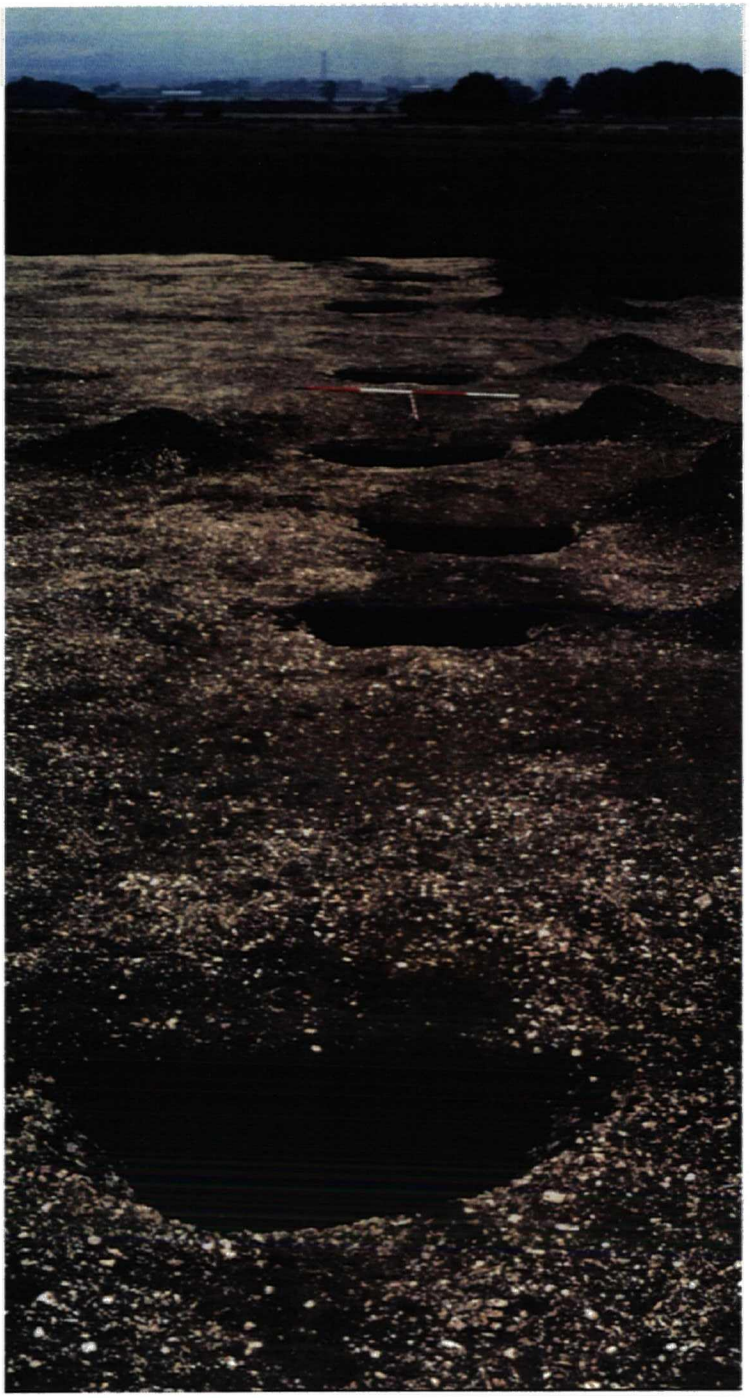
Cook's Quarry Watching Brief and Evaluation

Landscape Research Centre Ltd

1999

Archaeological watching brief and evaluation at Cook's Quarry, West Heslerton: Site 10AA



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The Landscape Research Centre 1999

Background

Figure 1: The Quarry face following excavation

The small sand quarry operated by E. Cook and Son at West Heslerton, North Yorkshire (NGR SE 916 769) was the setting for a nationally important series of rescue excavations undertaken between 1977 and 1986. (Powlesland, D.J., Haughton, C.A., and Hanson, J.H. 1986; Haughton & Powlesland 1999) These excavations formed the impetus for the creation of a long-term research strategy employing targeted large-scale rescue excavations: The Heslerton Parish Project (HPP). A watching brief condition set in a planning permission granted in 1987 for further areas of extraction (**NYCC Consent No. C3/60/53/PA)** was not fully complied with, owing to confusion over how this work was to be funded. Following the discovery of an early Anglo-Saxon burial (an outlier from the excavated cemetery to the south) attention was once again focussed on the quarry. The areas lost without proper observation lay to the north and west of the most significant deposits identified on Site 1 which lay adjacent (See *Figure 2*) and occasional visits confirmed that the density of past activity in these areas was relatively low. Following the discovery and excavation of the burial it was agreed by the quarry owners and their agents, minerals and archaeological officers of NYCC and the Landscape Research Centre (LRC) that the watching brief be undertaken. This work would in addition serve as an evaluation which, combined with the extensive excavations undertaken both to the east and to the south of a 4Ha. area proposed for further quarrying, would enable a suitable programme of works to be defined to ensure that further deposits were properly dealt with as a component of the planning application. It was agreed that the watching brief and evaluation be jointly funded by NYCC and the quarry operators, the quarry bearing the cost of plant hire, and a grant from NYCC and additional costs borne by LRC enabled the supervised stripping and examination of an area of circa 0.6 hectare to the west of Site 1 and to the north of the area being proposed for further mineral extraction.

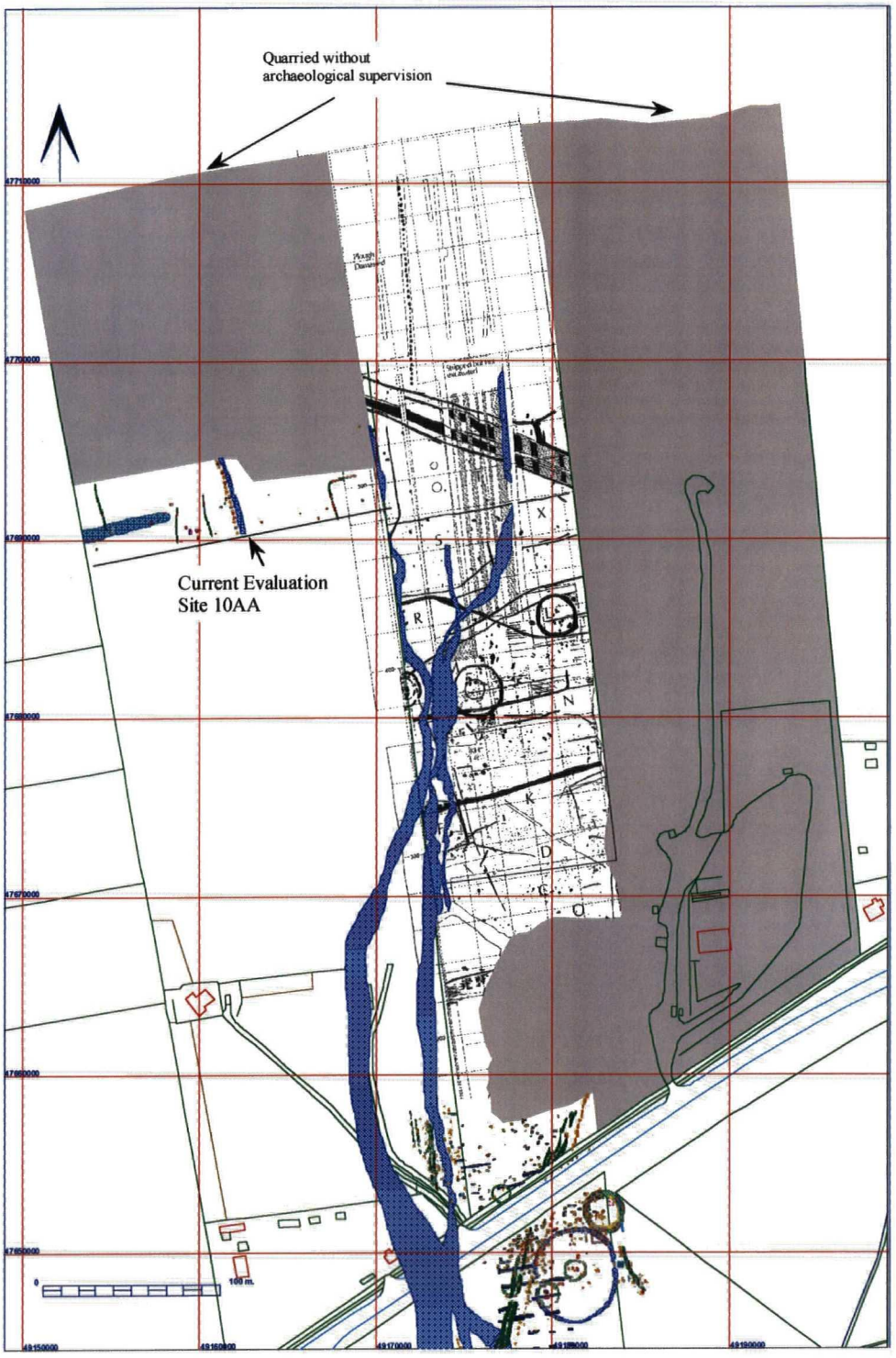


Figure 2 Areas previously excavated and the current evaluation

Summary of Results

The investigation of an area measuring 170 x 40m and situated to the west of Site 1 took place during January and February of 1999, with further work being undertaken during the spring and summer of that year. The density of activity was much as predicted based on the results from the excavations on the adjacent Site 1. Extensive deposits of blown sands had sealed both natural and archaeological features cut into the post-glacial sands and gravels which are the subject of the extraction programme. As was the case on Site 1 all the archaeological

features were filled with heavily leached sands with only a minimal silt/loam component. Natural features included periglacial features and two braids from the relict stream channel, which were studied extensively on Site 1 to the east. Buried soils ((See Appendix One for a profile of the overlying soils across the evaluation area) of varying date were preserved over less than 50% of the area, these deposits have been the subject of extensive study and which were unfortunately demonstrated to offer little or no environmental potential.

Lithic debris and finished products from the Late Neolithic/Early Bronze Age reflected similar densities to those encountered in adjacent areas of Site 1, indicating low levels of activity during this period.

