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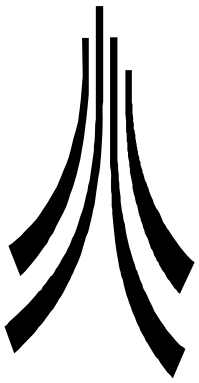

July 1997

OASIS SEWER REQUISITION

Cumbria

Excavation Report

Commissioned by:

North West Water Ltd

Oasis Sewer Requisition
Brougham
Cumbria

Archaeological Excavation Report

Checked by Project Manager. ..... Date
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The excavations were undertaken by Richard Short, Julia Roberts, Graham Mottershead, and Neil Perkins, with some assistance from Vernon Furnell. Chris Wild supervised, and the project was directed in the field by James Wright. This report was written by James Wright and Christine Howard-Davis, and edited by Jamie Quartermaine and Rachel Newman. The project was managed by Jamie Quartermaine.

EXECUTIVE SUMMARY

In June 1996 an evaluation was undertaken, by Lancaster University Archaeological Unit (LUAU), along the proposed line of a sewer serving the Oasis holiday village at Whinfell, near Penrith, Cumbria. Two areas of potential archaeological significance were encountered, at NGR NY 547296 and NY 567275. The one at the northern end of the pipeline comprised several ditches, probably of different dates and on differing alignments. The other was at the southern end and comprised postholes and stakeholes representing one or more rectangular timber-built structures, which, on typological grounds, could have been early medieval in date. The evaluation report (LUAU June 1996a) recommended the excavation of both sites, in order to record the archaeological evidence in advance of destruction. In response to this North West Water Ltd commissioned LUAU to undertake excavations at these two sites as mitigation in advance of the sewer scheme, in accordance with a Project Design (*Appendix 1*); the work was carried out in August 1996.

The sites are in the Eamont valley, an area rich in antiquities of prehistoric, Roman, and medieval date; a Roman road (marked by the present line of the A66) ran along the valley from Stainmore Gap in the Pennines to the fort at Brougham, where it met a major road between Hadrian's Wall and the South. Both routes continued in use well into the medieval period, and recent excavations at Fremington, close to the A66, and only 2.1 km to the west of the sites under consideration here, have provided evidence for both Roman and early medieval occupation close to the proposed sewer.

At the northernmost site an open area of 30m by 25m, and a trench 4m by 20m, were excavated firstly by mechanical then manual techniques. These revealed a single large ditch between 2m and 3m in width orientated north/south, and two other less substantial ditches which lay at an angle of *c*45° to it; the relationship between the ditches, however, is unlcear. The linearity and uniformity of the ditches would suggest that they were former boundaries of fields. Although no dating evidence was recovered from the excavation, pottery retrieved during the evaluation, which was associated with the largest ditch, suggested that it was likely to be of Romano-British date. The other ditches, which were more eroded, were potentially of an earlier date, possibly of the first millennium BC.

At the southern site, an area 47m by 25m was examined and over 60 postholes and four pits were exposed. There was evidence for at least two rectangular post-built structures, of which one seems to have been rebuilt on a slightly different alignment. One some 14m in length, and more than 6.0m wide, with an entrance in the north-western gable wall (Structure A1) although a general lack of artefacts meant that the site could not be firmly dated. However, a similar structure, dated to the seventh or eighth century AD, is known from nearby Fremington and both are similar in style to excavated examples of early or middle Anglo-Saxon halls elsewhere in the country.

A second concentration of postholes may possibly represent another timber building (Structure B) which was *c*3.5m wide and up to 13.5m long. This second building lay parallel to the putative hall, some 6.0m to the west. Three or four large pits were also excavated, the purpose of which is not obvious, but one may have been a hearth.

1. INTRODUCTION

1.1 BACKGROUND

1.1.1 North West Water Ltd applied for planning permission to lay a sewer between the proposed Oasis holiday village at Whinfell, near Penrith, Cumbria and a treatment plant near the River Eamont. Because of the wealth of both prehistoric and historic remains in the area, the Cumbria County Archaeologist recommended an evaluation of the impact of the proposed pipeline on the archaeological resource. Lancaster University Archaeological Unit (LUAU) prepared a Project Design advising a watching brief during borehole drilling, a landscape survey, and trial trenching (LUAU 1996a) which was accepted, and this evaluation was undertaken between 16th March and 3rd May 1996.

1.1.2 Two areas of archaeological potential were discovered, one at the northern end of the pipeline (NGR NY 547296) comprising several ditches, probably of different dates and on differing alignments. The other was at the southern end (NGR NY 567275) and comprised postholes and stakeholes representing one or more rectangular timber-built structures, which, on typological grounds, could have been early medieval in date. The evaluation report (LUAU 1996a) recommended the excavation of an area 25m by 30m, at both sites, in order to record the archaeological evidence in advance of destruction. A project design for these excavations (LUAU 1996b) was prepared and accepted, and the work was undertaken between the 5th and 19th August 1996.

1.2 TOPOGRAPHY AND GEOLOGY

1.2.1 ***Area A:*** Two trenches (101 and 102) were opened on the flood plain of the River Eamont, just north of the A66; the trenches were on flat land but, *c*50m to the west, the flood plain edge was marked by a steep, wooded slope. They were located immediately to the east of a minor road (running north/south) which provides access to a water treatment plant near the river (Fig 3). The underlying solid geology is Permian Penrith Sandstone, covered by drift comprising mixed sands, gravels, and clays. The soils are mapped (Jarvis *et al* 1984, end map) as of the Wick 1 series, which are typical brown earths.

1.2.2 ***Area B:*** The excavation area (Trench 103) was sited in a valley that runs from south to north, to join with the valley of River Eamont. A small stream runs down the valley, and the straightness of its course adjacent to the dry stone wall acting as a field boundary suggested that its course has been canalised. The sides of the valley rise, on both sides of the stream, to north/south ridges which command views of the Pennines and the mountains of northern Cumbria. Area B lay at *c*150m OD, and was positioned adjacent to the field boundary. The underlying solid geology is Permian Penrith Sandstone, covered by a drift of sand and stones. The soils are mapped (Jarvis *et al* 1984, end map) as of the Newport 1 series, which are typical brown sands.

1.3 HISTORICAL BACKGROUND

1.3.1 ***Prehistoric Period:*** The area surrounding the confluence of the rivers Eden and Eamont has one of the greatest concentrations of known archaeological sites in Cumbria, the low-lying terrain, surrounded by high hills, providing fertile agricultural land apparently from at least the late Neolithic period onwards. A concentration of henge monuments (Mayburgh, King Arthur's Round Table, and the Little Round Table) is situated at Eamont Bridge, close to the centre of the natural bowl formed by the confluence of the rivers, demonstrating some density of population in the vicinity in the late Neolithic with the ability to construct large communal monuments (Harding and Lee 1987). The number of monuments in a limited area suggests some continuity of a location of importance to the surrounding communities.

1.3.2 The route across Stainmore seems to have been known in the prehistoric period, forming one of the major trans-Pennine routes, along with the Tyne-Irthing gap to the north and the Aire-Lune gap to the south, through which trade developed and seemingly also ideas flowed.

1.3.3 A pattern of individual farmsteads can be recognised from the late prehistoric period in the area, such as at Sceugh Farm on the northern bank of the Eamont, which seems to continue unchanged into the period of Roman occupation of the region. This density was no doubt encouraged by the combination of good agricultural land and the possibility of trade along a natural routeway.

1.3.4 ***The Roman Period***: The Roman occupation of the area would appear to have been entirely military in nature, with the natural routeway from the east across Stainmore seemingly used as one of the first means of entry into the North West (Shotter 1996, 28). A road was constructed from the eastern side of the pass, to link with the main road up the west side of the country towards Carlisle, which remains largely in use to this day as the A66 (Margary 1957, 118), along which were constructed several forts and marching camps, notably the fort at Brougham (*Brocavum*), some 0.8 km to the west of the sewerage scheme. Remarkably little is known of the fort, although it survives as a well-defined earthwork, since little formal excavation has taken place within its confines (Birley 1931).

1.3.5 Early writers, such as Stukeley (1776, 45-6), noted traces of an apparently extramural settlement to the east of the fort, but no evidence of this has been identified by modern scholars and, indeed, intensive aerial photography in the early 1970s found rather a density of cropmarks that has been interpreted as a number of small settlements forming a widely dispersed pattern focusing on the fort (Higham and Jones 1975, 27), rather than any formal nucleated settlement associated with the military site. The date range of these cropmark sites remains largely untested by excavation. It is likely, however, that whatever the actual date of these settlements field systems may be associated with them.

1.3.6 The cemetery associated with the fort has been identified some 600m to the north-east, immediately to the north of the present A66. Indeed, it was improvements to this road which led to its partial excavation (Ministry of Public Buildings and Works 1967, 12; 1968, 17). This has not to date been published, but the site appears to bear similarities to cemeteries associated with the neighbouring forts of Brough under

Stainmore to the east (Jones 1977) and Low Borrowbridge to the south (Hair and Howard-Davis 1996), where a long tradition of cremation was identified, including evidence for the possibility of some deliberate breakage of grave goods as part of the burial rite. These excavations are situated only some 150m to the west of Area A.

1.3.7 ***Early Medieval Period:*** The early medieval period is not well known in the north-west of England as very little archaeological evidence for activity of that date has been identified between Chester and Hadrian's Wall. For the first few centuries after the withdrawal of Rome in the early fifth century AD there is to date almost no evidence at all, and, whilst there is undoubtedly a little more for subsequent centuries up to the Norman Conquest and beyond, it still amounts to very little by comparison with the amounts of evidence gained from elsewhere in the country. Therefore such a dearth gives importance to any new archaeological discoveries or investigations of this period in the region.

