project | An archaeological evaluation was conducted for Anglian Water Services Ltd ahead of the proposed construction of a new Chryptospiridium removal plant and associated hardstanding at Barrow Water Treatment Works. The archaeological project was undertaken prior to the submission of a planning application. There were archaeological features present in all three trial trenches. Trenches 1 and 2 contained several undated possible post-holes which had probably been modified by root disturbance. Trench 3 contained a ditch and a large possible quarry pit, which had in-filled in the Roman period (this was the only feature that contained dating evidence). The evaluation confirms the presence of archaeological activity, and suggests a continuation of the Romano-British site observed to the north in the excavation by Lindsey Archaeological Services in 1999. |
| Project dates | Start: 11-05-2010 End: 13-05-2010 |
| Previous/future work | Yes / Not known |
| Any associated project reference codes | BRCP - Museum accession ID |
| Any associated project reference codes | BAU2417 - Contracting Unit No. |
| Type of project | Field evaluation |
| Site status | None |
| Current Land use | Other 13 - Waste ground |
| Monument type | QUARRY PIT Roman |
| Monument type | POST-HOLE Uncertain |
| Significant Finds | POTTERY Roman |

| | |
|---|---|
| Methods & techniques | 'Geophysical Survey','Sample Trenches' |
| Development type | Service infrastructure (e.g. sewage works, reservoir, pumping station, etc.) |
| Prompt | General structure plan/local plan/minerals plan guidance |
| Position in the planning process | Pre-application |
| Solid geology | CHALK (INCLUDING RED CHALK) |
| Drift geology | BOULDER CLAY AND MORAINIC DRIFT |
| Techniques | Magnetometry |

## Project location

| | |
|---|---|
| Country | England |
| Site location | NORTH LINCOLNSHIRE NORTH LINCOLNSHIRE BARROW UPON HUMBER Barrow Water Treatment Works, Barton on Humber |
| Postcode | DN19 7EA |
| Study area | 1100.00 Square metres |
| Site coordinates | TA 0609 2037 53.6687879812 -0.394030826795 53 40 07 N 000 23 38 W Point |
| Height OD / Depth | Min: 11.00m Max: 11.00m |

## Project creators

| | |
|---|---|
| Name of Organisation | NAU Archaeology |
| Project brief originator | North Lincolnshire Sites and Monuments Record Office (Alison Williams, April 2010) |
| Project design originator | David Whitmore |

| | |
|---|---|
| Project director/manager | David Whitmore |
| Project supervisor | Peter Crawley |
| Type of sponsor/funding body | Utility |
| Name of sponsor/funding body | Anglian Water Servces Ltd |

**Project archives**

| | |
|---|---|
| Physical Archive recipient | North Lincolnshire Museums Service |
| Physical Contents | 'Ceramics' |
| Digital Archive recipient | North Lincolnshire Museums Service |
| Digital Contents | 'Ceramics','other' |
| Digital Media available | 'Spreadsheets','Text' |
| Paper Archive recipient | North Lincolnshire Museums Service |
| Paper Contents | 'Stratigraphic' |
| Paper Media available | 'Context sheet','Drawing','Photograph','Plan','Report' |

**Project bibliography 1**

| | |
|---|---|
| Publication type | Grey literature (unpublished document/manuscript) |
| Title | An Archaeological Evaluation at Barrow Water Treatment Works, Barton on Humber, North Lincolnshire |

| | |
|---|---|
| Author(s)/Editor(s) | Crawley, P. E. |
| Other bibliographic details | NAU Archaeology Report 2417 |
| Date | 2010 |
| Issuer or publisher | NAU Archaeology |
| Place of issue or publication | Norwich |
| Description | Spiral-bound double-sided paper; pdf copy |

| | |
|---|---|
| Entered by | Jayne Bown (jayne.bown@nps.co.uk) |
| Entered on | 9 June 2010 |