Two pit alignments were examined, one, of closely spaced pits measuring roughly 1m.x.5m x.5m lay to the west of one of the stream channels, the second of widely spaced smaller pits roughly .8m. in diameter ran at right angles to the other alignment and extended into Site 1, where some re-interpretation is now required. The dating of these features is difficult at the best of times and it is most likely that they relate to late Bronze-Early/Iron Age activity and that they form additional components to related features identified on Sites 1 and 2 to the south. Small scale activity during the late Iron Age and Romano-British periods comprising four segments of shallow slots and a few apparently random pits indicates that this fragment of landscape was peripheral to the agrarian landscape related to an extensive linear settlement which has been observed from the air and lies some 500m to the north.

The results of the work in this area demonstrate the degree to which the results from the excavations of the adjacent Site 1 can be used to reliably infer the levels and types of activity likely to be encountered on the remainder of the area proposed for mineral extraction.

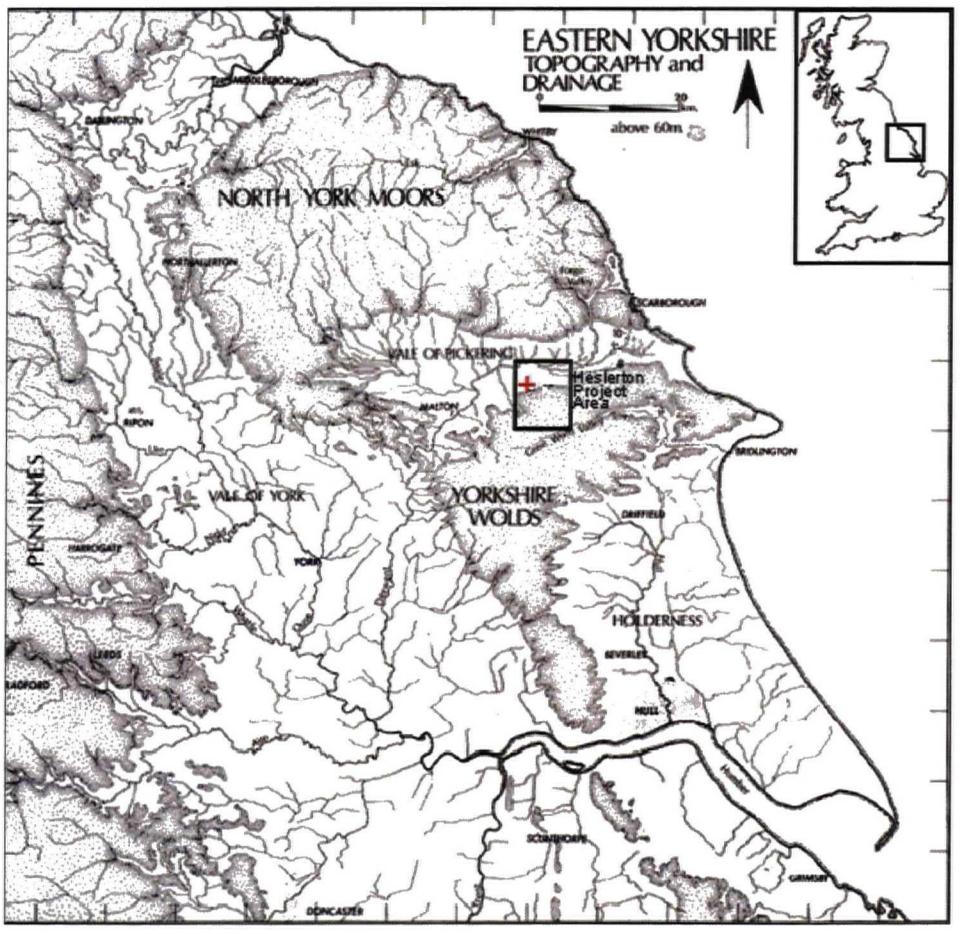


Figure 3

Location of the Heslerton Parish project area, which covers a transect from the Yorkshire Wolds into the Vale of Pickering. The location of the current investigation is marked with a red cross

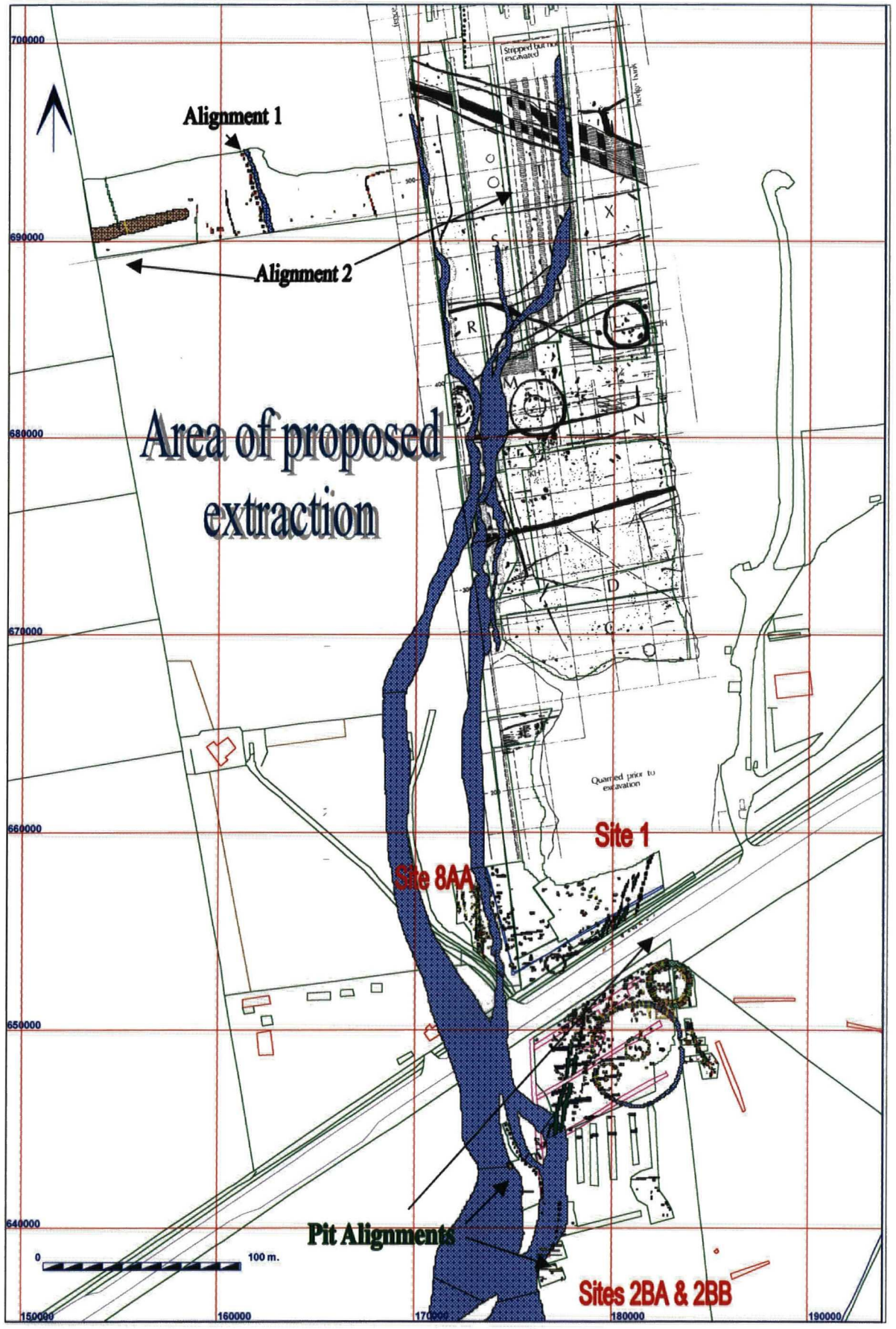


Figure 4 Area 10AA in relation to previous excavations on Sites 1, 2 & 8

Introduction

In the summer of July, 1998, the stripping of overburden at Cook's Quarry exposed an Anglian burial, which was duly reported to NYCC and the LRC and immediately excavated (Appendix I - Haughton 1998). Following this discovery a programme of work was agreed between E. Cook & Son, their agents, minerals and archaeology officers of NYCC and the LRC, that would comprise an archaeologically supervised watching brief and evaluation ahead of the preparation of a planning application for further mineral extraction. As an evaluation exercise this work was designed to provide additional data to that already recovered in the total excavation of Site 1 to the east and Site 8AA to the south of the proposed area for further extraction.(See Figure 4)

Methodology

The methodology adopted for this evaluation was consistent with that applied to areas of Site 1 and other work undertaken as part of the Heslerton Parish Project. This entailed the total stripping of the area using a machine with a back-actor under archaeological supervision, followed by hand cleaning where necessary and selective excavation of up to 50% of any features identified. The choice of machine (a wheeled rather than tracked machine) and operator was made by the quarry company, and was not well suited to the problem in hand. Any future work should take note of this, the use of wheeled machines is just not suitable in this environment.

Standard HPP recording procedures were applied, including the individual recording of all contexts and finds, all of which were entered into computerised databases, production of plans with contours which were subsequently digitised as part of the HPP Geographic Information System, sections were drawn at a scale of 1:10. In the case of the enclosure slots/ditches representative 3-5m. lengths were excavated in order to identify any internal features and recover dating evidence. The recovery of environmental evidence is generally not an issue in the sand environment at Heslerton where, bone, plant remains and pollen do not generally survive. Carbonised plant remains do on occasion survive, primarily hazel-nut shells in some of the Late Neolithic/EBA pits, none of which were encountered in this area.

The site was designated 10AA, following the site and area code system established during the Heslerton excavations (1977-1995). A single context sequence was employed. Each feature was issued with a cut number, and as many fill numbers as were required. The cut number is used as the unique identifier for each feature as referenced in this document.