1.3.8 Wilmott (in press) has been able to demonstrate both continuity of occupation and function at the Roman fort site of Birdoswald (on Hadrian's Wall) into the sixth century AD, and excavations at the proposed monastic site of Dacre, near Pooley Bridge on Ullswater (Newman and Leech forthcoming) have established evidence for some activity on the site in the period between the sixth century and the Norman conquest. During that period such a settlement must, presumably, have drawn heavily on the resources of its surroundings, and this would imply a widely settled and well-ordered rural environ. Similarly the later proto-urban centres of Carlisle (McCarthy 1990) and Penrith (Newman pers comm) must have been able to draw upon a well-established and relatively secure hinterland to justify and underpin their growing status and increasingly centralised role within the wider society.

1.3.9 There is, however, very little evidence to illustrate the nature of rural settlement in the North West during the early medieval period, nor to chart its development, or of how it reflected or absorbed influences from elsewhere at a time when immigrants and fashions from mainland Europe were clearly having a profound effect on the development of English society.

1.3.10 Only two rural sites are known locally from excavations: Bryant's Gill (Dickinson 1985), an isolated upland, stone-built farmstead in Kentmere which can be dated to the eighth century AD, and, more importantly, the small-scale rural settlement at Fremington (Oliver *et al* 1996) which lies so close to the site of the present excavation as to be able to regard them as very closely related, if not one and the same.

1.3.11 Work at Fremington suggested an extended settlement of seventh to eighth century date which had, at some remove, replaced at least one Roman building dating to the second or third centuries AD. However, given the conditions of excavation (a linear area only 20m wide) the extent in the east/west axis could not be established. The site lies in an area that aerial reconnaissance and other archaeological investigations have proved to be intensively occupied during the Roman period, and which was probably focused upon the fort and extramural settlement at Brougham, a few kilometres to the west.

1.3.12 Excavations in 1991 revealed four sunken-floored buildings, regarded elsewhere in England as typical of the early medieval period, but hitherto unknown in the North West. The group from Fremington remain unique in the region (in the North West the only other examples of this period are at Manchester, and these are not well-dated. Such buildings are relatively well-known to the east of the Pennines and have been excavated at Yeavering and elsewhere in the Milfield Basin in North Northumberland (Hope-Taylor 1977, Gates and O'Brien 1988). Excavation at Fremington also uncovered the western side of a post-built rectangular building of a kind often associated with sunken-floored structures (Jones 1979, 53); it conformed to what seems to have been a fairly widespread vernacular architectural type (James *et al* 1984) typical of the period between the fifth and eighth centuries AD. The rectangular building is usually regarded as domestic accommodation whilst the sunken-floored structures are seen to be either workshops, or at least buildings of lesser significance.

1.3.13 The dating of early medieval sites is often problematic, and even more so, in the North West, where there is no easily identifiable cultural assemblage (Oliver *et al* 1996, 165). In consequence it is typically based on analogy with sites much further south, and on the typology of objects such as loom weights which cannot be dated with precision. Early medieval objects at Fremington were sparse, and excavations from a number of sites elsewhere in the country have demonstrated that it is not uncommon for settlement sites of this type to be devoid of finds (Millett 1983, 197).

1.3.14 Evidence suggests that the inhabitants of Fremington practised a largely agricultural regime, raising crops such as oats in the easily worked sandy soils. Such soils can, however, be exhausted with relative rapidity and it is not impossible that at Fremington some attempt to renew them was made by the addition of a sea-weed mulch. It is also possible that, as at sites such as Mucking (Hamerow 1993), there was a slow shift of settlement as house yards, enriched by domestic refuse and manure from penned stock, were eventually taken for arable farming and the main dwelling moved elsewhere. This is certainly reflected at Fremington and elsewhere by the long-term use of abandoned and decaying sunken-floored buildings as large-scale receptacles for domestic refuse which must have continued accumulating even when that part of the settlement was no longer inhabited. Indeed, evidence from these buildings suggests that, when in use, they were kept scrupulously clean, and so presumably rubbish was dumped away from current habitation. Such a slowly shifting settlement would explain the relatively large area over which the Fremington settlement appears to have been spread, and might even allow some chronological zoning of the site.

1.3.15 Unfortunately the exposed nature of the site, with friable sandy soils, along with a regime which included the cultivation of abandoned house sites, and subsequent cultivation, has led to substantial amounts of erosion and disturbance at Fremington. This possibly obliterated many of the shallower cut features and, at its most extreme, probably reduced the depth of sunken floored buildings from around 0.5m to as little as 0.02m.

1.3.16 The tenuous nature of evidence for early medieval sites in the North West serves well to emphasise the importance of any new evidence, allowing the existing

evidence to be interpreted with more confidence as well as adding significantly to the sparse body of evidence.

1.3.17 The area was largely common land following the establishment of a number of castles along the A66 following the Norman take-over of the North West at the end of the eleventh century. The settlement pattern seems to have stabilised as a network of villages with dispersed farms between, colonising the waste land, a pattern which remains to this day.

2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 A project design (*Appendix 1*) was compiled for North West Water Ltd in response to a verbal brief, provided by the Cumbria County Archaeologist, for an archaeological excavation of a site at the northern end (Area A: NY 547296) and one at the southern end (Area B: NY 567275) of the sewer requisition.

2.1.2 The project design (*Appendix 1*) was based on the results of the archaeological evaluation of the sewer requisition (LUAU 1996b) and provided for excavations to establish and record the nature, extent, and chronology of the archaeological remains identified during the evaluation in mitigation of their destruction during the proposed development.

2.1.3 The work was carried in accordance with the project design. Any variations to the fieldwork strategy were discussed and agreed with the Cumbria County Archaeologist prior to their implementation.

2.2 HEALTH AND SAFETY

2.2.1 Both Lancaster University and LUAU maintain Safety Policies, the latter based on the SCAUM (Standing Conference of Unit Managers) *Health and Safety Manual* (1991). In keeping with current Health and Safety at Work Regulations, prior to commencing on-site work, a risk assessment for each activity was completed. Due regard was given to all Health and Safety considerations during all aspects of the project, with service information provided by the client. No services had been revealed during the course of the evaluation programme. However, it is LUAU standard practice to scan the positions of all trenches for underground cables using a U-scan meter.

2.3 FIELDWORK STRATEGY

2.3.1 ***Excavation:*** At the northern site (Area A) a rectangular trench (101) measuring 30m by 25m, encompassing the evaluation trenches T1 and T52, was opened within the area of archaeological potential as recommended in the evaluation report (LUAU 1996b). A further trench (102), measuring 14m x 3.5m, was opened *c*10m to the south, just south of the evaluation Trench T53. At the southern site (Area B) a rectangular excavation area, measuring 40m x 20m, was opened, which encompassed evaluation Trench T41. When postholes were discovered extending to the southern edge of Area B, the trench was extended by *c*10m to ensure that no further postholes and potential structures lay beyond, which would be threatened during the laying of the sewer.

2.3.2 In each case, the turf and topsoil was stripped by a wheeled (360°) mechanical (Case) excavator, fitted with a toothless ditching bucket, under close archaeological supervision. The positions of the evaluation trenches were clear at ground level and

the backfill of each trench was largely removed mechanically. The topsoil and subsoil were stored separately to enable reinstatement.

2.3.3 The excavation areas were cleaned manually and inspected for archaeological features. All archaeological features were excavated manually and stratigraphically. Sections were excavated through each ditch, in Area A, in order to determine its profile and to enable the recovery of finds from securely sealed contexts; further segments were excavated where ditches or other features intersected in order to establish their stratigraphic relationship. Postholes and pits were half-sectioned. Samples were taken for subsequent bulk sieving and general biological analysis (GBA) by York University Environmental Archaeology Unit (*Section 4*). The position of each trench was surveyed by use of total station equipment with respect to field boundaries.

2.3.4 ***Recording***: The excavation plans were digitally drawn in Area A and by hand on drafting film in Area B. Written, drawn, and photographic records were maintained of all archaeological strata and cut features, and finds recovered were labelled and stored by context. Where features or deposits of archaeological interest were observed and investigated accurate scale plans and sections were drawn at 1:20, plans of the area were produced at 1:50 scale. Context records were completed in the usual manner along with a photographic record. The recording system is based on that used by English Heritage's Central Archaeology Service.

2.4 ARCHIVE

2.4.1 A full archive of both fieldwork and analysis has been produced to a professional standard in accordance with current English Heritage guidelines (English Heritage 1991). The archive will be deposited with the Tullie House Museum, Carlisle and a copy of the report given to the Cumbria Sites and Monuments Record. A copy of the archive will also be available for deposition with the National Monuments Record in Swindon. The present report reflects a summary of the project archive; the trench descriptions (*Section 3*) are summaries of the site context sheets and only selected site plans and section drawings have been reproduced within this report.

3. EXCAVATION RESULTS

3.1 AREA A

3.1.1 Both trenches (101 and 102: Fig 3) were sited on the flat flood plain of the River Eamont, and the natural deposits exposed (1003) comprised areas of sand and gravel, yellowish brown fine sand, and pale yellowish brown fine sandy silt loam. It is possible that, after the sand and gravel had been deposited, both were cut by a later channel which subsequently filled with fine sand. A yellowish brown, sandy silt loam subsoil (1002), between 0.14m and 0.18m in depth, was removed mechanically in places. Topsoil 1001 was a greyish brown fine sandy clay loam between 0.14m and 0.25m thick.

