35364
0156B

NORTH LINCS MUSEUM
SOURCE REPORTS

SLS NUMBER: 3608

LINDSEY ARCHAEOLOGICAL SERVICES

Barrow on Humber
Water Treatment Works
Archaeological Excavations

Site Code: BOH99

NGR: SE 06000 20350

Report for

Anglian Water Services Ltd

LAS Report No: 520

March 2001

25 WEST PARADE · LINCOLN · LN1 1NW

TELEPHONE 01522 544554 · FACSIMILE 01522 522211 · EMAIL las@lasarchaeology.demon.co.uk

F.N.FIELD B.A.(Hons), MIFA

SLS3608

EVAL ELS 3032

EY ELS 3033

W6 ELS 3034

Contents

List of Figures

List of Plates

Barrow on Humber
Water Treatment Works
Archaeological Excavations
Site Code: BOH99
NGR: SE 06000 20350

(BRBN)

Summary

Excavations at the above site revealed part of a Romano-British field system with a complex arrangement of intercutting ditches and pits. There was no evidence for occupation on the site although a single oven was found, probably a corn drier, which may have been connected with occupation beyond the southern limit of the excavation. The field system was in use throughout the Roman period and shows evidence of re-cutting on the same alignment suggesting a relatively stable, organised landscape.

Also found were four burials, two of which were heavily disturbed by modern ploughing. These burials were dated to the Roman period by their association with 2nd – 3rd century pottery. It is likely that they were from the settlement that farmed the area. It is difficult to determine the full extent of the original cemetery but it may have been dispersed, covering a large area.

Introduction

Lindsey Archaeological Services (LAS) was commissioned by Anglian Water Services Ltd to undertake archaeological investigations at a planned water treatments works extension adjacent to Barrow Pumping Station, Barrow on Humber, North Lincolnshire.

The archaeological work was carried out according to a specification set by the North Lincolnshire Sites and Monuments Record (NLSMR) dated June 1999 and amended in a letter dated 23rd July 1999.

Site Location and Description

The site is located north of an existing water treatment works south-west of the modern village of Barrow on Humber. The proposed development area lay at the south-east corner of an arable field and has approximately 1.5ha in extent (Fig. 1).

The site lies on the south-facing slope of a gently sloping hillside, on approximately 0.30-0.50m of topsoil which overlies a subsoil (up to 0.20m) above mainly chalk and flint glacial gravels. They in turn, overlie boulder clay. At the north east end of the excavation area, an outcrop of weathered natural chalk lies immediately below the topsoil. Although on a slope, there is little evidence of colluviation. The southern extent of the site has been built up possibly during the building of the original treatment works to the south of the development.

Scope of Work

The proposed development entailed the construction of an underground chlorine treatment tank, an associated access road and a compound to be used during construction work. Following the evaluation carried out by Lindsey Archaeological Services. It was agreed by Anglian Water Services Ltd to partially topsoil strip and cover the areas of the access road and compound area with geotextile sheet in order to preserve the archaeology in situ. The area of the chlorine tank itself was fully excavated by representatives from LAS (an area of 52 x 52m with a 25x17m extension at the south east for access road and services).

The replacement of an overhead power cable with an underground cable was monitored by LAS as part of the archaeological investigation, as was the installation of piping along the south and west sides of the site.

The access road, compound and topsoil storage area were outside the scope of archaeological excavation as Anglian Water were able to carry out this work without impact upon the archaeological remains.

A staged archaeological investigation was undertaken and comprised four phases:

a) Geophysical Survey

In June 1999 Lindsey Archaeological Services (LAS) commissioned Oxford Archaeotechnics to undertake a geophysical survey of the site (OAA 1999 Survey Ref. no. 1900699/BHL/ANW). A number of linear anomalies, which seemed to represent rectilinear enclosures and probable pits were identified . This pattern of features extended over the whole of the development site.

b) Evaluation

A programme of evaluation excavations was agreed with the North Sites and Monuments Record and Anglian Water Services Ltd. The purpose of the evaluation was to:

- establish the overall function and date of the features identified by the geophysical survey and to assess their importance in a local, regional and national context

Four trenches were excavated across the northern part of the development site (Fig. 2). One trench was 20 x 2m: two were 10 x 2m and one 15 by 2m (see Fig 2). The features identified on the geophysical survey were present but were much more complicated with multiple re-cuts of ditches and additional features, not identified by the geophysical survey. Significantly there was a single burial located in the area of the proposed chlorine treatment tanks (Trench 2).

c) Excavation

Due to the timing of the programme of works and the significance of the archaeological remains it was decided to follow on from the evaluation, almost immediately, with an excavation covering those parts of the site which would be disturbed by the new chlorine tank. This comprised an area of approximately 3000m^2 immediately north of the existing treatment works (Fig 2).

d) Watching Brief

The purpose of the watching brief was to monitor the excavation of cable/pipe trenches associated with the extension. The watching brief could be used to answer questions raised during the excavation stage and the location and intensity of the watching brief was discussed with the North Lincolnshire Archaeological Officer in advance.

Method

All topsoil removal during both evaluation and excavation was carried out by a 360° excavator using a 2m wide toothless bucket under the supervision of an experienced archaeologist. The stripped area was cleaned by hand and a ground plan (1:50) was made of the archaeological remains individual features was sampled by hand in order to determine the nature and extent of the archaeological remains. A full written context-based record was kept, with sections and further plans of the excavated remain drawn at a scale of 1:20. A full photographic record was kept throughout the project cover individual features and general area views.

Each individual layer, cut or fill was given a separate identifying context number. Where cross-sections were cut through the same feature in different locations separate context numbers were assigned to what were, in all likelihood, the same deposit/feature. This allowed finds, samples etc to be accurately located for spatial analysis. For the purpose of the narrative the ditches are numbered 1-21.

Precise dimensions of features can be found in the appendices, as well as descriptions of fills and artefacts found. Only details which are pertinent to the flow of the narrative are included within the main body of the text.

When first mentioned in the text many features are given a grid reference to locate them on Fig. 3. A simple grid system has been adopted based upon eastings and northings with the origin in the south west corner of the site. For example 10, 30 refers to 10m east and 24m north of the origin and is the location of pit **1556**.

Results

Most of the features within the excavated area were ditches and pits, dug into the natural soils (Pl. 1). In many instances the profile of the features showed that they had been cleaned out and re-cut on

several occasions but fills were often impossible to differentiate, as they were identical in colour and texture. There were three main phases on the site. The first, a Late Neolithic/ early Bronze Age phase was represented by a single pit. The remaining features belonged to the Romano-British period and to post-medieval quarrying.

Evaluation Trenches

Trenches 1 and 2 lay within the area of the excavation and are included in the excavation description; their locations are shown in Fig. 2. It was more difficult to interpret the features within the evaluation trenches as they were necessarily much more restricted in their extent.

Trench 3 was situated west of the main excavation area and contained numerous features (Pl. 20). **318** was probably the linear anomaly identified on the geophysical survey (Pl. 21). It contained pottery dated from the mid to late 3rd century. It was relatively shallow with gentle concave sides, **327** extended beyond this feature and appeared to be the remnants of an earlier ditch. There were two shallow ditches **309** and **307** which seem to run parallel. It is most likely that one or both of these represent the feature which was shown in the geophysical survey.

304 was a concave shallow feature cutting **311.** A sample from this feature contained wheat grains and sheep bones. A smaller earlier feature seemingly on the same alignment. **315** and **316** were again shallow features, running parallel to each other. These features are not unlike the features identified in the main excavation area, shallow, and filled with very similar fills. The most likely interpretation for these features to represent a continuation of the field system westwards from the excavation area. The relationship between the geophysical results and the excavation results is compared with that seen in the excavation area. In that the features on the ground are much more complicated than the geophysical anomalies at first suggest.

Trench 4 was situated further to the west and contained a single ditch and three quarry pits, which are discussed below (Pl. 22). The ditch (**404**) was a shallow concave feature which corresponded with a geophysical anomaly. The uneven western side of the feature was stepped and may indicate a re-cut but it was impossible to tell from the fill which had no visible variation. An environmental sample produced wheat and oats and cat and frog bones, an assemblage similar to the material from the main excavation site.

The Excavations

Late Neolithic/Early Bronze Age (LN/EBA)

A single pit (**1376**) containing Beaker pottery, was located at 43,43. It had steep sides and an irregular base (Fig. 4a). **1432** the uppermost fill a red brown silty sand contained three sherds of roman pottery. **1432** overlay **1377** a dark grey silt sand which contained several sherds of pottery from two Beaker pots (see Appendix 5). The Beaker pottery did not have much indication of abrasion and therefore the pot is likely to be deposited in the pit soon after breakage. It is possible that the pit originated in the Late Neolithic/Early Bronze Age and was reused in the Romano-British period but that is impossible to determine. Environmental samples from **1377** (Sample 12), showed some hammerscale and one charred weed seed, possibly intrusive.

No further features or artefacts of prehistoric date were found within the excavation area although the presence of the pit indicates potential for further remains in the surrounding area

Romano-British

The majority of the features identified on the site were part of a Romano-British field system, the ditches being field boundaries and/or drainage ditches associated with the fields. Due to the similarity of the fills it was impossible to determine a full sequence of phases. Each of the ditches showed multiple re-cuts but excavation along the different parts of the same feature often showed different numbers of re-cuts. This is to be expected as re-cutting is effectively maintenance of the boundaries and need not have been neatly executed. In fact the only time a re-cut is visible is when it does not precisely follow the previous ditch.

During the initial cleaning of the site, after machine stripping of the topsoil, different numbers were assigned to the same cleaning layer on different parts of the site in order to examine potential spatial variation of the material recovered from this phase of work. This did not turn out to be a useful exercise as there was very little pottery recovered. The following numbers were assigned to the cleaning layers **1138**, **1140**, **1173**, **1192** and **1193**.

Ditches

Three intercutting ditches were identified extending south from the northern edge of the excavations. The precise identification of the three ditches was extremely difficult because they appear to have crossed over one another and their fills were so similar. The following account is one possible interpretation of the data. It appears that Ditch 01 turned eastwards at a right angle at 15,40, where the remains of a further ditch (Ditch 04) lay on its north side. Ditch 01 formed the south-west corner of an enclosure which lay mainly beyond the northern limits of the excavation. The junction of ditches 01, 02 and 03 at approximately (15,35) was excavated in an attempt to reveal the sequence of re-cuts but this proved to be impossible due to the similarity of the fills (Pl. 5). **1109**, **1120**, **1125**, **1164**, **1166**, **1223** contained pottery and are referred to in the pottery report. Two sections were excavated across

the north-south length of Ditch 01 where it showed a similar profile in both (**1035** in Fig 4b and **1109** in Fig 4c). At least two re-cuts were visible in the east-west length of the ditch (**1205** replacing **1582** in Fig. 4d). An environmental sample was taken from cut **1205** (Sample 13). This phase of the ditch contained pottery dating to the late 2nd to 3rd century.

Inside this enclosure area were the remains of a narrow ditch, 16 (**1110**), aligned north-south, which extended 10m into the site finishing just north of the 50,50 grid point. A pit, or the end of another ditch (**1112**) was cut into Ditch 16, which contained pottery dating from the 1st to 2nd century, indicating that Ditch 16 was an early component of the field system.

Ditch 02 was visible in the two sections (**1033** in Fig 4b and **1158** in 4c) but terminated just beyond the right angle in Ditch 01 (**1122** on Fig. 4e). Ditch 03 was more difficult to follow but seems to have extended the full length of the site. It had one re-cut visible in section 4f (**1143** replacing **1145**) but only a single cut was visible further south. Ditch 03 (**1068**) appeared to cut Ditch 17 (**1069**) near the southern limit of the excavation (Pl.6). Ditch 17 contained Roman pottery fragments, too small to be more closely dated. Ditch 03 continued beyond the southern limit of the excavations but was not seen in the cable trenching to the south.

Ditch 10 was a narrow ditch, west of ditches 01,02 and 03 that ran almost the length of the site, southwards from about 6, 50 becoming less defined but still visible at 17,10. It was very shallow with a depth of slightly less than 0.20m. This ditch seems to have functioned as another, perhaps earlier, phase of the NE-SW boundary, its character being similar to that of early Ditch 16 (see above).

Ditches 06 (Fig. 5a) and 07 (Fig. 5b) were also part of this major north-south boundary sequence, both running between Ditches 03 and 10. Ditch 07 may have been a continuation of Ditch 02, with the gap at 08,32 being an entrance (Pl. 7). The north-east corner of Ditch 06 (**1566**, 5c) cut through Ditch 07 (**1568**, Fig. 5c), turning west and crossing over Ditches 10 and 18 to meet Ditch 08 (see below).

An environmental sample taken from the fill of Ditch 06 **1568** (Sample 5) contained limited material but Sample 4, from **1140,** the fill of cut **1349** at section 5a, taken further along Ditch 06 contained cereals. Fig 5a shows a profile of Ditch 06 (**1349**).

At the south end of the excavations Ditch 06 cut across Ditch 17 (**1089** on Fig. 7b) (Pl. 8) and was also observed in the cable trenches south of the site. Ditch 17 ran east-west at about 15,00. It was cut by Ditch 06 and probably by Ditch 03 but its relationship to Ditch 18 could not be established. Its fill **1139** contained 2-3rd century pottery.

Ditch 18 was located between Ditches 08 and 10 and formed the north-west corner of an enclosure at 17, 21. Section 5e showed that Ditch 18 (**1285**) was cut by Ditch 06 (**1286**). Further sections to the

east failed to determine the relationships with Ditches 10 and 07 although pottery recovered from the intersection dated to the 2nd-mid 3rd century (**1540** and **1542** in Appendix 2). The ditch was not seen during the watching brief of the cable trenches to the south but as it was relatively shallow it may have disappeared because of truncation. Its fill **1285** contained pottery dating to the mid 3rd or later as did **1286** from Ditch 06. The north-west corner of Ditch 18 cut pit **1195** which also contained pottery dating to the mid to late 3rd century.

Ditch 08 lay to the west of Ditch 18 along the west side of the excavations, defining an enclosure which lay west of the excavated area. Its north-east corner lay just inside the excavations at 0,30m. Mid to late 2nd – 3rd century pottery was found in the section 5d (**1574**). An environmental sample from this deposit (Sample 7, **1575**) did not contain any significant material. Burial **1427** cut into the north-east corner of Ditch 08 (see below).

Towards the southern end of the excavations Ditch 08 showed two visible re-cuts (**1021**, **1023** and **1025**) containing pottery of 2nd and 3rd century date. Cable trenching to the south of the main excavation area showed that Ditch 08 continued at least 5 metres beyond the excavation limits.

Ditch 08 cut through a shallow gully (**1167**) which connected with Ditch 18 towards the southern limit of the site at 10,3 and an environmental sample taken from this section produced cattle bones.

Excavation at the junction between Ditches 08 and 09 (Fig. 6) clearly showed 08 (**1393**) crossed Ditch 09 (**1396**), both of which cut east-west Ditch 11 (**1398**). Ditch 06 was also later than Ditch 09 but its relationship to Ditch 08 could not be determined, because of disturbance from a later treebole which crossed the two ditch junctions (3,16). Pottery from contexts **1344**, **1346** and **1418** were from this area.

Ditch 09 was on a slightly different alignment to the majority of ditches on the site, and was cut by both Ditches 06 and 08. A section (**1577**) at the western edge of the excavation produced pottery dating to the 2nd to 3rd century. South of the grave, Ditch 09 contained pottery dating to the mid to late 2nd century at section **1335**.

Ditch 11 ran west-east across the site intermittently from south of 0,30 as far as 32,32. It was cut through by later ditches 08 and 09 on the west side of the excavations and by Ditch 10. Its relationships to Ditches 07 and 03 were not clear. It was excavated as it crossed a quarry pit **1380/1381** (**1378,** Fig. 7a) and pottery of late 2nd early 3rd century date was retrieved. It is possible that this feature originally continued across the site but has since been truncated.

Ditch 12 ran eastwards from the north-east corner of Ditch 06 on the same alignment. (The gap between Ditches 06 and 12 may have formed an entrance at some point). It was excavated in two

locations (**207/221** on Fig 7c) where it showed as a single cut, and contained pottery dated 2nd –3rd century. A re-cut was visible further to the east (**1461** and **1458** on Fig 7d) The eastern end is confusing but the separate features **1459**, **1464** and **1466** may have been the irregular base of a single larger ditch. Excavations showed that Ditch 12 (**1384**) cut through Ditch 19 (**1373**) running north-south (Fig 8e).

Ditch 13 lay 3m south of Ditch 12, on the same alignment. Section 8a shows that the ditch was re-cut at least once. One of the re-cuts**1216** terminated before it joined Ditch 02 (Fig. 3). Ditch 13 (**1180**) was cut by Ditch 02 (**1181,** Fig 8b, Pl. 9). Pottery from Section 8b was dated to the 3rd century but it was impossible to determine which of the re-cuts was sampled. However, a second section further east **1448** also contained pottery dated to the 3rd century or later. An environmental sample taken from this section (Sample 9, **1169**) did not show any significant material.

Ditch 19 ran north-south, to the south of Ditch 01 at 29,31. A section across Ditch 19 revealed a single shallow concave profile (**1373**, Fig 8d). The relationship between Ditches 19 and 11 was obscured by the later quarry pit **1381**. It was cut through by Ditch 12 (**1384,** Fig. 8e) but crossed over Ditch 13 (**1445**, Fig. 8f, Pl. 10).

A slightly unusual feature of the site was the short segments of ditch, which seemed to link some of the north south ditches (see Fig. 3). These lengths of ditch were relatively shallow and sections cut to establish the relationships between these and the larger north-south ditches were largely unsuccessful. Context **1083** (at 10,42) was a small gully between Ditch 10 and Ditches 01, 02 in the northern part of the site. The relationship between the two was impossible to determine as the features did not meet, possibly due to truncation. **1209** (10,39) was another gully again linking 10 and 01 further to the south. It appeared to be cut by the two north-south ditches but this was greatly complicated by the tree disturbance. A third example of these short sections of ditch **1299** (17,30) was located immediately to the south linking Ditches 07 and 03 but it was impossible to determine the relationships with the north-south boundaries.

In the south east corner of the site close to the area of the extension, a number of ditches were revealed. Ditch 14 had an approximately north-south orientation, 5 – 10° east of the orientation of the main body of features. The feature formed a right angle and continued east-west (on the same orientation as the other features) where it formed a butt end at about 58,07. It showed a re-cut, **1359** cut by **1357** (Fig 9a) which contained Roman pottery. Close to the end of this feature the ditch cut through an oven. An environmental sample from the ditch (Sample 15, **1358**) did not contain anything significant.

Ditch 15 **1173** was identified on the same east-west alignment as Ditch 14 and was cut by both Ditches 14 and 21. It was shallow and contained the same red brown silty sand as the other features

and contained Roman pottery that could not be more closely dated. Ditch 21 (excavated as **1480**) contain pottery dating to the mid to late 3rd century.

A narrow gully **1507** located west of Ditch 14 (40,05) may have been connected with a shallow feature **1522** which cut across Ditch 14 but the features were heavily truncated. It contained possible third century pottery. Its north west end was destroyed by a tree bole (see below). It may also have been a continuation of Ditch 19.

A north south Ditch 20, was located immediately east of Ditches 14 and 21. A quarry pit was dug through the presumed junction between Ditches 20 and 21. It was on the same north-south alignment as the main of ditches to the west and may form the east side of an enclosure, perhaps relating to Ditches 03 and 04. An environmental sample was taken from its single fill **1532** at section 9b **1533** (Pl. 11) (see Appendix 4). It contained pottery dating to the 2nd to 3rd century.

At the eastern boundary of the site, was ditch **1074** which contained a modern water pipe and ran along the hedge line on a completely different alignment to the Roman ditches. It cut through ditch **1102** which was relatively wide with a steep basal slot. Although it contained no dating evidence it was very regular in shape and was also considered to be modern (Fig 9c, Pl. 12).

Oven

An oven or hearth (**1152**) was identified at the eastern limit of, and cut by, Ditch 14. Pottery from the oven was dated to the mid to late 3rd century. It was 2.60m in length and roughly 0.75m at its widest. It had a bowl shaped profile and was lined with a clay **1226** (Pl. 13) that had been turned red by the effect of heat. **1226** was up to 0.20m wide on the sides but only two centimetres thick at the base. Ditch 14 had removed part of the southern portion of the oven but the southern tip remained. It had two fills: **1208** was a dark grey brown clay which contained ash and the largest content of charred cereal grains on the site, also containing Roman pottery overlying **1153/1154** again contained charred cereal and the small amount of hammerscale (see Appendix 4). This contained pottery dating to the mid 3rd century or later. The environmental remains from this feature suggest that this is a corn drier (Samples 22, 23 24) containing relatively large amounts of wheat barley and oats, and suggests that the cleaned grain was being dried in this feature.

Burials

Four burials were found. Burial **216**, was found in Trench 2 during the evaluation This was at the western limit of Ditch 12 (Pl. 14). This burial was in a very poor state of preservation because it was disturbed by the cutting of Ditch 03, leaving only fragmentary remains (Appendix 3). The surviving part of the grave cut was relatively shallow with a gently sloped western side and steeper eastern side. It was aligned east-west with the head to the west. It was impossible to determine the individual's sex but the skeleton was most likely a 25-35 year old individual.

A second skeleton **1004** (cut **1003**) was found on the eastern side of the site. The skeleton had suffered significant damage from root and water erosion and it was difficult to determine anything about this individual except that it was possibly in its thirties or older. The grave cut was very shallow due to truncation and its fill was a grey brown silty clay **1005**. The grave was orientated approximately east-west.

Two further burials less than 4m apart were found at the western side of the site. **1429** (Fig. 14) was contained within an oval grave cut **1427** (Pl. 15). The grave measured 1.20m by 0.86m with fairly steep sides although the north and west sides were difficult to determine due to root disturbance. It contained pottery dating to the mid to late 3rd century. It was located at the corner of Ditch 08 and appeared to be cut into the ditch although there was heavy disturbance by animal / trees which had removed a large part of the upper body. The remains were of a child of around 2 years old. Again the skeleton was orientated east - west with but with the head at the east.

Skeleton **1221** (Fig 14b) within **1219** was by far the best preserved of the skeletons with only the skull disturbed (Pl. 24). The skeleton was supine with arms to sides; it was male, probably between 20-25 years of age and around 1.70m in height. The grave had been cut into a Roman boundary ditch 09 and it is likely that this was intentional. The burial was orientated north - south with the head to the north. The fill of the burial contained pottery dating to the Roman period.

Postholes and Pits

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 were genuine. Several pits were identified on the site although it was often difficult to differentiate these from natural features caused by tree-root disturbance. There were a small number of pits, which due to their regular shape could be nothing but man made.

The most convincing post holes from the site seemed to be associated with the ditches and burials. No evidence of buildings was identified but two features(**1006** Fig.10J and **1008**) to the west and east of burial **1003** may have been associated with it and acted as markers. Both were possible post holes and had sloping sides which tapered to a concave base but were markedly different sizes with **1006** (Pl. 17) being almost twice the size of **1008** (Pl. 18). The removal of a post and post-depositional weathering can significantly alter the shape of post holes and their position at each end of the grave is suggestive. Neither contained any finds. A third post hole **1043** (Fig. 10L, Pl. 19), was located immediately south of **1006**, again sloping to a concave base. **1085** (Fig. 10K) a pit or large post hole was located at the fourth corner of a rough square with **1006**, **1008**, **1043**, and was almost 1m across and 0.30m deep.

To the south of this group of postholes were a series of pits. **1093** (Fig. 11f) was an oval feature 0.50 by 0.44m with irregular sides and a single fill. A much larger, again oval feature was located immediately to the south approximately 1m x 0.80m shallow concave base with a single fill. A large pit **1029**, 2.30m x 2m and 0.3m deep was located immediately to the west of **1010** (Pl. 20). **1010** was a rectangular shaped feature, either an elongated pit or the terminal of a ditch extending beyond the eastern limits of the excavation (Pl. 21). It was 0.50m wide and a minimum length of 0.80m. This feature contained pottery dating to the mid to late 2nd to the 3rd. To the south of this were two further post holes **1049** (Pl. 22) and **1057** (Pl. 23).

A group of features was also associated with burial **1427**. **1489** and **1493** were possibly post holes related to the burial in much the same way as the features associated with **1003**. They may have formed a succession of grave markers locating the approximate location of the burial. **1396** was a pit next to posthole **1489** dug through the backfilled ditches 08 and 09..

Five shallow features (**1053**, **1055**, **1051**, **1502**, and **1499**) which are best identified as post or stake holes, formed a rough semi-circle at the northern end of the site, west of Ditch 10, located at approximately 07,44 (Fig. 10 A, B, C, Pl. 24). These features were all similar in shape, most being around 0.20m wide by 0.10m deep and filled with a similar material. With no associated floor or ground surfaces it is impossible to determine the function of these features.

Three possible post holes, **1045**, **1041**, **1047** and (Fig. 10 Post D, E and F) ran down the eastern side of Ditch 01 at approximately 15,45 and possibly constitute the remains of a fence line flanking the ditch. **1041** and **1045** were both 0.22m diameter , while **1047** was smaller at 0.14m diameter.

A closely grouped set of post holes (**1295**, **1297**, **1299**, **1301**) was identified beneath Ditch 09 (Fig.10 Post G, H and I). The interpretation of this group is difficult and it is possible that this was a post replaced several times. The ends of ditches are often the focus of activity (perhaps an entrance structure)

Pit **1012** (Fig 11a, Pl. 25) was located north-east of Ditch 11. It was a very steep sided flat-bottomed feature approximately 0.80m deep. There is no indication as to its function but the absence of pottery and other material suggests it may have been for storage rather than a rubbish pit.

Pit **1095** (Fig. 11b) was identified at the southern part of the site between Ditches 08 and 18. A steep sided feature with flat base, it contained **1096** a red brown silty sand (Pl. 26). In the northern half of the feature a clean gravelly deposit was identified which probably represents natural gravel collapsed in from the side. Pottery from this feature was identified as mid to late 3rd century. Environmental samples revealed that this feature contained the second highest concentration of cereal grains from the site as well as two small corroded lumps of lead. Immediately north of this feature was a smaller

more rounded pit/ post hole **1087** again with a flat base. It contained a single fill **1088** and may be associated with **1095**. There were no other associated postholes.