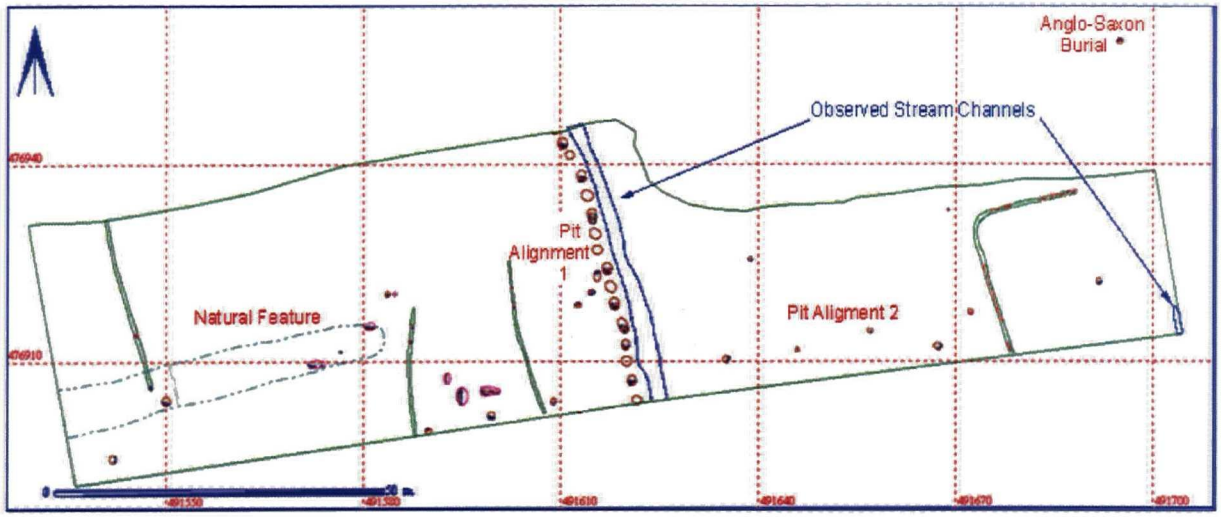


Figure 5 Site 10AA observed features. Pits are in brown, ditches in green and the stream channels in blue. The remaining features were deemed to be natural in origin.

The Relict Stream Channels

Two components of the relict stream channel examined in detail on Site 1 and draining from a spring examined on Site 11, some 1045m to the south. At this distance from the spring, it has become a braided stream, represented by a number of different shallow channels, made particularly obvious by the iron-pan deposits on the base of the channels. One channel (Channel 1) lay on the very eastern edge of the excavated area where it meets Site 1; only fragments of this feature survived within the excavated area. A second channel (Channel 2) was observed running south to north across the area being excavated c. 40m to the west of the channel identified on the eastern limit of the area. This channel was narrow and shallow and had been badly damaged by quarry activity as it ran into the area used by the quarry company for its access ramp onto the area. It was further damaged by unsupervised quarry activity following the stripping of the area. Small scale activity during the Late Mesolithic was associated with the stream channel on Sites 1 and 2, however, there was no indication of similar activity in the case of the channels identified on 10AA. The western channel on Site 8AA was shown to be active during the late Neolithic and is likely that the channel running through the centre of 10AA represents the same channel. It is likely to be of far greater importance to the south of this area where its relation to the barrows excavated on Site 1, and others in the area currently proposed for further sand extraction will be important for general landscape reconstruction.

The Pit Alignments

Two pit alignments were identified, Alignment 1 comprising 16 pits following a north-south alignment adjacent to relict stream channel 1, and Alignment 2 comprising 8 pits aligned east-west which link with further pits not originally identified as part of this alignment on Site 1.

Alignment 1

A total of 16 pits were uncovered, situated on and following the western bank of a relict stream channel 1. Pit **10AA70**, which had been located right on the quarry edge, was lost in a collapse of the quarry edge before it could be examined, and only 15 of the pits remained within the area exposed. It was observed that the pits incorporated two distinctive plan-forms,

either sub-circular or ovate, the two biggest pits (**10AA48** and **10AA58**, both ovate) were excavated and six of the remaining 13 smaller pits. Two of the pits (pits **10AA72** and **10AA50**) had been truncated by the initial construction of the ramp up into the area, and as the remains of these two had been driven over by a number of heavy plant and machinery, they were excluded from the sample excavated.

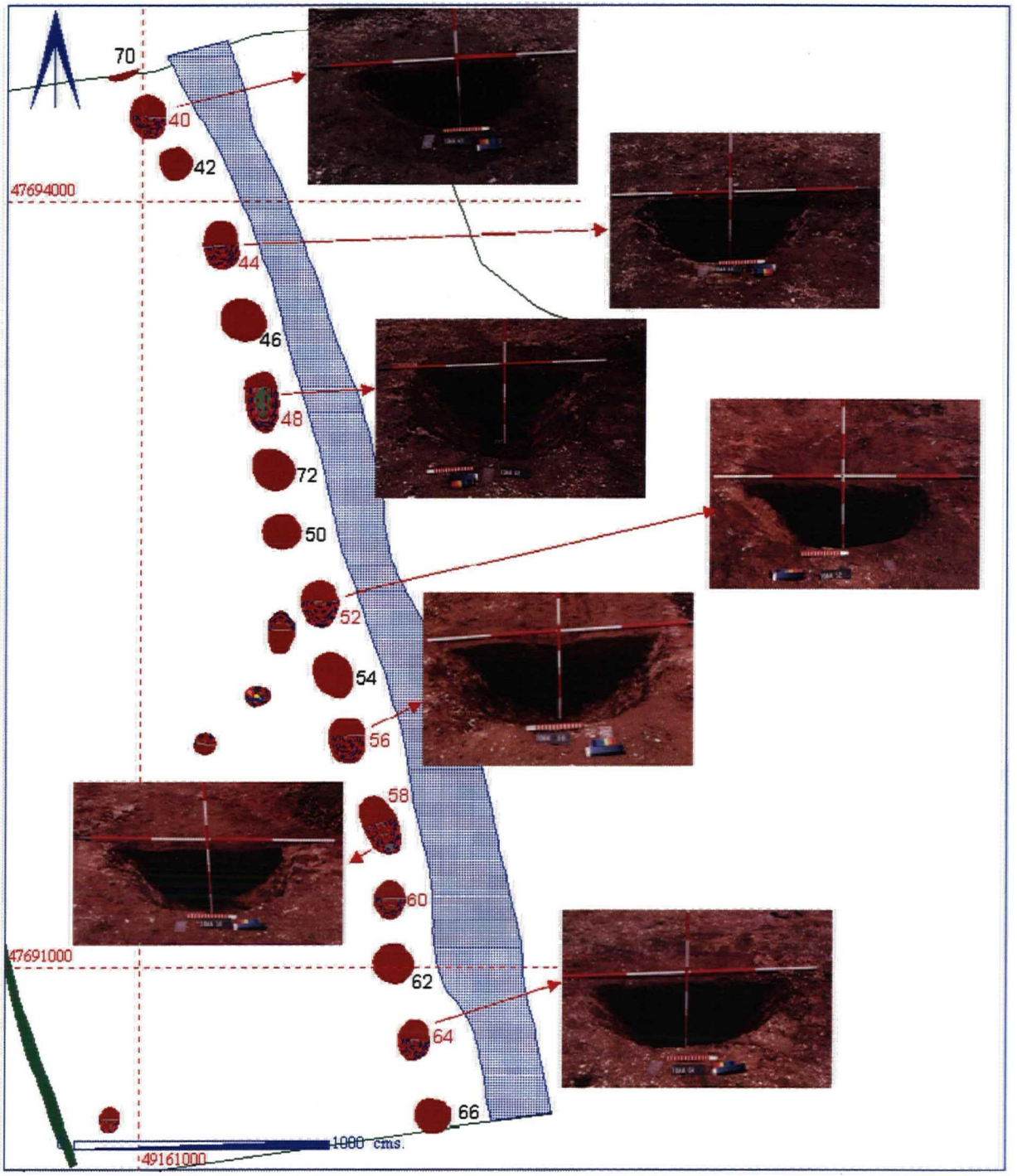


Figure 6 Plan showing the location of the pit alignment adjacent to stream channel 2. Excavated pits numbered in red, unexcavated in **black**.

Little in the way of dating evidence was recovered from the pits (only 12 finds in total from all 8 of the excavated pits). Pits **10AA56** and **10AA58** contained no finds, **10AA40** only a

recent rodent skeleton. Fragments of pot boilers show a widespread distribution on Site 1 and further examples were recovered from pits **10AA44, 10AA52 AND 10AA60**. Seven sherds of pottery were recovered, 3 small, abraded sherds from **10AA44,** 2 small, abraded sherds from **10AA52,** and single sherds from **10AA48** and **10AA64**.

All of the excavated pits had a flattened V-shaped profile, and varied in depth from 55 to 75 cm. The average distance between the pits was 297cm, with the shortest distance 231cm and the longest 379cm. It is highly likely that this alignment represents a continuation of that identified on the western bank of the stream channel on Site 2BB 470m to the south and excavated in 1982. (Area 2BB, see *Figure 4*). The pits appear to have filled in naturally, with occasional incursions of water-borne material derived from flood events related to the stream channel, evidenced by thin clay rich lenses in the fills.

The evidence recovered from this section of pit-alignment is consistent with that from others examined on Sites 1 and 2. The ceramics indicating a Late Bronze or more probably an Early Iron Age date, a single sherd of Roman grey-ware in the top of **10AA48,** may indicate continuity of these early boundaries into the Roman period. The excavations on Site 1 confirmed that environmental and faunal evidence only survived in exceptional circumstances Site 10 appears to have similar qualities; the recovery of the partial skeleton of a small mammal in pit **10AA40** represents a modern intrusion.

Alignment 2

The second alignment oriented approximately at right angles to Alignment 1 comprises a group of smaller pits at a wider spacing (*Figure 7*). It appears that pit **10AA64** of Alignment 1 is situated in exactly the right position to have formed either a component of both alignments or to have cut away entirely a pit of Alignment 2; there was no evidence of recutting. If the assumption is made then the average distance between the pits is 13.15m, with the shortest gap being 9.69m and the longest being 20.03m.