3.1.2 The variation in underlying geological deposits caused difficulties of feature recognition during both machine clearance and manual excavation, and accounts easily for the variation in width, depth, and composition of the fills of some of the features.

3.1.3 Four ditches were identified; the broadest of these (1015) was orientated almost north/south and there were two parallel ditches (1017 and 1019) which had a north-west/south-east orientation converging on ditch 1015; however, the anticipated intersection point of these ditches was beyond the area of excavation. The fourth ditch was orientated north-east/south-west and linked ditches 1017 and 1019.

3.1.4 Where two ditches intersected or met, L-shaped segments were excavated to try to determine from inspection of the longitudinal sections which, if either, feature cut the fill of the other. None of these segments, however, provided a clear indication of the relationships, and to avoid repetition each of these excavated segments is described simply in terms of the depth, profile, and fills exposed.

3.1.5 ***Ditch 1015 (Segments 1004/1034)***: Ditch 1015 was observed in both Trenches 101 and 102, running from north to south, over a distance of 45.10m. This ditch had been investigated (104 and 153) during the evaluation stage of the project, but was further examined by the excavation of two separate segments across its line (Segments 1004 (0.83m) and 1034 (1.10m)). There were no finds from this ditch.

3.1.6 The ditch varied considerably in width, between 1.25m and 2.73m (in segment 1004 it was 2.3m wide, in segment 1034 it was 2.73m wide) but varied little in depth (between 0.54m and 0.56m). In profile (Fig 5) it appeared to have gently sloping sides and a rounded base, although the mixed underlying drift led to difficulties in establishing its exact form. It contained a single fill (1005), a brown silty clay loam or fine sandy loam in which the stone content varied according to the substrate through which it was cut. Within segment 1004 the exposed section showed signs of gleying, grey and reddish brown mottling, which is probably indicative of post-depositional fluctuation in water levels.

3.1.7 A shallow and irregular channel (1193: 0.21m wide, and 0.08m deep) cut into fill 1035 in segment 1034, and ran parallel to the ditch. The channel contained fill 1010, which was similar to fill 1035 but included more rounded stones. It seems likely that fill 1010 was formed incidentally during the formation of fill 1035, possibly by deep

ploughing, and reflects the difficulty of identifying features cut into glacial sands and gravels.

3.1.8 ***Shallow ditch 1017 (Segments 1021, 1038):*** A shallow ditch (1017) was observed running on a south-east/north-west alignment for a distance of 35.10m. This ditch had been investigated during the evaluation (LUAU 1996b) and two further segments (1021 (2.00m wide), and 1038 (1.13m wide)) were excavated. The latter lay at the intersection of ditches 1017 and 1026 (see below *section 3.1.14*). There were no finds from this ditch.

3.1.9 In segment 1021 excavation established that ditch 1017 cut an earlier feature (1006). This appeared to run on the same line as ditch 1017, and had shallow sloping sides and a concave base. The edges of feature 1006 were difficult to establish with confidence, as they were marked only as concentrations of manganese panning. It was filled by 1007, a reddish brown sandy clay. Analysis suggests that the irregular edges and the ephemeral nature of this feature were consistent with it being of natural origin, possibly a former water-course. The feature is therefore not shown on Figure 3.

3.1.10 Ditch 1017 varied between 0.70m and 1.10m in width, and was around 0.35m deep. It had shallow sloping sides and a gently rounded base in segment 1021, but a sharper slope, *c*45°, in segment 1038. Within segment 1038 there was a single fill (1018), a brown fine sandy loam, which became stonier where the ditch was cut through gravel, but in segment 1021 two fills were noted; the lower fill (1022) was a greyish brown sandy clay, some 0.10m thick, and contained small stones. Above this was fill 1023, a reddish brown sandy clay loam, which also contained small stones.

3.1.11 ***Shallow ditch 1026 (Segments 1038, 1028, 1032):*** Ditch 1026 was observed over a distance of 4.02m, running from the northern edge of the excavation area to its terminus at ditch 1017. Three segments were excavated through this shallow feature; segment 1038 (0.50m) was intended to examine the relationship between ditches 1026 and 1017; segment 1028 (0.75m) was intended to obtain a full cross-section of the ditch; and segment 1032 (0.56m) was to examine the stratigraphic relationship between ditch 1026 and ditch 1019.

3.1.12 Segments 1028 (0.75m) and 1032 (0.56m) both showed the ditch to be around 1.0m wide and 0.15m to 0.25m deep. In profile it had a sharp break of slope at the top and the sides sloped at *c*45° to a rounded base. Again the ditch had been dug through gravel, and the northern side was irregular where very large stones had been left *in situ*. There was a single brown (1033) or greyish brown sandy loam (1029) fill within the ditch, which on occasion (1029) contained fairly frequent large stones.

3.1.13 'L'-shaped segment 1038 examined ditch 1026 at its intersection with ditch 1017. Only half of the width of the ditch was excavated (0.24m), and it was demonstrated that the depth varied between 0.16m and 0.24m, becoming shallower to the west, as it approached ditch 1017. In profile there was a sharp break of slope at the top of the ditch and the sides sloped at *c*45° to a concave base. It was filled by 1037, a dark brown sandy silt loam containing frequent small stones.

3.1.14 Analysis of the exposed sections indicated that whilst there was an easily observed difference between the fills of the two ditches, there was no well-defined interface between them, indicative of a cut, and thus they may have been broadly contemporary in date.

3.1.15 ***Shallow ditch 1019 (Segments 1013, 1024, 1032):*** Ditch 1019 ran on a south-east/north-west alignment for 30.20m across the trench. It lay to the north-east of ditch 1017 and was parallel to it. It was examined by the excavation of three separate segments across its line (1013, 1024, and 1032); segment 1032 examined the interface between ditches 1019 and 1026, segment 1024 examined the profile of the ditch near its north-western end, and segment 1032 examined the ditch profile at a distance of 14.2m from its intersection with ditch 1026. There were no finds from this ditch.

3.1.16 Ditch 1019 varied between 0.33m (1013) and 0.60m (1024) in width and 0.15m (1013) to 0.21m (1024) in depth. The profile (Fig 5) was broadly 'U'-shaped, and more or less rounded depending on the substrate through which it was cut. The single fill (1014, 1020, 1025, 1033) varied from grey to brown in colour, and from clay loam to sandy loam in texture with more or less stone, again depending on the nature of the underlying geological deposits. Its colour, however, appeared to be greyer than that of the other linear features.

3.1.17 'L'-shaped segment 1032 was laid out in the same fashion as 1038 above (*3.1.9)* to examine the intersection of ditches 1026 and 1019. Analysis proved inconclusive and, because of the shallowness of both ditches, the similarity between their fills, and the degree of bioturbation, no relationship could be established between them.

3.2 AREA B

3.2.1 ***Introduction***: Area B was excavated as near as was practicable to the drystone wall which formed the south-western boundary of the modern field. Immediately to the south-west of the wall was a stream running in what was probably a man-made channel. Although excavated in the same locality as evaluation Trench T41, there were few remaining signs of the edges of the earlier trench, although features exposed in that trench had survived.

3.2.2 A greyish brown sandy loam topsoil, with an average depth of *c*0.25m, overlay the site. This was removed by machine, exposing the natural geological deposits. Within Area B these were represented by sand (1112), generally a yellowish brown colour, although there was evidence of podsolisation, shown by areas where the colour had leached out and other areas where it had intensified. Thus there were pale grey patches, and, especially in the north-western (lowest) corner of the trench, there were very dark grey areas where metal salts had accumulated and started to bind the sand, giving it a firm consistency. A number of large stones and boulders was scattered uniformly across the trench. Although their distribution did not appear to be related to man-made features, and it is assumed that they were related to the underlying geology, they were recorded on plan. They are not discussed further in this report, but are shown on archive plans.

3.2.3 Some modern field drains were observed and recorded (1040, 1041, 1042, 1043, 1044 and 1045), but are not described within this report; they are, however, presented within the archive and are shown on Figure 4. They had an adverse effect on the earlier deposits, cutting some of the postholes, particularly at the north-eastern side of the excavation area and may have removed or obscured evidence of others.

3.2.4 Over 60, generally small, features were recorded cut into the natural deposits; most have been interpreted as post- and stakeholes, but four larger pits were recorded as well as modern ploughmarks, and other modern features. Erosion and disturbance meant that many of the features were damaged and badly truncated, and the simple and very shallow stratigraphy (topsoil lying directly above natural deposits) has meant that few stratigraphic relationships could be recovered between the many individual elements of the site. There was, however, a distinct clustering of features, with two concentrations separated by a 6.0m wide band that was devoid of archaeological features. This suggests that the clusters represented buildings or structures of some kind. Similarly the two clusters of features appeared more-or-less isolated within the trench, with large featureless strips to the south-west and north-east.

3.2.5 The nature of the archaeological remains, exacerbated by a total lack of artefact evidence, has made interpretation difficult, and inevitably tentative. It has, however, been possible to suggest the presence of a number of earth-fast (post-built) timber structures on the site and offer some interpretation. The eastern cluster of features is described first (Structures A1 and A2), followed by the western group (Structure B) (Fig 5). The pits are discussed separately, as are the remaining isolated post- and stake holes.