1469 (Fig. 11b), an oval shaped pit was found immediately west of the quarry area. It measured approximately 3.3m by 1m and contained 3 fills The first fill was a thin band of sandy silt **1472.** Above this was a similar but thicker deposit **1470** which was sampled for environmental remains. This was overlain by **1471**, which contained 2nd century pottery. The environmental samples (Sample 10, 1470) contained wheat grains, cattle and small bird bones, which may have been part of the human diet of the site.

A small pit was cut (**1522**) into ditch 15 (**1521**). It contained pottery dating to mid to late 3rd century. It may have been a continuation of gully **1507** (see above).

Pit **1195** was adjacent to and cut by the north west corner of Ditch 18. It was 0.36m deep and 0.50m in visible length. Its two fills contained pottery dating to the mid to late 3rd century. An environmental sample (Sample 6 **1196**) revealed a higher proportion of chaff than other samples which is likely to be derived from crop processing.

Quarry Pits

The area seems to be have been intermittently quarried mainly for gravel, although a small pit **1406** located in the south eastern part of the site (at 60,04), where there was an outcrop of clay, was interpreted as a clay extraction pit. There appeared to be at least two intercutting pits which were excavated to a depth of between 0.70-80m, had steep sides, and was very irregular in both plan and profile which may be expected from ad hoc clay extraction. The similarity of the fills and its association with the junction of Ditches 20 and 21 made full interpretation impossible, but it appears to have been Roman.

Quarry pit **1380** was cut by Ditch 11 and probably by Ditch 19 too (Fig. 7a) and must therefore have been Roman or earlier in date.

The remainder of the quarrying activity on site appears to have been much later in date. Most notable was the large pit complex on the eastern side of the excavations. The sections show that, rather than a single extraction episode a number of pits (eg **1252/1133**) were dug adjacent to each other to a depth of 0.60-0.80m (i.e. the base of the gravel). Post medieval pottery was found in the pits in small quantities but enough to suggest that quarrying dated to this period. The archive contains detailed drawings and context recording of the quarry.

There were further large pits in the southern portion of the site. **1272** an amorphous pit south of Ditch 13 at 26,10 was approximately 0.36m deep, and probably an ad hoc series of small intercutting pits.

The only find was a post medieval/modern nail. **1126** another smaller steep-sided pit was immediately south east this pit and contained a single sherd of Iron Age or Roman pottery but this may have been residual. A much larger pit quarry pit located to the east **1581** was steep sided and cut to the level of the clay but its more regular circular outline may in fact represent a single quarrying episode.

To the east of this was a series of features, **1433**, **1555**, **1349**, largely amorphous in shape, which due to their proximity to quarries were interpreted as a series of quarry episodes. Certainly **1433** and **1524** are smaller and unlike other quarry episodes but are much smaller than other features. Interpretation of these features is difficult but there irregularity suggests that they are natural, either quarrying or a treebole or a combination of the two. **1433** contained a single sherd of mid to late 3rd century pottery which may be intrusive.

Three pits were identified in evaluation Trench 4 prior to the main excavations. **409**, was on the edge of the trench, and **407** (Pl. 27) a steep sided pit was excavated through the gravel to the clay below. A third pit **405** was cut to the same depth, again with steep straight sides. All the features were filled with similar firm red brown sandy silts. These coincide with features identified on the geophysical survey and seemed from the survey to be largely restricted to this area. An environmental sample from **410** revealed very little information.

A very large pit was identified during the watching brief phase maintained on a pipe trench cut along the western side of the excavation area. This was over 20m in length again steep sided and cut to the level of the clay (its width was impossible to determine as the width of the pipe trench was less that 0.50m).

Natural Features

There were numerous tree-boles with evidence of animal burrowing on the site. These features have been largely left out of the report but the site archive contains more information including records of sample excavation and contexting of a number of these features. There is evidence that there was substantial tree coverage predating the Roman ditches, probably indicating clearance for agriculture.

1203 identified as a treebole contains a brown sandy silt and mid late 3rd century pottery but is likely to be residual. The remainder of the features contained no archaeological remains and were identified as natural features. These can be seen in the feature list (Appendix 1).

Environmental samples from natural features taken for comparative purposes showed very little apart from some intrusive brick/tile from sample 11 (**1510**), a treebole.

The Watching Brief

A watching brief was undertaken on the area of the piping and cabling associated with the development (Fig. 16). The watching brief was designed to answer questions arising from the previous phases. The primary aims were to determine whether the cemetery continued to the south of the current development site and if the location of the associated settlement could be determined.

Five features were identified during the watching brief only two were new features that were not found during the excavation. 05/06 and 09 (Fig. 17) were located in the south eastern cable trench. These were similar in form and function to those found during the excavation and are likely to be continuations of the field system. 01/03 and 11 represented continuations of features 08 and 06 respectively. A large quarry pit 13 was located at the eastern side of the site.

There was no evidence of the burials continuing further but the low density of burial and the relatively low area covered by the trenching means that this should not be taken as an evidence of absence. There was no evidence of the settlement found during the watching brief.

Discussion

The excavated area is part of Romano-British field system The field system is broadly north-east 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. The features, organised on local topographical terms, may indicate that the landscape organisation is local and not part of a larger regime such as found in Yorkshire (Stoertz 1997) and Nottinghamshire (Riley 1980) which often overrides local topography. A possible reason is that the Roman field system is not based on a pre-existing landscape demarcation such as prehistoric linear boundaries. In this regard Barrow is similar to other North Lincolnshire examples highlighted from the recent aerial photographic mapping survey (Winton 1995, 58).

The site appears to have undergone a significant amount of erosion. All four burials were located just below the topsoil and it is likely that further burials have been removed by ploughing, although there was very little bone recovered during the topsoil stripping. A number of ditches were only preserved intermittently, suggesting that just the bases of larger ditches and pits survived. This makes an interpretation of the site difficult as it is likely that entire features have been removed by subsequent erosion. This may include previous living and working surfaces.

The relationship with the geophysical survey is ambiguous. The recorded ditches follow the same alignment as those in the excavation, but the excavation revealed more features than identified in the geophysical survey. At Edenthorpe the geophysical survey only picked up the latest phase of re-cutting, it is possible that here at Barrow a similar process is taking place. The geophysical survey also identified features that were not revealed during the excavation, and it is possible that the

geophysical survey was picking up residual features no longer visible, but their magnetic signature is still present in the soil.

The size of the enclosures are difficult to determine. If Ditch 20 was a boundary to an enclosure 02 (or other features in this group) forming the other this would make an enclosure of approximately 40m wide which compares well with other enclosure systems in the east midlands. The enclosures at Gonalston are a little larger at 45m.

The extensive re-cuts visible in many of the ditches are present on numerous sites, one possible explanation is that the re-cuts reflect careful cleaning (Samuels and May 1980). At Edenthorpe, South Yorkshire ditches were almost totally filled before cleaning, while some of the ditches at Barrow, although truncated showed substantial filling prior to cleaning. An alternative view proposed by Cumberpatch and Robbins is that the ditches were more complex in nature perhaps reflecting social practices of re-emphasising boundaries (Chadwick, Cumberpatch 1995, 48). If the burials are seen in this context then they are perhaps easier understood. The use of linear boundaries for complex social and ritual practices has a long history with pit alignments and ditched boundaries dating from the Bronze and Iron Ages.

The dating evidence for these features from first to 4th century is not unusual and has been noted at many sites to the west (Chadwick 1995). The absence of Iron Age features should not be taken to mean a lack of people but as the lack of Iron Age artefacts. This has been noted in South Yorkshire, and has been suggested to result from the fragility of the material and inappropriate sampling strategies (Cumberpatch 1993).

The concentration of ditches within a small area reflects 400 years of relatively stable agricultural organisation, although the shifting of ditches over a small area and the movement of entrances reflects local changes in the land use which undoubtedly occurred over the period. Enclosures at Dragonby on the lowlands north-east of Scunthorpe shows a similar change in the local positioning of ditches (May 1996, 102). At Gonalston, Nottinghamshire where a series of enclosure ditches enclosed internal features similar to those identified at Barrow but two possible circular drip gullies, which would have surrounded a building, provided a stronger case for occupation (Lee and Knight 1996, 163). The site at Barrow does not show any significant evidence of domestic occupation. It is possible that the pits and post hole features are from domestic structures but there is insufficient evidence. The environmental evidence suggests that the main focus of the settlements to the south as the two highest concentrations of charred cereal grains are here as well as the oven structure. There was little pottery from the site considering the length of use. Gonalston produced a richer assemblage of artefacts than Barrow with the presence of Samian pottery and roof tiles (Lee and Knight 1996, 163) suggesting that occupation was closer to the excavated enclosures than at Barrow. Another possibility

is that the settlement at Barrow was not as wealthy as that at Gonalston and did not have the same amount of material remains.

The burials were a significant feature of the site and their shallow cuts suggest that others may have been removed by ploughing, making an estimate of the original extent of a cemetery difficult. However, the paucity of human bones in the topsoil suggests few burials were removed this way. Their dating is determined by the fact that one of the burials is cut by a ditch and the other is cut into a ditch which indicates a contemporaneity with the enclosure complex. There were no grave goods with the burials which is not unusual and reflects local burial traditions, and need not necessarily reflect on the status of the individuals.

It seems likely that the burials were widely distributed across the enclosure system rather than part of an intensive orderly cemetery such as are often associated with Roman towns (three of the burials were located near or in visible boundaries and the fourth was too disturbed to determine). Another extensive cemetery located in or near ditches at Owslebury in Hampshire was found to be hundreds of metres in extent but with a very low density of burials (Collis 1977). The burials at Barrow were largely poorly preserved making ageing and sexing difficult. In addition, the small number of individuals represented makes it impossible to draw conclusions about the population from which they came. They probably represent a small community of people living in the nearby settlement over four centuries and buried in an area probably not formally separated from the agricultural areas. Burial in ditches may reflect practical concerns, for example causing the least destruction to cultivatable land but also reflects a currently poorly understood ritual dimension.

The large quarry at the eastern part of the site contained post medieval pottery and cut all the Roman features suggesting a date in the post medieval period. Unfortunately non of the other quarry pits contained dating evidence but it is not unreasonable to assume that gravel was quarried from this area for some time. The quarry pit in the south east of the site adjacent to the oven is likely to have been roman and evidence suggests that it was for clay extraction, although there is no evidence of what the clay was used for. Quarry pit 1380 was cut by a Roman ditch, also indicating an early date.

Acknowledgements

The archaeological work was carried out by Mark Allen, Claire Angus, Pete Barnes, Wendy Booth, Dave Bower, Mike Garrett, Wayne Livesey, Jeremy Mordue, Geoff Tann, Liz Davis, Darren Pullen, Rob Schofield and Mark Williams. Naomi Field was project manager and edited this report.

Mark Williams
Lindsey Archaeological Services
March 2001

References

Bewley, R, H. (1998) *Lincolnshire's Archaeology from the Air.* Soc for Lincolnshire Archaeology & History/RCHME.

Chadwick, A. (1997) *Towards a Social Archaeology of Later Prehistoric and Romano-British Field Systems in South Yorkshire, West Yorkshire and Nottinghamshire* Assemblage vol 3

Cumberpatch, C. and Chadwick (1995) *Archaeology in South Yorkshire (1994-95)* South Yorkshire Archaeology Service (40-49)

Collis, J. (1977) Owslebury (Hants) and the problem of burial on rural settlements in Reece, R. (ed) *Burial in the Roman World.* Council for British Archaeology.

Elliott, L and Knight, D (1996) Excavations of an Iron Age and Romano-British settlement near Gonalston, Nottinghamshire. *Transactions of the Thoroton Society* vol. 100 (161, 164)

Field, N. (1999) *Barrow upon Humber, Project design and Estimate.* Unpublished archive report for Anglian Water Services Ltd.

May, J (1996) *Dragonby: Report on an Iron Age and Romano-British Settlement in North Lincolnshire* Oxbow Monograph 61.

Riley, D, N. (1980) *Early Landscapes from the Air*, University of Sheffield, Sheffield

Samuels and May 1980 The Excavations in Riley, D, N. (1980) *Early Landscapes from the Air*, University of Sheffield, Sheffield pp 73-81.

Stoertz, C. (1997) *Ancient Landscapes of the Yorkshire Wolds*. Royal Commission on the Historical Monuments of England.

The Appendices

APPENDIX 1

List of Features

Context No	Length/ diameter	Width	Depth	Fills	Type	Date
Excavation						
1003				1005 mid grey brown silty sand 1004 skeleton	Burial	
1006	0.55	0.36	0.30	1007 mid red brown sandy silt	Posthole	
1008	0.27	0.27	0.16	1009 mid reddish brown sandy silt	Posthole	
1010	2.15	1.05	0.50	1011 mid reddish brown sandy silt 1019 mid grey sandy silt 1020 dark grey brown sandy silt	Ditch	MI2-3+
1012	1.28	0.76	0.76	1013 mid red brown silty clay	Natural	
1014		0.66	0.17	1015 red brown sandy silt	Gully	
1016		0.70	0.18	1017 red brown sandy silt	Gully	
1021		1.50m	0.44m	1022 red brown sandy clay silt	Ditch	M2+
1023		0.86m	0.18m	1024 red brown sandy clay silt	Ditch	ML3+
1025		1m	0.44m	1027 red brown sandy silt	Ditch	2-3c
1029	2.30	2	0.3	1030 red brown sandy silt	Pit	
1031		0.42	0.10	1032 red brown sandy silt	Ditch?	
1033		0.55	0.20	1034 red brown sandy silt	Ditch?	
1035		1.80m	0.42m	1036 red brown sandy silt	Ditch	
1037		1.22m	0.40m	1040 red brown sandy silt 1065 red brown sandy silt 1066 red brown sandy silt	Ditch	
1041	0.22		0.18	1042 red brown sandy silt	Posthole	
1043	0.85	0.70	0.27	1044 mid red brown sandy silt	Posthole	
1045	0.22m		0.16m	1046 red brown sandy silt	Posthole	
1047	0.14		0.20	1048 red brown sandy silt	?posthole	
1049	0.65	0.35	0.18	1050 mid greyish brown sandy silt containing numerous stones	Post hole	
1051	0.20	0.18	0.08	1052 red brown sandy silt	Post hole	
1053	0.28	0.14	0.12	1054 red brown silty sand	Post hole	
1055	0.14	?	0.12	1056 red brown sandy silt	Post hole	
1057	0.35	0.25	0.12	1058 mid greyish brown sandy silt	Post hole	
1061					Quarry pit	2-3c
1062		0.80	0.26	1240 red brown sandy silt	Quarry pit	
1063				1064 red brown sandy silt		
1068		+0.56	0.22	1075 yellow brown silty sand 1079 yellow brown silty sand	Ditch	
1069				1080 yellow brown silty sand 1076 yellow brown silty sand	Ditch	Roman
1070	3	2	0.25	1071mid grayish brown sandy silt	tree bole	
1072	2.5	1.5	0.3	1073 mid grayish brown sandy silt	tree bole	
1074				Modern water pipe	Ditch (modern)	Post med
1077	3	2	0.20	1078 mid grey brown sandy silt	tree bole	
1081		0.58	0.14	1082 red brown sandy silt	Gully	
1083		0.60	0.17	1084 red brown sandy silt	Gully	
1085	1	0.65	0.35	1085 mid grey brown sandy silt	Post hole/pit	
1087	1.5	1.2	0.25	1088red brown sandy silt	Tree bole	
1089				1090/1139 Red brown sandy silt/clay	Ditch	2-3c

Context No	Length/ diameter	Width	Depth	Fills	Type	Date
1093	1.35	1.15	0.35	1094 mid red brown sandy silt	Pit	
1095	1.40	0.88	0.42	1096 red brown silty sand	Pit	M3+
1098				1274 red brown silt, infrequent chalk 1275 red brown silt, infrequent chalk 1276 red brown silt, infrequent chalk 1277red brown slightly gritty silt 1278 red brown silt, infrequent chalk	Quarry pit	Post med
1100						
1102		2.80	1.12	1103 mid grey brown silty clay	Ditch	
1104		0.48m	0.24m	1105 dark red brown silty sand	Ditch	
1106		?0.54	0.20	1107 red brown silty sand	Ditch	
1108		0.90m	0.34m	1109 red brown slightly clayey silt	Ditch	2c+
1112	+0.90	1.10	0.46	1113 mid red grey brown sandy silt	Pit	1-2c
1116	?	+1.90 m	0.50m	1149 red brown sandy silt	Pit	Roman
1120		+0.64	0.16	1121 dark red brown clayey silt	Ditch	M3+
1122		?1.10	0.20	1194 red brown silty sand, 1123 red brown silty sand	Ditch	
1124		+1.30	0.22	1125 mid red brown clayey silty sand	Ditch	Romanan
1126	2.10	1.90	0.20	1127 red brown sandy silt	Small pit	Iron Age/Roma nan
1128				1280 light brown slightly gritty silt 1281 mixed sands and gravels 1282 red brown sandy silt 1283 red brown clay with lenses of sand 1284 red brown sandy silt	Quarry	Post med
1132				1303 red brown sandy silt with flint and chalk 1304 orange sand with flint and chalk 1305 red brown silt 1306 red brown silt 1307 orange sand with chalk and flint 1308 red/brown silt 1309 red brown sandy silt 1310 red brown sandy silt	Quarry	Post med
1133				1312 orange gritty sand and chalk 1313 red brown sandy silt 1314 red brown sandy silt 1315 red brown sandy silt 1316 red brown sandy silt 1317 red brown silt 1318 red brown silt 1319 red brown sandy silt	Quarry	Post med Post med
1143		0.72	0.14	1144 mid red orange brown slightly clayey silty sand	Ditch	
1145		+1.2m	0.16	1146 mid brown slightly clayey silt sand	Ditch	
1147		0.58	0.22	1148 mid brown grey silty clay	Ditch	ML3
1150	?	2.25	0.38m	1151 red brown sandy silt	Pit	
1152	2.7	0.81	0.27	1226 mid brown clay, 1208 dark grey brown clay, 1153 mid brown silty clay	Oven?	Romanan M3+
1155		0.84	0.24	1156 mid orange/brown slightly clayey silty coarse sand	Ditch	
1157		+1.14	0.42m	1158 mid-dark red brown clay/sand	Ditch	

Context No	Length/ diameter	Width	Depth	Fills	Type	Date
1160				1327 red brown sandy silt 1328 red brown sandy silt 1329 red/brown sandy silt 1330 red brown sandy silt 1331 red brown sandy silt with lenses of sandy silt	Quarry pit	Post med
1177		?0.64	0.2	1178 mid red brown silty sand	Ditch	
1180		1	0.2	1199 mid dark red brown sandy silt	Ditch	
1181		0.9	0.3	1202/218 dark red brown sandy silt 1201 mid-dark red brown sandy silt	Ditch	ML2-3
1186	0.81	0.8	0.4	1185 dark brown silty sand	Natural	
1188	0.4		0.35	1187 mid to dark brown silty sand	?post hole	
1190		0.24	0.20	1189 mid to dark brown silty sand, 1191 mid to light orange brown silty sand	tree bole	
1195	2.40	0.70	0.35	1196 mid dark grey brown sandy silt 1207 dark grey brown sandy silt,	Pit	M3+
1197		1.30	0.30	1198 grey, red, brown sandy silt	Ditch	M3+
1203				1204 brown sandy silt fill	tree bole	M3+
1205		1.14	0.20	1206 mid red brown silty sand	Ditch	L2-3
1209		0.6	0.1	1210 red brown sandy silt	Gully	
1213		+0.54	0.22	1214 red brown sandy silt, 1215 red brown sandy silt	Ditch	
1216		0.38	0.24	1217 mid red brown sandy silt, 1218 mid red brown sandy silt	Ditch	
1219	1.62	0.52	0.34	1221 Skeleton, 1220 mid grey brown sandy silt	Burial	
1222		0.35	0.16	1223 mid red brown silty sand	Ditch	ML2-3
1224		0.60	0.05	1225 mid red brown silty sand	Ditch	
1236		0.6	0.28	1235 mid grey brown silty clay	Ditch	
1249				1250 red/brown clayey silt	Quarry pit	Roman
1244		?	?	1245 red brown sandy silt	Ditch	
1247	0.35		0.48	1246 dark brown silty sand	Post hole	
1272		0.48	0.36	1273 mid-dark red brown sandy silt	Pit	Post-med /modern nail
1285		1.25	0.26	1253 dark brown silty sand	Ditch	M3+
1286		1.1	0.2	1254 dark brown medium silty sand	Ditch	M3+
1289		?	?	1290 red brown sandy silt	Ditch	
1293		0.6	0.09	1294 mid red-brown silty sand	Ditch	
1295	0.30	0.18	0.28	1295 dark red coarse silty sand	Post hole	
1297	0.50	0.40	0.30	1298 dark red brown silty sand frequent sub rounded stones	Post holes	
1299	0.25	0.20	0.40	1300 red brown coarse silty sand	Post hole	ML2+
1301	0.3	0.27	0.3	1302 red brown silty clay	Post hole	
1334		+0.38	0.16	1335 mid grey brown sandy silt	Gully	
1336		+0.42	+0.44	1337 mid grey brown sandy silt	Ditch	
1338	?	?	?	1339 Red brown silty sand, highly disturbed	tree bole	
1344		0.7	0.18	1343 brown silty sand	Gully	Roman
1346	1.9	1.70	?	1345 brown sandy silt	Tree bole	
1349		1.30	0.32	1351 red brown sandy silt 1350 mid dark red-brown sandy silt	Ditch	M3+
1357	12.5	0.6	0.35	1356 mid grey brown silty clay	Gully	Roman
1359		+0.42	0.28	1358 mid grey brown silty clay	Gully	

Context No	Length/ diameter	Width	Depth	Fills	Type	Date
1373		1	0.25	1375 red brown sandy silt, 1374 red brown sandy silt	Ditch	
1376		1.1	0.4	1432 coarse red brown silty sand 1377 dark grey silt sand	Pit	Roman Neolithic
1378		0.52	0.24	1382 pale brown sandy silt with frequent gravel, 1444 red brown sandy silt with occasional gravel	Quarry	
1379		0.7	0.53	1437 red brown silty clay, 1383 grey brown slightly sandy silty clay	Quarry pit	
1380		?	0.44	1436 red brown sandy silt, 1435 red brown sandy silt, 1438 pale grey sand silt, 1489 80% chalk gravel in a red brown silt sand matrix	Quarry pit	
1381		1.10	0.83	1442 red brown gritty sandy silt, 1440 red brown gritty silty sand, 1443 red brown sandy silt 1441 red brown sandy silt	Quarry pit	
1384		1	0.35	1386 red brown sandy silt 1385 reddish mid brown sandy silt	Ditch	
1389	0.3	0.19	0.3	1388 mid to dark red brown silty sand 1387 mid to dark red brown silty sand	Post hole	
1391		1.1	0.4	1390 Mid to dark brown medium silty sand	Ditch	Roman
1393		1.35	0.62	1395 mid grayish sandy silt 1394 mid grey brown sandy silt	Ditch	Roman L2-3
1396		+0.50	+0.26	1397 mid grey brown sandy silt	Gully	
1398		0.62	0.08	1399 mid grey reddish brown sandy silt	Gully	
1402		1.55	0.6	1400 loose grey brown silt 1401 light grey brown silt	Ditch	M3+
1406				1403 grey brown silt 1404 grey brown silt with flint and chalk 1405 grey brown silty	Roman Clay pit	M3+
1419		0.4	0.3	1418 mid to dark coarse silty sand	Ditch	Roman
1421		1.1	0.32	1420 red brown coarse silty sand	Tree bole	
1423	0.84	0.65	0.48	1422 mid red brown coarse silty sand	tree bole	
1427	1.2	0.75	0.35	1429 human remains, 1428 mid red brown silty sand	Burial	M3+
1430		0.8	0.22	1431 red brown course silty sand	tree bole	
1433	1.90	1.00	0.15	1434 mid red brown sandy silt	Pit	M3+
1445		0.80-1.15	0.22	1447 red brown coarse sandy silt, 1446 red brown sandy silt	Ditch	
1448		0.64	0.12	1449 red brown sandy silt 1450 red brown sandy silt	Ditch	3C+
1458		0.36	0.25	1459 Red brown silty clay 1460 red brown sandy silt	Ditch	Roman
1461		0.4	0.18	1463 red brown sandy silt	Ditch	
1464		0.32	0.06	1465 red brown sandy silt	Same as 1458	
1466					Same as 1461	

Context No	Length/ diameter	Width	Depth	Fills	Type	Date
1469	3.3	1.08	0.38	1471 red brown sandy silt 1470 red brown sandy silt 1472 red brown sandy silt with infrequent chalk and flint gravel	Pit	2c
1480		0.5	0.07	1479 mid grey brown silty clay	Gully	M3+
1483		0.7	0.29	1482 dark grey brown silty clay	Gully	Roman
1489	0.44	0.36	0.40	1490 mid grey brown sandy silt	Post hole	
1493	0.40	0.30	0.36	1494 mid grey brown sandy silt	Post hole	
1499	0.21		0.12	1500 red brown sandy silt	Post hole	
1501	0.22		0.09	1502 red brown sandy silt	Post hole	
1507		0.86	0.24	1508 mid to dark grey silty sand	Natural	3C?
1514		0.45	0.2	1513 mid to dark coarse silty sand	Natural	
1516		1	0.25	1515 mid to dark brown silty sand	Natural	
1523				1522 dark grey brown silty clay	Natural	M3+
1524	0.22		0.32		Natural	
1527	0.25	-	0.25	1526 dark brown coarse silty sand	Natural	
1529	0.2		0.18	1528 mid to dark brown silty sand	Natural	
1533	1.9		0.34	1532 grey brown sand silt	Ditch	ML2-3
1536		1.10	0.26	1538 red brown sandy silt with much gravel,1537 red brown sandy silt	pit/ tree bole	
1541		1.3	0.26	1540 mid to dark brown coarse silty sand	Ditch	M3+?
1543		1.05	0.3	1542 mid to dark brown medium to coarse silty sand	Ditch	
1545		0.6	0.2	1544 mid brown silty sand	Natural	
1547	1.2	0.6	0.28	1546 loose dark brown silt	Quarry	
1548			0.52	1549 Red brown silty sand with lenses of gravel	Pit	
1550			0.24	1551 Red brown sandy silt	Pit	
1553				1154 mid grey brown sand silt	Ditch	
1556		+1.70	0.20	1557 red brown sandy silt	tree bole	
1559	0.3		0.27	1558 mid to dark brown coarse silty sand	tree bole	
1562		0.92	0.18	1563 red brown sandy silt	Pit	
1566		1.3	0.25	1567 mid grayish red brown sandy silt		
1568		+0.42	0.22	1569 mid grayish brown sandy silt	Ditch	
1570	4	2.5	0.3	1571 mid grey brown sandy silt	tree bole	
1574		1.3	0.42	1575 red brown sandy silt	Ditch	MI2-3
1577		0.45	0.20	1578 red brown sandy silt		2-3c
1582		+0.30	0.14	1583 red brown slightly clayey silty sand	Ditch	
Evaluation						
103		1.6	0.30	104 red brown sandy silt	Ditch	
203/1213		+0.90	0.36	202/1214? red brown silty sand	Ditch	Roman
206/1216		1.64	0.40	205/1217 gravel fill 204/1218 red brown silty clay	Ditch	MI3+
207		1.20	0.22	208 mid red brown silt	Ditch	2-3c
212		1.04	0.20	211 gravel deposit 210,mid red brown silt 209 mid red brown silt	Ditch	
214		0.70	0.28	213 red brown sandy silt	Natural?	