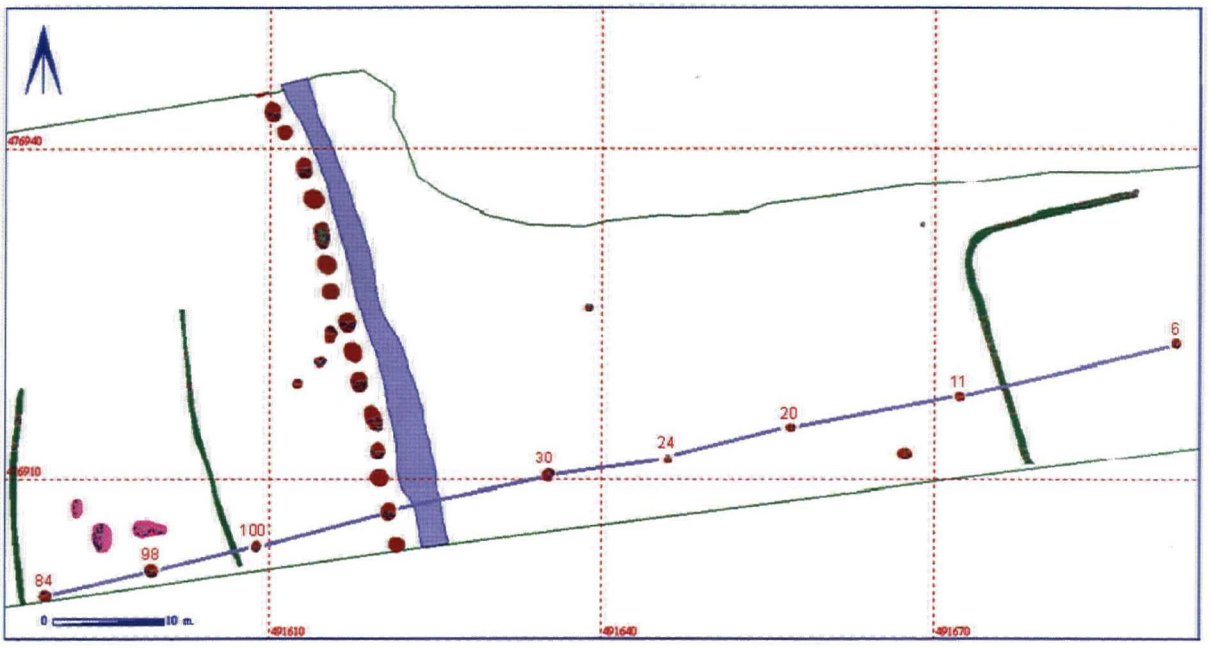


Figure 7 Plan showing the numbers and location of pits forming Alignment 2

These pits which ranged in size from 2.25 x 1.32 x 0.65m to 1.28 x 1.26 x 0.5m were all half-sectioned, had roughly U-shaped profiles and were filled with a dark very sandy matrix. Only three sherds of pottery were recovered, 2 from **10AA10** and a single sherd from **10AA97;** all were abraded and of late Bronze Age/early Iron Age date.

The temptation to interpret this feature as some sort of post alignment or fence line is not supported by any clear evidence of post pipes in any of the features examined. Layers of redeposited natural indicates that in some cases the primary filling was rapid either as a result of natural or deliberate means; this was best seen in the section of pit **10AA98** (*Figure 8*), although pit **10AA30** also displayed this characteristic on its northern edge.

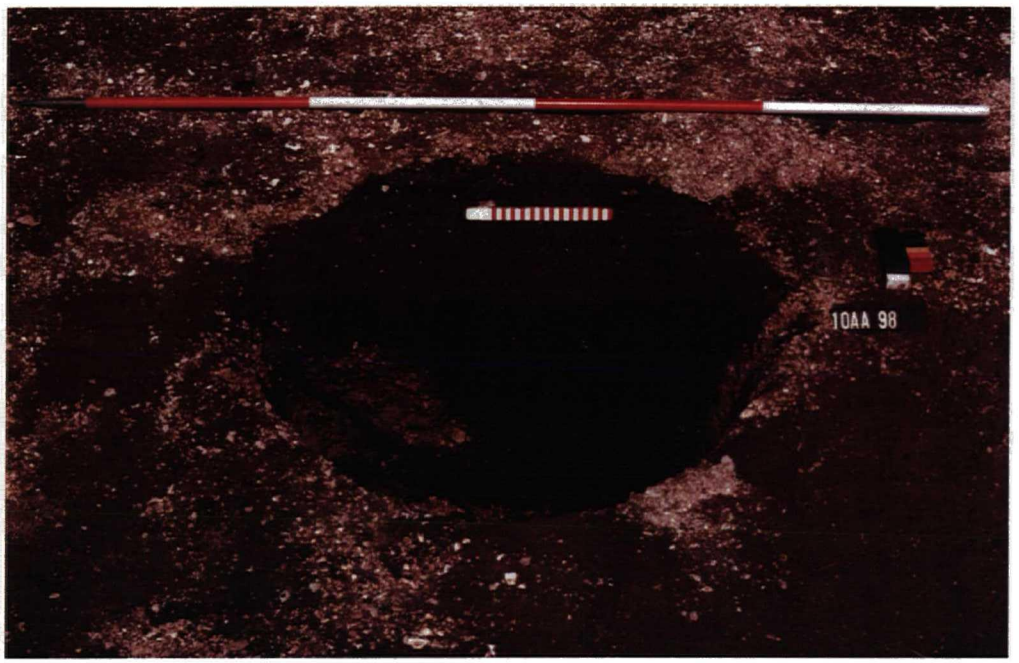


Figure 8 Pit **10AA98** from the south, showing the redeposited natural in the west.

An important feature of Alignment 2 is its continuation across Site 1, where one of the pits which clearly belongs to this alignment was included as a component in the Late Neolithic post avenue. In fact its position was divergent from the rest of the avenue and its inclusion as the smallest pit in the Avenue was a possibility rather than a confirmed component.

Pit alignments have a limited distribution in Britain, although air photography over the last 20 years have confirmed their presence beyond East Yorkshire in the Marches, in parts of Scotland and elsewhere. In East Yorkshire they appear to be relatively commonplace by the Late Bronze Age and form components in a broad network of large scale land divisions, often described as estate boundaries. There is good evidence from the Wolds that the first phase of many of the Wold Entrenchments were as pit alignments. They show considerable variation on scale from large pits up to 2m. square and deep, such as the examples excavated on Site 1, to smaller less regular examples such as those excavated here. One possibility is that these smaller alignments represent the first attempts to establish hedge boundaries. It is not inconceivable that the pits contained posts, however this cannot be proven on stratigraphic grounds. The dating of these features and landscape boundaries in general is problematic, at Heslerton we are gradually building up a picture of these features which in this case and those found further south in the Anglian cemetery and the Anglian settlement appear to form a secondary level of landscape division to the large alignment which bisected Site 1 from east to

west. An important feature of the area currently proposed for further mineral extraction is that it is very likely to contain evidence which will allow the relationship between the vary large and smaller pit alignments to be established.

Isolated Pits

Eight pits (*Figure 9*) were identified, a group of three situated immediately to the west of Alignment 1, and five others distributed widely across the area. The levels of material culture evidence were again slight and indicate, where any date can be assigned, that they relate to Iron Age activity.

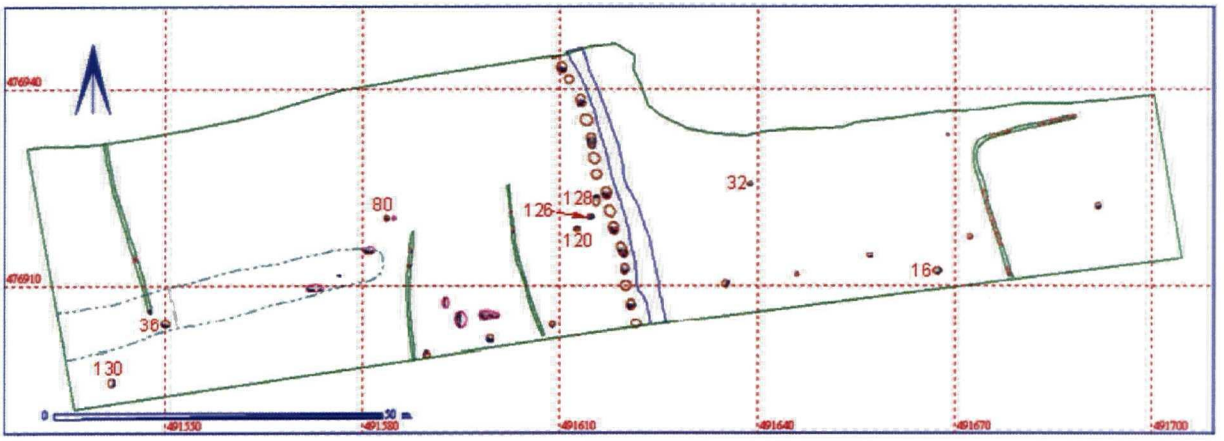


Figure 9 Distribution of the isolated pits

Pit 10AA16 (1.25 x 1.05 x 0.15m)

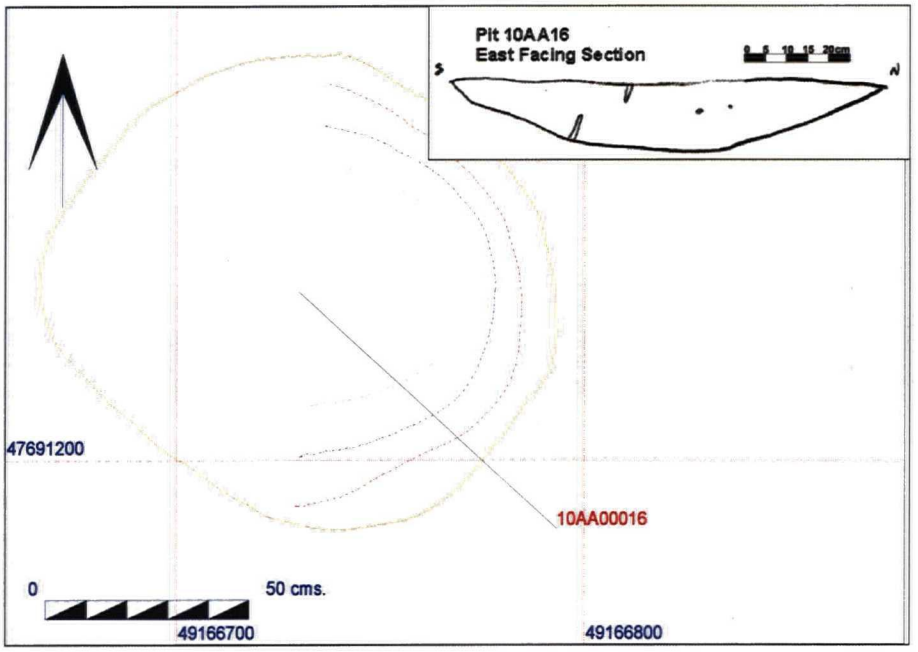


Figure 10 Plan and section of Pit **10AA16**

Pit **10AA16** was an ovate pit with a wide V profile, filled with sand with a medium texture (10YR 3/3). No finds were recovered from this feature.