3.2.6 ***Structure A1:*** A rectangular post-built structure was aligned roughly north-west/south east, and could be identified as some 14m long and more than 6.5m wide; any eastern wall lay beyond the confines of the excavation. The surviving western wall of this structure was represented by four postholes, 1090, 1080, 1082, and 1068 (numbered 140 in the evaluation), which appeared to form pairs at either end of the wall. Nothing remained of any southern gable end and, indeed, modern field drains in the close vicinity (1042 or 1043) may well have removed all evidence. It is however possible that postholes 1048 and 1062 could be the last traces of such a gable end, although they perhaps fit better into other structures (see below *Section 3.2.12*). The northern gable end was, however, considerably better preserved, with posthole 1104 clearly indicating a return. A shallow beam slot (1088) or eroded line of some less substantial structural infill, such as wattle, between 1104 and 1090 at the northern end of the west wall. This may have indeed turned southwards for a short distance towards posthole 1080, before petering out. Although there were no other postholes on the line of the northern gable end, a second shallow slot (1100) similar to 1088 continued the line of the wall eastwards for some 2.5m. A gap of approximately 2m separated posthole 1104 and slot 1100, probably indicating a gable-end entrance, especially as the western end of 1100 turned abruptly south, into the interior of the proposed structure, before ending at posthole 1102, suggesting some interior partition. Posthole 1173 (Fig 7), to the immediate north of 1104, may also have been part of the entrance, but equally might represent a replacement or reinforcement, in the same way that posthole 1169 appeared to replace posthole 1090 at the corner of the building. An entrance in the centre of the western wall may have

been represented by postholes 1108 and 1180; however, they are more likely to be parts of Structure A2 (See below: *Section 3.2.12*).

3.2.7 The four postholes (1090, 1080, 1082 and 1068) which appeared to form the western side of the building were of similar shape and size. All were round or slightly oval, with diameters or long axes between 0.44m and 0.58m. Although the profile varied considerably between the four, all were between 0.12m and 0.16m deep, suggesting that all four must have contained similarly sized timbers. Their fills (1091, 1081, 1083 and 1069 respectively) were likewise similar, being greyish brown sandy loams. Fill 1083 (posthole 1082) contained a patch of redeposited sand. The four postholes were grouped as pairs approximately 2.0m apart at each end of the wall, leaving the central 9.0m long section devoid of post- or stakeholes and raising the possibility that it might have been left open, although this does not seem likely.

3.2.8 Posthole 1104 in the northern gable end was again oval, but somewhat smaller and shallower, at 0.36m by 0.25m, and *c*0.07m deep, than those of the west wall; its fill (1105) was a grey sandy loam. Beam slot 1088, which ran between 1104 and the north-western corner of the structure, had in fact been cut by posthole 1090 which formed the corner. This suggested the renewal or replacement of the flimsy structure that was implied by the size and nature of the beam slot. The slot was 'L'-shaped, the northern arm 1.50m long, and the shorter western arm only 0.05m long. It varied between 0.10m and 0.18m in width and was 0.05m deep with a 'U'-shaped profile. It was filled by 1089, a firm greyish brown sandy loam.

3.2.9 Slot 1100 (Fig 7), forming the eastern side of the entrance, was again 'L'-shaped, the northern arm being 2.25m in length and the inward return was 1.05m long. Both arms were around 0.14m wide and 0.05m deep, and had rounded bases. Again the fill (1101) was a greyish brown sandy loam, its firm consistency precluding the possibility that it was simply an animal burrow. Slot 1100 terminated to the south at posthole 1102. This was relatively large, comparable in size and shape with those of the west wall (oval, long axis 0.55m, 0.15m deep), with, again, a greyish brown fill (1103).

3.2.10 It seems likely that posthole 1169 formed a replacement for posthole 1090 at some point in the life of the building, because the former was a similar size and shape to the four other postholes of the western wall, and because all five postholes are on the same alignment. Although badly damaged by the plough, posthole 1169 appeared to be approximately square (side 0.41m) and some 0.09m deep, with sloping sides and a flat bottom. The fill (1170), a greyish brown sandy loam, contained some modern fine roots.

3.2.11 It also seems reasonable to associate posthole 1173 with this structure, although it appeared rather more substantial than the other postholes. It lay outside the northern gable end, little more than 0.05m from posthole 1104. It was again oval (long axis 0.66m) but unlike the others was 0.23m deep, with almost vertical sides and a rounded base. Unlike the others it contained two fills: 1175, a reddish brown sand, possibly post-packing, adhered to the western side of the posthole in a strip 0.07m wide, and 1174, a greyish brown sandy loam, filled the rest of the cut. Its purpose seems unclear but it could either have been a more substantial replacement for 1104, or it could have been part of a complex entrance.

3.2.12 ***Structure A2:*** This is a rectangular post-built structure, aligned roughly north-west/south-east, some 12.4m long and more than 6.08m wide. It lay approximately parallel to Structure A1, but overlaps it, and clearly the two buildings could not have been in contemporary use (Fig 5). The south-western wall of this structure is represented by four postholes, 1180, 1108, 1076 and 1060, which appeared roughly evenly spaced along the line of the wall. Nothing remained of any northern gable end which might over-or underlie Structure A1. The south-eastern gable end was, however, considerably better preserved, with postholes 1060, 1054 (Fig 6) and 1050 marking the line of the wall. The north-eastern wall of the building was possibly represented by a line of five postholes: 1050, 1048, 1118, 1096 and 1098. Some internal partition of the building may be suggested by the line of postholes 1078, 1086 and 1118, which would have divided the building in two. It is also not impossible that postholes 1096 (Fig 6) to the north, 1094 and 1108 may have represented further insubstantial partitioning, orientated south-west/north-east across the structure.

3.2.13 Two (1180 and 1076) of the four postholes, which appeared to form the south-western side of the building, were of similar shape and size; each were oval with long axes between 0.48m and 0.52m. Although the profiles of the postholes of this possible wall varied considerably, all were between 0.10m and 0.20m deep, again suggesting that they must have contained similarly sized timbers.

3.2.14 The fills differed slightly: postholes 1180 and 1108 had two fills (1181, 1182, and 1116, 1109 respectively) whereas the remaining postholes (1076 and 1060) had a single fill of grey brown or brown silty loams. The similarities between postholes 1180 and 1108 were marked; posthole 1108 was oval-shaped (0.48m by 0.30m) with a bowl-shaped profile 0.16m deep. Lining the bottom and sides of the cut was a brown sand (1116) with a maximum thickness of 0.07m, and the rest of the posthole was filled by a grey sandy loam (1109). Posthole 1180 had a similar shape (0.49m by 0.46m) and profile (0.20m deep). A brown sand (1181) lined the base and sides of the cut to a depth of 0.08m, and above was a greyish brown sandy loam (1182). The upper fills of both of these postholes (1182 and 1109) closely resembled the single fill of posthole 1076 in this putative wall, and also posthole 1056, which was slightly remote from the main structural alignments but could possibly have related to this structure. The fills of 1180, 1076 and 1056 all contained fragments of apparently redeposited clay, unlike the postholes of Structure A1. This would appear to reinforce the argument that postholes 1108 and 1180 were part of Structure A2 and it also possibly suggests a difference in the depositional sequence of the two structures; the timbers of Structure A2 were also possibly removed rather than left to rot *in situ*.

3.2.15 The postholes of the south-eastern gable wall (1060, 1054 and 1050) displayed some similarities in shape, although posthole 1054 was appreciably larger and deeper than either 1050 and 1060 (long axes 1054: 0.45m, 1050: 0.36m and 1060: 0.32m). Their profiles were basically similar, although irregularities in the base of 1054 suggested that it might have been recut (no secondary cut could, however, be distinguished within the fill). Their fills (1055 and 1051) were ostensibly identical, greyish brown sandy silt loam with flecks of yellowish brown decayed sandstone, and occasional small stones.

3.2.16 Postholes 1078 and 1118, which were possibly part of a partition, are slightly smaller (0.36m and 0.26m respectively) than those of the south-western wall, particularly 1076 and 1180, although of a similar depth. This is broadly consistent with the proposed non-load bearing character of these posts. Posthole 1118 was shallower (0.07m) than 1078 and had a rounded base, but again the fills were similar, although that of 1118 contained some large stones.

3.2.17 The putative north-eastern wall was marked by a series of relatively small postholes (1050: 0.45m, 1048: 0.58m, 1118: 0.26m and 1096: 0.38m (long axes)). Although oval posthole 1048 was relatively large it was rather shallow (0.05m depth). The fill of 1096 was similar to that of 1118, a grey fine sandy loam (1097). The fill of 1048 (1049) was a dark brown sandy silt loam containing occasional medium stones, with a higher proportion of sand towards its northern side. In this instance the interpretation of this group of postholes as a wall relies more on their alignment than any similarity in their shape and character.

3.2.18 A significantly large posthole or pit (1062) also lay within or adjacent to the building and close to pit 1064 (see below *Section 3.2.34*). It was different from other postholes in the area, perhaps due to geological conditions. In shape it was sub-rectangular (0.82m by 0.66m) with a maximum depth of 0.21m. Its profile was markedly asymmetrical with an almost vertical side to the south and a much more gradual slope to the north-east where the base was formed by a flat surfaced, but sloping, stone slab of natural origin. There were two fills; 1113, a loose grey sand, was sealed by 1063, a brown sandy loam containing patches of very pale brown sand and occasional small pieces of reddish clay.