Context No	Length/ diameter	Width	Depth	Fills	Type	Date
219		1.30	0.20	221 human remains 220 red brown silty sand	Burial	
221		0.70	0.24	222 red brown silty sand	Ditch	MI2?
304		0.64	0.13	302 red brown sandy silt	Ditch?	
				303 very chalky red brown sandy silt		
				322 very chalky sandy silt		
307		0.56	0.18	305 red brown sandy silt	ditch?	
				307 very chalky red brown sandy silt		
309		0.28	0.10	302 red brown sandy silt	ditch?	
311		0.20	0.12	310 red brown sandy silt	ditch?	
314		0.42	0.8	313 red brown sandy silt	ditch?	
316		0.40	0.15	312 red brown sandy silt	ditch?	
318		0.50	0.13	317 red brown sandy silt	ditch?	
319					tree bole	
320		0.36	0.18	320 red brown sandy silt	pit	
403		0.78	0.24	404 red brown sandy silt	ditch	
405		0.60	1.2+	406 red brown sandy silt	quarry pit	
407		0.60	1.8+	408 red brown sandy silt	quarry pit	
409		0.60		410 red brown sandy silt	quarry pit	
Watching Brief						
01		0.63	0.35	02 red brown silty sand	Ditch	
03		+0.60	0.35	04 red brown sandy silt	Ditch	
05		0.7	0.4	07 red brown sandy silt	Ditch	
06		+0.3	0.4	08 red brown sandy silt	Ditch	
09		1.4	0.3	10 red brown sandy silt		
11		1.1	0.4	12 red brown sandy silt	Ditch	
13				14 dark grey brown silty sand	Quarry pit	

Appendix 2: Roman Pottery Report
(Maggi Darling)

REPORT 55 ON THE POTTERY FROM BARROW-ON-HUMBER, BOH99

for LINDSEY ARCHAEOLOGICAL SERVICES

by Margaret J. Darling, M.Phil., F.S.A., M.I.F.A.

3 November 1999

QUANTITY AND CONDITION

The pottery amounted to 273 sherds weighing 4.394 kg from 88 contexts and two unstratified groups. Quite a lot of the sherds are abraded and fragmentary. There are no groups of any size, many contexts producing just one or two sherds. No problems are anticipated for long term storage. The pottery has been archived according to the guidelines of *The Study Group for Roman Pottery*, the archive including sherd count and weight. A copy of the archive database is attached (Appendix 1).

QUANTITIES AND DATING BY CONTEXT

The quantities and dating by context are shown in Table 1, with comments where applicable.

Table 1 Quantities and date, context order.

Cxt	Sherds	Weight	Date	Comments
+ T2	1	27	L3-4?	
+ U/S	2	55	M3+	
202	3	19	ROM	
204	5	120	ML3+	Some abrasion
208	2	49	2-3C	
218	1	9	ROM	
222	2	43	ML2?	
317	2	45	M3+?	
1000	2	11	EM2+	Some abrasion
1011	1	81	ML2-3+	
1018	1	3	ROM	
1022	2	61	M2+	
1024	1	68	ML3+	
1025	2	54	2-3C	
1027	9	179	2-3C?	Some abrasion
1067	1	1	ROM	
1074	1	3	POST-MED	
1076	1	20	ROM	
1090	1	38	2-3C	
1096	5	169	M3+	
1101	1	45	POST-MED	
1109	2	13	2C+	Incls. Prehistoric sherd; Some abrasion
1113	1	61	1-2C	
1115	1	3	POST-MED	
1121	2	33	M3+	
1125	3	37	ROM	
1127	1	17	IA/ROM?	

1138	2	6	ROM	
1139	16	209	M3+	
1140	3	103	M3+	
1148	7	120	ML3?	Some abrasion
1149	1	9	ROM	
1153	2	13	M3+	
1164	5	31	E2+	Some abrasion
1166	9	196	M3+	
1173	1	78	ML2-E3	
1192	3	129	ML3+?	
1193	1	4	2C?	
1196	3	49	M3+	
1198	22	180	M3+	
1202	1	27	ML2-3	
1204	6	14	M3+?	Some abrasion
1206	2	67	L2-3	
1208	2	5	ROM	
1220	1	17	ROM	
1223	2	13	ML2-3	
1228	5	156	2-3C	Some abrasion
1250	1	4	ROM	
1253	3	44	M3+	
1254	5	70	M3+?	Some abrasion
1278	1	21	POST-MED	
1282	1	3	POST-MED	
1306	1	1	POST-MED	
1317	7	59	POST-MED	
1319	1	1	POST-MED	
1327	1	6	POST-MED	
1333	4	44	M3+	Some abrasion
1335	1	8	ML2+	
1343	2	20	ROM	
1345	3	14	ROM	
1351	1	9	M3+	Some abrasion
1356	3	7	ROM	Some abrasion
1377	3	37	ROM?	
1390	2	45	ROM	
1394	3	23	ROM	
1395	2	45	L2-3	Some abrasion
1400	17	331	M3+?	
1403	1	18	M3+	
1418	1	4	ROM	Some abrasion
1428	9	101	M3+?	
1434	1	14	M3+	
1449	2	97	3C?	Some abrasion
1452	2	4	POST-MED	
1459	1	6	ROM	
1470	3	31	M3+?	Some abrasion
1471	2	27	2C?	Some abrasion
1479	4	21	M3+?	
1482	4	13	ROM	
1508	3	237	3C?	
1522	1	15	M3+	
1532	1	40	ML2-3	Some abrasion
1540	5	61	M3+?	
1542	8	143	2-3C	
1546	1	3	ROM	Some abrasion
1549	1	12	M3+	

1567	1	6	ROM
1571	2	3	ROM
1575	1	1	ML2-3
1578	5	42	2-3C?
1580	2	13	M3+?
Total	273	4394	

The average sherds per context is only 3 sherds, with 64% having only 1 or 2 sherds; the average sherd weight is 16g. Out of 165 ceramic records, only 41 records include rim sherds. All these factors militate against the possibility of close dating of individual contexts.

OVERVIEW OF FABRICS AND FORMS

Fabric	Code	Sherds	%	Weight	%
Colour-coated ware	CC	1	0.37	6	0.14
Coarse	COAR	8	2.93	27	0.61
Dales ware shell-gritted	DWSH	36	13.19	624	14.20
Dales ware shell-gritted?	DWSH?	30	10.99	387	8.81
Grey fine	GFIN	1	0.37	2	0.05
Grey	GREY	147	53.85	2654	60.40
Grog-tempered	GROG?	2	0.73	55	1.25
IA tradition gritty	IAGR?	1	0.37	61	1.39
Mortaria Mancetter-Hartshill	MOMH	1	0.37	81	1.84
Native	NAT	1	0.37	5	0.11
Oxidised	OX	7	2.56	68	1.55
Oxidized?	OX?	4	1.47	44	1.00
Parisian type?	PART?	1	0.37	1	0.02
Post Roman	PRO	17	6.23	146	3.32
Rough-cast	RC	1	0.37	1	0.02
Samian Central Gaul	SAMCG	2	0.73	119	2.71
Shell-gritted	SHEL	12	4.40	96	2.18
Shell-gritted sparse medium	SHSM	1	0.37	17	0.39
Total		273	100	4394	100

Only two sherds of samian occurred, both of 2nd-century date from Central Gaul, one from a mended rivetted vessel. A single mortarium base fragment from the Mancetter-Hartshill industry came from 1011, with black trituration which could date anywhere in the range mid-late 2nd century through the 3rd century. There are two colour-coated sherds from beakers, one in a red-brown fabric of unknown source, and the other from a rough-cast beaker, probably of 2nd-century date. A single body sherd is in a Parisian type of fabric. Over 24% of the sherds are from Dales ware shell-gritted jars; a further 4.4% are coded as SHEL, where the fragmentary and/or abraded nature of the sherds made certain identification impossible. Dales ware jars are unlikely to appear before the mid 3rd century.

The occasional shell-gritted sherd could be hand-made in the Iron Age tradition, although these continue into the early Roman period. A number of coarser fabrics, some verging on Iron Age tradition types which continue into the Roman period also occur, with the occasional apparently grog-tempered sherd. A grey bowl with a flange from 1164 resembles a bowl from Old Winteringham (Rigby & Stead 1976, fig 75, no 34) dated to the Neronian to early Flavian period, but the type continues to be made well into the 2nd century (ibid., at Old Winteringham: fig 76, no 52; fig 77, no 60; at Winterton, fig 83, nos 82-84, Antonine date). An unusual oxidised flanged dish (dwg 16) from 1578 is likely to be of similar mid to late 2nd

century date, and has been mended by rivetting. Fragments from two lug-handled jars and some narrow-necked jars would fit the same 2nd century range. The flanged bowls or dishes could all date in the later 2nd to 3rd century; there are no definitely very late 3rd century bowls, and this may suggest that the dating extends no further than the mid to late 3rd century.

Two collared rim jars of the type made at the Rookery Lane and Swanpool kilns (dwgs 2 and 12 from 204 and 1192) are likely to date to the later 3rd century, while a wide-mouthed bowl fragment (dwg 7 from 1139) could fit a similar range, with the possibility of slipping into the 4th century.

Possibly the latest sherd is a shell-gritted plain-rimmed dish which was unstratified in Trench 2, the date of which may slip into the 4th century, although there is no strong dating on these vessels in shell-gritted fabric.

CONCLUSIONS

The overall Roman date-range of the assemblage can be estimated at early 2nd century through to the later 3rd century, just possibly into the 4th century. There are no Roman sherds which can be definitely dated to the 1st century. The outside range is Iron Age through to post-Medieval. Only a single sherd likely to be of prehistoric date was found, a rim with scored decoration (dwg 6) from 1109. Ten contexts contained post-Medieval sherds. Given the tenuous dating from small scrappy contexts, the dating emphasis of the assemblage clearly lies in the 3rd century, with over 56% of the contexts dated to the 3rd century, mostly after the mid 3rd century, backed up by over 26% more broadly dated to the 2nd-3rd century.

RECOMMENDATIONS

17 vessels have been selected for drawing to illustrate the material from the site, list attached. The prehistoric sherd should be submitted to a specialist for confirmation of dating.

BIBLIOGRAPHY

Rigby, V. & Stead, I.M., 1976 Coarse pottery, in Stead, I M, 1976, *Excavations at Winterton Roman Villa and other Roman sites in North Lincolnshire, 1958-1967*, 136-190.

Appendix 3: Human Burials Report
(Wendy Booth)

The Human Remains

Four burials were excavated from the site, one (216), during the evaluation phase and the other three,(1004)(1221)(1429), during the ensuing excavation. In addition, several other fragments of unstratified human bone were recovered from the excavation.

Skeleton 216

This individual was recovered from Trench 2 during the evaluation phase of the excavations .

Condition of the Remains

Unfortunately, the majority of the burial had been cut by a later ditch cutting through the burial ditch at right angles, so very little remained of the skeleton. What was remaining was in an extremely fragmentary state, limiting the analytical possibilities, although the condition of the outer surface of the fragments was reasonably well preserved, with only a little root damage.

Sex, Age and Stature of the Individual

The pelvis and the majority of the skull were not preserved, and these being the diagnostically sexually dimorphic areas of the skeleton, it was not possible to assign sex to the individual. The mandible had a fairly rugose appearance, indicating a more marked degree of muscularity in the jaw and throat area, but this is not conclusive enough to indicate sex in itself.

An age of 25-35 years was estimated using Brothwells table of dental attrition. This was supported by the adult appearance of the remaining bones, the full eruption of the teeth, and the full fusion of the epiphyses present.

It was not possible to estimate the stature of the individual due to the complete absence of any long bones.

Palaeopathology and Morphological Traits

The only pathological traits visible on these remaining bones was the occurrence of mild osteophytic lipping on the right articular processes of a fragment of lumbar vertebrae. This is indicative of the normal wear and tear usually seen in the lower spine of archaeological individuals of this age. Morphologically, the only variation present was the double form of the superior articular facets of the atlas vertebrae, which is present in many individuals.

Dentition

The teeth exhibited the indications of wear one would expect from a mature adult. Calculus was present on both the lingual and labial surfaces of all the remaining teeth, masking any enamel hypoplasias which may have been present. The presence of calculus is indicative of poor oral

hygiene, which allows plaque to accumulate on the enamel surface and become mineralised, and is a relatively common feature of most archaeological dentitions. This poor hygiene also encourages the resorption of the alveolar margin of the bone, such as exhibited by this individual. It appears that the margin may have been becoming infected at two sites, the upper right third molar and the upper right canine, due to excessive porosity and roughening of the bone in these places. Anomalies more specific to this individual include a bipartite root formation of the lower left canine, and an unusually large gap of 7.9mm between the upper first incisors. There is also a chip in the enamel of the lower left first molar, which may have occurred post-mortem or peri-mortem, as the dentine is exposed yet there is no evidence of infection as would normally be expected.

Skeleton 1004

Condition of the Remains

The remains are extremely fragmentary, with the pelvis and femurs having suffered longitudinal damage. The surface of the bone does exhibit some root damage and water erosion, although overall the bone is in reasonably good condition despite its fragmentary state.

Sex, Age and Stature of the Individual

It was not possible to conclusively sex this individual, due to the absence of a skull and the fragmentary nature of the pelvis. The sexually dimorphic traits which were present were not diagnostically conclusive, being neither strongly male or female, but with a slight bias towards male. The general aspect of the bones was relatively gracile, suggesting a female, while the femoral necks and heads appeared large and more robust, suggesting a male. It seemed the skeleton was more likely to be that of a male but the evidence was not strong enough be conclusive.

The estimation of the age of this individual was also problematic due to a lack of evidence. The main tool for estimating age, the dentition, was completely absent. The mature appearance of the bones, together with the full fusion of all remaining epiphyses indicated a mature adult. This was supported by the appearance of the auricular surface of the right ilium, suggesting a non-youthful individual, no younger than early thirties. It was decided that it was not possible to assign any age range to this individual other than mature due to the lack of conclusive evidence.

It was not possible to estimate the stature of the individual due to the complete absence of any long bones.

Palaeopathology and Morphological Traits

No evidence for pathological conditions was identified on these remains. The only morphological trait discernible on the remains is the unusually high hiatus level of the sacrum, the sacral

foramen being open inferiorally up to the third sacral vertebra. The usual level is the fifth or fourth sacral vertebrae. This in itself is not especially significant, except that it fractionally increases the exposure of the nerves and blood vessels exiting the sacrum at this point to possible damage through trauma.

Skeleton 1221

Condition of the Remains

The remains of this individual were in good condition, exhibiting only minimal erosion, although the skull and ribs were extremely fragmentary and very few hand and foot bones were preserved. This individual has the most intact remains of the four excavated from this site.

Sex, Age and Stature of the Individual:

It was concluded that this individual was male. This assessment was facilitated by the presence of all the sexually dimorphic diagnostic features. All the pelvic characteristics were strongly male, although the skull was slightly more feminine. The functional aspect of the pelvis makes it a more secure indicator of sex, which, together with the strength of the indications in this area, allows the secure assignment of male sex to the individual.

All the epiphyses from this individual were fully fused, indicating that growth was completed, but in many cases it was still possible to see the lines of fusion around the edges of the plates were fusion was not quite complete, suggestive of an age in the early twenties. The pubic symphysis was also youthful, placing the age at 20-21 years following Todd, and 19.4 years following Suchey and Katz. However, the wear patterns on the molars indicate a greater age of 25-35 years for the mandible and 33-45 years for the maxilla, although this maxilla age is very tenuous, being based on only one tooth, and so should not be taken into account. Considering the possibility of excessive wear to the teeth and taking into account the general poor condition of the dentition it was decided to place the age estimate at 20-25 years, between the two ranges.

The stature of the individual was estimated at 170.3 cms, or 5'8", using the maximum lengths of the right femur and tibia, (Trotter 1970).

Palaeopathology and Morphological Traits

Osteochondritis dissecans was present on both distal femoral articular surfaces. Both femora exhibited one lesion on the medial and one on the lateral condyle, all of the lesions being on the anterior faces of the condyles. In both cases the worst lesion was on the medial side of the lateral condyle, with the lesser lesion being on the lateral side of the medial condyle. This condition is caused by the death of bone tissue from significant obliteration of the areas blood supply, usually as a result of trauma, and is present in the knee in 80% of cases (Roberts and

Manchester 1995). No corresponding lesions were found in the tibiae. Young males are most usually affected, which fits in well with the profile of this individual.

The spine is usually highly indicative of wear and tear in an individual, and, as may be expected in such a young individual, there is minimal osteophytic lipping present in the vertebrae of 1221. The mild lipping which is present is where it may be most expected, the last two lumbar vertebrae and the second to last thoracic vertebrae, where the spine is most under stress. However, ten of the vertebral bodies do exhibit Schmorl's nodes, an unusually high number given the youth of the individual and the good health of the rest of the spine. This may be accounted for by the possibility that the nodes were caused by a single traumatic event placing a sudden load on the vertebral column, damaging the intervertebral discs and allowing the disc contents to exert pressure on the vertebral bodies, thus causing these depressions. Underlying infection, osteoporosis or neoplastic disease may weaken the bone and encourage the development of this condition (Roberts and Manchester 1995), although this seems unlikely in this case. Degeneration of the intervertebral discs may also have contributed.

Morphologically, several variations were present. One of these was the double form of the left superior articular facet of the atlas vertebrae (the right facet being destroyed), and the corresponding double form of the condylar facet on the skull. This is the same trait as exhibited in skeleton 216. Unfortunately, the lack of skull in that individual prohibits a complete comparison. This individual also has a sacral open hiatus level up to the third sacral vertebra, as is exhibited by skeleton 1004. Also exhibited is the double form of the inferior articular surface of the left talus, but unfortunately the right talus was too degraded in this area to see if this trait was also present here. A sacralised fifth lumbar vertebra was also noted. All of these traits are commonly seen in archaeological material. The final anomaly noted in this individual, and slightly more unusual, was an enlarged indent of the lateral proximal corner of both patellae, but this appears to be an exaggeration of a normally occurring feature rather than a morphological trait.

Dentition

The dentition of this individual is unusually poor, with several teeth exhibiting extremely uneven wear, one maxillary molar crown being worn completely down to the root level. Three teeth have chipped enamel, three teeth were lost ante-mortem, seven teeth were carious, one incisor shows evidence of an infection in the root, and one premolar has an abscess. The wear suggests an unusually harsh diet, which could be supported by the presence of the enamel chips, but it must be remembered that this damage may have been sustained post-mortem. Other anomalies include the genetic absence of at least three of the third molars, the lack of surviving maxillary bone making it impossible to be certain if the lack of the fourth third molar is due to genetic non-formation or post-mortem loss. Another genetic anomaly is the malformation of the first left maxillary pre-molar, which is much smaller than is normal and also exhibits extreme wear. The

majority of remaining teeth also have calculus to a mild-moderate degree, the only severe calculus being where it may be most expected, on the right upper molars, in proximity to the salivary glands. Alveolar resorption was present on most margins, and most marked on the left maxilla. Enamel hypoplasias were also noted on five of the mandibular teeth, indicating formation ages of three, four and a half to five and six years. These lines across the enamel are caused by stresses to the body such as serious disease or infection, starvation or trauma, during the formation of the enamel within the jaw, and so can be indicative of childhood well being.

Skeleton 1429

Condition of the Remains

These remains were in relatively good condition, considering the young age at death of the individual, although most surfaces had sustained root damage.

Sex, Age and Stature of the Individual

It was not possible to assign sex to this individual due to its young age, none of the sexually dimorphic traits having developed before death.

Age at death was estimated to be 2 years + or – eight months. All epiphyses were unfused, leaving the partial dentition as the only means of ageing the individual. The immaturity of the skeleton made estimation of stature impossible.

Palaeopathology and Morphological Traits

Damage to the outer table of the cranium was noted, in the form of diffuse, non-localised porosity. Due to the fragmentary and incomplete nature of the bones it was not possible to establish the pattern of this porosity on the vault. It was unclear whether this was a palaeopathological lesion or if the damage was caused by soil erosion. The lack of lesions in the rest of the skeleton discounts a more generalised infection, such as congenital syphilis, and the softness of immature bone makes soil or water erosion the most likely cause. It is also possible that a scalp infection could have caused such porosity, but the passive nature of the porosity makes this unlikely.

Dentition

No dental anomalies were noted, and the attrition of the remaining teeth was very slight.

Unstratified Human Remains

Small Find One

Five fragments of adult cranial vault.

Unstratified

One fragment of adult cranial vault.

Unstratified

Two fragments of left tibia, distal end and shaft, adult.

Four fragments of right tibia, heavily eroded proximal end and shaft, adult.

Two fragments right fibula, shaft only, adult.

Quarry Cleaning

One fragment of left mandible, adult, slightly masculine in appearance. Four teeth present, first and second molars and first and second premolars. Slight calculus on all teeth, no caries present, all at wear level five (Brothwell). Approximate age at death 33-45 years. Considerable facial alveolar resorption, and slight lingual resorption.

Conclusion

Due to the small size of this sample it is not possible to draw any conclusions about the demography or health status of the population from which they come, as the individuals represented here cannot be taken as representative of the population as a whole. Any conclusions must be limited to this particular skeletal sample.

It was not possible to draw any conclusions about the possible cause of death in any of these cases, except that it was most likely the result of a fast acting pathogen. This would not have given the skeleton enough time to react to the infection before the victim was killed, as is often the case. In general, all of these individuals exhibited the degree of degeneration of bone condition and general health which we have been led to expect from archaeological material of this nature, that is, people who led more physically demanding lives than ourselves and ate coarser, less processed food.

It is possible that some of the unstratified fragments of human bone are from the excavated burials, their removal being due to disturbance of the burials by later ploughing etc. but, naturally, this cannot be proven.

Wendy Booth

Lindsey Archaeological Services

References

Brothwell, D. R., 1981, *Digging Up Bones*, London, British Museum (Natural History).

Roberts, C., and Manchester, K., 1995, *The Archaeology of Disease*, Stroud, Alan Sutton Publishing Group.

Suchey, J.M., and Katz, D., 1986, Age Determination of the Male Os Pubis, *Am. J. Phys. Anthrop.*, 69: 269.

Todd, T.W., 1920, Age Changes in the Pubic bone. I. The Male White Pubis. *Am. J. Phys. Anthrop.*, Washington, **3:** 285-334.

Trotter, M., and Gleser G.C., 1952, Estimation of Stature from Long Bones of American Whites and Negroes, *Am. J. Phys. Anthrop.*, Washington, (n.s.) **10:** 463-514.

Appendix 4: Environmental Report
(James Rackham)

Barrow on Humber – BOH99

Environmental Archaeology Report

Introduction

Excavations were conducted by a team from Lindsey Archaeological Services on the site of an extension to an existing water treatment works at Barrow on Humber have uncovered a number of Romano-British features and a single pit, possibly of Bronze Age date. During the course of the excavations a series of samples were taken from the excavated deposits (Table 1) and a small collection of animal bones collected by hand. The site lies on the chalk wolds.

Table 1: Barrow on Humber. Samples taken for environmental analysis

sample no.	context	sample vol. l.	sample wt kg	feature type	Date
1	1096	36	48.5	Fill of small pit	Rom.
2	1139	26	41.5	Fill of linear	Rom.
3	1166	29.5	41.75	Fill of linear	Rom.
4	1140	35	50	Fill of linear	Rom.
5	1138	27	38.5	Fill of linear	Rom.
6	1196	28	40.5	Fill of pit	Rom.
7	1575	26	37	Fill of linear	Rom.
8	1563	18.25	28	Undefined spread	Rom.
9	1169	26.25	40	Fill of linear	Rom.
10	1470	27	38.5	Fill of pit	Rom.
11	1510	19	26	Fill of pit	Rom.
12	1377	9	12.5	Fill of small pit	BA/Rom.
13	1192	28	39	Fill of linear	Rom.
14	1485	8	10	Fill of tree bole	Rom.
15	1358	17	23.5	Fill of linear	Rom.
16	1532	29	40	Fillof linear	Rom.
	204	4	4.5	Fill of linear	Rom.
	302	4	4.5	Fill of linear	Rom.
	404	4	4	Fill of linear	Rom.
	410	4	4	Fill of linear	
	213	4	4.5	Fill of linear	Rom.
	1153	10	12	Possible grain drier	Rom.
	1154	3	4.5	Rake out type deposit of grain drier	Rom.
	1208	1.5	1.5	Clay lining of grain drier	Rom.