Pit 10AA32 (0.58 x 0.53 x 0.39m)

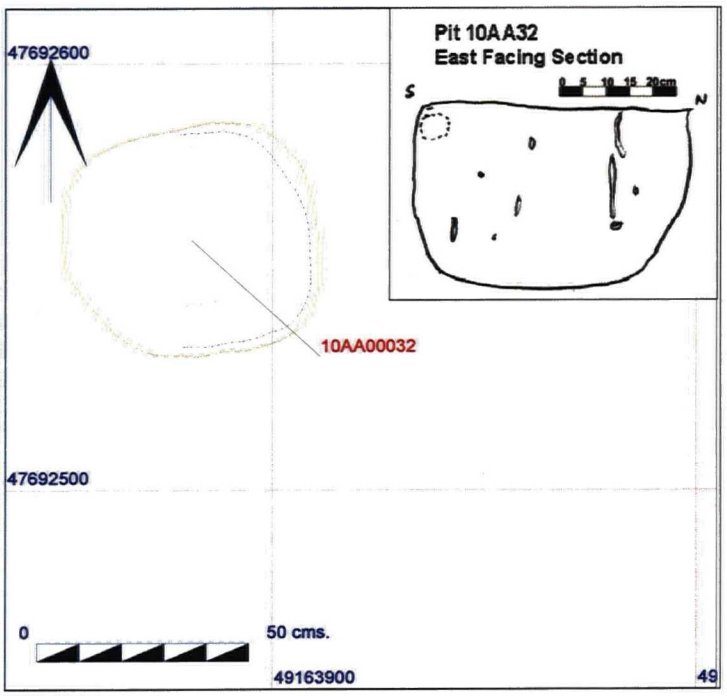


Figure 11 Plan and section of Pit

Pit **10AA32** was a sub-rectangular pit with a U profile, filled with sand with a medium sandy texture (10YR 3/2). No finds were recovered from this feature.

Pit 10AA36 (1.40 x 1.30 x 0.18m)

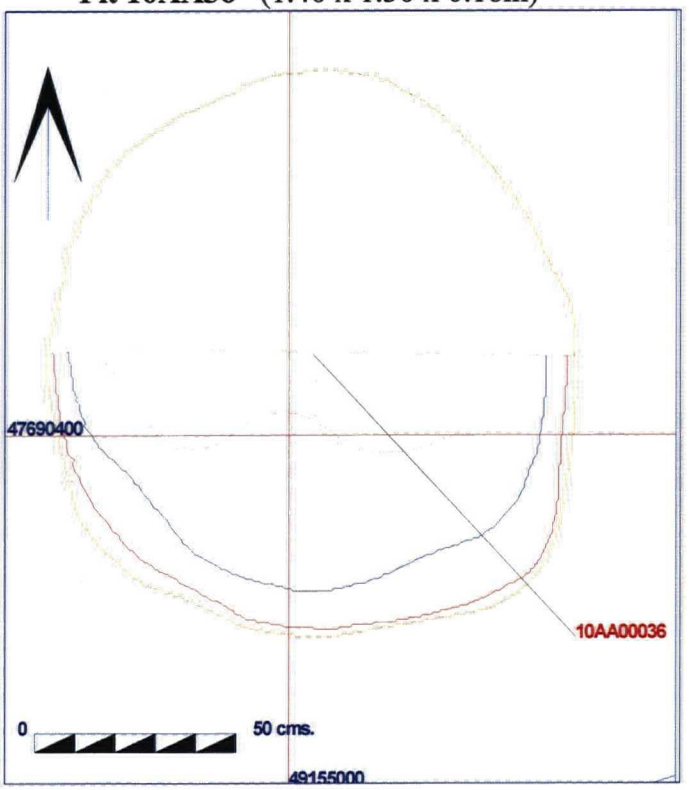


Figure 12 Plan of Pit **10AA36**

Pit **10AA36** was a sub-circular pit with a wide U profile, filled with sand with a medium sandy texture (10YR 4/3). No finds were recovered from this feature.

Pit 10AA80 (0.84 x 0.68 x 0.18m)

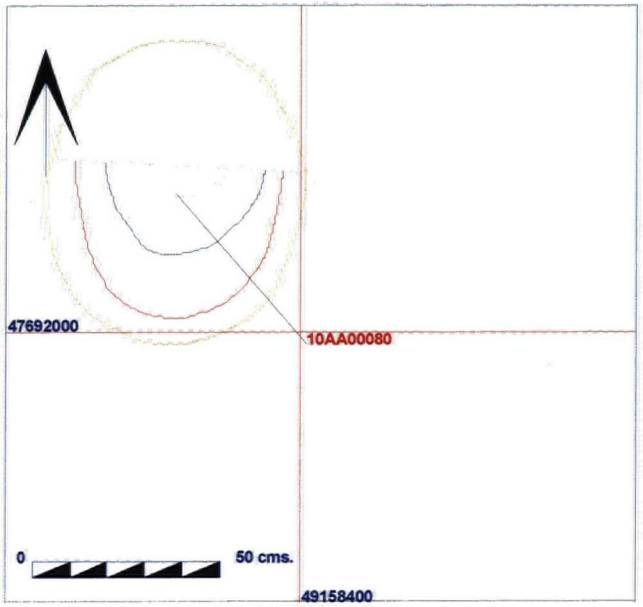
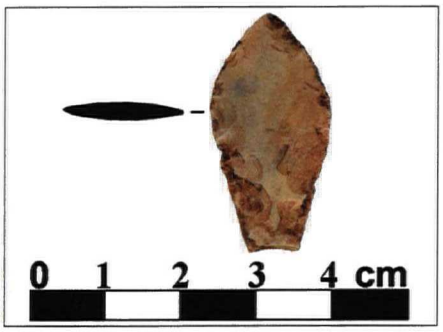


Figure 13 Plan of Pit **10AA80**

Pit **10AA80** was an ovate pit with a V profile, filled with sand with a medium sandy texture (10YR 5/4). No finds were recovered from this feature.

Pit 10AA120 (0.83 x 0.81 x 0.57m)



Situated 2.88m to the south-west of pit 10AA126, this round pit was filled with a dark (10YR 3/2) and heavily burrowed sand containing 5% inclusions of local flint <3cm in size. This type and colour of fill was, on Site 1, associated exclusively with Late Neolithic activity; a suggestion given some support by the recovery of a broken leaf-shaped arrowhead from the fill, the only find recovered from this feature.

Figure 14 Leaf-shaped arrowhead: 10AA119AA

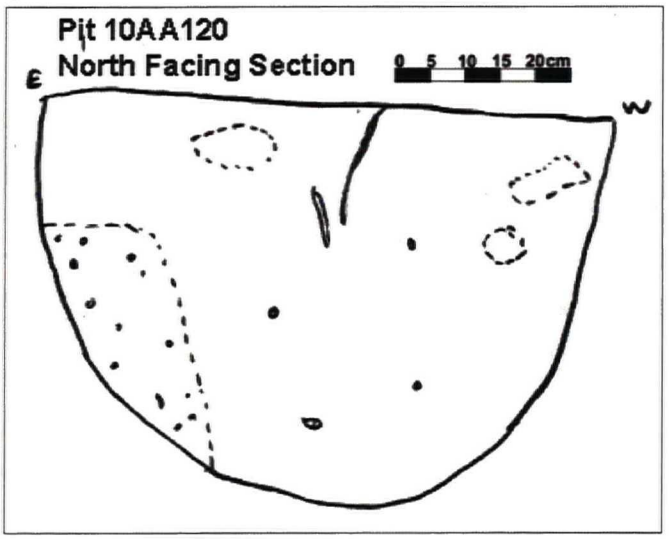


Figure 15

Section of Pit **10AA120**, *showing burrowing and patch of redeposited natural in the east.*

Pit 10AA126 (0.95 x 0.90 x 0.31m)

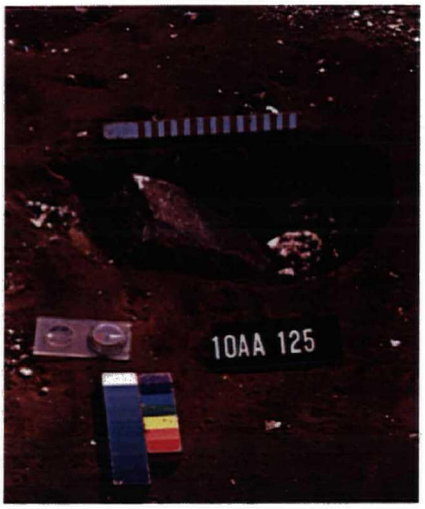


Figure 16 Discarded fragment of burnt saddle quern in the top of 10AA126

This pit initially was exposed following weathering of the stripped surface. The fill was a light loamy sand (10YR4/4), with few inclusions.

The pit contained a substantial but broken chunk of a burnt saddle quern in addition to some other fragments of non-utilised but burnt stone. (*Figures 16 and 17*).

There was no evidence of burning in the pit itself and it appears that this material represents disposal of debris relating to a cooking site which lay outside the area of excavation.