3.2.19 This group of features has been interpreted as representing two superimposed rectangular structures as this seems to account most logically for anomalies in the line of walls, and the arrangement of internal divisions. It is not, however, out of the question that they in fact represent a single building some 17.5m long, with an internal division separating the southernmost third of the building from the rest. The other postholes in this case could be accounted for as aisles of a large hall of a type paralleled at Yeavering (Hope-Taylor 1977).

3.2.20 ***Structure B***: This comprises a complex group of features; it clearly represents a rectangular post-built structure, again aligned roughly north-west to south-east, but it cannot be established with confidence whether it represents a single long, narrow building (14.0m long and around 4.0m wide) with opposed entrances midway along the long sides, or two smaller rectangular buildings (both 6.0m by 4.0m, separated by a corridor between 1.0m and 2.0m wide). If treated as a single building, however, it is similar in size to Structures A1 and A2, but a little narrower.

3.2.21 The surviving north-eastern wall of this structure was represented by a line of five postholes (1178, 1171, 1167, 1161, and 1141) which ran parallel to, but some 6.0m to the west of, the south-western wall of Structure A1, strongly suggesting an ordered layout, and thus some contemporaneity. The south-western wall is less well-represented, no trace of a northern corner being identified, and only postholes 1183, 116 and 120 (numbered during the evaluation) can be regarded as part of the wall proper. Only the northern corner posthole of the north-western gable end survived (1178). The close proximity of 1167 and 1161 in the east wall, and the fact that they

appeared to be paired across the width of the structure by 1183 and 116, strongly suggests opposed entrances, midway along the length of the structure.

3.2.22 All five postholes in the north-eastern wall were oval, but they varied in size. Posthole 1178, forming the north-east corner of the structure, was the largest, being 0.70m by 0.50m. Of the others, 1171, 1167 and 1141 were roughly comparable in size (long axes between 0.35m and 0.55m, and depth between 0.04m and 0.11m). Posthole 1161 (Fig 7), forming the southern side of the putative entrance, was of a similar size to 1178 (long axis 0.65m), although much deeper (in excess of 0.18m but not fully excavated). The uneven shape of this feature, which was considerably wider at one end than the other, raises the possibility that it was a double posthole; however, the single fill discerned in the section makes this unlikely, and the larger post accommodated by this posthole perhaps supported a door. The fills of all five postholes of the north-eastern wall (1179, 1172, 1168, 1162, and 1142 respectively) were similar, greyish brown sandy loams containing occasional stones and, in 1142, flecks of clay.

3.2.23 The three postholes thought to represent the remnant of a south-western wall (1183, 116 and 120) were all approximately circular with diameters between 0.40m and 0.60m and were between 0.16m and 0.25m deep. The fill of pit 1122 (Fig 6; *Section 3.2.33*) and that of posthole 1183 were very similar, both being a brown sandy loam, consequently the relationship between the two features was uncertain. Posthole 116 was filled by a dark brown fine sandy silt loam (115) which, on excavation during the evaluation phase of the project, had produced a single small fragment of flint of indeterminate date. Posthole 120 was unusual on the site, in having three fills (119, 127 and 128). Fill 128, a very dark brown sand, probably represented the decayed post (some 0.24m wide), packed around by fill 127, a pale brown sand which was probably a redeposited natural. Both were sealed by 119, a 0.08m thick layer of dark brown fine sandy silt loam.

3.2.24 The south-eastern gable end was apparently represented by posthole 1191 to the south-west of apparent corner posthole 1141 (both 0.35m in diameter); however, the resultant structure would have had slightly convergent walls. Posthole 1191 was filled by a brown sandy loam (1192).

3.2.25 A group of three postholes (1156, 1159 and 1163), close to the suggested entrance in the north-east wall, are less easy to explain as replacements of elements of the structure, as they would have effectively blocked the entrance. This may, however, have been their purpose and they may well represent a modification to the structure. Posthole 1156 (numbered 138 in the evaluation (Fig 7)) was sub-rectangular or oval (long axis 0.57m), and 0.18m deep. Posthole 1159 (Fig 7) was similar in shape but slightly smaller (long axis 0.43m) and shallower (0.10m deep) and posthole 1163 (numbered 136 in the evaluation) was smaller and shallower still (long axis 0.34m and 0.03m deep). Their fills differed, posthole 1156 contained two fills, 1157, a pale greyish brown sandy loam which only appeared to line the south-western side of the cut, and 1158, a greyish brown sandy loam which filled the rest of the posthole. Posthole 1159 was filled by 1160, a grey sandy loam containing occasional medium stones, and 1163 was filled by 1164, a greyish brown sandy loam containing occasional lumps of yellowish brown clay, some redeposited natural sand, and occasional stones.

3.2.26 ***Structure C***: this less substantial building, measuring 3.5m by 8.0m, was on a slightly different alignment to Structures A1, A2 and B. The north-eastern wall comprised postholes 112, 114, 118, 148 and 1131 (130 of the evaluation), and the south-western wall comprised 1189 (150 of the evaluation), 1187 (149 of the evaluation), 1137 (132 of the evaluation), and 1145. Replacements for postholes in the corners of the building were represented by 1133 (131 of the evaluation) and 1149, and 1189. There was no consistency in the sizes of these postholes, although those in the east of the building were the largest; this possibly reflects a combination of erosion, hillwash, and possibly plough damage which has had a greater effect towards the west, close to the valley floor and its stream. There was no obvious entrance for this building.

3.2.27 In the north-eastern wall postholes 114 and 120 were the most substantial, both being oval shaped with major axes of 0.45m, and 0.60m respectively. The other postholes (148, and 1131) in this wall were also oval-shaped with similar lengths (0.22m, and 0.29m respectively), and the more southerly posthole was shallower (1131 was 0.08m).

3.2.28 Postholes 112 and 1189 were possibly corners of the building, but they were relatively small, oval in shape (long axis 0.23m) and were only 0.06m deep. The fills (111 and 113) were both dark brown sandy loams, and the latter included two fragments of burnt, but otherwise unworked flint.

3.2.29 Just 0.64m south-east of the corner post (112) was another slightly larger posthole (114), which could potentially have been a replacement posthole. However, it is possibly significant that the configuration was mirrored on the south-western side of the building where posthole 1187 was 0.62m to the south-east of corner post 1189. These were essentially matched pairs, but their precise function was not evident.

3.2.30 The south-western wall was not as well represented, and there was more variation between the postholes; thus 1187 was sub-oval with a maximum length of 0.28m, 1137 was oval (long axis 0.60m), and 1145 was oval (long axis 0.32m). However, their depths were constant (1137: 0.16m and 1145: 0.17m). Immediately adjacent to posthole 1145 was a smaller possible posthole (1149) in an area of greyish brown sandy loam (1136); this had a clearly defined oval shape (0.23m by 0.18m), with stones around the edges of it. The appearance of 1149 suggested a posthole with stones acting as post-packing, although this could not be confirmed by excavation.

3.2.31 All the replacement postholes (1133 (131 of the evaluation), 1149, and 1187) were oval shaped, and had similar axial lengths (1133: 0.26m, 1149: 0.28m, and 1187: 0.28m). Their depths varied between 0.04m and 0.10m.

3.2.32 ***Pits***: There were four large pits (1122, 1064, 1120, and 1124) across the site, three of which were in a line extending across the excavation area (1120, 1124 and 1064). Two of these pits (1122 and 1064) were closely associated with the suggested structures, pit 1122 being adjacent to Structure B, and pit 1064 was adjacent to Structure A1; however, this association may be fortuitous rather than deliberate. Apart from the alignment there was little, if anything, to link the four features, except that 1122, 1064, and 1124 contained large stones.

3.2.33 Pit 1122 (numbered 108 in the evaluation; Fig 6) was initially thought to be modern disturbance, but subsequent investigation suggests that this may well be amongst the earliest of the features on the site. Excavation of the feature was logistically difficult, as it contained three large boulders which precluded the possibility of obtaining a section through it; in consequence, once the boulders were removed, the pit was fully excavated. It was almost circular in plan (diameter between 1.24m and 1.18m) and 0.39m deep. Its sides were steep, with a well-defined break of slope at both the top and bottom, and the base was level. To the east the side bulged to form what has been interpreted as a separate posthole (1183: discussed above under Structure B; *Section 3.2.23*). The only fill (1123) was a brown silty loam containing redeposited red clay, presumably originating from the red clay substrate into which it was cut. Fill 1123 was unusually moist for the site, and in consequence a fragment of waterlogged worked wood was recovered from beneath a stone near the top of the pit. No clear stratigraphic relationship could be discerned between pit 1122 and posthole 1183.

3.2.34 Pit 1064 (Fig 6) lay within Structure A2 towards the eastern edge of the excavated area. It was irregular in plan, somewhat egg-shaped, with maximum dimensions of 1.04m north/south, 1.03m east/west and was 0.25m deep. The sides were near vertical around most of the circumference, and the base was horizontal. It contained two fills (1117 and 1065). The lower fill (1117) was a yellowish brown redeposited natural sand, containing some dark mottles, and varied between 0.07m and 0.24m in thickness; fill 1065 was above this and was a dark greyish brown sandy silt loam with some mottling and concretions. Like pit 1122 (*Section 3.2.33*) there were large stones within the pit, which overlay the interface between the two fills. Unless the timber they supported was relatively small (<0.18mm) it seems unlikely that they acted as post-packing. There were similar pits associated with the Fremington structures (Lambert 1996) and one possible interpretation was that it was the remains of a hearth.