Methods

The soil samples were processed in the following manner. Sample volume and weight was measured prior to processing. The samples were washed in a 'Siraf' tank (Williams 1973) using a flotation sieve with a 0.5mm mesh and an internal wet-sieve of 1mm mesh for the residue. Both residue and float were dried and the residues subsequently re-floated to ensure the efficient recovery of charred material and mollusc shells. The dry volume of the flots was measured, and the volume and weight of the residue recorded.

The residue was sorted by eye, and environmental and archaeological finds picked out, noted on the assessment sheet and bagged independently. A magnet was run through each residue in order to recover magnetised material such as hammerscale and prill. The residue was then discarded. The float of each sample was studied under a low power binocular microscope.

The presence of environmental finds (ie snails, charcoal, carbonised seeds, bones etc) was noted and their abundance and species diversity recorded on the assessment sheet. The float was then bagged. The float and finds from the sorted residue constitute the material archive of the samples.

The individual components of the samples were then preliminarily identified and the results are summarised below in Tables 2 and 3. Subsequently material was selected from the samples for further analysis and submitted for specialist identification.

Results

All the soil samples have some level of recent contamination. This takes the form of recent plant rootlets, intrusive uncharred seeds of *Chenopodium* (goosefoots), *Galium* spp. (bedstraw), *Polygonum* sp. (knotweeds), *Sambucus* (elder), and other taxa, and many shells of the burrowing blind snail, *Cecilioides acicula*, and a little modern straw and chaff, presumably blown in prior to sampling. Apart from the rootlets all this material is very small and has probably travelled down through the soil as a result of soil processes, worm activity, root voids and burrowing. This poses a problem in that single charred seeds or small snails cannot be guaranteed to be contemporary with the deposits, but where assemblages are substantial this potential contamination is insignificant.

Table 2: Archaeological finds from the assessed samples

Sample no.	context	sample vol. l.	residue vol. l.	pot #/wt	fired clay wt. *	Ham'r scale	bone wt	Other
1	1096	29	1.2	6/48	<1		21	Pb-corroded lump, 3xsmoothed stones, 10g coal
2	1139	26	11.8			3	1	
3	1166	29.5	3.25	3/6		3	17	2xflint flakes
4	1140	35	2.25	2/16		11	4	1xburnt flint
5	1138	27	8		7	4	3	A little slag - <1g
6	1196	28	5.5	2/9			17	
7	1575	26	9	1/11		1	9	
8	1563	18.25	2.25	2/23		5	37	1xflint flake
9	1169	26.25	1.25			3	2	1xflint flake
10	1470	27	5?			1	42	
11	1510	19	4				<1	4 g brick/tile?
12	1377	9	1.3			5		
13	1192	28	9.1			2	4	4g brick/tile?, 1xflint flake
14	1485	8	1.2			2		
15	1358	17	6.1	1/47		2	1	
16	1532	29	7.2	½		1	9	
	204	4	1.2	1/7		1	4	
	302	4	1.4			1	3	
	404	4	0.9				1	
	410	4	0.9			4		
	213	4	0.5			1		
	1153	10	0.45					
	1154	3	0.85			1		
	1208	1.5	0.125			3		

#/wt - no sherds/weight in g.

* sorted from >7mm fraction of residue only

Archaeological finds from the samples comprise pottery, fired clay, animal bone, a little marine shell, occasional flint flakes, burnt flint, small fragments of brick/tile, corroded lead, flakes of hammerscale and a little slag (Table 2). The samples with the highest concentration of occupation rubbish are located in the southern half of the site, those to the north produced relatively little debris. The consistent presence of hammerscale, although it does not occur with any abundance, suggests that iron smithing was probably being carried out at the site, but not within the excavated area.

The environmental material shows a similar southerly distribution across the site (eg. Fig. 1) suggesting that occupation is most likely to be located to the south of the excavated area. A little bird eggshell, small vertebrate bones, charcoal, charred cereals, weed seeds and snail shells form the bulk of the environmental evidence from the samples (Table 3). Few of the samples show very high concentrations of charred material and even densities of charcoal are very low. Few of the samples produced more than one charred cereal grain per litre of sediment (Fig. 1) and much of this material is likely to have been blowing around the settlement. Small quantities of chaff and charred weed seeds accompanied the grain, but only in one sample <6> did this component attain any significance. Context 1377, a pit fill and the only context possibly not of Romano-British date, since Bronze Age ceramics were found in its fill, produced no archaeological finds other than a few flakes of hammerscale and only one charred weed seed.

Two features deserve specific comment.

Sample <6>, fill 1196 of a pit.
This pit fill contains the second highest concentration of charred remains from the site (Table 4). A relative abundance of charred cereal grain and chaff suggests that it might have received some burnt crop processing waste (see below), otherwise the debris reflects the general rubbish typical of the other samples.

contexts 1153, 1154 and 1208. Possible corn drier.
These three contexts comprise elements of a structure interpreted as a possible corn drier. 1208 is identified as a clay lining to the feature, 1153 as the main fill, and 1154 a rake out type of deposit. Apart from a few flakes of hammerscale the samples produced no archaeological finds, they did however contain charred cereals and weed seeds (Table 5). 1208 was the richest sampled context on the site with a density of well over 100 charred grains per litre of sediment. The high density of cereal grain in this deposit suggests that 1208 may be a primary fill rather than a clay lining. The relatively high concentration of cereals in this deposit tends to confirm the interpretation of the feature. A lack of chaff in the samples implies that cleaned grain was being dried in the feature.

The presence of one or two eel bones and vertebrae of other small fish in context 1532 implies that fish were eaten at the site and such finds are relatively rare on rural Romano-British sites. The samples produced a few fragments of cattle, sheep and pig bone, with a small bird ulna in 1470 perhaps also being part of the human diet. Cat, dog and house mouse suggest other residents at the settlement.

The palaeoenvironmental evidence from the samples is limited to a few small vertebrate remains and a relative abundance of terrestrial snails. Amphibian bones were common, with

field vole and water vole present. Snake and mole bones occur in one sample each. The snails, although affected by preservation, were locally abundant in some samples (Table 3). Shells of the blind snail, *Cecilioides acicula*, were particularly common, but probably represent more recent snails that burrowed into the deposits.

Table 3: Environmental finds from the assessed samples

sample no.	cont.	sample vol. l.	flot vol. ml.	char -coal	charr'd grain	charr'd chaff	charr'd seeds	snails	egg-shell	small vert.	Description
1	1096	29	7	3	2		2	5	1	1	barley, wheat, oat, pulse, pig, sheep, mouse, field vole, frog/toad
2	1139	26	3	2	2		1	3			wheat, barley, burnt bone
3	1166	29.5	4	2	2	1	1	3		1	wheat, barley, pig, sheep, house mouse, frog/toad
4	1140	35	10	2	2	1	1	5	1	1	wheat, barley, pulse, oyster, cockle, sheep, mouse, rodent, snake, burnt bone
5	1138	27	8	2	1	1	1	5		1	wheat, bean, sheep, frog/toad
6	1196	28	15	3	4	3	2	3		2	wheat, barley, water vole, field vole, mole
7	1575	26	6	2	1	1	1	4		1	wheat, barley, pulse, field vole, mole, frog/toad
8	1563	18.25	5	2	2		1	2		1	wheat, cattle, mouse
9	1169	26.25	4	1	1	1	1	3		1	wheat, oat?, field vole, frog/toad
10	1470	27	7	1	1	1	1	5		1	wheat, cattle, small bird, frog/toad
11	1510	19	<1	1				1			
12	1377	9	3	2			1				
13	1192	28	11	1	1	1	1	4		1	wheat, oat, sheep, frog/toad
14	1485	8	<1	1	1		1				wheat?
15	1358	17	5	1	2		1	2		1	wheat, dog?, frog/toad
16	1532	29	7	1	1	1	1	5		1	wheat, barley?, rodent, frog/toad, eel, other small fish
	204	4	<1	1	1			2			sheep
	302	4	<1		1						wheat, sheep
	404	4	<1	1	1	1		2		1	wheat, oat, cat, frog/toad
	410	4	<1	1			1				
	213	4	<1	1							
	1153	10	<1	1	2		1	2			barley
	1154	3	1	1	2		1	3			wheat?, barley
	1208	1.5	4		4		2	2			wheat, barley, oat?, pulse

* frequency – 1=1-10; 2=11-50; 3=51=150; 4=151-250; 5=>250 items

The charred plant remains and snails from some of the samples were submitted for further analysis.

The Charred Plant Remains
John A Giorgi

Introduction
On the basis of the assessment results, 19 of the samples were selected for the analysis of the charred plant remains. All are dated to the Romano-British period and most of them derive from linear features associated with the field systems, with a few samples from features, pits and spreads (see Fig. 1).

The charred plant remains from the 19 samples were separated from the flots and presented to the author for analysis. Several flots, which had produced the richest charred plant assemblages (samples <1>, <3>, <4> and <6>), were quickly scanned for additional information. The charred plant remains were identified using a binocular microscope together with modern and charred reference material and reference manuals. All the plant items were quantified with the exception of small cereal grain fragments (below 2mm) , indeterminate seeds and charcoal, the quantities of which were estimated.

Results

The results are shown in Tables 4 and 5. The samples collectively produced a fairly small assemblage of identifiable charred plant remains with the quantified remains totalling 807 plant items. Cereal grains made up the greater part of the individual assemblages representing 83% of the quantified remains together with a few chaff fragments (10%) and a very small number (7%) of seeds from wild plants and a few pulses. The condition of the charred plant material was very poor and the majority of the material was too fragmentary to be identified. The flots also included some intrusive material in the form of modern roots and a small number of uncharred seeds of bedstraw (*Galium* spp.), goosefoots/oraches etc. (*Chenopodium/Atriplex* spp.); modern hexaploid wheat rachis fragments and straw were found in sample <4> from 1140. The results will be discussed in more detail under the following headings - cereals, pulses, flax, wild plants.

Cereals

Cereals were represented mainly by grains plus a few chaff fragments. 532 or 80% of the cereal grains were too poorly preserved to be identified although the size and morphology of the grains suggests that they belong to the large seeded cereals, either wheat (*Triticum* spp.) or barley (*Hordeum* spp.). Of those cereals that could be identified, wheat and barley were equally well represented with 62 grains (9%) and 70 grains (10%) respectively.

Most of the wheat grains (74%) could not be identified, although the well-preserved grains suggested the presence of both glume wheats and free-threshing wheats. Glume wheat grains are difficult to separate although a small number of spelt (*Triticum spelta*) grains and a single grain of emmer (*T. dicoccum*) were identified. Most of these grains, however, were placed in an indeterminate category of either spelt or emmer. The presence of glume wheats was confirmed by the recovery of wheat glume bases and a few spikelet bases with 16% of the better preserved glume bases being identified as spelt. The morphology of the free-threshing wheat grains suggest that they belong to free-threshing bread wheat (*Triticum aestivum* s.l.). A number of the better preserved barley grains included evidence of the lemma and palea adhering to the grain and both twisted and straight grains which indicates the presence of six-row hulled barley. Just five oat (*Avena* spp.) grains (1% of all grains) were identified. It was not possible, however, to establish whether these were wild or cultivated oats because no diagnostic oat floret bases were present in any of the samples.

These cereals have previously been recovered as archaeobotanical remains from urban and rural sites in Roman Britain. The relative importance of the different cereals at the site is similar to previous results which show that spelt wheat and barley are usually the best represented grains during this period with free-threshing wheat appearing less frequently and being abundant at very few sites (Greig 1991, 309). Oat grains are rare finds on Romano-British sites and probably represent wild rather than cultivated oats, possibly growing as cereal weeds.

These cereal grains may have been used for bread, porridge, gruel and cakes (Wilson 1991, 234). The Romans made a number of different types of bread using the cereal types found at the site. For instance, *artophites* was a light leavened bread made from the best wheat flour, probably bread wheat, while a gruel, known as *puls* or *pulmentus*, was made from barley or spelt wheat (Renfrew 1985, 22). Barley may also have been used for animal fodder, particularly for horses, and possibly for brewing. None of the barley grains, however, had germinated, generally a sign of use for brewing.

Pulses

Pulses were represented by 21 seeds although the majority of these could not be reduced to genus or species because of their fragmentary condition and the absence of seed coats. Indeed, most of these seeds were very small and rounded and could be simply wild species, possibly cereal weeds. The larger unidentifiable fragments may belong to cultivated species although only four cotyledons from one sample were tentatively identified as the cultivated species, horse/broad bean (cf. *Vicia faba*). Beans are usually poorly represented as charred remains on Roman sites (Greig 1991, 311) although they were used in Roman cooking being a nutritious food and high in protein (Renfrew 1985).

Table 5: The charred plant remains from 302, 404 and the corn drier

	Context	302	404		1153	1154	1208
	Sample	-	-		-	-	-
	Vol. soil (l)	4	4		10	3	1.5
	Flot size (ml)	<1	<1		<1	1	4
Cereal grains							
T. dicoccum/spelta	emmer/spelt wheat						2
Triticum sp(p).	wheat	2					1
cf. *Triticum* sp(p).	?wheat		1			1	7
Hordeum sativum L.	barley				2	3	8
cf. *H. sativum*	?barley				1	3	20
Avena sp.	oat		1				
cf. *Avena* sp.	?oat						1
indeterminate cereals	fragments (>2mm)	2	5		9	17	144
Cereal chaff							
Triticum sp(p).	wheat glume bases		1				
Other plants							
Fabaceae indet.	small rounded seeds						5
Fallopia convulvulus (L.)A.Love	black bindweed						2
Rumex spp.	docks						2
Polygonaceae indet.	-						1
Euphrasia/Odontites spp.	-						4
Tripleurospermum maritum (L.) Koch	sea mayweed				1		3
Eleocharis palustris/uniglumis	spike-rush						1
Cyperaceae	-					2	
indet. seeds	-				+		++
charcoal fragments(small)	-		+		+	+	
total number plant items		4	8		13	26	201
density of items per litre		1.0	2.0		1.3	8.6	134

Key: + = 1-10 items; ++ = 11-50 items; +++ = 51+ items

Wild plants

The other botanical material in the charred assemblages consisted of a small number of seeds from a range of wild plants. Most of these seeds, however, were either too poorly preserved to be identified or could only be identified to genus or family level which limits ecological interpretation. The habitat information is taken from *The Flora of the British Isles* (Clapham *et al* 1987). Species from the Polygonaceae family were relatively well represented although only black bindweed (*Fallopia convulvulus*), a plant of both waste places and arable ground, was identified to species, while docks (*Rumex* spp.), which grow in many habitats, were also identified. Another disturbed ground plant was identified in one sample, sea mayweed (*Tripleurospermum maritimum*), with the subspecies *inodorum* growing in arable ground and in waste places. The only other plant reduced to species was represented by a single seed of ribwort (*Plantago lanceolata*), which grows in grassy places on neutral and basic soils. Grasses (Poaceae) were represented by a few seeds of brome (*Bromus* spp.), a common arable weed, and small indeterminate grass seeds while there were a few Cyperaceae seeds including spike-rush (*Eleocharis palustris/uniglumis*), a wetland plant. The association of these plants with the cereal grains suggests that they are arable weeds incidentally harvested with the cereal crops.

Discussion

The internal composition of individual charred plant assemblages from the samples may be examined to provide potential information on the activities that produced the remains. There was little significant difference in the range and proportions of different categories of plants between the samples from the site other than in the quantity of the remains. The seed density of the quantified remains ranged from 0.1 to 134 items per litre of soil although it was generally very low with an average of just over 2 items per litre. Only the sample from 1208 produced a high density of 134 items per litre of soil (see Tables 4 and 5). All the samples were characterised by mainly poorly preserved cereal grains of wheat and barley, with significantly smaller quantities of wheat chaff fragments and weed seeds. The widest range of wild plants was represented in 1208 from the possible corn drier. The charred plant assemblages represent the residues from almost fully processed cereals, which may have become charred during cooking or possibly drying in the 'corn drier' before storage or milling. The poor condition of the grains suggests that they were subjected to severe heat during the carbonisation process. One context, 1196, contains a higher chaff component than the other samples and therefore probably includes debris from earlier stages of crop processing.

Terrestrial snails

The terrestrial snails were identified and counted from a number of the samples (Table 6). The bulk of the shells have been identified as taxa characteristic of open country and calcareous grassland, with shells of the genus *Vallonia* dominating throughout the samples, with a strong catholic element, particularly *Hygromia hispida* a taxon that Evans (1972) notes as especially abundant in meadows and marshes. Densities were not high (Table 6) and the condition of many of the shells was relatively poor.

There are minor variations in some of the contexts. A few shells of shade loving taxa are present in contexts 1140, 1575 and 1192. All three of these are ditch fills and may indicate that the ditch sides carried sufficient vegetation to afford the required shade. Context 1470 produced a fauna that included a wetland and marsh element and a particularly high *Vertigo* sp. count. Unless this fauna was introduced with vegetation thrown into the pit it indicates a

feature that may have had temporary standing water and locally marshy conditions with a good vegetation cover, the occurrence of *Vallonia pulchella* indicating wet or damp conditions in the grassland. It seems likely that much of this fauna was deposited in the pit after its period of use. The ditch fill 1192 is in contrast lacking any significant marshy element, as are most of the ditches. These must have been relatively dry and may have lacked any great vegetation cover or hedging on their banks. The complete lack of shells of *Vertigo* in 1192 and the occurrence of *Truncatellina cylindrica* suggests that this ditch had dry exposed banks probably with an incomplete vegetation cover.

Table 6: Molluscan taxa recorded from the samples

Sample	1	2	4	5	6	7	8	9	10	13	14	15	16
Context	1096	1139	1140	1138	1196	1575	1563	1169	1470	1192	1485	1358	1532
Open country													
Cecilioides acicula	+++	+++	+++	+++	++	++	++	++	+++	++	+	++	+++
Helicella sp.	3	2	9	2		3		5	2	14			2
Vertigo pygmaea									28				
Vertigo sp.	13	6	2						57			1	1
Truncatellina cylindrica										6			
Pupilla muscorum		1	1			5		2	7	7	1	1	1
Vallonia costata				2		9		2	2	14	1	1	
Vallonia excentrica	7	5	7	2	2	5	6	4	13	17	1		3
Vallonia pulchella				6					10	2			
Vallonia sp.	14	7	24	7	3	7		8	39	22	4	3	8
Catholic													
Hygromia hispida	4	2	17	7	3	58	2	3	21	84	2	10	4
Helix hortensis/nemoralis				1						5			
Helix sp.				1		1			1	2			
Cochlicopa lubrica									10				
Cochlicopa sp.	2	2	2			1			5	2	2		
Shade loving													
Discus rotundatus						1							
Oxychilus cellarius		1	2										
Oychilus alliarus								1					
Oychilus sp.			3	1		2	1			9			
Retinella nitidula						2							
Retinella sp										1			
Clausilia sp.										1			
Vitrea crystallina				1		1		1		1			
Acanthinula aculeata										2			
Punctum pygmaeum										10	1		
Columella edentula						1							
Marsh/Aquatic													
Vertigo angustior									2				
Vertigo antivertigo									5				
Carychium cf. minimum		1	1						15	3			
Lymnaea truncatula	2	1							12				
Planorbis leucostoma			1						1				
Shells per litre of sediment *	1.2	1.1	2	1.1	0.3	3.7	0.5	1	8.5	7.2	1.5	0.9	0.7

* excluding shells of *Cecilioides acicula*; habitat groupings broadly taken from Evans, 1972; Macan 1977; Ellis 1969; Cameron and Redfern 1976

The fairly dry open landscape suggested by the majority of the snails from the samples makes the assemblage in 1470 a significant contrast and why this feature remained wetter than the other sampled features on the site may have had something to do with its function or the immediate sub-soil.

Excavated Animal Bone

A small collection of animal bones was made during the excavation (Table 7) from a range of features. The bones have been identified and recorded following the procedures of the Environmental Archaeology Consultancy (see attached Key) and the catalogue is attached to this report.

The preservation of the bone was generally good although the calcareous soils have resulted in material lacking any organic component and the bone is brittle, with over 36% of the recorded fragments having been broken into between 2 and 20 pieces during excavation and subsequent processing. One cattle skull was severely fragmented into over 50 pieces, although much of this fragmentation must have occurred in the soil. Although fragmentation is quite high this is not severe and the fragmentation index of 0.93 (total number of zones/total number of recorded fragments) suggests a lower level of fragmentation than many rural sites. The damage to the sheep/goat bones appears to have been much greater than that to the cattle, horse and pig bones, which have a much higher number of zones relative to recorded bone fragments (Table 7). This is likely to have lead to an under-representation of sheep, relative to cattle, pig and horse in the recovered sample, a conclusion supported by the fact that sheep fragments were identified from seven of the soil samples while pig and cattle were only recorded from two (Table 3). Dogs may have had some impact on this fragmentation and loss since 10% of the bone fragments carried evidence of gnawing.

Table 7: Hand excavated animal bones

	No.fragments	No. zones
Horse	7	15
Cattle	57	81
Cattle size	33	7
Sheep/goat	15	9
Sheep size	9	0
Pig	3	7
Dog	3	3
Unidentified	3	0

The sample is too small for any extended analysis, but cattle clearly dominate the assemblage. Dental data indicates only adult cattle are present but the epiphyseal evidence provides single bones of a calf and an immature beast as well, and two other bone fragments probably derive from calves. The few sheep bones and teeth are dominated by mandibles and tibiae, a pattern typical of assemblages that have suffered scavenging and taphonomic loss. The few dentitions indicate sub-adult and adult animals. Even the pig mandibles surprisingly indicate adult animals (see attached catalogue) since this species is characteristically slaughtered when young. It is possible that the juvenile elements of the original assemblage have been lost to dogs and other taphonomic processes.

There are clearly significant biases in the small collection recovered and it would be inappropriate to extend this discussion into interpretation of the husbandry of the stock on site. That animals are being bred here is evident from the burial of an adult sheep skeleton in context 1540. Twenty two fragments of the posterior half of the animal are present, and presumably the anterior half and spine were left in the section. 1166 included the humerus,

radius, ulna and metacarpus probably all from the same front leg of a cow, and more of this animal may have been present in the unexcavated deposits of the ditch.

Discussion

There is little industrial evidence from the samples but the consistent occurrence of hammerscale suggests iron smithing on site, although contamination from more recent farrier activity is not impossible. Otherwise the bulk of the environmental and sample evidence is suggestive of domestic refuse from occupation on the site. One context may include material from the earlier stages of crop processing, 1196, but the remainder of the contexts are more typical of cleaned crops charred, perhaps during drying prior to storage or milling. The environmental evidence supports the conclusion that 1153 is a corn drier.

These charred plant remains show that barley and wheat (including bread wheat and spelt) were crops used on the site possibly together with horse bean, and perhaps other cultivated pulses. The few oat grains are probably cereal weeds and the single grain of emmer might conceivably derive from earlier activity on the site, although it might also have been a weed in the spelt crop. The remaining part of the charred assemblages can provide very little detail on crop husbandry or processing at the site although the wild plants are probably also arable weeds.

The animal bone assemblage is evidently biassed by taphonomy and scavenging, and although cattle bones predominate, with sheep and pig significantly less abundant, sheep at least are probably under-represented in the assemblage. Horse were used at the site and cats and dogs kept by the inhabitants. A few fragments of oyster and cockle indicates trading with the coast, but the few eel and other fish bones probably reflect fish caught or trapped from the local streams. The tendency for the debris in the samples to be at a greater concentration in the southern half of the site suggests that the main focus of the settlement may be to the south of the excavated area, and much of the charred material may have been incidentally incorporated into the various deposits as a result of being blown around the site. There are two foci of specific activity concerned with the crops. A small waste component possibly from an early stage of crop processing in 1196 and evidence for drying of a largely cleaned cereal crop in corn drier 1153. The site presumably represents part of a small mixed farming settlement.

House mice inhabited the buildings while field voles, water voles, snakes and amphibians utilised the ditches, and the voles may have scavenged grain and other food from around the settlement. The landscape in the immediate vicinity of the excavated area appears to have been open calcareous grassland and the field ditches show little evidence of having been wet or even particularly damp.

Acknowledgments

We should like to thank Alison Foster, Jeremy Dubber and Jeremy Mordue for the sample processing.

Bibliography

Cameron, R.A.D. and Redfern, M. 1976 *British Land Snails.* Linnean Soc. Synopses of the British Fauna No. 6

Clapham A., Tutin T., and Moore D. 1987 *Flora of the British Isles. 3rd edition.* Cambridge University Press.

Ellis, A.E. 1969 *British Snails*. Clarendon Press

Evans, J.G. 1972 *Lands Snails in Archaeology*, Academic Press

Greig J. 1991 The British Isles, in W. van Zeist, K. Wasylikowa, K-E. Behre (eds) *Progress in Old World Palaeoethnobotany*, Rotterdam, 229-334.

Macan, T.T. 1977 *A Key to the British Fresh- and Brackish-water Gastropods*. FBA Scientific Publication No. 13.

Renfrew J. 1985 *Food and Cooking in Roman Britain. History and Recipes* (English Heritage).

Van der Veen, M. 1989 Charred grain assemblages from Roman-period corn driers in Britain. *The Archaeological Journal*, 146 (1989), 302-319

Williams, D.1973 Flotation at Siraf, *Antiquity*, 47, 198-202

Wilson C.A. 1991 *Food and Drink in Britain. From the Stone Age to Recent Times*. Penguin. Harmondsworth.

Appendix 5: Report on Prehistoric Pottery
(Carol Allen)

BARROW ON HUMBER - BOH 99

NGR TA 06002040

REPORT ON PREHISTORIC POTTERY

Summary

A total of 13 sherds weighing 235 g, representing two partial Beaker pots, were found in a small pit on this site. The fabrics of the two vessels are different but both were probably locally made.

The base and part of the rounded rim of Pot 1 survives, with fingernail decoration. The vessel is in an unabraded condition with fresh breaks, suggesting that it had been buried and protected, perhaps as a special deposit, in a pit until recent times. The undecorated base of pot 2 survives, but the original context is unclear.