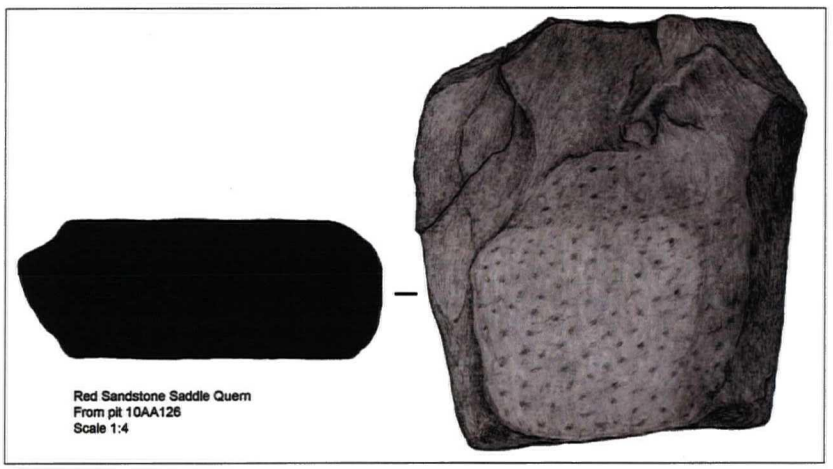


Figure 17 Sandstone Saddle quern fragment: 10AA125AA

Pit 10AA128 (1.65 x 1.01 x 0.70m)

This pit was unusual both in its depth and its fill, which had a much higher (20%) inclusion rate than any of the other features in the excavated area. The feature contained one early Iron Age body sherd, which was found 2.5cm from the base of the pit. The fill was sand with a medium texture (Munsell 10YR 4/3).

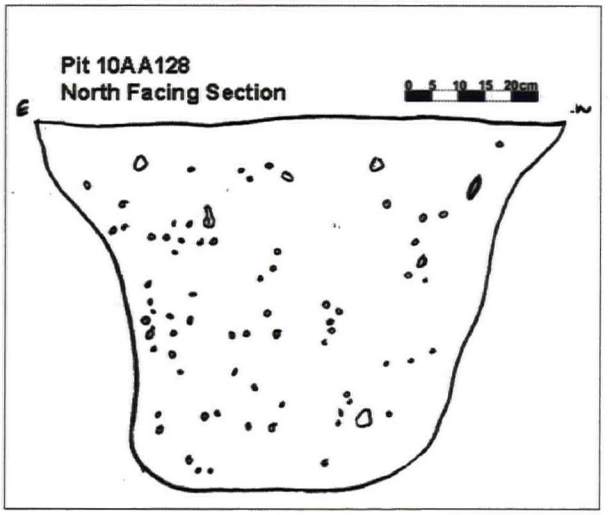


Figure 18 North facing section of pit **10AA128**

Pit 10AA130 (1.11 x 1.10 x 0.14m)

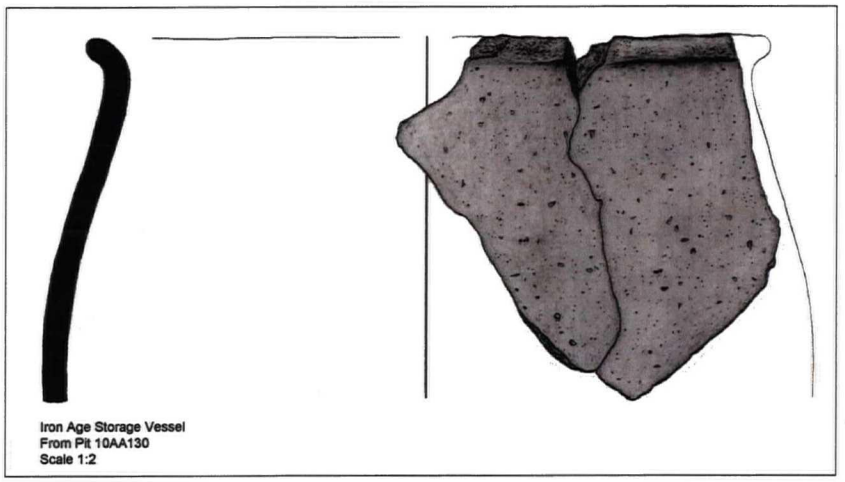


Figure 19

This shallow, square pit was discovered when a sherd of pottery was uncovered during the initial machine stripping. Excavation showed that approximately one quarter of the Iron Age pot, a hand-built, calcite gritted vessel, was deposited in the pit, along with a base sherd from a different vessel. Found underneath the base sherd were two stones, both burnt and heat cracked, probably pot boilers. The fill was sand of a medium texture (Munsell 10YR 4/3).

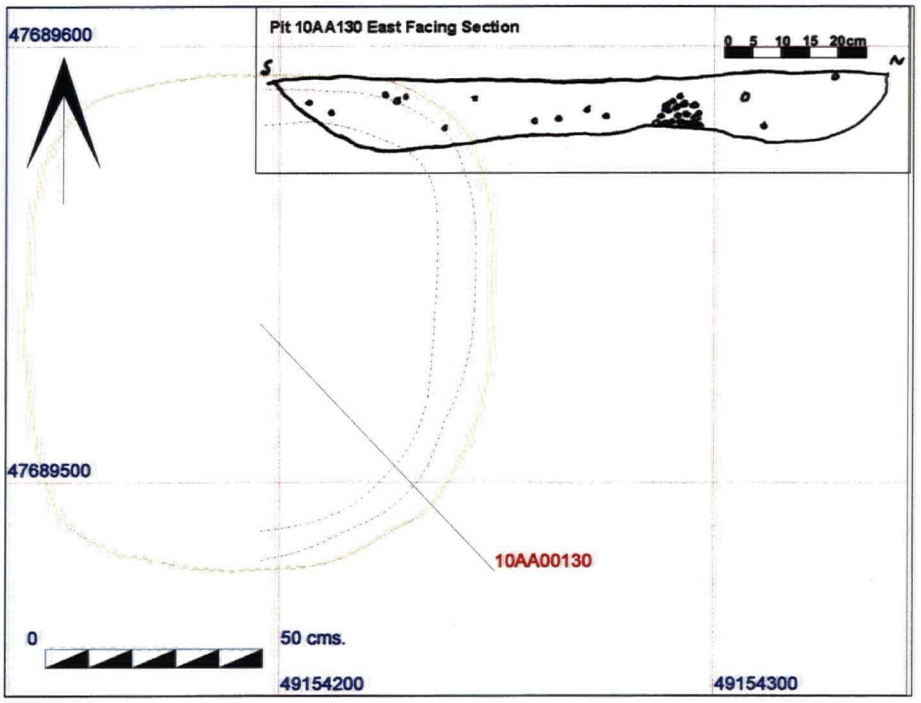


Figure 20

Plan and section of pit **10AA130**

The Ditches

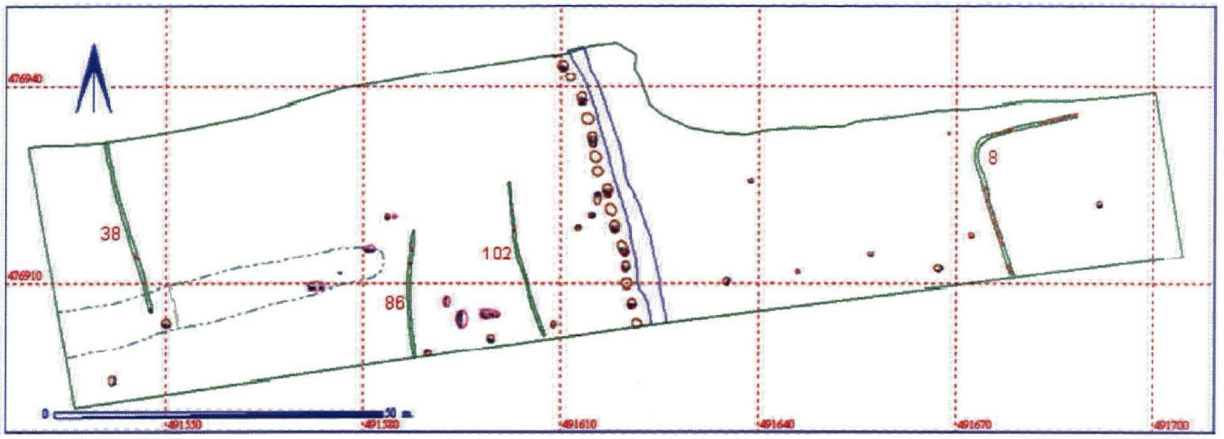


Figure 21 The location and numbers of the 4 ditches

Segments of the four ditches were excavated, two of which producing dating evidence. All of the ditches were narrow and shallow. **10AA38** contained 2 late Bronze Age/early Iron Age sherds. **10AA8** contained 8 small, abraded sherds, again of a late Bronze Age/early Iron Age date. All of the ditches follow alignments that appear to respect the line of the stream channel and the pit alignment, indicating that they are all broadly contemporary.

Ditch 10AA8 (36.04 x 0.46 x 0.15m)

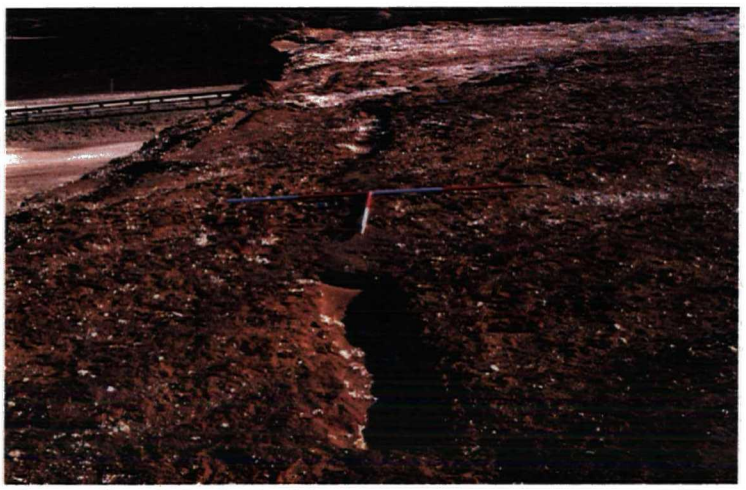


Figure 22 A view of the northern part of ditch **10AA8** *looking east*

Ditch **10AA8** extended for 36 metres, initially in a north-south direction for 20 metres, before turning to an east-west direction. A total of 20 metres in five segments was excavated. Finds included a number of small, abraded Iron Age sherds. The fill was sand with a medium texture (Munsell 10YR 3/4) and contained sporadic charcoal and daub flecking.