3.2.35 Pit 1120 was only examined in part, as it ran beyond the western edge of the excavation. It appeared to have an irregular oval plan, being 2.30m north/south and around 2.0m long in its east/west axis, although only 1.14m was excavated. The pit was very shallow, only 0.09m maximum depth, and the sides sloped gently, with no real break of slope between them and the base of the feature. The single fill (1121) was a grey sandy loam containing some large stones, redeposited clay, lenses of yellowish brown sand, and rust-coloured mottling.

3.2.36 Pit 1124 (numbered 141 during the evaluation) was sub-rectangular, 1.24m by 1.16m in size and 0.42m deep. The pit was well-defined, with an abrupt break of slope at the top and almost vertical sides; the bottom was roughly horizontal. The fill (1125), was a yellowish brown sandy silt loam, with some greyish brown mottling, some redeposited clay, and some very large stones; it incorporated fill 1126, which was 0.16m thick, 0.48m wide and was a lens of greyish brown mottled sandy silt loam.

3.2.37 ***Other postholes and stakeholes***: Some other post- and stakeholes were noted during the excavations. However, these made little sense within the context of these interpreted structures.

3.2.38 Stake hole 110 was oval (long axis 0.44 and depth 0.11m) and was filled by a dark brown sandy silt loam (109). It was within the extent of Structure B, but slightly remote from any of the putative wall alignments.

3.2.39 Posthole 1176 (diameter 0.32m; Fig. 7) was slightly truncated. It survived to a depth of 0.16m, and was filled by 1177, a greyish brown sandy loam. It lay near to the northern corner of Structure B. There is also one very small (0.15m diameter) posthole (1185) near the south-western wall of the building and does not appear to be related to the structure.

3.2.40 Postholes 1152 and 1154, to the south-east of Structure B, had a similar grey sandy loam fill which contained flecks of red clay. There is an alignment of postholes extending at an oblique angle with respect to both structures B and C (postholes 1152, 1146, 147 and 124). Although they could relate to an other structure it is also possible that they reflect a coincidental alignment as there are no other associated walls on this orientation.

3.2.41 ***Natural and plough damaged features***: the final group of features described here are likely to be of natural origin, or the result of plough damage.

3.2.42 Feature 151, thought to be a stakehole, did not survive cleaning. Similarly 1150, an insubstantial feature measuring 0.19m by 0.07m, barely survived cleaning. Its fill, 1151, was a loose greyish brown sandy loam. The stake hole was near to the south-western corner of Structure C and it is possible that there was a relationship.

3.2.43 Features 1046, 1066, 1084, and 1114 are thought to be the result of later ploughing over the site. Full descriptions of them, and their fills (1047, 1067, 1085, 1115 respectively) can be found within the archive. Feature 1086 is also considered to be modern, and feature 1165 is thought to have a natural origin. Both are described within the archive.

4. FINDS

4.1 AREA A

4.1.1 There were no finds identified during the excavation of Area A. However, finds were recovered during the evaluation from this area (LUAU 1996b); ten fragments of Romano-British pottery were recovered from the fill of ditch 1015 in Trench T1. This material comprised small and abraded pieces, suggesting considerable and sustained disturbance and movement within the soil matrix. Five of the fragments were Black Burnished (BB1) ware and were broadly of late second to third century date, but there were also five fragments of calcite gritted ware (significantly, less abraded) which are likely to derive from vessels whose date range extends into the fourth century AD. The group is probably best placed within the third century.

4.1.2 Three fragments of lead were also discovered during the excavation of evaluation Trench T1; one was a small cast plug of a kind frequently encountered on sites of Roman date and the other two were of unidentified function.

4.1.3 It is interesting that the greatest assemblage recovered during the evaluation was from the fill of ditch 1015, and yet the more systematic examination of the same ditch during the excavation produced no assemblage. It is probable therefore that the evaluation disturbed a localised rubbish deposit within the ditch.

4.2 AREA B

4.2.1 The excavation of Area B recovered no artefacts; however, the evaluation did produce two small fragments of possibly burnt flint from the fill of posthole 114. Environmental samples were taken from posthole 1080 and pit 1123, which are discussed in *Section 5*.

5. ENVIRONMENTAL RESULTS

by Environmental Archaeology Unit (York University)

5.1 Two sediment samples from possible early medieval deposits were submitted for an assessment of their bioarchaeological potential. The first was from 1081, the fill of posthole 1080 (Structure A1). It consisted of moist, mid-yellowish brown, unconsolidated, slightly silty sand, with stones up to 20mm.

5.2 The second sample was from 1123, the fill of a pear-shaped pit (1122). It consisted of moist, mid orange-ish brown, unconsolidated, slightly silty sand with some lumps, up to 20mm, of orange ?burnt earth with clay. The sample also contained stones up to 60mm and some rootlets.

5.3 ANALYSIS OF POSTHOLE FILL 1081

5.3.1 A 2.65kg sub-sample was processed in its entirety for extraction of macrofossil remains. The very small washover consisted mainly of very decayed root fragments, some or all of which might be recent. With these were small numbers of rather poorly preserved seeds of a variety of damp ground taxa and weeds, at least some of which were clearly modern. Indeed it is possible that virtually none of the plant remains are very ancient. A very small assemblage of insects was also recovered and consisted of a few decomposed species and a weevil. Two earthworm egg capsules were also noted. All may have been of recent origin.

5.4 ANALYSIS OF PIT FILL 1123

5.4.1 The small washover mainly consisted of root fragments with some very decayed wood up to 20mm in largest dimension. The few, rather poorly preserved, seeds present included some modern corn-spurrey (*Spergula arvensis*) with a few plants probably representative of wet grassland, though by no means very characteristic.

5.4.2 Several cysts of the soil-dwelling nematode *Heterodera* sp. were present and the only insect remains recovered were two fragments of a fly puparium, an unidentifiable fragment of beetle cuticle, and a wing-case of *Megasternum obscurum* (Marsham). All of the sclerites were rather yellow, indicating decomposition under dry, and somewhat acidic, conditions.

5.5 CONCLUSION

5.5.1 The above two samples were selected for their waterlogged nature and ecological potential; however, the analysis has demonstrated that they have very poor environmental preservation and are of very limited bioarchaeological potential. It can therefore be concluded that there is little justification for undertaking further environmental analysis at this site.

6. CONCLUSIONS

6.1 AREA A

6.1.1 The earliest feature (1006) in either of Trenches 101 or 102 ran on a similar line to ditch 1017 and was very ill-defined (not shown on Figure 3). It was however demonstrated (in segment 1021) to be stratigraphically older than 1017 and appears to have been natural in origin, probably a minor watercourse flowing across the Eamont flood plain. Above this, four ditches were recorded, all cut into natural deposits. Three of them (1017, 1019, and 1026) were closely related to each other, they were narrow and shallow, running either parallel to, or intersecting with each other, whilst the fourth, a rather more substantial ditch (1015), appeared to be aligned approximately perpendicular to the nearby Roman road under the A66.

6.1.2 The three small ditches were of similar dimensions, around 1.0m in width, and generally less than 0.35m deep. Although they intersected, it proved impossible to establish a firm stratigraphic relationship between them, but the leached nature of the fill of ditch 1019 may suggest that it was the earliest, and that rather than being recut during maintenance, it was replaced by ditch 1017. This ditch (1017) was dug on the south-western side of 1019, possibly because there was a bank to the south-west of the earlier ditch. Ditch 1026 intersected with, but did not continue beyond 1017 and was thus probably contemporary with it, although no firm stratigraphic evidence for this was found. There were no finds from these ditches to suggest a date, but the close orientation of all three might suggest at least a broad contemporaneity, and their less substantial and more eroded appearance, when compared to ditch 1015, might suggest that they pre-date it.

6.1.3 Ditch 1015 ran north/south at approximately 45° to the others, and at right-angles to the line of the nearby Roman road which ran from the Stainmore Gap (Margary 1973, 433-6). It was by far the most substantial of the four ditches examined, being up to 2.73m wide and 0.56m deep below the level of topsoil. Although no finds were recovered during the excavation, eleven fragments of abraded Roman pottery of the third century AD were collected during the evaluation (LUAU 1996b). The poor condition of several of these fragments might suggest that they were not deposited in the ditch until some time after their manufacture, and their subsequent discard; however, a Roman or later date for this large feature would be consistent with the fact that it lies at right-angles to, and thus appears orientated upon, the line of the present A66, which has been in use since at least the Roman period. If, as inferred above, this boundary is later than the other three it would suggest that a Roman field system was superimposed upon an earlier Iron Age system of different orientation.

6.1.4 A shallow channel (1193), which cut across the fill of ditch 1015, probably represents the latest activity on the site, being plough damage from relatively modern agricultural activity.

6.1.5 There is little doubt that the fertile Eamont plain has proved attractive to farmers for a long time and thus it is not surprising to find relatively shallow ditches such as these cut across the area. They potentially represent field boundaries of prehistoric and/or Roman date. The site is just to the east of the Roman cemetery and it is

perhaps to be expected that there would be a contemporary field system in the vicinity.

6.2 AREA B

6.2.1 ***Introduction***: Over 60 cut features were recorded from the excavation and most can be interpreted as stake- and postholes relating to structures erected on the site in the past. No finds were recovered which might have provided a firm framework of dating for the structures, but it is possible to suggest a likely early medieval date for some, if not all, of the activity on the site. Four putative rectangular structures (A1/2, B, and C) have been identified.