Methodology

The pottery was examined with a X4 binocular microscope, and was divided into fabric groups. The pottery was counted, weighed and recorded.

Fabrics

Two fabric types were apparent in the sherds.

1 SHMC/QUSF - fabric contains a moderate amount (10 to 19%) of moderately sorted and sub-angular shelly/limestone material of coarse (modal size 1.00 to 3.00 mm) size, together with a moderate quantity of moderately sorted sub-rounded quartz of fine (below 0.25 mm) to medium (0.25 to 1.00 mm) size - pot 1.

2 GNSC/QUSF/VOSM - fabric contains a sparse amount of poorly sorted, angular pieces of granite of coarse and very coarse (over 3.00 mm) size, together with a sparse amount of well-sorted sub-rounded fine quartz, and a sparse quantity of poorly sorted sub-angular medium sized voids - pot 2.

Source

The granite, shell and quartz inclusions seen within these two fabrics could be found in the glacial drift of the area, which is a chalky boulder clay (Kent and Gaunt 1980, 124: Madgett and Catt, 1978). It seems quite likely therefore that all the pottery could have been made locally. However, the two fabrics are quite different in type and quantity of inclusions, and the materials for each must have intentionally been taken from a different although fairly local source.

The surface of fabric 1, pot 1, has a smooth appearance with obvious white inclusions on the surface. Fabric 2, pot 2, has a different appearance with a smooth but slightly vesicular

surface. It seems likely that the sparse voids are the result of leaching out of small amounts of chalky material found in the boulder clay, although thin section examination would be required to confirm this, and to ascertain the fabric types.

Form and Decoration of the Pottery

Pot 1: Fabric 1:
A Beaker vessel with a wall thickness of about 10 mm, and a base diameter of about 80 mm. Sherds join and form much of the base and some of the lower body and joining sherds also form part of the rounded rim. The pot is decorated with fingernail impressions in pairs in vertical rows. The exterior is deep orange in colour, well fired with an unoxdised core. The condition of the pot is very fresh and unabraded. Often such pots have been called `domestic' ware, but it is uncertain if there is a true division between the fine and slightly coarser wares.

Pot 2: Fabric 2:
A Beaker vessel with a wall thickness of 6mm, and base diameter of about 75 mm. Sherds join and form part of the base and lower body. The pot is undecorated, and slightly abraded.

Dating, Context and Comparisons

Most Beaker pottery was in use during the second half of the 3rd millennium BC and the early part of the 2nd millennium BC (Kinnes *et al* 1991).

The sherds were found in the bottom fill of a small pit (1377), although the area had been disturbed in the past. Pot 1 is in a fresh, unabraded condition with clear decoration, and all the breaks are fresh. Thus the vessel had been protected and only recently disturbed, suggesting that it may have been buried in a pit. No burial is known but it seems likely that this pot was specially deposited. Pot 2 is more abraded and the breaks above the joining sherds are not fresh, so the context of this vessel is unclear. However, the vesicular nature of the fabric suggests that this vessel would not have survived long on the surface, and so this too could have been a pit deposit.

Beaker pots, with fingernail decoration, are well-known, for example as handled vessels in Lincolnshire (Clarke 1970, Denton 1059: Gibson 1982, Risby Warren, RW6). Fingernail decorated pots, sometimes called `domestic' or `rusticated' are also known on the Fen Edge (Bamford 1982). Pot 1 is therefore a typical and well recognised style of this type of pot in the region.

Pot 2 is likely to have been decorated above the base, but as this part of the pot does not survive, this cannot be compared.

Catalogue of Prehistoric Pottery

Context	Sherds	Weight	Fabric	Pot	Type & Decoration
1377	3	144 g	1 SHMC	1	Beaker, finger nail dec, joining base sherds, wall 10mm, base 80mm diameter
1377	4	43 g	1 SHMC	1	Same pot, joining rim sherds, fingernail decoration, rounded rim, fresh and unabraded
1377	5 + 1 frag	48 g	2 GNSC	2	Joining base sherds of undecorated Beaker pot, with thin wall 6mm, base diameter 75 mm, orange & oxidised pot
Totals	13	235	1 & 2	2	-

Catalogue of Illustrated Pottery

Pot 1: Beaker vessel, base and rounded rim sherds, decorated with pairs of fingernail impressions in vertical rows; fabric SHMC/QUSF, unabraded, context 1377.

Bibliography

Bamford H M, 1982. Beaker Domestic Sites in the Fen Edge and East Anglia.

Clarke D L, 1970. Beaker Pottery of Great Britain and Ireland.

Gibson A M, 1982. Beaker Domestic Sites. BAR British Series 107.

Kent P and Gaunt G D, 1980. British Regional Geology,Eastern England from the Tees to the Wash.

Kinnes I, Gibson A, Ambers J, Bowman S, Leese M and Boast R, 1991. Radiocarbon Dating and British Beakers: The British Museum Programme, Scottish Archaeological Review 8, 35 - 78.

Madgett P A and Catt J A, 1978. Petrography, stratigraphy and weathering of Late Pleistocene tills in East Yorkshire, Lincolnshire and north Norfolk, Proceedings of the Yorkshire Geological Society 42, 16-90.

Carol Allen, 24 July 2000

Appendix 6: Metalwork from Barrow on Humber
(Jenny Mann)

METALWORK FROM BARROW ON HUMBER (BOH99)

Four iron objects and a single copper alloy piece were examined, together with the relevant X-ray plates; all of the ironwork is heavily encrusted with soil and corrosion products, displaying surface cracking, and has undergone remedial treatment by the Lincoln City and County Museum Conservation Laboratory to prevent further deterioration. A fifth iron object (<1>) had not been submitted to the Conservation Laboratory and no X-ray was therefore available for viewing. This piece is in similarly poor condition to the rest of the ironwork, showing clear evidence of surface cracking, lamination and fragmentation; it requires X-ray and remedial treatment as soon as possible.

All finds were recorded on standard finds cards to basic archive level and sketches made where necessary. Three of the iron objects are clearly nails and all could be of relatively recent date (no context information was received); one of these - <4> - is almost certainly a late post-medieval or modern floorboard nail. A small tapering fragment <11> resembles the tip of a blade but appears to be of plano-convex section; investigative conservation would aid more accurate identification but is not recommended because the piece appears to be unstratified (context 'U/S').

Only two pieces can be more accurately identified and dated. The first is a fragmentary iron knife <1> that is almost certainly Roman in date; its rod handle probably terminates in a loop (X-ray should confirm this; see above) and the cutting edge of the fragmenting blade appears to be heavily worn/damaged. Similar knives are discussed by Manning (1985, 114: Type 11b).

The second piece is of copper alloy and, although now torn and squashed out of shape, it is clearly recognisable as the upper half of a 'rumbler' bell of medieval or later date, its suspension loop still in place. The bell was made in two halves, both made from thin sheet metal hammered to hemispherical shape. A thin strip of folded metal was pushed through a hole cut in the upper half of the bell to form the suspension loop, its ends pushed outwards within the body of the bell. A loose (iron) pea was inserted before the two halves were soldered together along a central horizontal seam, along which the bell subsequently split. Bells of this type were commonly used from the (late) 13th to the 16th century, both for animals and as costume fittings (see, for example, Margeson 1993, fig 162, 1759); the size of this piece perhaps suggests its use as an animal bell.

References

Manning, W H, 1985 *Catalogue of the Romano-British Iron Tools, Fittings and Weapons in the British Museum*

Margeson, S 1993 *Norwich Households: The Medieval and Post-Medieval Finds from Norwich Survey Excavations 1971-1978, East Anglian Archaeology*, **58**

jem
06/10/00

BOH99: Registered Finds List

Context	Finds No.	Material	Object	Date/Comments
-	1	Iron	Knife	Roman
1273	4	Iron	Nail	Post-med/mod
U/S	5	Iron	Nail	
U/S	6	Copper Alloy	Bell	Med-EPmed; rumbler
1323	10	Iron	Nail	
U/S	11	Iron		

The Figures

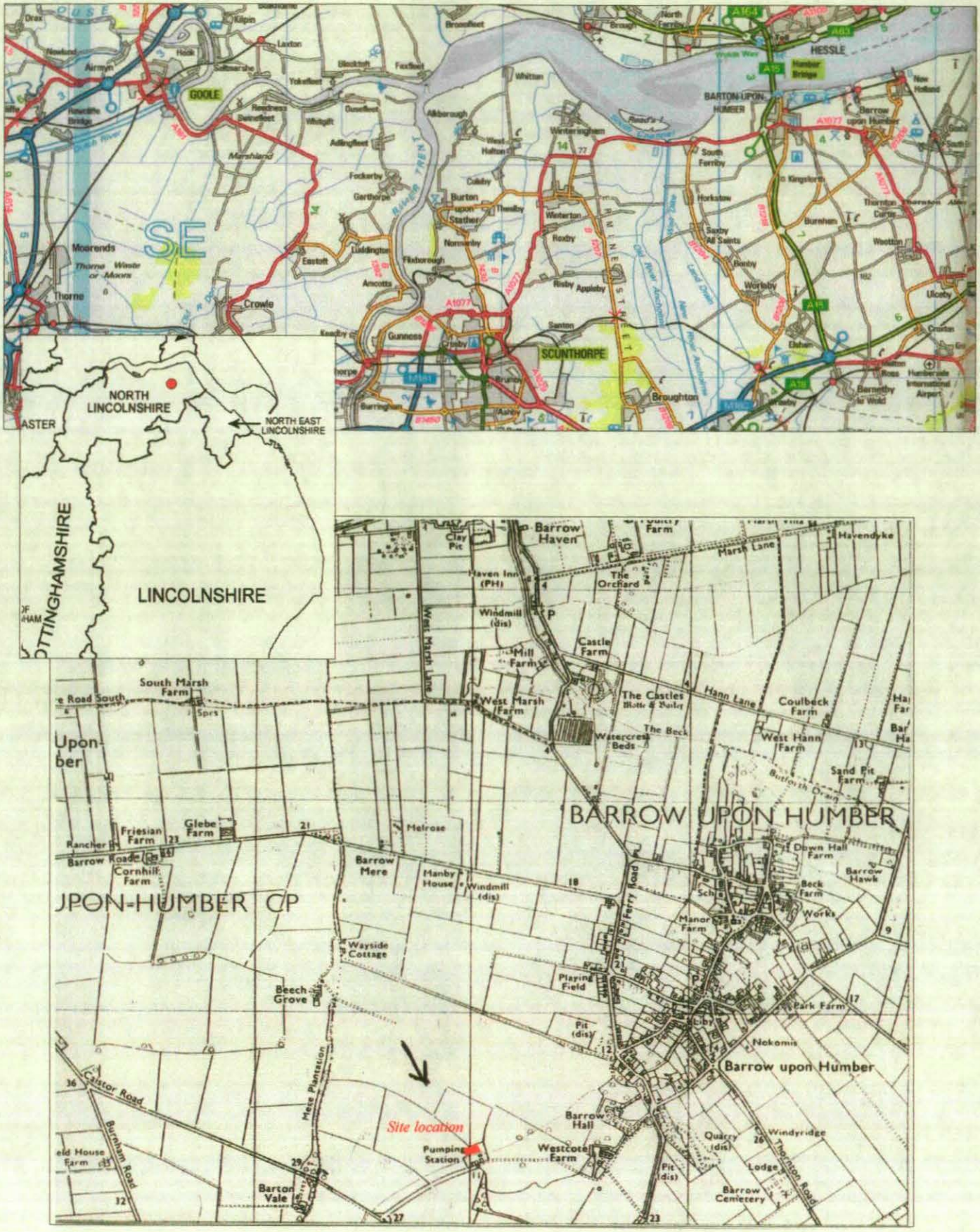


Fig. 1: Location of Barrow on Humber, North Lincolnshire inset C reproduced from OS map 1:50 000 map, Crown Copyright, reproduced with the permission of the controller of HMSO. Licence No: AL 50424A

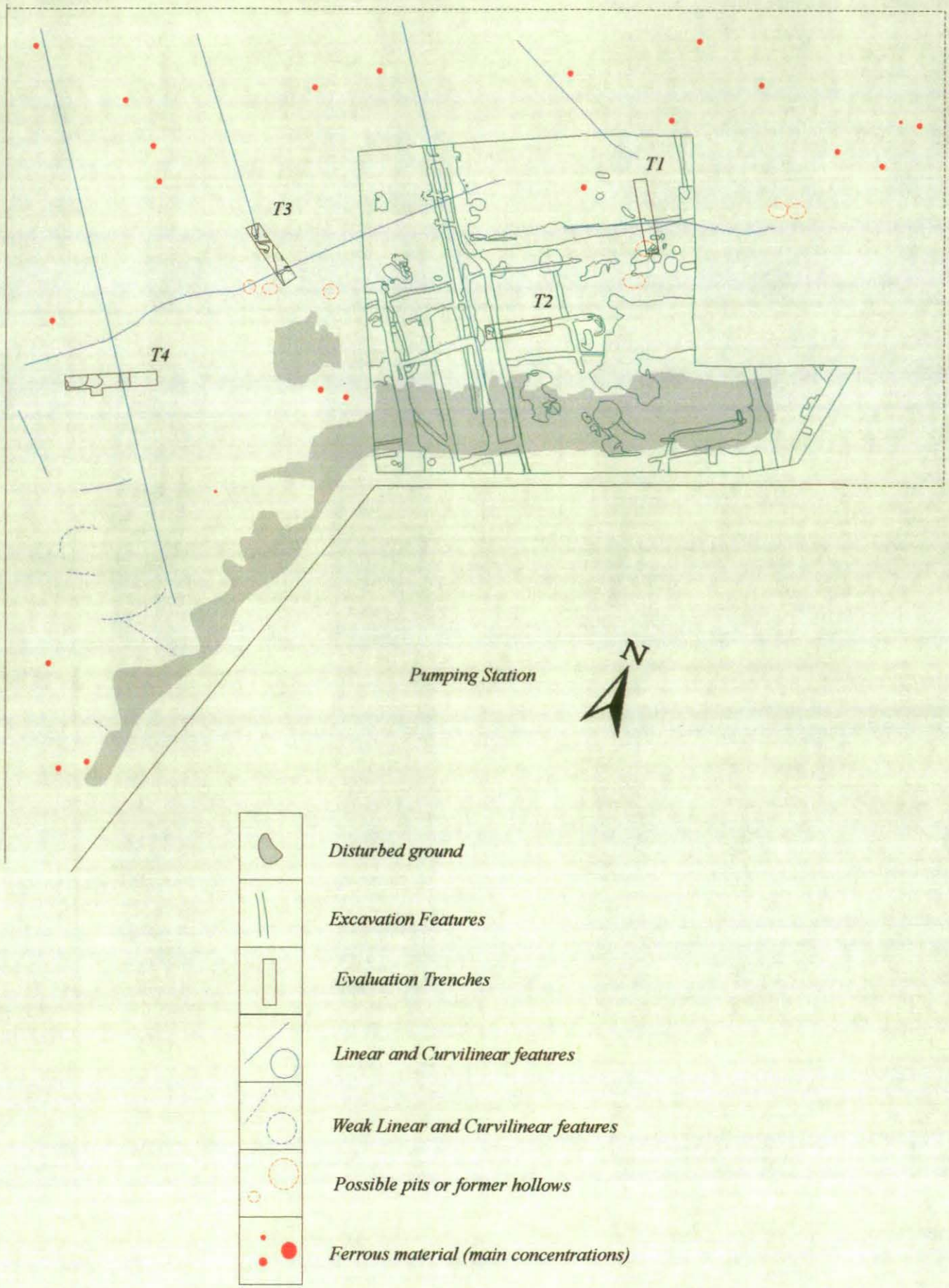


Fig. 2, Area of archaeological investigation showing features recorded by geophysical survey and the excavated areas

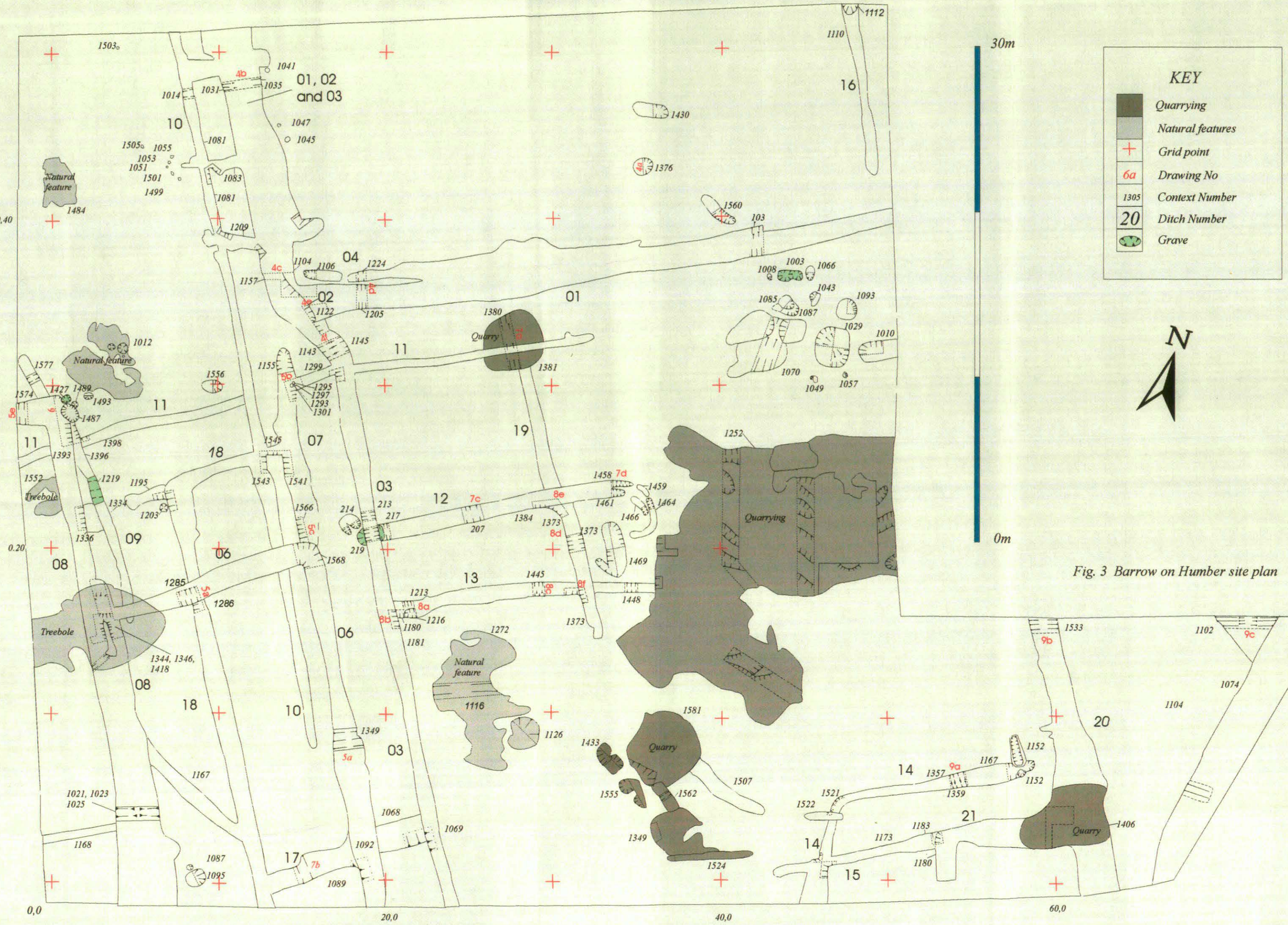


Fig. 3 Barrow on Humber site plan

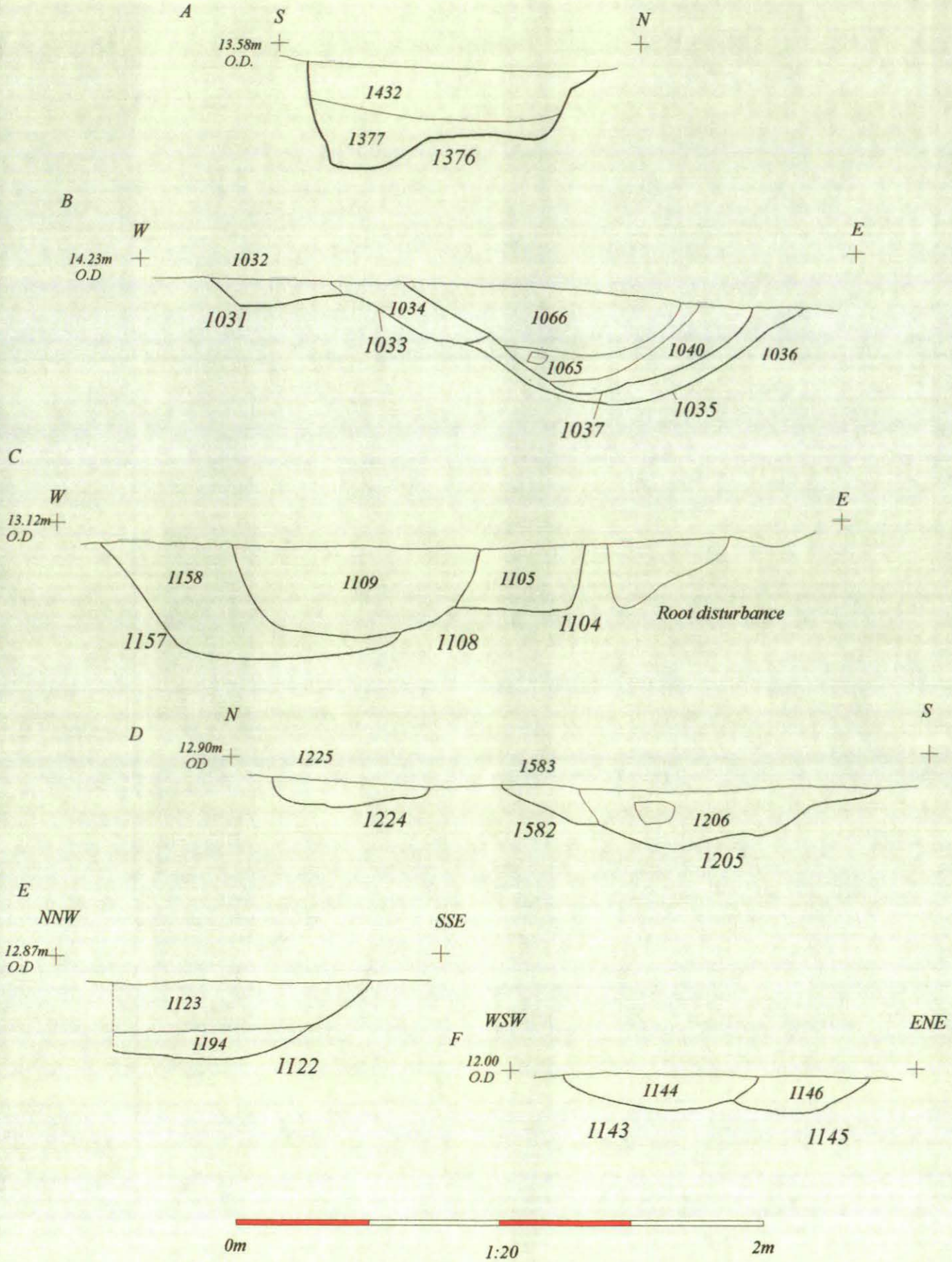


Fig. 4: A: Pit 1376, B: Ditches 01, 02 and 03, C: Ditches 01, 02 and 03, D: Ditches 01 and 04, E: Ditch02, F: Ditch 03