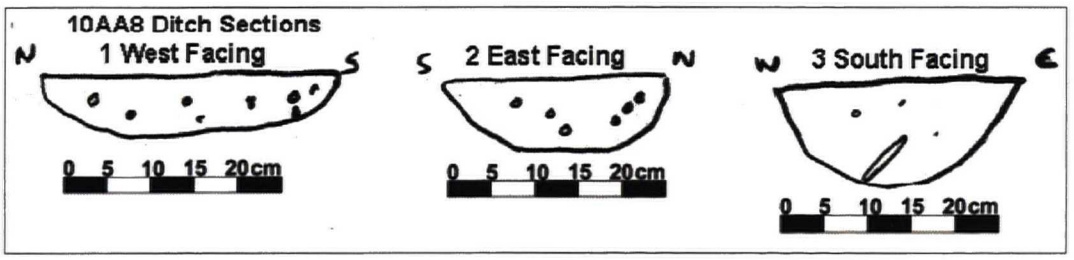


Figure 23 Sections of ditch **10AA8**

Ditch 10AA38 (27.20 x 0.83 x 0.40m)

Figure 24 A view of the northern part of ditch **10AA38** *looking north*

Ditch 10AA38 ran in a north-south direction for 27.20 metres from the northern quarry edge until it terminated, just after it cut into the natural feature **10AA132**. The ditch was filled with sand, with a medium texture (Munsell 10YR 3/4). The terminal and one other segment of the ditch were investigated. These yielded two small, abraded Iron Age potsherds and one flint flake.

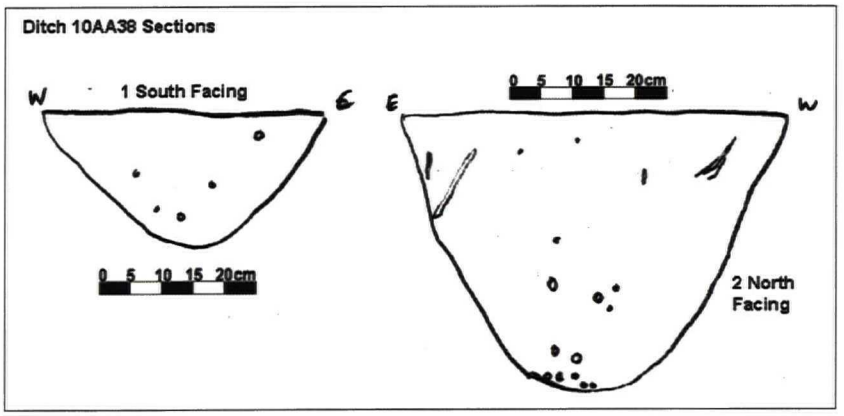


Figure 25

Sections of ditch **10AA38**

Ditch 10AA86 (19.90 x 0.40 x 0.20m)

Figure 26

A detail view of an excavated segment of ditch **10AA86** *looking south*

Ditch 10AA86 ran in a north-south direction for 19.90 metres before reaching part of the site which had been stripped before archaeological intervention began. The ditch was filled with sand with a medium texture (Munsell 10YR 3/3). The two excavated segments contained no finds, and no daub or charcoal flecking was visible.

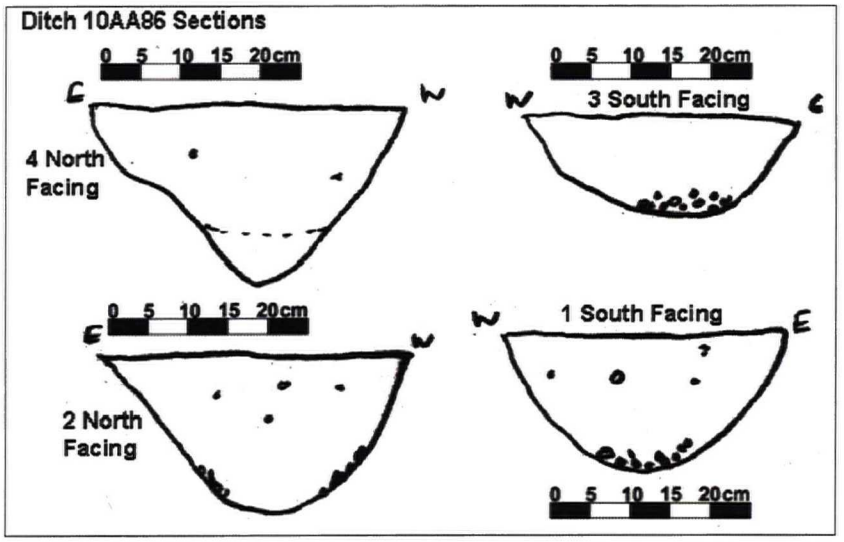


Figure 27

Sections of ditch **10AA86**

Ditch 10AA102 (27.00 x 0.30 x 0.20m)

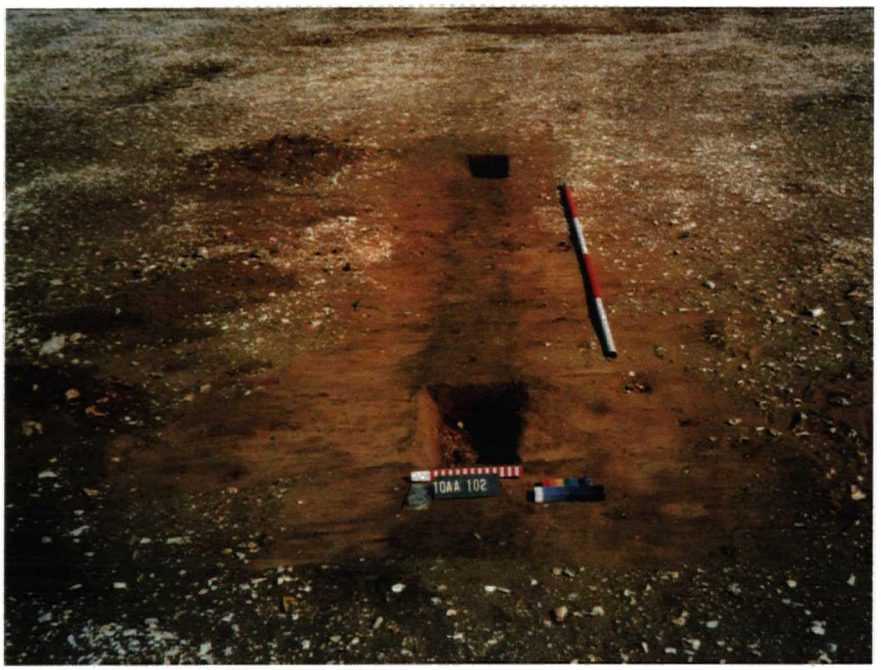


Figure 28

All of the ditches were initially visible as slightly darker lines in the sandy chalk gravel. When cleaned back they became much clearer, although all four ditches proved to be both narrow and shallow.

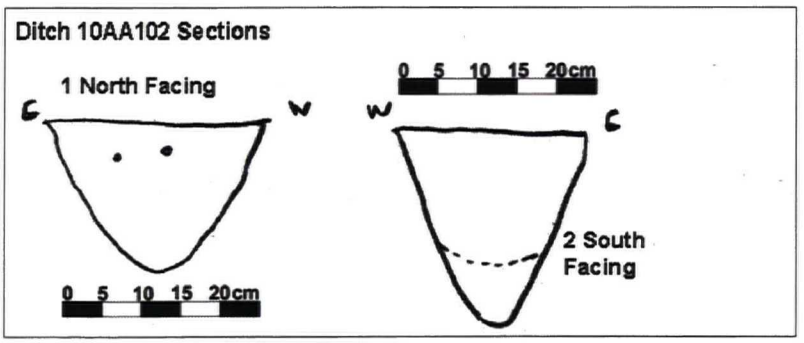


Figure 29 Sections of ditch **10AA102**

Ditch **10AA102** extended for 22.7 metres in a north-south orientation, and was filled with a loamy sand (Munsell 10YR 3/2) with a medium sandy texture. Two segments were excavated. Only 1 find of a small fragment of burnt daub was recovered.

Isolated Post Holes

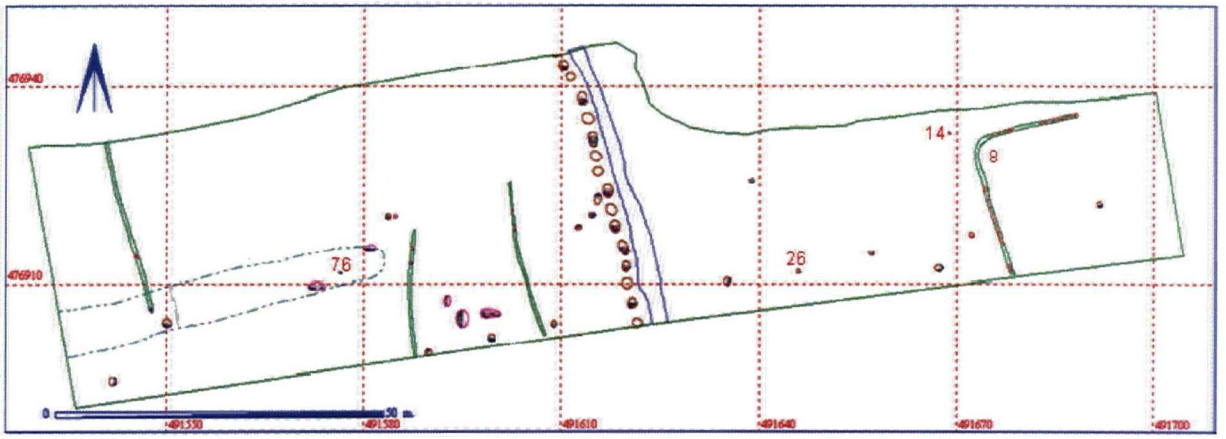


Figure 30 The location and numbers of the 3 isolated post holes

Three isolated post-holes were excavated. The areas around these post holes were cleaned back and further post holes sought, but none were found. It is always unsatisfactory to find these isolated post holes, as their function must remain a mystery, with no supporting evidence for their use either as structural components or as parts of fence lines.