6.2.2 The four buildings were all rectangular, and of approximately similar proportions, although structure C was on a slightly different alignment to the three others. Evidence suggests a broad contemporaneity between Structures A and B, although the relationship with structure C is more doubtful. Both A and B were of similar form and size, both around 14.0m long and between 3.5m and at least 7.0m in width. They were both parallel and separated by a 6.0m wide strip devoid of postholes, which perhaps implies a clear area deliberately maintained between two standing buildings. Both structures were poorly preserved, leading to some ambiguity in their interpretation; Structure A can be seen as a superimposition of two similar buildings (A1 and A2), one upon the other, and Structure B can be seen as a single building of similar dimensions to Structure A, or two smaller, four or six-post structures in close proximity (less than 2.0m apart).

6.2.3 Structure A1 was a poorly preserved rectangular building (13.9m long and more than 6.0m wide), aligned approximately north-west/south-east. All evidence for the north-eastern side, and for the south-eastern gable end of the building, had been destroyed, but there is good evidence for a complex entrance at the opposite end of the structure. There is also some indication of the renewal or replacement of individual timbers in the northern gable, suggesting a certain longevity for the building. Structure A2 was again poorly preserved but clearly lay upon the same alignment. It was a little shorter, about 12.4m in length, and survives to a greater width, being not less than 6.1m across. There is, however, evidence within this structure for an internal wall dividing the building in two (postholes 1114 and 1086).

6.2.4 Structure B was of almost the same length (13.5m) as Structure A1, but somewhat narrower (only 3.50m). It had a well-preserved north-east wall, a less well-preserved south-west wall and a single posthole (1191) marking the line of the southern gable. The northern gable had been destroyed. Paired postholes towards the centres of both surviving sides strongly suggest opposed entrances, unless they marked the gap between two much smaller rectangular buildings. Again there is some evidence for repair and modification, possibly the blocking of the entrance, to suggest that the building was reasonably long-lived.

6.2.5 Structure C was a less substantial building, measuring 8.0m by 3.5m and was on a slightly different alignment to Structures A1, A2 and B. There was no consistency in the sizes of the postholes forming this structure, although those in the south-western part of the building were the smallest, perhaps indicating that a combination of erosion, hillwash, and possibly also plough damage, has had a greater effect towards

the west, near the stream. The possible corner posts of the structure were relatively small by comparison with internal postholes, from which it may be inferred that the gables were not the major load-bearing elements. There were, however, slightly larger replacement postholes (1133, 1149, and 1189) in three of the corners of the building, perhaps suggesting some longevity for the structure. There is a possibility that the replacement structure was of a slightly more substantial design, hence requiring larger posts.

6.2.6 The dimensions, and the ratio between the long and short walls, of Structures A1, A2 and C, give a structural module of 2:1. This, when coupled with the proximity of the site to the dated early medieval settlement at Fremington to the east, which has similar structures, goes some way to suggest that these too are of early medieval date; a similar structure at Fremington has been dated to the seventh to eighth centuries (Oliver *et al* 1996, Structure 5). Structure A1 in particular can be equated to typical early medieval hall-type structures of the kind seen on sites in the south (eg Mucking, Hamerow 1993, West Stow, West 1985) and to the north-east at Yeavering (Hope-Taylor 1977). In general, however, such halls have entrances in the long walls instead of, or as well as, in the gables. Whilst there are postholes associated with Structure A1 in approximately the position expected for such an entrance (1108 and 1180), just outside the west wall line, these are in fact more likely to form part of Structure A2.

6.2.7 Whilst of similar dimensions, Structure A2 is less typical of the form of early medieval halls, as internal divisions tend to be asymmetrically placed and here the proposed partition divided the structure into two almost equal parts. There is, however, a similarity between this building and the possible hall excavated at Fremington (Structure 5, Oliver *et al* 1996) in that both have a cluster of pits and other internal structures including a hearth (a possible interpretation of 1064) towards one end of the building.

6.2.8 The apparent *c*5m wide gap between Structures A and B was possibly deliberate and might suggest that both were standing at the same time. Again it is possible to see Structure B as a hall of typical early medieval type, this time with the more conventional opposed entrances in the long sides. Although the building is relatively narrow compared with the others investigated at this site, a structural ratio of 1:4 is not unknown elsewhere (James *et al* 1984, Marshall and Marshall 1991). This does not entirely preclude the possibility that Structure B may in fact represent two smaller structures set end to end. Smaller rectangular buildings, similar in size to half of the proposed Structure B, are known from other early medieval sites (eg Mucking, where a number of the post-built rectangular structures are around 6.0m in length (Hamerow 1993, 9)).

6.2.9 The pits (west to east: 1120, 1122, 1124 and 1064) were spatially associated with the four structures but their precise relationship is uncertain. None was particularly large, or seemed to have unusually organic fills which might have suggested their use for the disposal of rubbish. Three (1122, 1064, 1124), however, contained large stones which may have served some specific but undefined purpose. Addyman (1965, structure D) has suggested that such large stones might form the base for a relatively complex hearth, and such an interpretation would see a hearth (pit 1064) in the

southern half of Structure A2, but would not particularly suit the other three pits. All the pits are relatively small and probably were used for depositing organic rubbish.

6.2.10 The lack of precise dating for the site severely restricts the range of discussion possible. It can however be suggested that the structures may be early medieval, although it is not entirely impossible that the earliest phase of activity might be of Roman date. Nevertheless, whilst the site is in the proximity of a Roman road and a Roman fort (Brougham), the lack of finds here argues strongly against Roman activity. This would, to a degree, reinforce the later date, as early and middle Anglo-Saxon sites are often short of, or entirely devoid of, finds (Millet 1983). Even at Fremington, where sufficient early medieval finds were recovered to provide a date for the site, the majority derived from preceding second and third century Roman activity.

6.2.11 Little can be said of the external appearance of the buildings except to reiterate that they were rectangular and post-built, with a number of upright posts providing a solid framework, and infilled with less substantial materials such as wattle and daub (suggested by the shallow and irregular beam slots at the northern end of Structure A1). The lack of evidence for such material suggests that the buildings were roofed with organic matter, presumably thatch, or possibly wooden shingles. The size of the buildings seems to imply that they were domestic accommodation and that their inhabitants were not of particularly high status. If Structure B does in fact represent two smaller structures they may be outhouses or animal byres rather than housing.

6.2.12 Although no artefacts survived this does not of course preclude a rich material culture using only organic materials, and it would not be correct simply to assume from the lack of artefacts that the inhabitants of the site were particularly impoverished. The light fertile soils of the Eamont valley were highly suitable to early agricultural practice and evidence from Fremington (*op cit*) suggests a mixed regime, including the raising of cows, and grains such as oats.

6.2.13 Despite this lack of artefactual evidence, it has proved possible to provide some reasonable interpretation for the site, suggesting at least two, and probably three phases of activity. It has also, viewed in conjunction with its near neighbour at Fremington, done much to confirm the conclusions drawn from that site, and has enhanced our knowledge of the early medieval period in Cumbria. It is now beginning to be possible to suggest a density of rural settlement flanking the Pennine crossing, strongly implying that the Roman road, or at least its line, remained important, acting both as a trade and communications route and as a conduit for ideas and change.

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APPENDIX 1
PROJECT DESIGN

June 1996

Lancaster
University
Archaeological
Unit

SEWER REQUISITION FOR OASIS DEVELOPMENT, PENRITH

CUMBRIA

ARCHAEOLOGICAL EXCAVATION

Proposals

The following project design is offered in response to a request from North West Water Limited for the excavation of two sites in advance of sewer laying at Whinfell, near Penrith, Cumbria. It is presented in accordance with current English Heritage guidelines, as specified in The Management of Archaeological Projects, 2nd edition, 1991.

1. INTRODUCTION

1.1 Background

The proposed *c* 4.1km long sewer requisition at Whinfell, near Penrith extends through an area which contains archaeological remains of some considerable significance. It has been suggested (Higham and Jones 1975) that the area is one of the densest for Romano-British settlements in Cumbria forming 'a dispersed vicus' around the fort at Brougham. There was probably a prehistoric route through the area, following a major trans-pennine link. The line of the A66, however, originated with the construction of the Roman road and there is a known Roman cemetery to the north-west of the Countess Pillar. Probably the most important site is the late Roman/early-medieval site at Fremington (NY 54752880), which was excavated by LUAU in advance of the Shell North West Ethylene Pipeline and is arguably one of the most important early medieval sites in the North of England. At its closest point, the proposed sewer will be only 220m away from the identified part of the Fremington site.

The Roman road continued to be used in subsequent periods; there is evidence of a Romano-British field system at NY 548289 and there is also aerial photographic evidence of a possible field system at NY 555289, an area which will be directly affected by the proposed sewer (Lambert 1996, 130). Because the sewer will be running alongside a Roman road, which has been used as a major communication route in subsequent periods, there is the potential for finding further settlement remains, further relict field systems and even cemeteries in relation to it. The landscape of the area has considerable archaeological sensitivity and any below ground works in the area have a potential for revealing archaeological remains.

1.2 Circumstances of project

A sewer pipeline is being laid between the Sewage works at Brougham and the new Oasis holiday development in Whinfell forest, and is being undertaken by Bechtel Water Technology Ltd on behalf of North West Water Ltd. The County Archaeologist recommended that, because of the archaeological sensitivity of the study area, an evaluation be undertaken to examine the sewer line in advance of development. The evaluation undertaken by LUAU (1996) revealed potentially significant archaeological sites at the northern and southern ends of the route and it was therefore recommended by the County Archaeologist that archaeological excavation be undertaken of these two sites to provide recording in advance of their destruction during the laying of the sewer pipe.