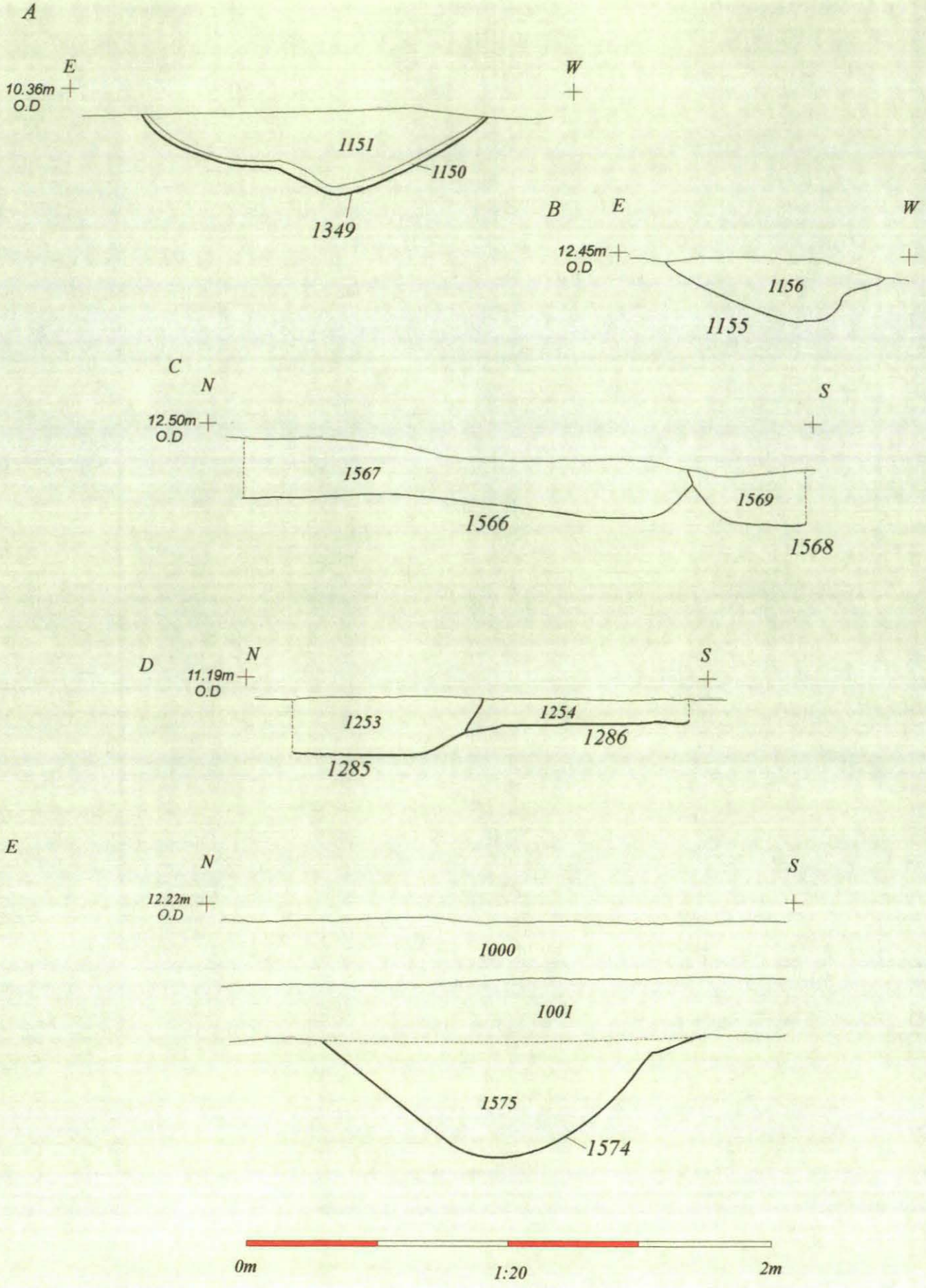


Fig. 5: A: Ditch 06, B: Ditch 07, C:Ditch 06 and 07

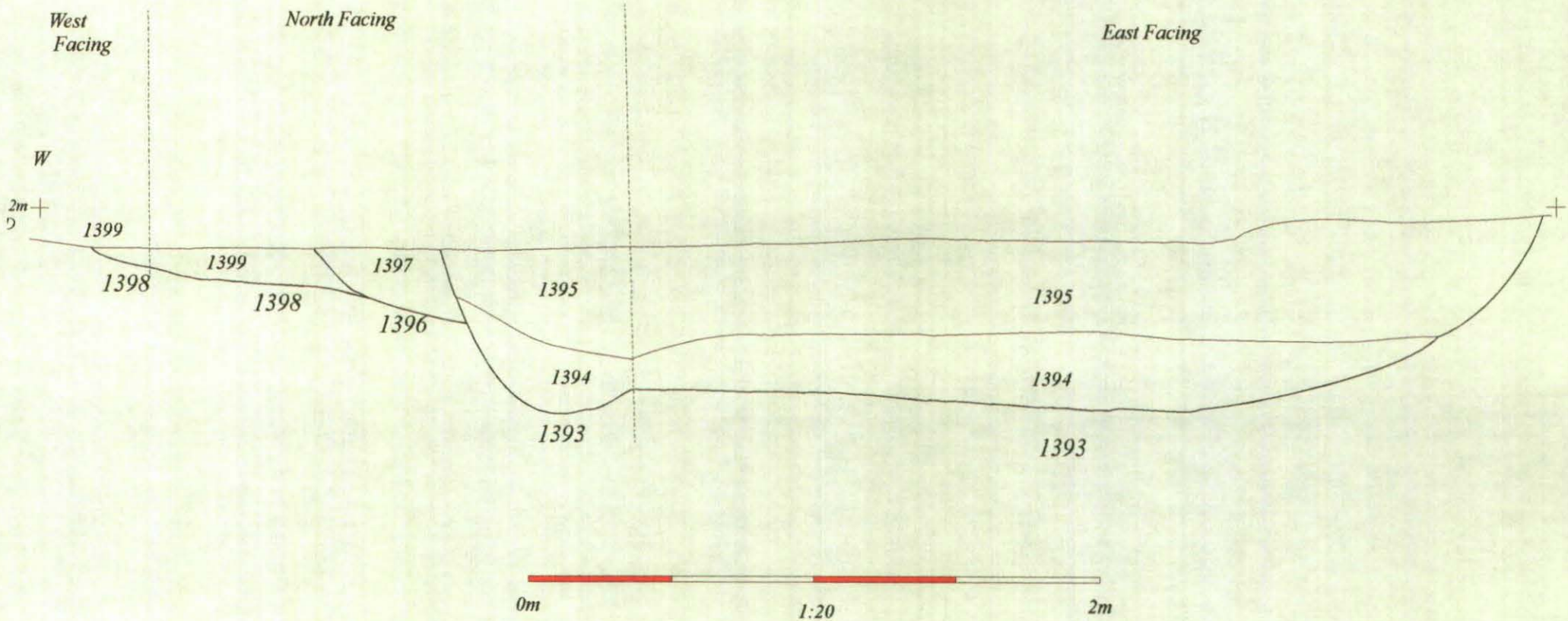


Fig. 6: Ditches 8 and 9

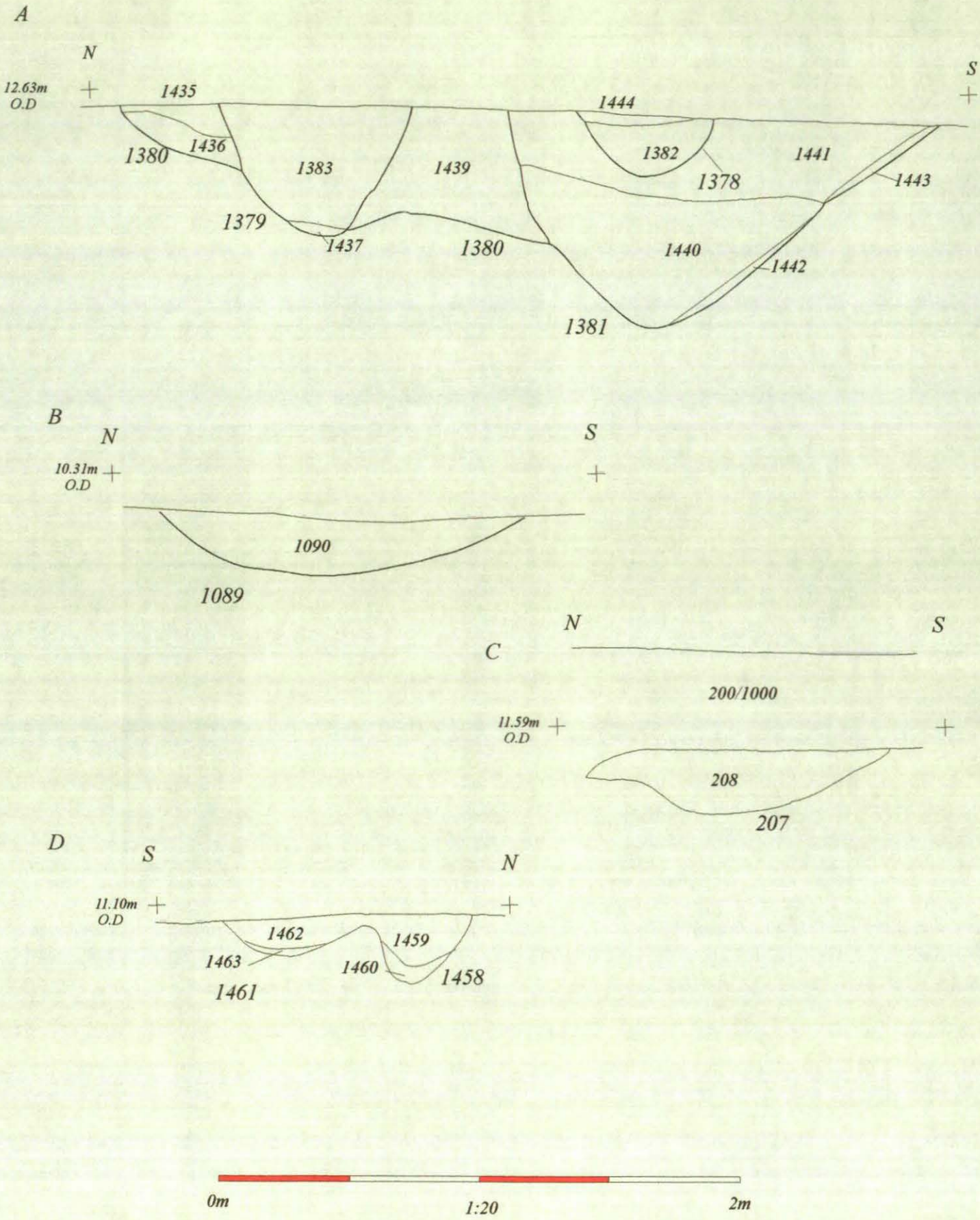


Fig. 7: A: Ditch 11, B: Ditch 17, C: Ditch 12, D: Ditch 12

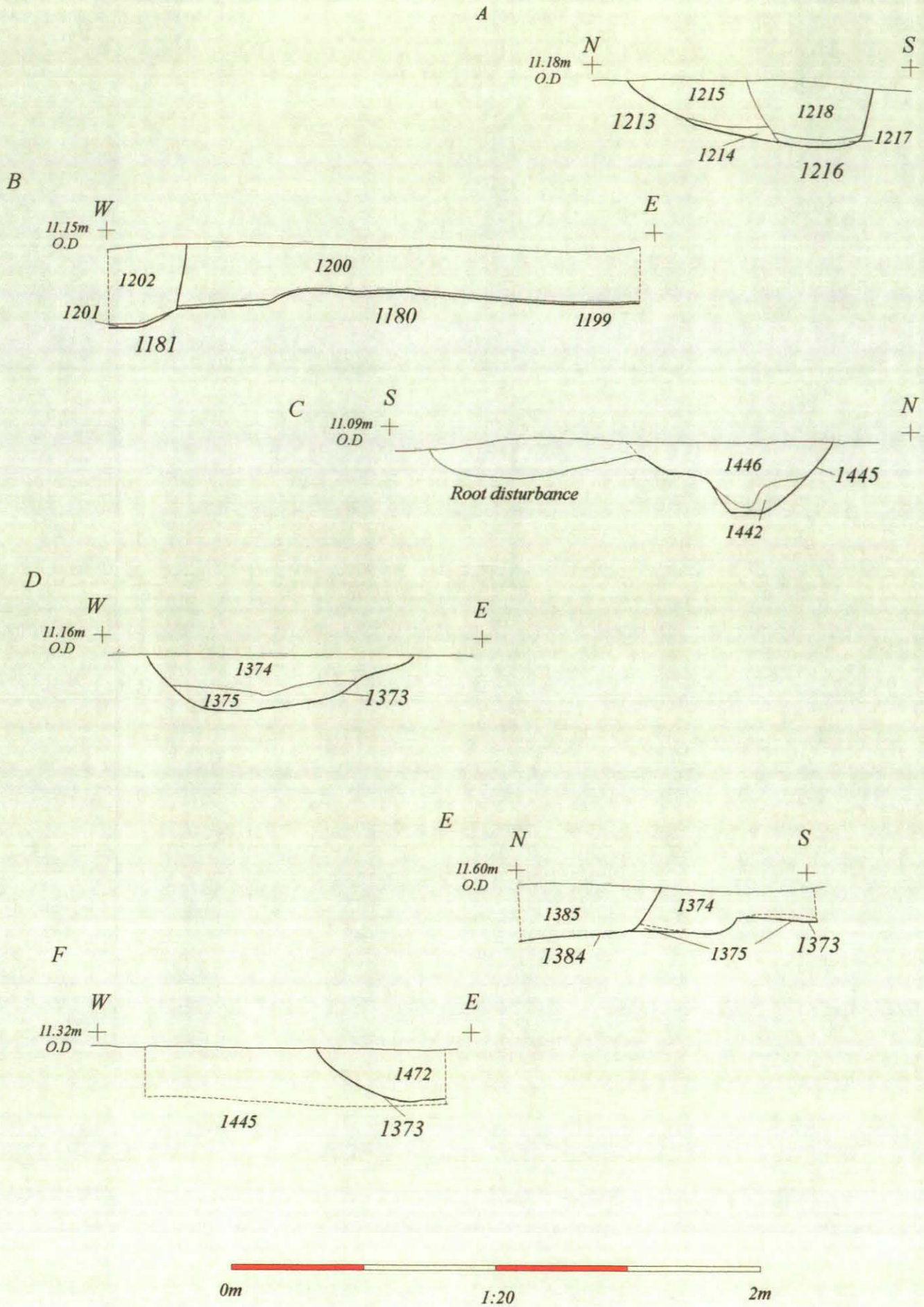


Fig. 8: A: Ditch 13, B: Ditches 13 and 02, C:Dtich 13, D:Ditch 19 , E: Ditch 12 and 19 , F: Ditches 19 and 13