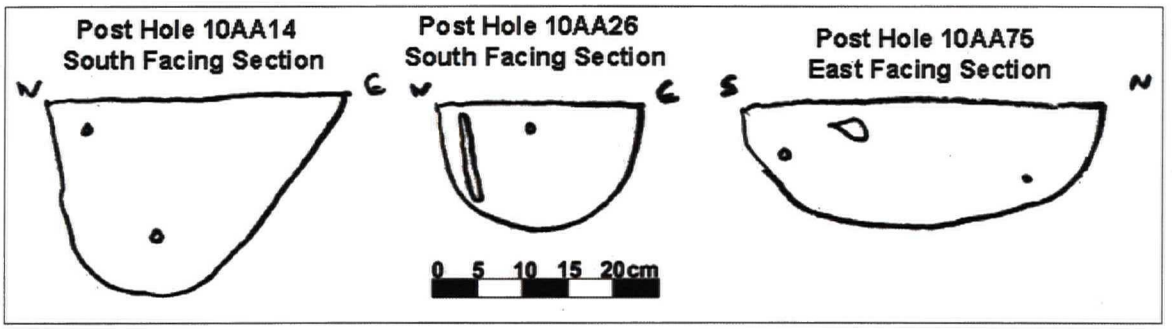


Figure 31 Section drawings of the 3 post holes

Stray Finds

The site was characterised by its relative lack of finds; only 55 finds from the entire area, including excavated features; this figure is consistent with the frequencies recovered in the adjacent areas of Site 1, although densities increase very considerably further south.

The stray finds assemblage includes a broken fragment of granitic material, and three worked flints: a blade, a thumbnail scraper, and a possible awl. All of these were exposed following wind erosion of the stripped surface a process which was observed on Site 1. This material confirms once again human activity in the area in the Neolithic and Early Bronze Age, something entirely anticipated given the relative proximity of the two barrow cemeteries and hengiform enclosures examined to the east and south.

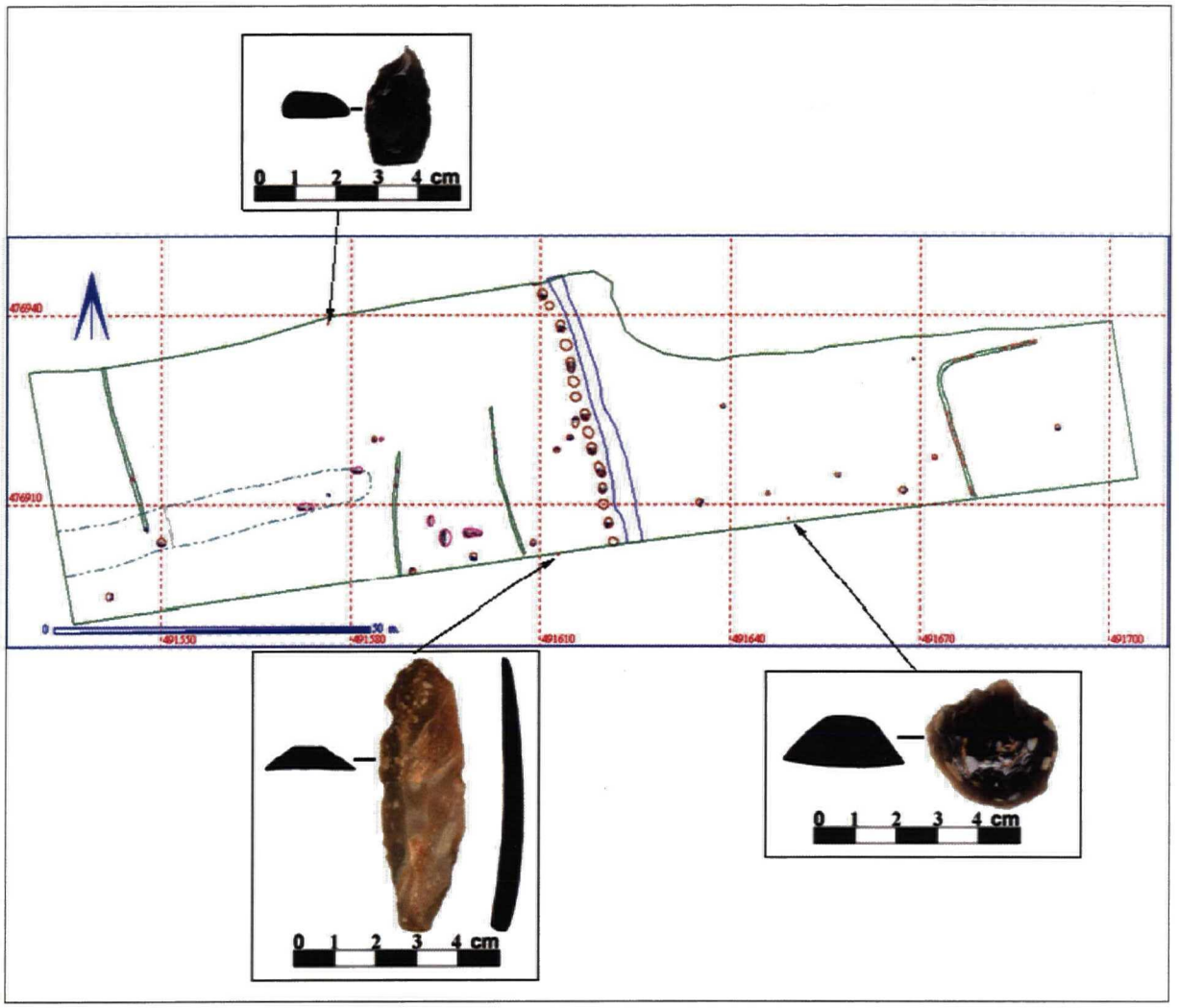


Figure 32 The worked flints and their distribution.

Natural/Geological Feature 10AA132

Figure 33

View of the natural feature from the west. Note the ditch **10AA38** cut through the feature in the centre foreground.

At the western end of the site, a 7 metre wide linear feature was visible. The feature extended from the western edge for 43 metres, and was cut by one of the ditches and a pit. It is very unlikely to have an archaeological origin and was filled with a homogenous light (10YR 4/3 to 10YR 4/4) sand. It is most likely a natural periglacial feature.

Conclusions

Although the level of archaeological activity was low compared with that known to the south-east and south the picture is consistent with that observed in the adjacent part of Site 1. This evaluation has fully demonstrated the degree to which the work on Site 1 can be used as an indicator of activity in the adjacent area. The sealing layer of blown sands towards the west and eastern sides of the area indicates that good survival of the barrow structures and occupation deposits known to exist to the south can be anticipated.

It is unfortunate that the environmental conditions preclude the recovery of pollen, faunal material and other environmental evidence, beyond the occasional survival of carbonised material in pits and bone in the deeper graves.

The iron enriched nature of the blown sands and the thickness of the deposits precludes the application of magnetometry as a potential research tool, although it is just possible that the iron-pans in the stream channels may give a response through the masking sand deposits. Generally, the similarity of the sandy fills to the parent material into which the features are cut would rule out the successful application of both conductivity and resistivity as geophysical survey methods.

Bibliography

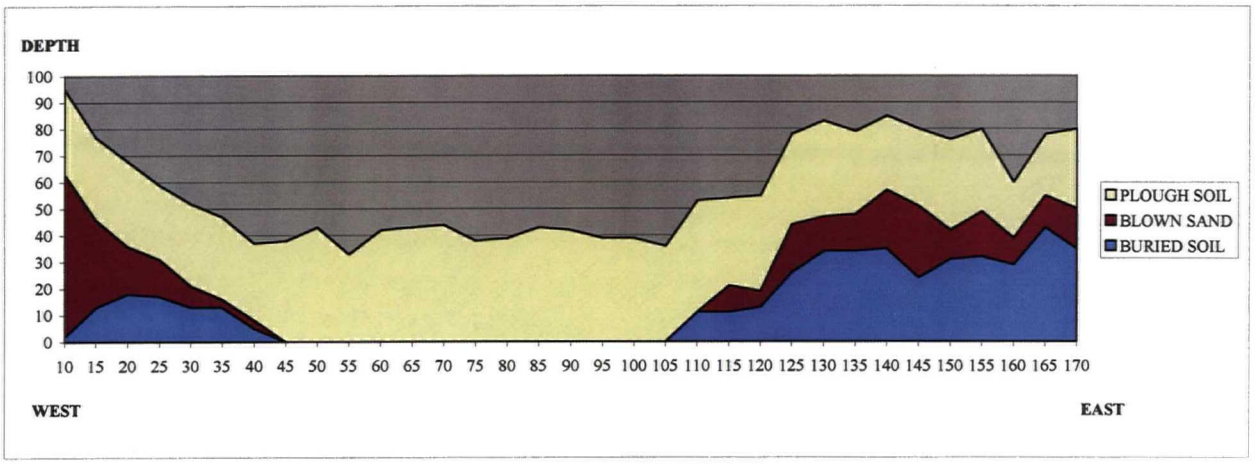
Haughton, C. 1998 Unpublished report on the rescue excavation of an Anglo-Saxon burial, July 1998.

Powlesland, D., Haughton, C., and Hanson, J. 1986 Excavations at Heslerton, North Yorkshire 1978-82. *Archaeol. J.*, **143** (1986), 53-173.

Powlesland, D. & Haughton, C. 1999 (forthcoming) *West Heslerton: The Early Anglo-Saxon Cemetery.*
English Heritage/Landscape Research Centre Monograph.

Appendix One

The excavation of this evaluation area allowed the observation of the overlying soils in section across the area. These included the ploughsoil, a layer of windblown sand and a buried soil, which appears to have been established in the late Iron Age/Romano-British period. The measurement of the depth of these deposits at five metre intervals is represented graphically below.



The figure above shows the section across the area looking from the south to the north. The readings for the first 10 metres have been omitted, as these tended to skew the data, due to the build up of blown sand against the hedge bank to a depth of over 2 metres. The depth value has been exaggerated by a factor of 50.