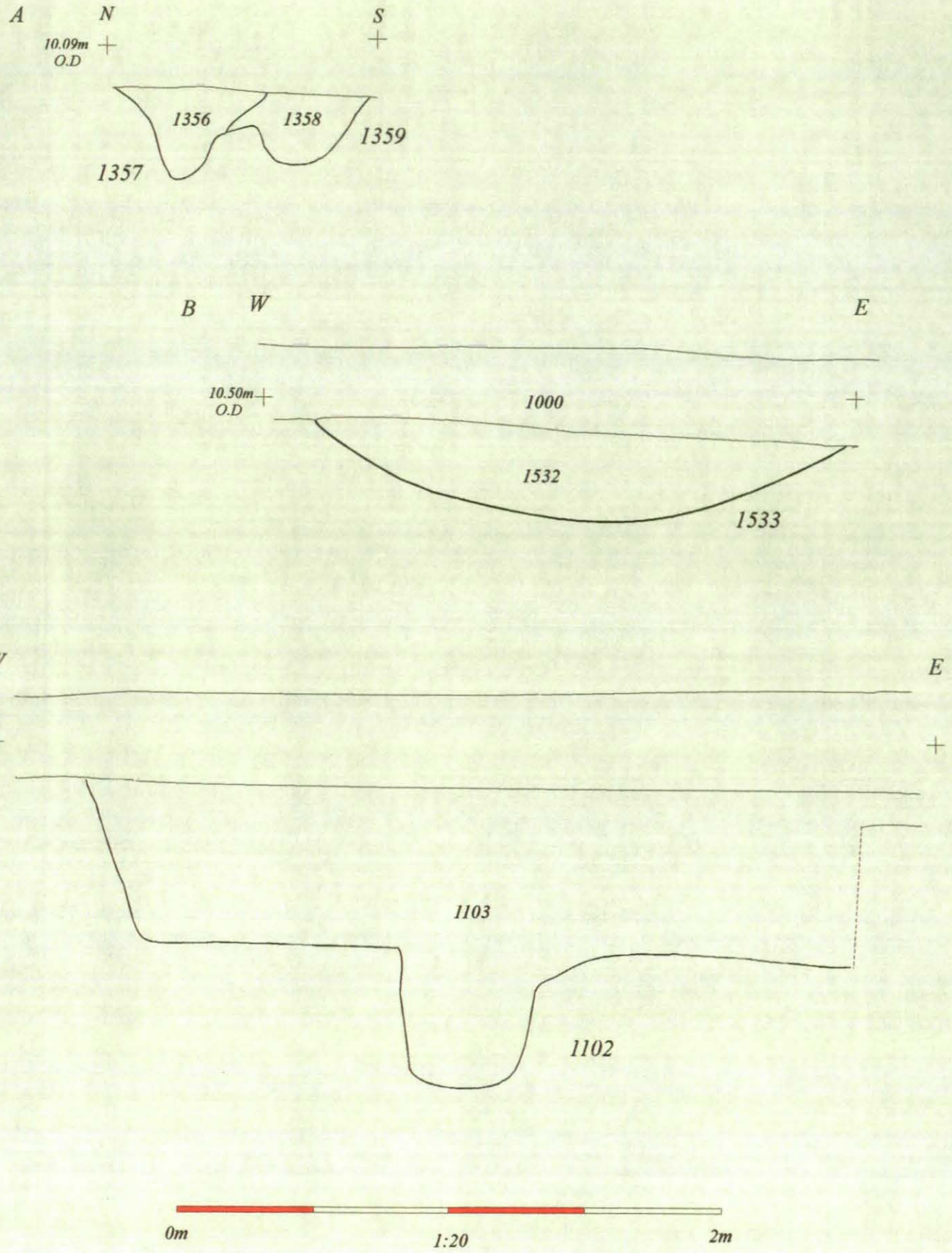


Fig. 9: A: Ditch 14, B: Ditch 20, C: Modern water pipe

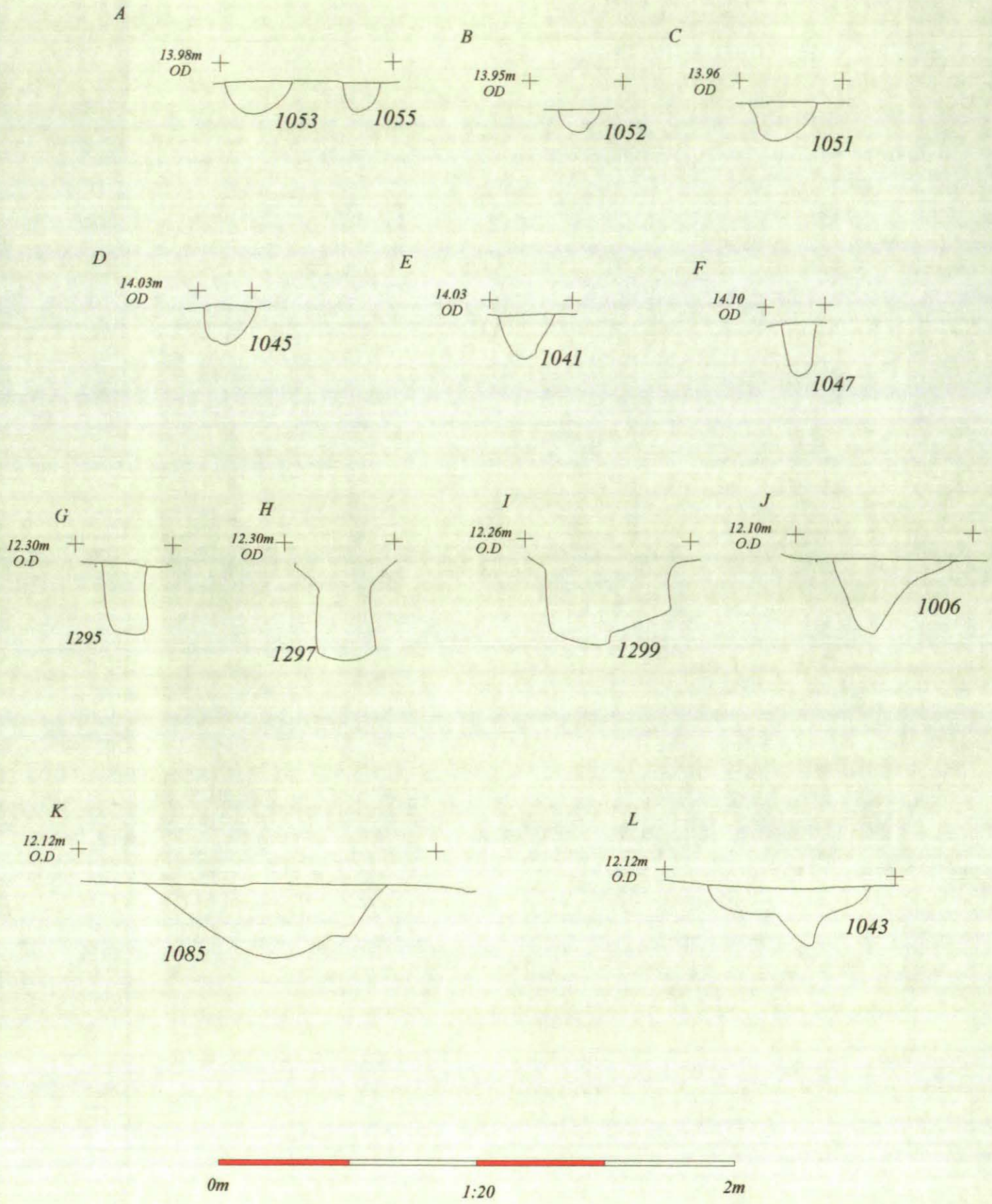


Fig. 10: Postholes and pits

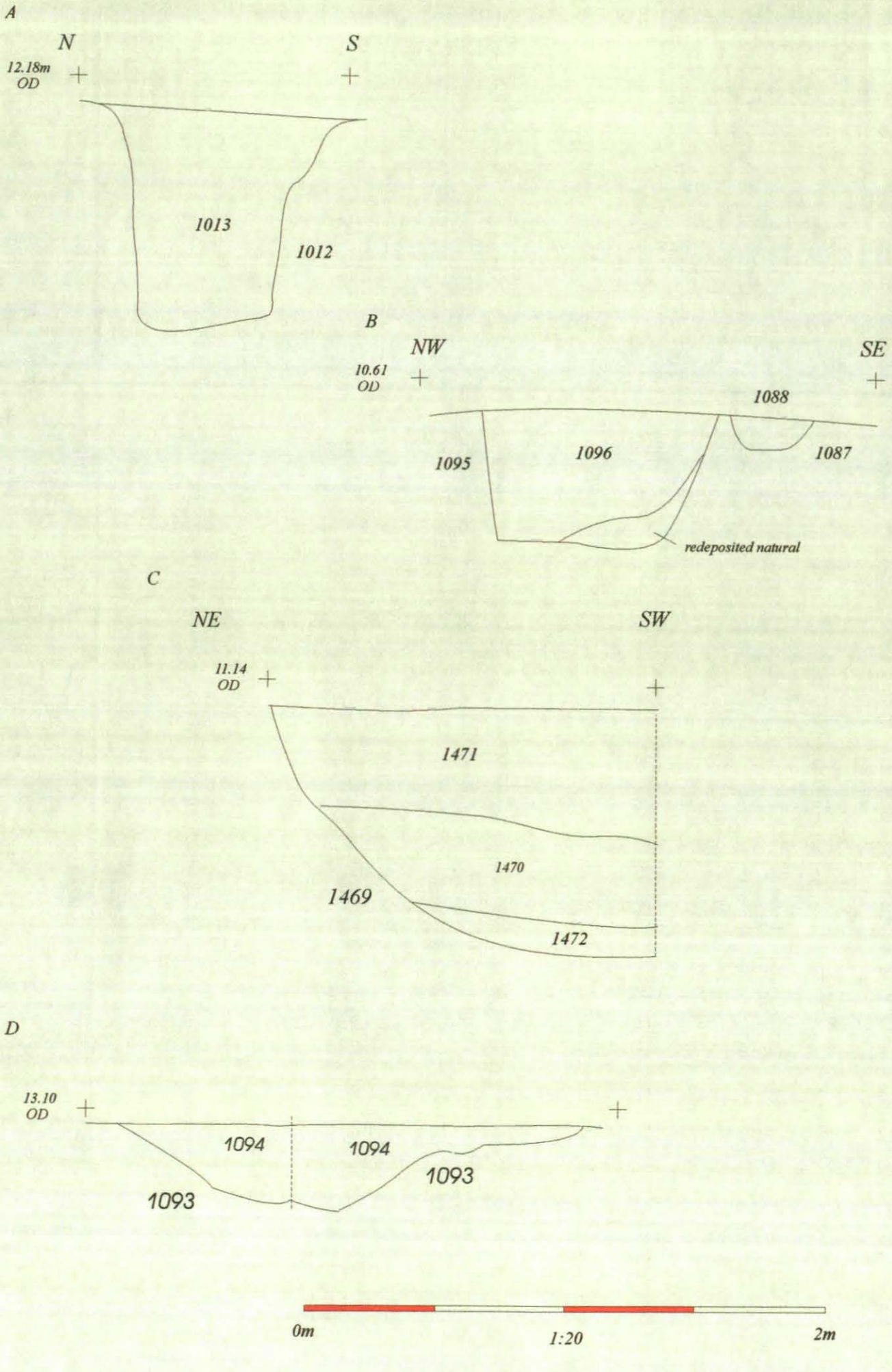


Fig 11: Pit Sections

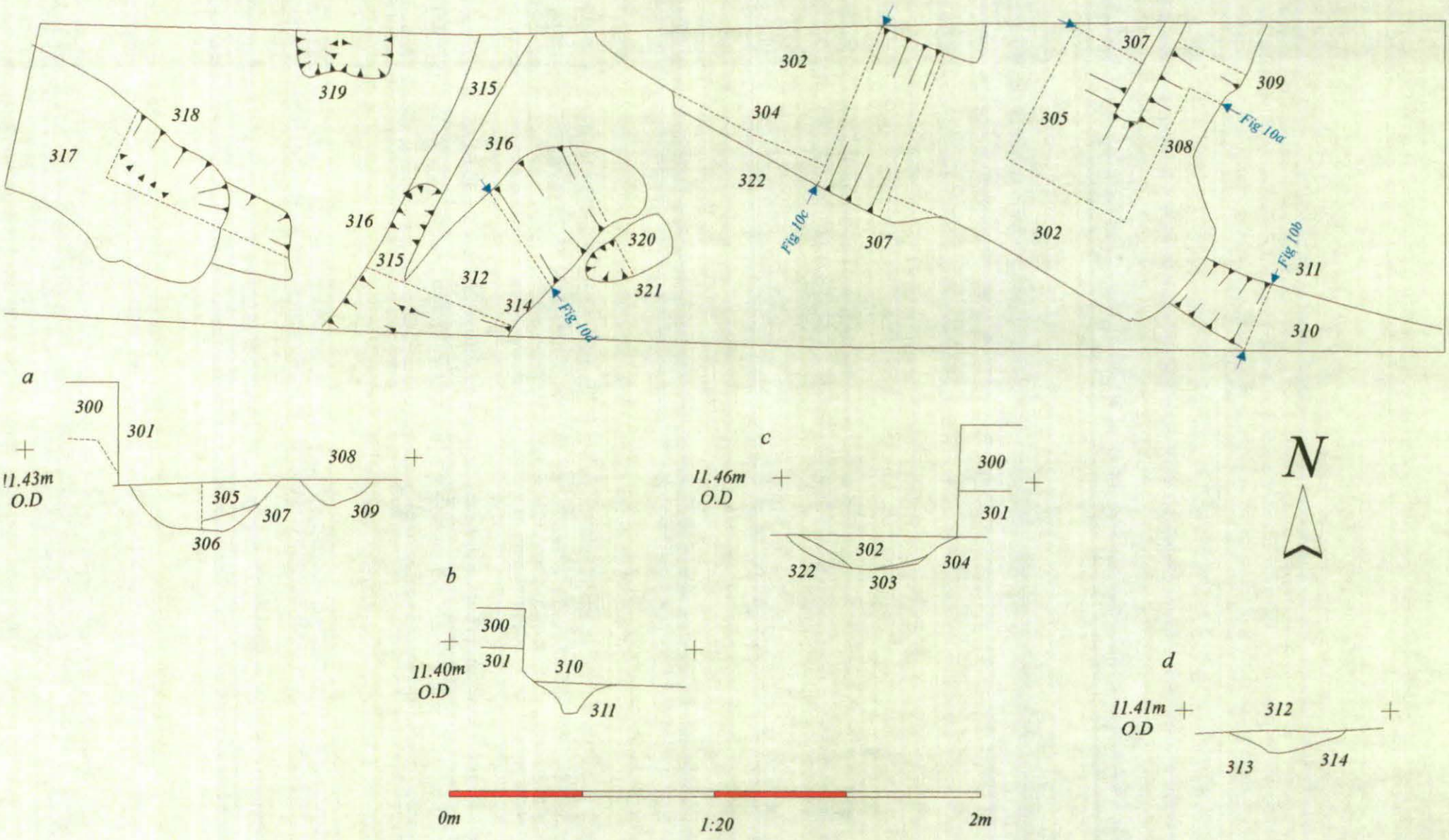


Fig. 12: Trench 3, Plan and Sections

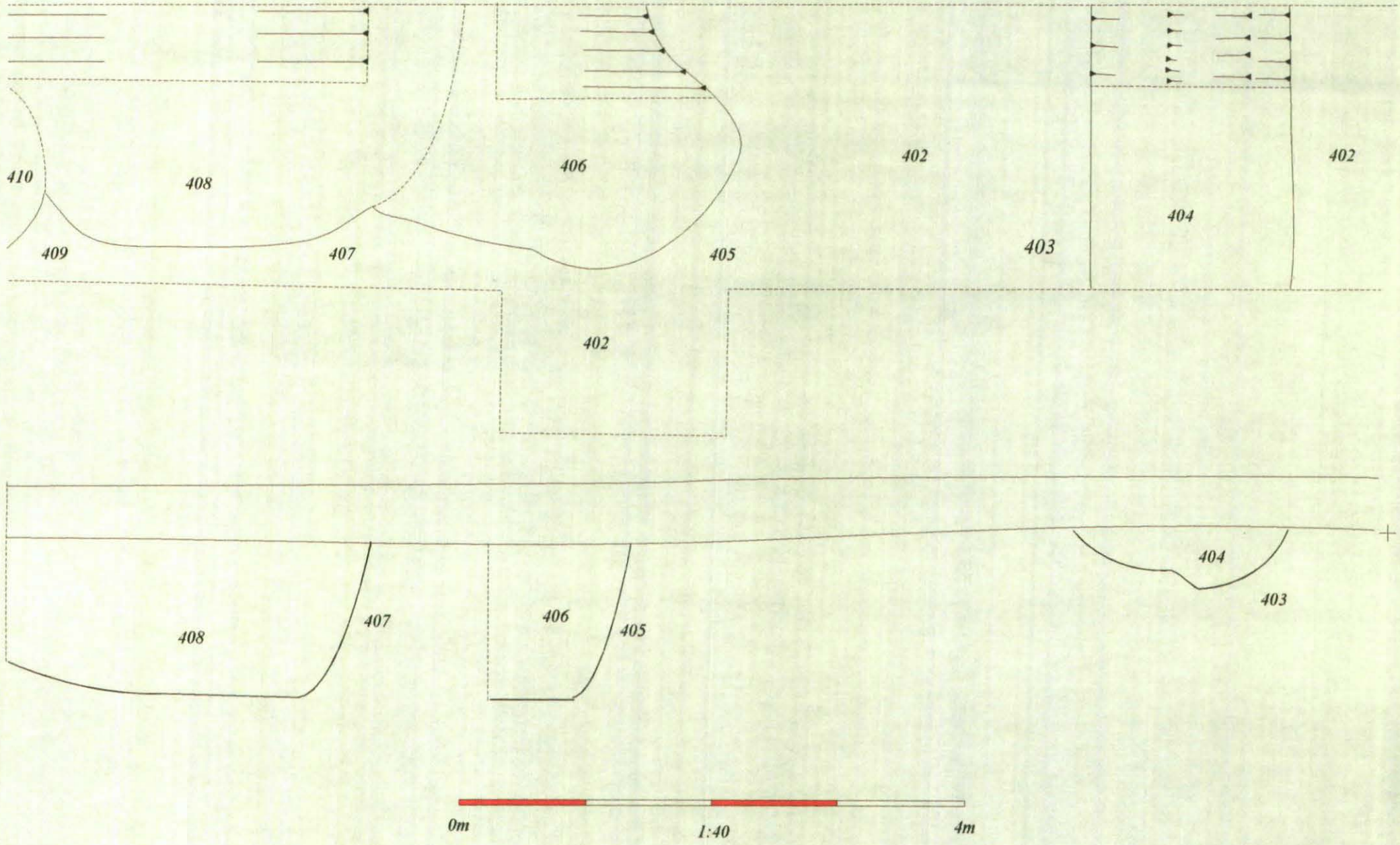


Fig. 13: Tench 4, Plan and Section

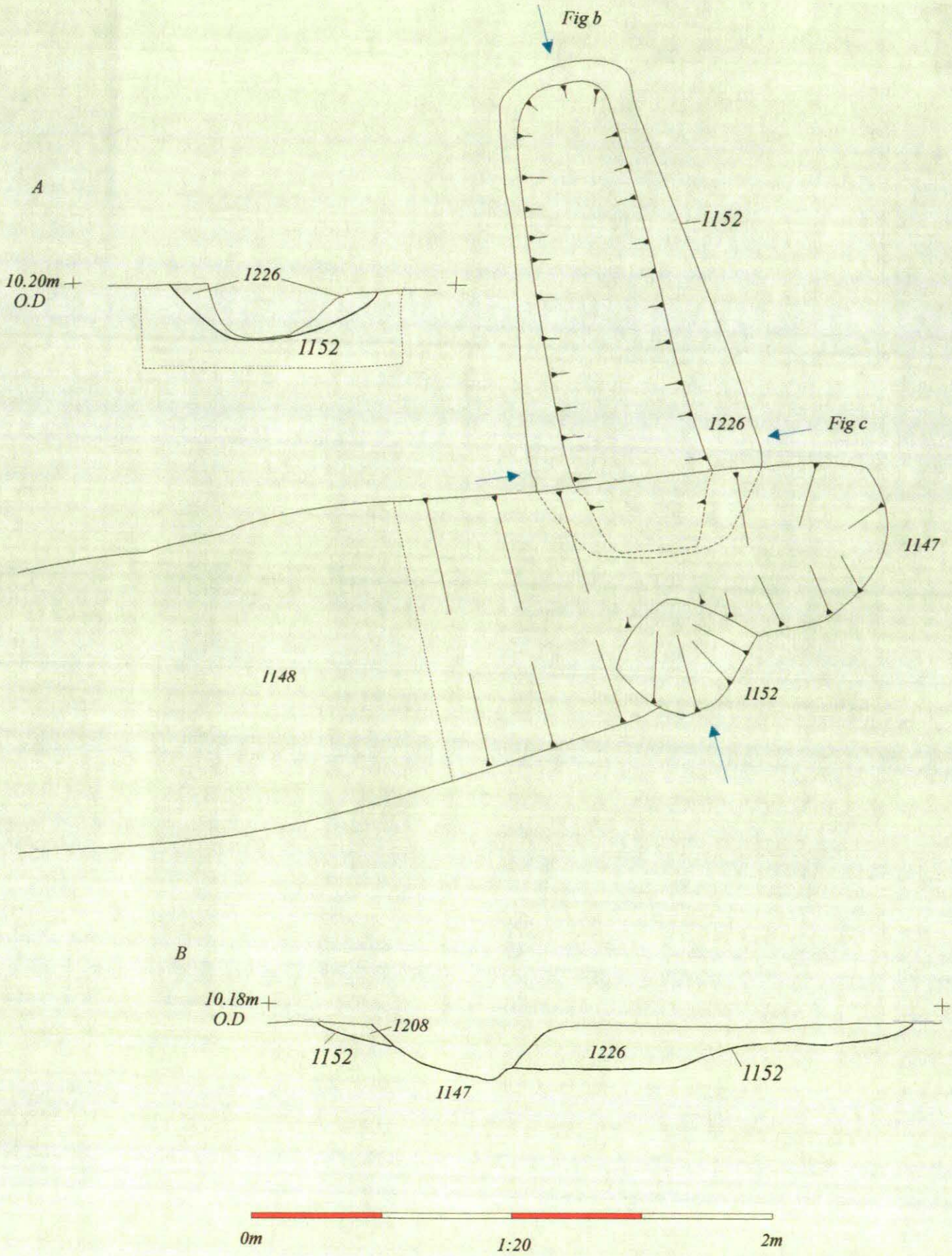


Figure 15: Corn Drier

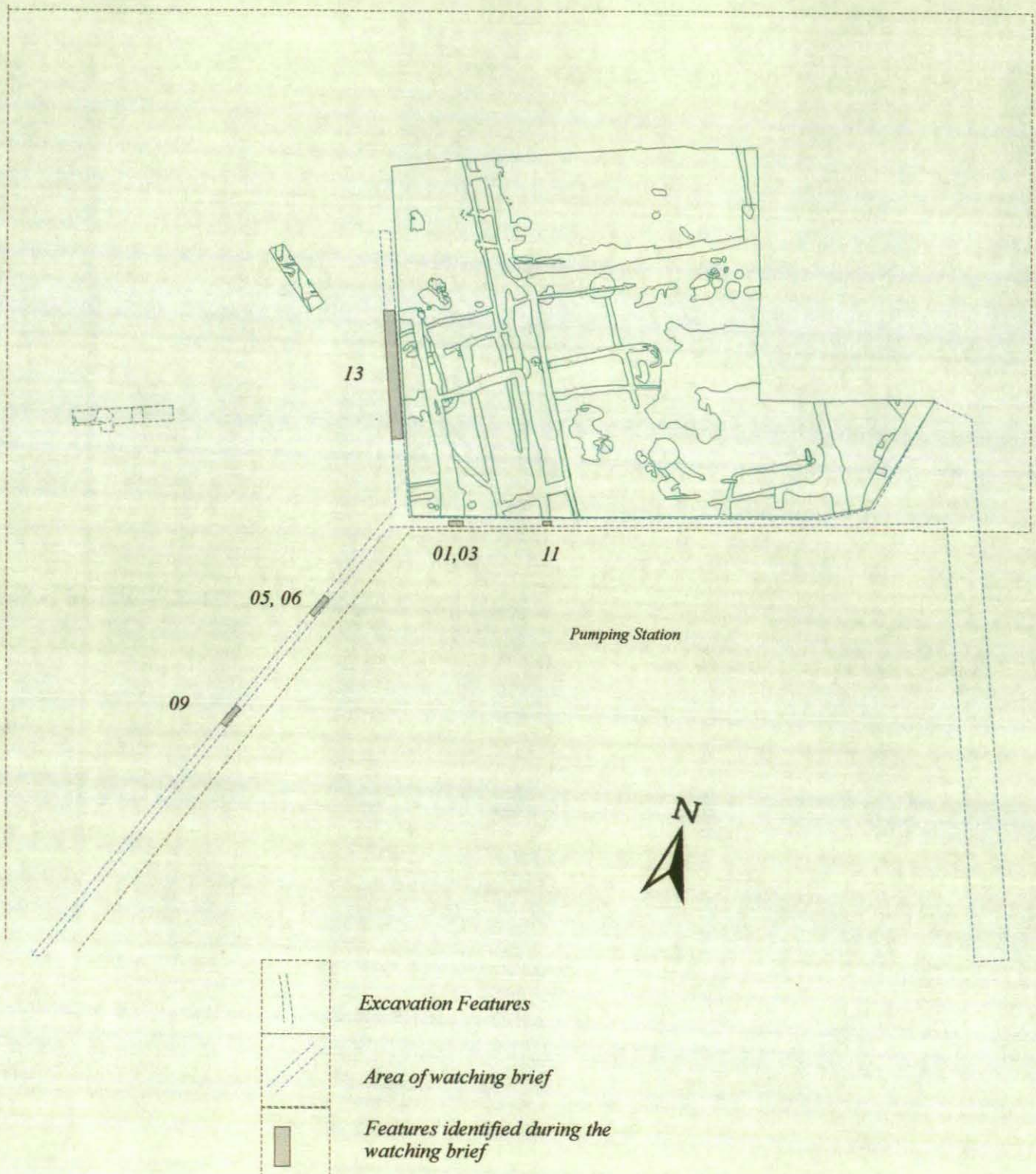


Fig. 16, Location of watching brief areas

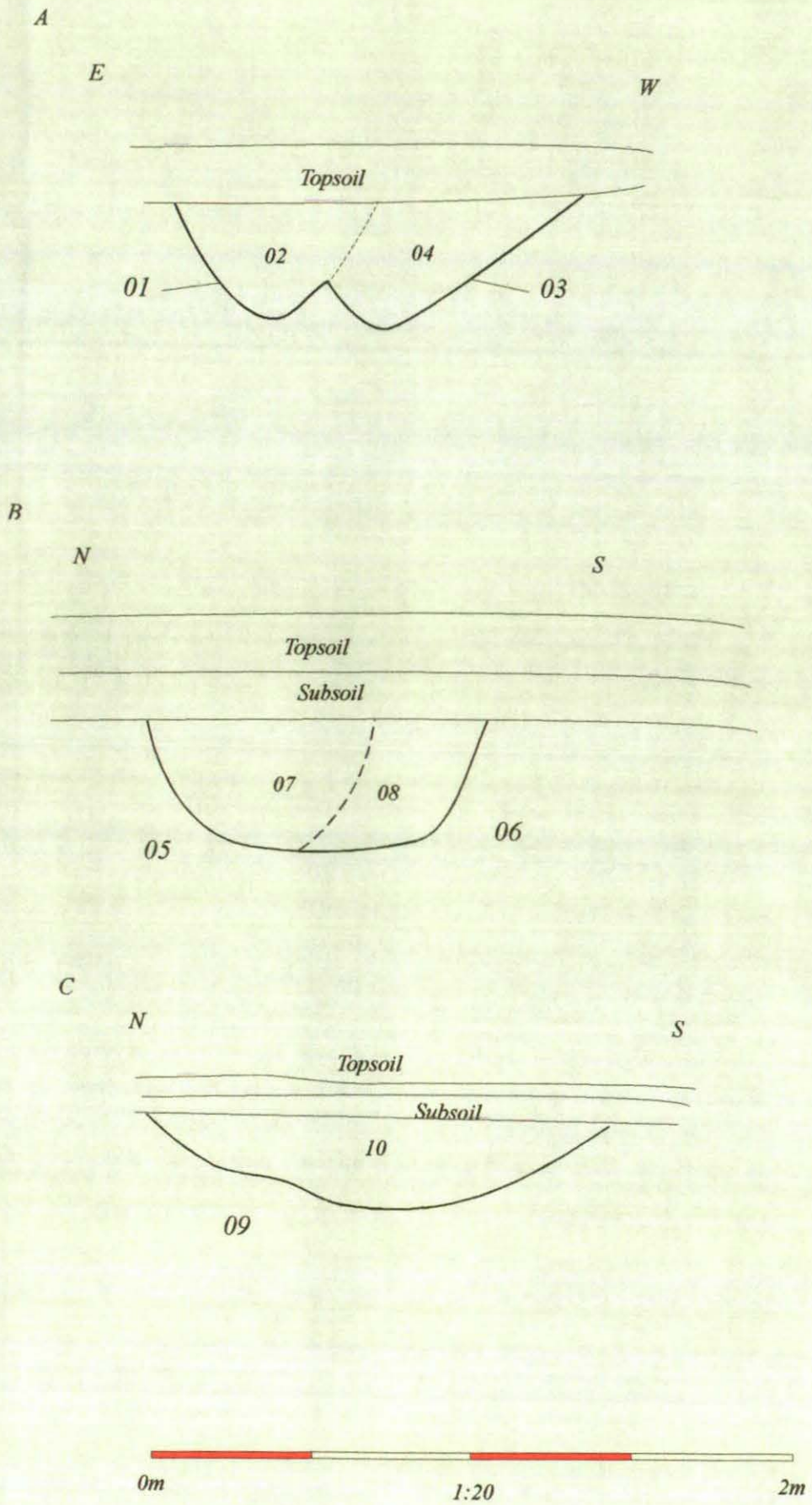
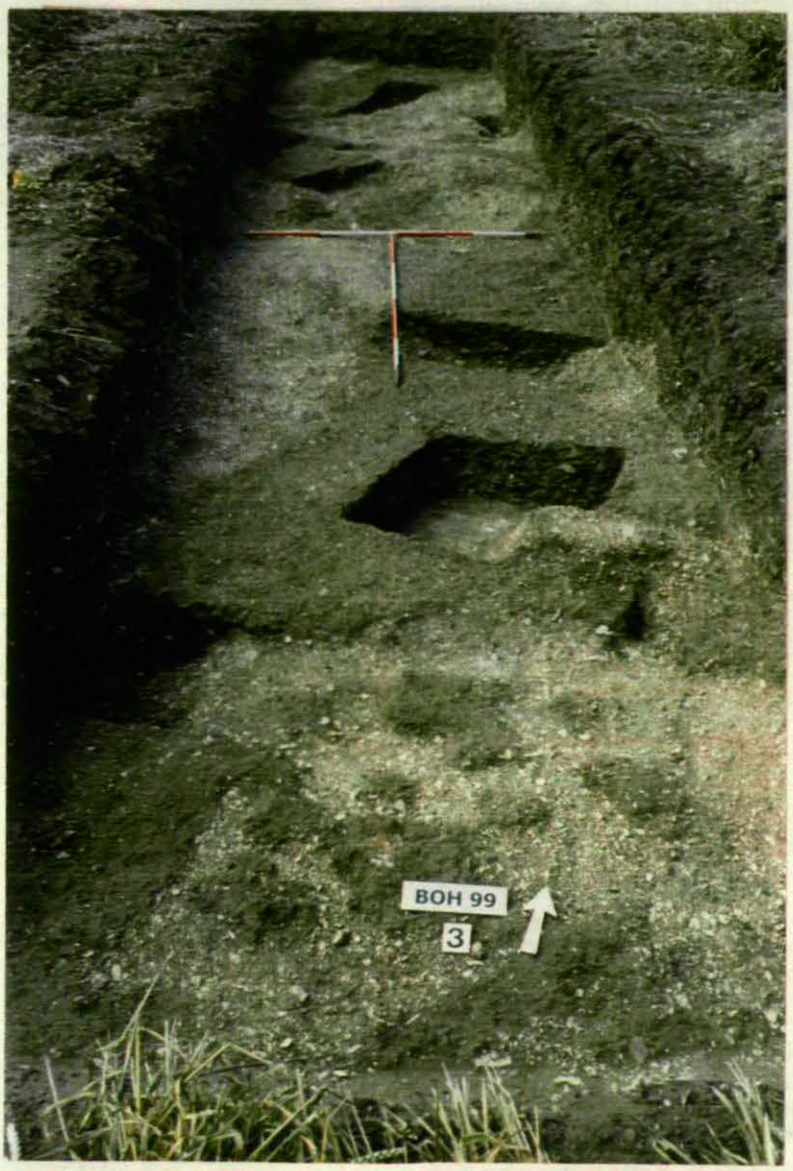


Fig. 17 Watching brief features

The Figures

Pl. 1 Excavation area looking south east. Scales 2m.

Pl. 2 Evaluation Trench 3, post excavation. Scale 2m.



Pl. 3 Section across possible gully or ditch 318, vertical scale 2m. Horizontal scale 1m

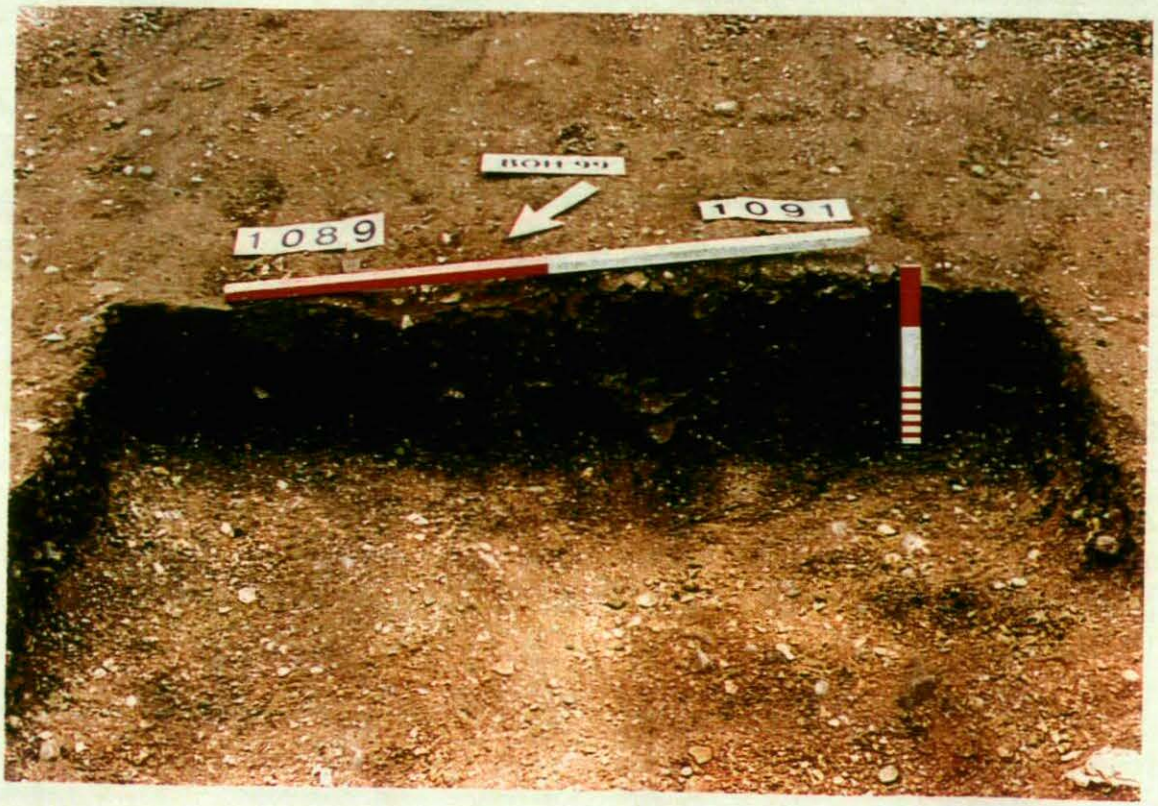
Pl. 4 Trench 4 prior to excavation. Scales 2m. Note large quarry features in the foreground.

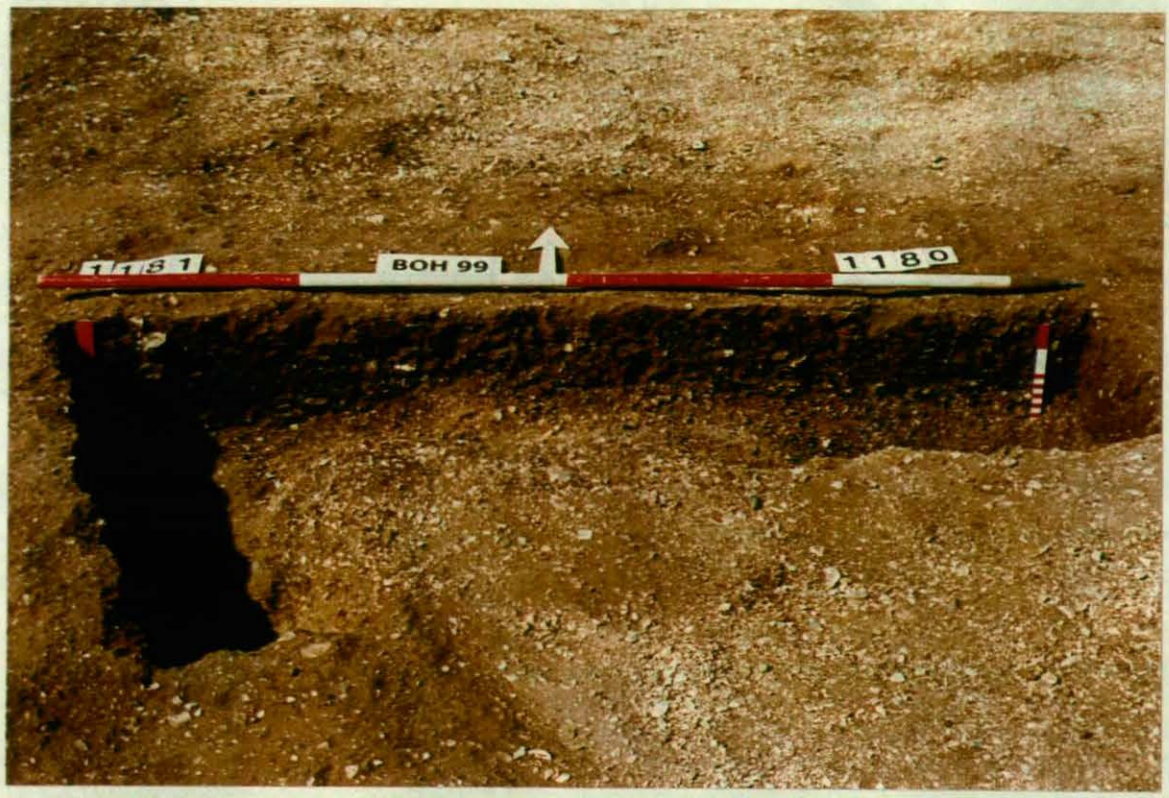
Pl. 5 Junction of Ditches 13 and 3 at section 4c. Note the similarity of the fills and the shallowness of the ditches. Scales 2m

Pl. 6 Junction of Ditches 17 (1068) and 3 (1069). Vertical scale 0.30m horizontal scale 0.50m

Pl. 7 Ditch 7 (1155) terminal, looking south. Horizontal scale 0.50m vertical scale 0.20m

Pl. 8 Junction of Ditches 17(1089) and 6 (1091). Vertical scale 0.30m and horizontal scale 0.50m



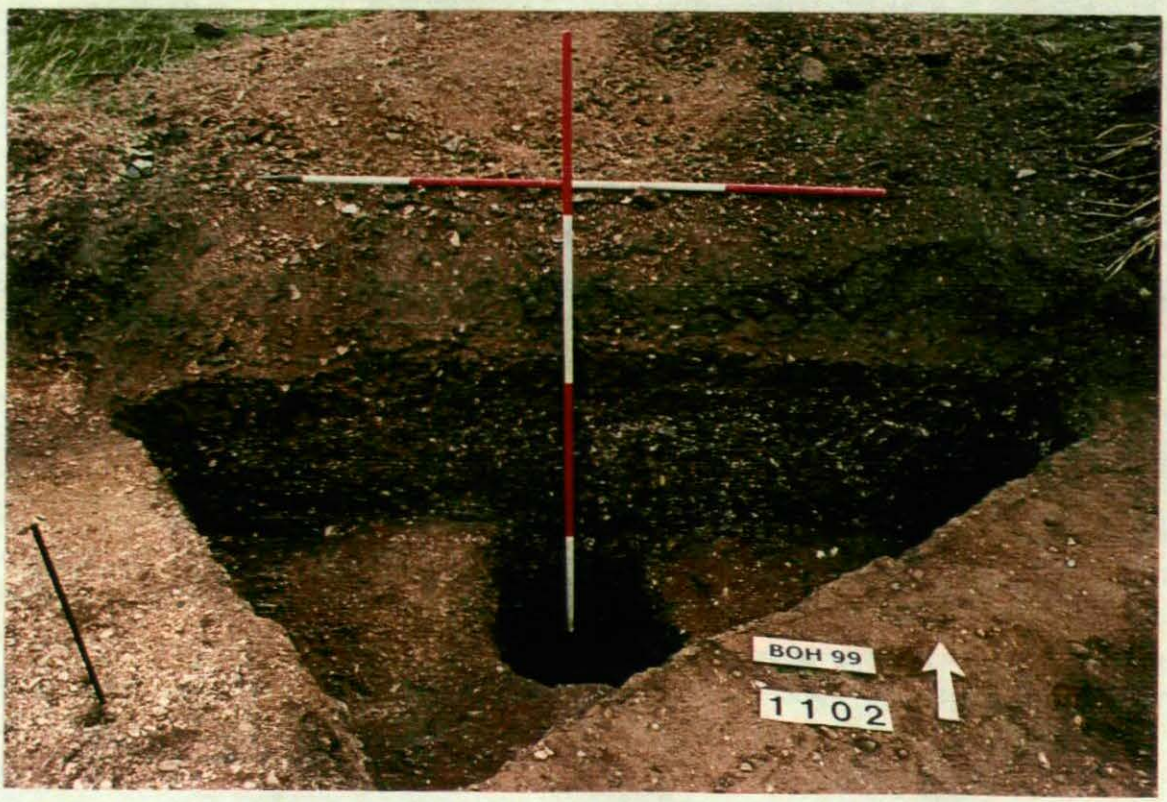


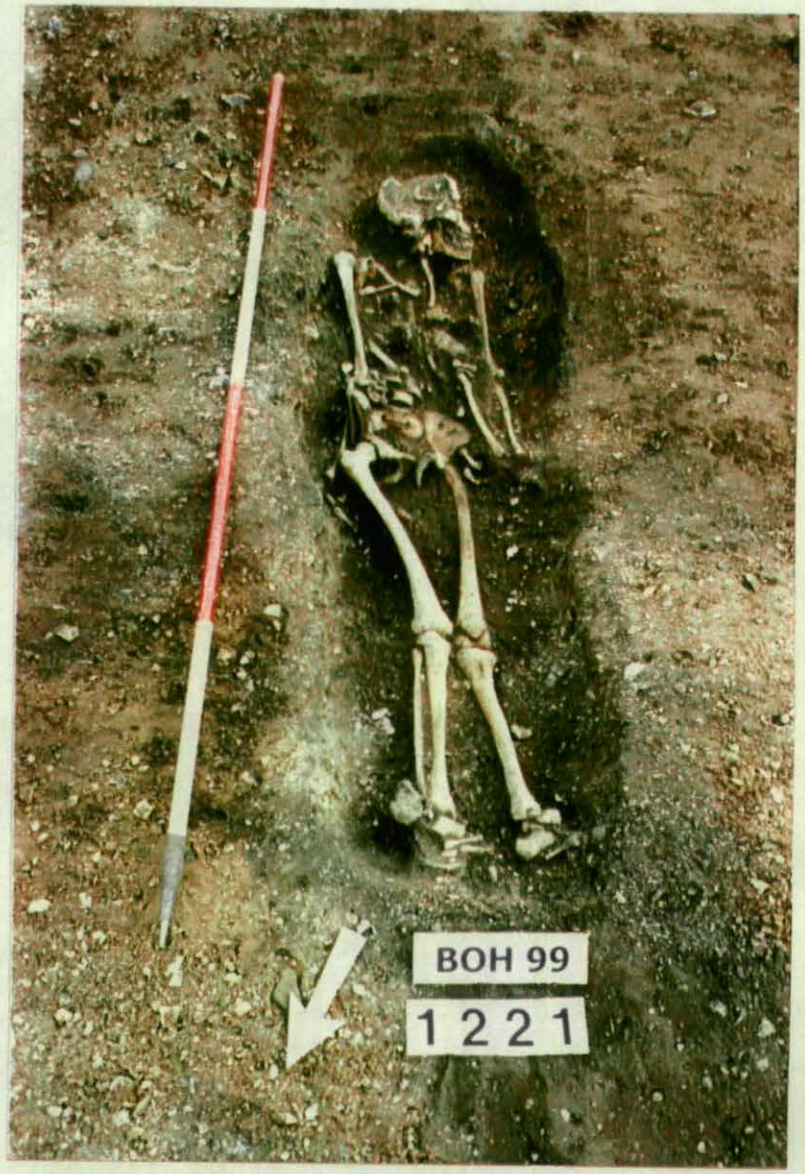
Pl. 9 Junction of Ditches 2(1180) and 13(1181). Note the severe truncation of features.

Pl. 10 Junction of Ditches 13 (1445) and 19(1373) at section 8f. Horizontal scale 0.50m and vertical scale 0.20m

Pl. 11 Ditch 20 (1533) at section 9b. Horizontal scale 2m. Vertical scale 0.50m

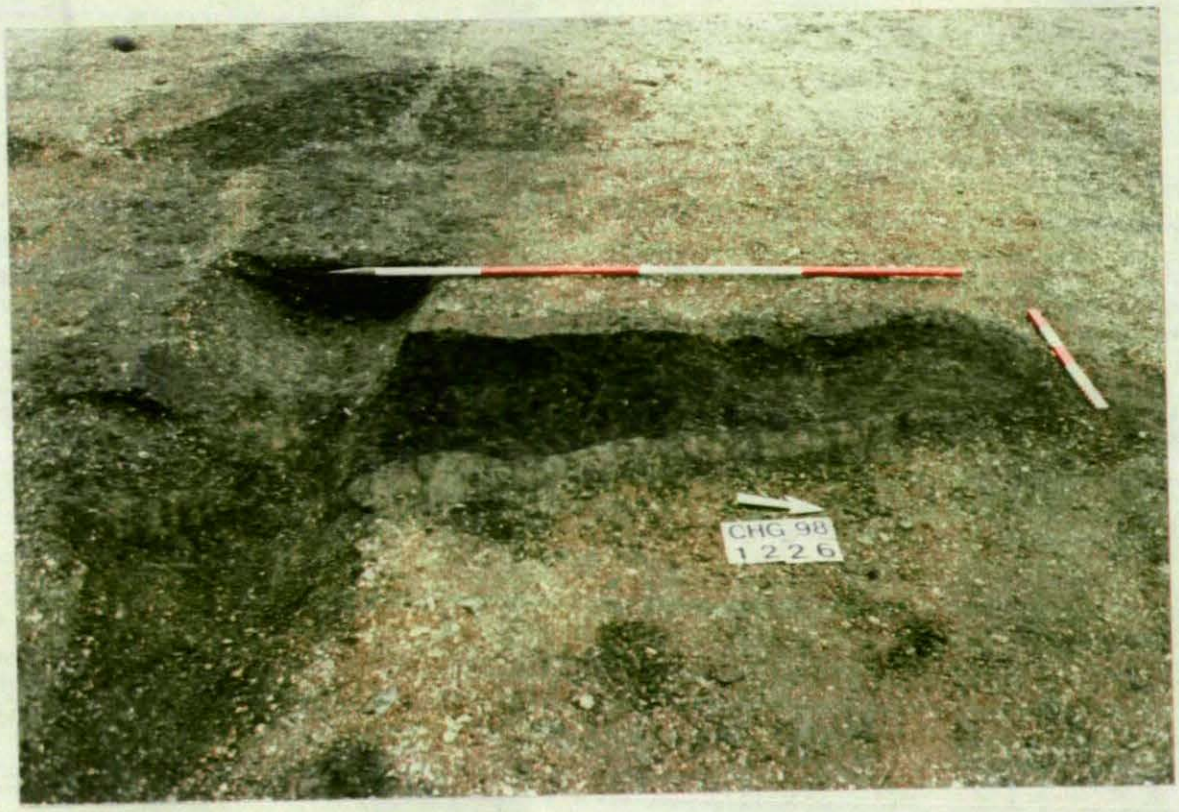
Pl. 12 Ditch 1102 at section 9c. Scales 2m





Pl. 15 Burial 1429. Scale 0.50m

Pl. 16 Burial 1221. Scale 2m

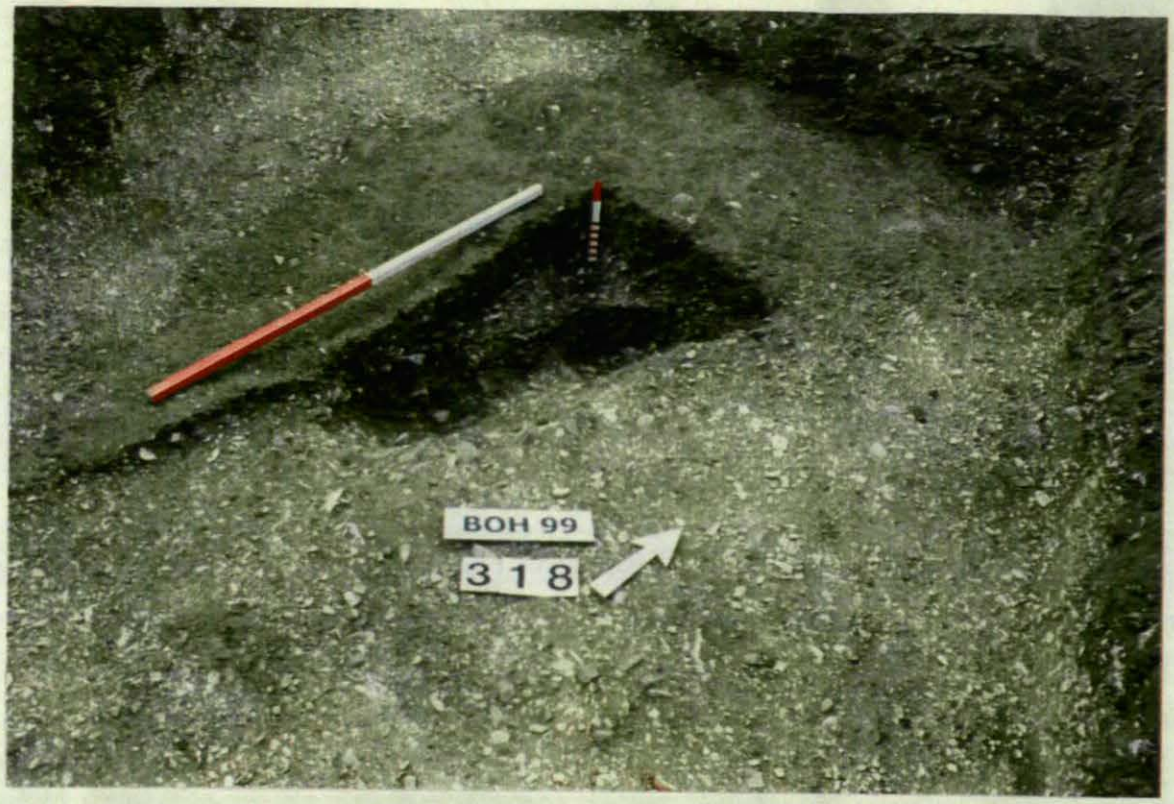


Pl. 13 Oven feature 1226. Scales 2m and 0.30m

Pl. 14 Burial 216. Scales 0.30m and 0.50m

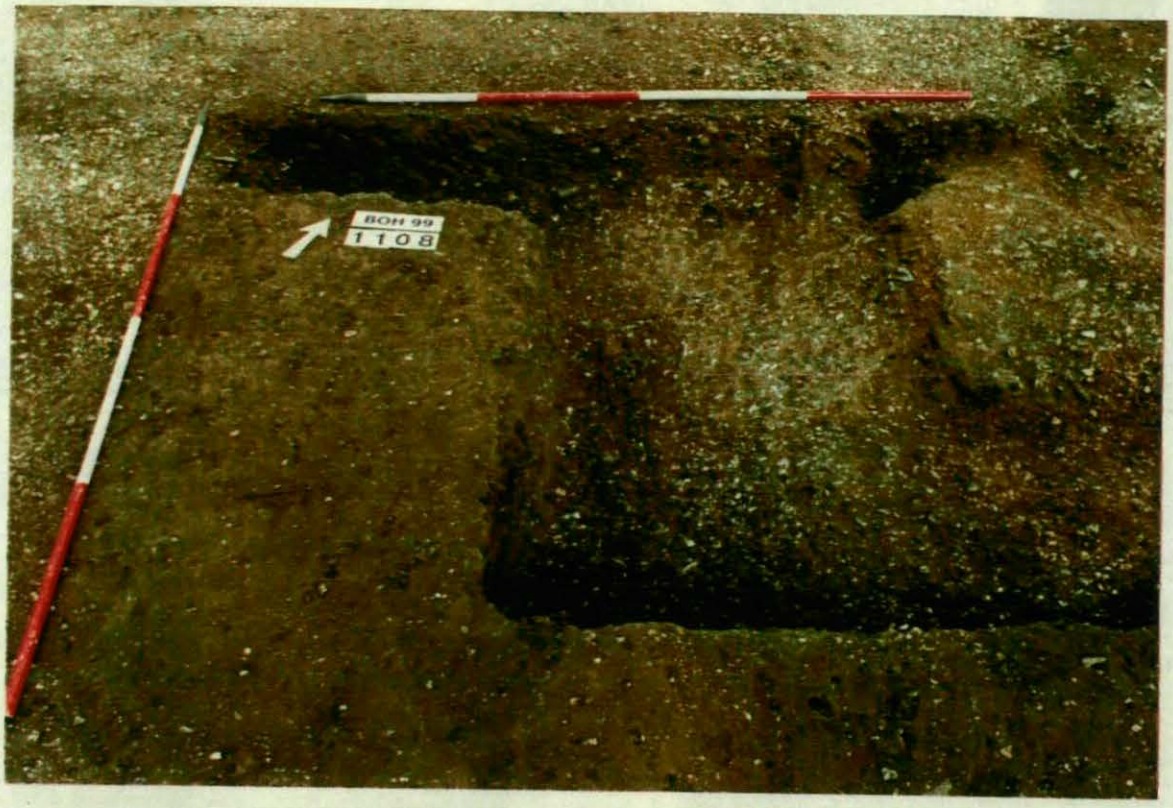
Pl. 1 Excavation area looking south east. Scales 2m.

Pl. 2 Evaluation Trench 3, post excavation. Scale 2m.



Pl. 3 Section across possible gully or ditch 318, vertical scale 2m. Horizontal scale 1m

Pl. 4 Trench 4 prior to excavation. Scales 2m. Note large quarry features in the foreground.

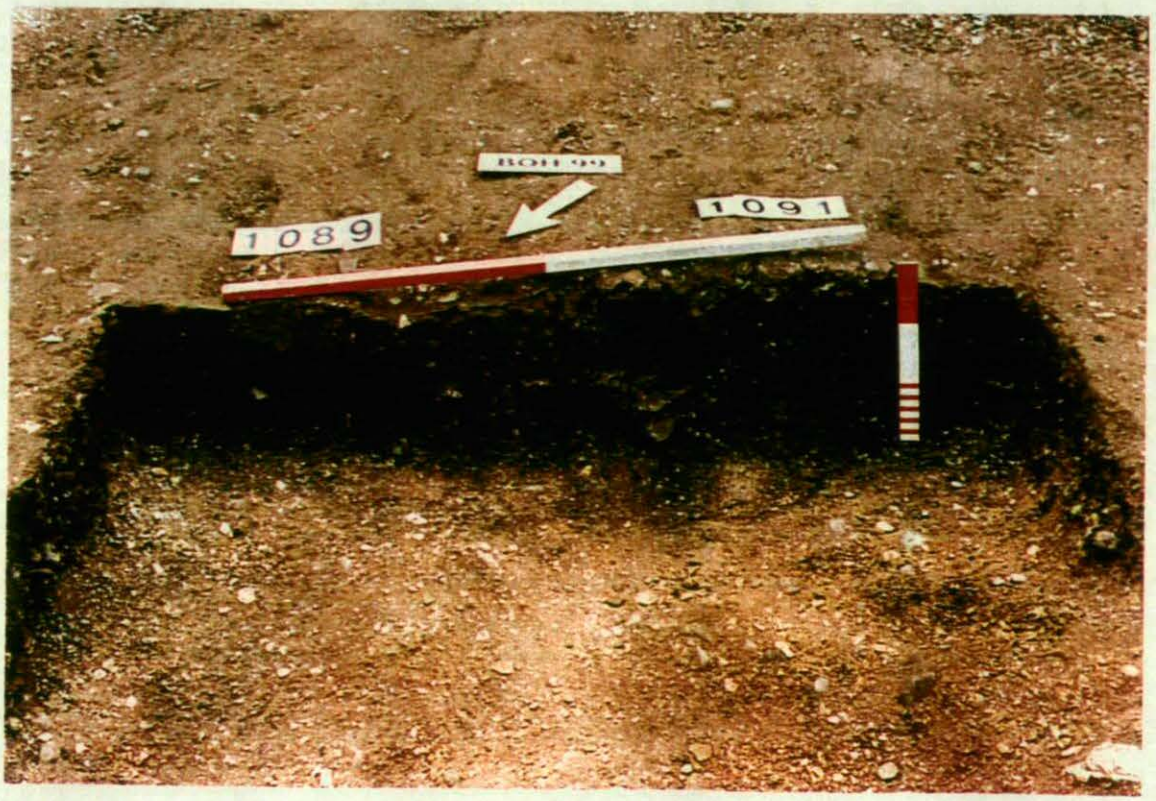


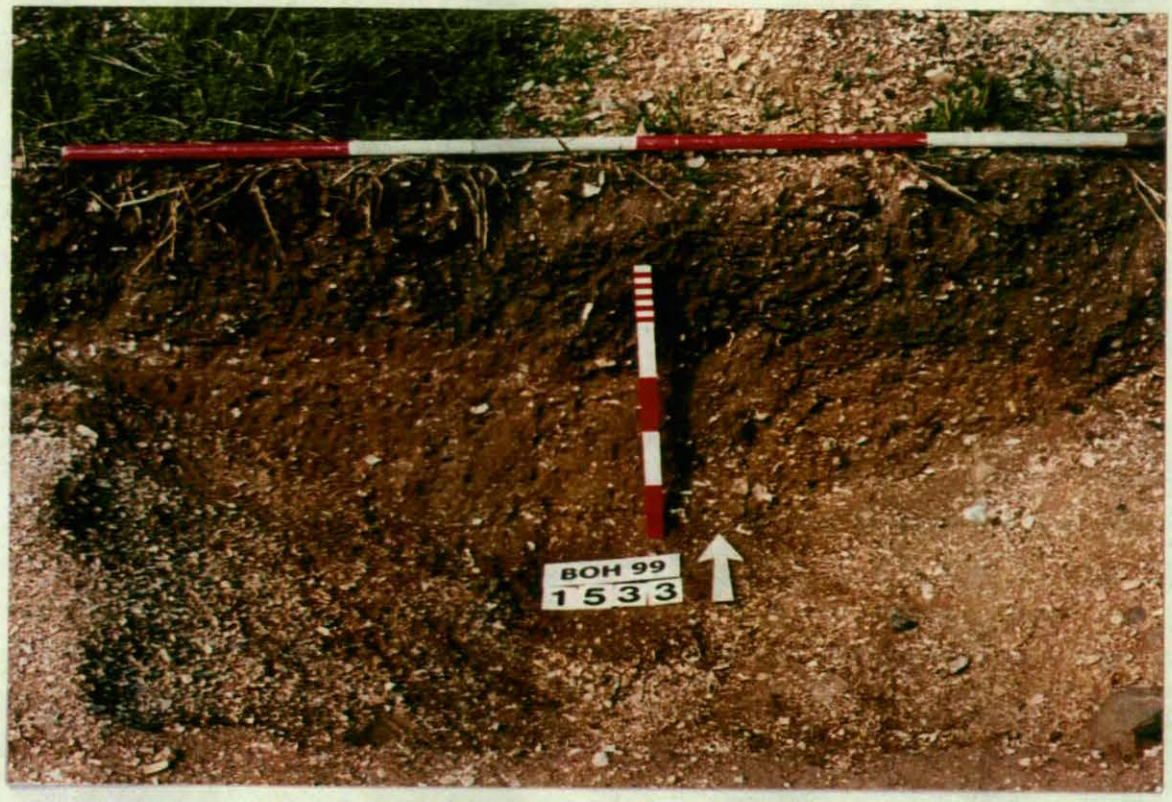
Pl. 5 Junction of Ditches 13 and 3 at section 4c. Note the similarity of the fills and the shallowness of the ditches. Scales 2m

Pl. 6 Junction of Ditches 17 (1068) and 3 (1069). Vertical scale 0.30m horizontal scale 0.50m

Pl. 7 Ditch 7 (1155) terminal, looking south. Horizontal scale 0.50m vertical scale 0.20m

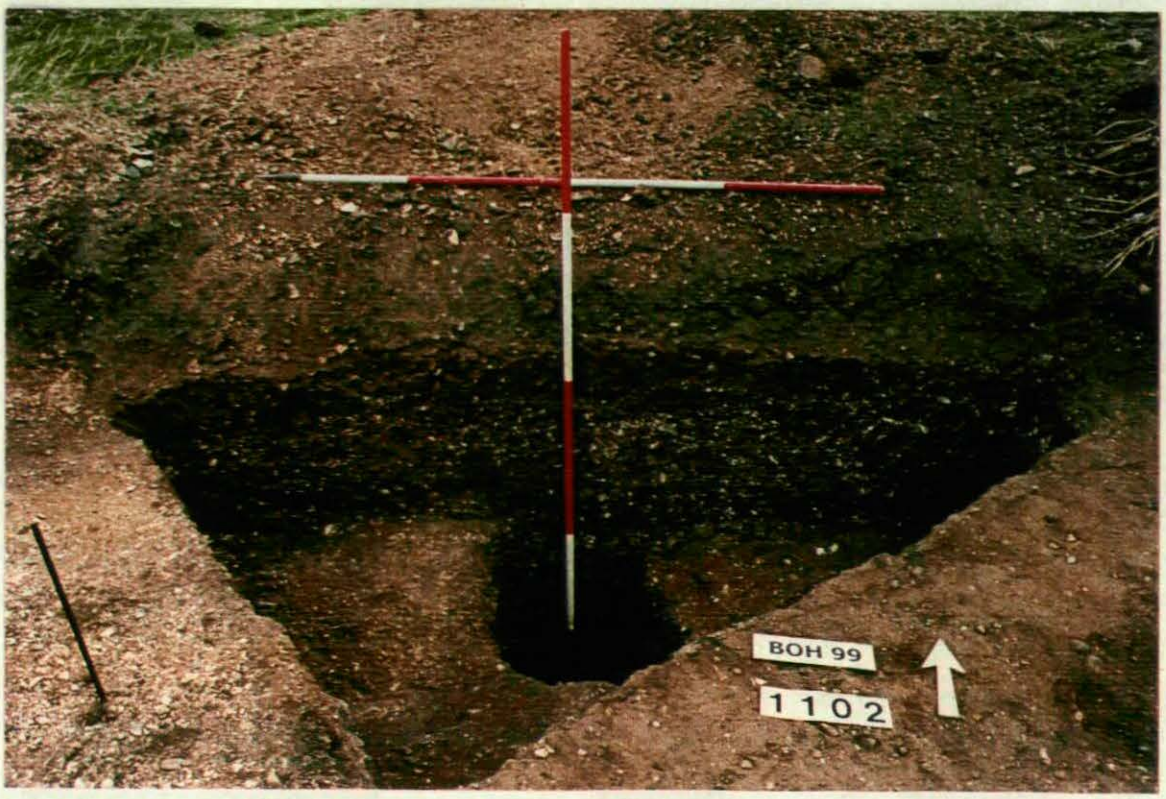
Pl. 8 Junction of Ditches 17(1089) and 6 (1091). Vertical scale 0.30m and horizontal scale 0.50m





Pl. 11 Ditch 20 (1533) at section 9b. Horizontal scale 2m. Vertical scale 0.50m

Pl. 12 Ditch 1102 at section 9c. Scales 2m



Pl. 9 Junction of Ditches 2(1180) and 13(1181). Note the severe truncation of features.

Pl. 10 Junction of Ditches 13 (1445) and 19(1373) at section 8f. Horizontal scale 0.50m and vertical scale 0.20m