1.3 Previous Work

At the request of North West Water Ltd the Lancaster University Archaeological Unit undertook an archaeological evaluation of the sewerage pipeline (between NY 54652935 and NY 56502757). The evaluation involved the excavation of 15m x 4m trenches, located at *c*50m intervals along the route of the pipeline. Two areas of archaeological potential were discovered, one at the northern end of the route and the other at the southern end. The site identified at the northern end comprised two ditches, one of which was aligned north/south, and the other was aligned north-west/south-east. Two segments of the north / south ditch were excavated producing some sherds of Roman pottery; however, the second ditch produced no finds. During hand cleaning of an area adjacent to the north/south ditch a lead cast plug was retrieved, and a small lead plug was recorded from Trench 2, 50m to the south.

The site at the southern end comprised the remains of a rectangular post-built structure 7.5m long and 3.4m wide (Trench 41). Two pieces of possible burnt flint, and a piece of flint-like stone, from within the postholes, were found, but no other finds were identified either within the postholes or in association. The grouping of the postholes suggested that some of the posts had been replaced during the use of the building. To their east was a second cluster of postholes which continued beyond the edge of the trench, and these probably represent another structure. The limited lithic finds retrieved from the postholes may suggest a prehistoric date, but it must be emphasised that only three pieces of flint were recovered, and that flint is a

durable material with the capacity of being redeposited in later features. The dimensions of the building are similar to those of Building 5 at Fremington (Oliver *et al* 1996) which is only 2.1km to the west of Trench 41; the Fremington structure was dated by its association with post-Roman buildings, which are so far unique in the North-West, although common in the South-East of England.

1.4 Lancaster University Archaeological Unit

The Lancaster University Archaeological Unit has considerable experience of the evaluation and excavation of sites of all periods, having undertaken a great number of small and large scale projects during the past 15 years. Evaluations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables. The archaeological work associated with a number of road schemes throughout the north of England has been undertaken recently, both for Cumbria County Council Highways and Engineering and for the government's Highways Department. LUAU has undertaken considerable archaeological investigations in an area immediately adjacent to the line of the proposed sewer in advance of the Shell North-West Ethylene Pipeline and at present holds the archive for this work. LUAU has recently undertaken a watching brief during pipe laying at Waitby, nr Kirkby Stephen for North-West Water Ltd. LUAU is very familiar with the archaeology of the area and the local soils and are in a unique position to be able to undertake this proposed excavation.

LUAU has the professional expertise and resource to undertake the project detailed below to a high level of quality and efficiency. LUAU and all its members of staff operate subject to the Institute of Field Archaeologists (IFA) Code of Conduct.

2. AIMS AND OBJECTIVES

The potential significance of the area is considerable both from a regional and national perspective. There is considerable evidence of continuity of settlement from perhaps the Neolithic through to the present day and as such the programme provides the opportunity to investigate the evolution of the landscape. Any settlement remains or even relict field systems provide an invaluable indicator of the pattern of developmental change, which results in the survival of some elements to survive but significantly affects others. The present programme of excavation, in conjunction with the other discoveries in the same area, have the potential to enhance significantly our understanding of settlement continuity in the area.

The primary objective of the excavation programme is to provide a record of the two sites prior to their destruction. A secondary academic objective is to investigate the extent, date, character and condition of the settlement remains near Whinfell Forest (evaluation Trench 41 (LUAU 1996)); to identify the relationships between this and any extant field systems; and to establish parallels with settlement, both in this area and from a national perspective. There is the potential within this rural context for settlements to develop laterally across the landscape, rather than vertically at a single location. The programme should therefore attempt to determine how the site has developed with time and should investigate any possible continuity with other local settlement. The programme of excavation should aim to establish a chronological framework for the remains and to inform our knowledge of the landscape development of the Brougham area.

A further academic objective relates more to the northern site (near the sewage works) and should attempt to establish the survival, character and alignment of the field systems within the area and establish their chronology. It should investigate to what extent the alignment and location of any field boundaries relates to the modern field system and hence establish the extent to which the field systems have developed in the area. The excavation should examine the intersection of the two ditches to establish their respective stratigraphic and chronological relationships.

The programme will investigate and record the presence of artefacts from all periods that are revealed during the works programme. It will examine the range and character of the artefactual evidence within a regional context. It will also provide for environmental sampling and analysis (as required) in order to establish an ecological perspective for the occupational and domestic activity.

The following programme has been designed, in consultation with the County Archaeologist, to provide an accurate archaeological excavation of the designated areas, within its broader context. The required stages to achieve these ends are as follows:

2.1 Open Area Excavation

An area 30 x 25m should be stripped by machine to a depth of *c* 200mm, or as appropriate, to remove the topsoil and expose the archaeologically sensitive sub-soils. The topsoil strip will be under the close supervision of an archaeologist. Following the clearing of the overburden manual excavation techniques will be employed down to natural which the evaluation informs us is c 500mm below the surface.

The excavation of a 15m x 4m trench at the Northern site should also be undertaken to establish the line of the ditch to the south of evaluation Trench 53.

2.2 Analysis/Archive/Report

Following fieldwork, the results of the various stages detailed above should be collated and analysis should be undertaken where appropriate. The whole should be presented as a report for the client and for dissemination to the general public.

3. METHOD STATEMENT

3.1 Outline Programme

The following programme has been designed, in consultation with the County Archaeologist, to provide a suitable level of archaeological observation, excavation and recording prior to construction works on the site. It has been based predominantly on the results of the evaluation by LUAU.

It is important that the programme of work should follow a series of stages, with a review of progress between each, allowing a flexible approach to the investigation of the archaeological deposits on the site.

3.1.1 Open Area Excavation

The two excavation areas (each 25m x 30m), at the Northern and Southern ends of the proposed Sewer requisition, will be cleared of any soil overburden by machine, under the supervision of archaeologists, to remove all topsoil and will then be manually excavated down to natural subsoils. A trench 4m x 15m will be excavated to establish the line of the ditch to the south of evaluation Trench 53.

3.1.2 Site Archive/ Review

Following fieldwork, the results should be collated and the site archive completed as appropriate. The whole programme should then be reviewed with the client and the County Archaeologist to agree the scope of any further work deemed necessary (assessment, analysis, synthesis) to complete the project.

3.1.3 Analysis

A provisional programme of post-excavation analysis is proposed, on the basis of the anticipated recovery of material from the excavation; however, the extent of the programme can only be reliably assessed on completion of the fieldwork. The proposed programme anticipates analysis of the artefactual evidence and analysis of the site stratigraphy leading to the production of a summary report.

3.1.4 Report

Following the analysis of the excavation results a report will be written which will present, summarise and interpret the results of the programme and will incorporate specialist reports on artefact assemblages.

3.2 Methods

3.2.1 Machine Clearance

An area of *c* 30m by 25m should be opened by machine at each site (Trenches (1, 2, 52) and (41) of the archaeological evaluation (Figs. 1 and 2) (LUAU 1996)). This will be undertaken under archaeological supervision since the archaeological deposits are relatively shallow (less than 0.30m below the present ground surface). The position of the earlier trial trenches will be established and reopened to enable a close correlation between the results of the open area excavation and the evaluation. Excavation should be undertaken using a mechanical excavator (tracked or wheeled) fitted with a six foot toothless ditching bucket.

3.2.2 Excavation

Following machine clearance, the two areas will be cleaned and any features excavated and recorded. Any negative features will be half-sectioned and manually excavated in a stratigraphical manner to establish in detail the character, techniques of construction and phasing. An attempt will also be made to establish the overall chronology of the respective sites and their duration of use. If environmental potential is established a sampling strategy will be undertaken to recover representative material for future analysis, particularly of any pre-construction old ground surface if identified and potential domestic deposits associated with the building.

All elements of the work will, as a matter of course, be recorded in accordance with current English Heritage guidelines (*The Management of Archaeological Projects, 2nd edition 1991*) and the best practices formulated by English Heritage's Central Archaeology Service. All excavation, by whatever method, will be recorded by the compilation of context records, and of object records for any finds, and the production of accurately scaled plans and section drawings (probably at scales of 1:20 and/or 1:10), as well as a photographic record. Finds recovery and sampling programmes will be in accordance with best practice (current IFA guidelines). Three-dimensional recording of selected finds' classes will be undertaken using a data-logging total station if this proves necessary. Any palaeoenvironmental sampling will be undertaken with advice from specialists. The Unit has close contact with Ancient Monuments Laboratory staff at the Universities of Durham and York and, in addition, employs in-house finds and palaeoecology specialists, who are readily available for consultation. Finds storage during fieldwork and any post-excavation assessment and analysis (if appropriate) will follow professional guidelines (UKIC). Emergency access to conservation facilities is maintained by the Unit.

3.3 Archive/Analysis/Report

3.3.1 Archive

The results of the programme of fieldwork detailed above will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (*The Management of Archaeological Projects*, 2nd edition, 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. It will include summary processing and analysis of any features, finds, or other data recovered. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the IFA in that organisation's Code of Conduct. LUAU conforms to best practice in the preparation of project archives for long-term storage. The expense of preparing such an archive is part of the project cost but only represents a very small proportion of the total. This archive (including excavated material) will be prepared in accordance with UKIC *Guidelines for the preparation of excavation archives for long-term storage*, and the Museums' and Galleries' Commission *Standards in the museum care of archaeological collections*. It can be provided in the English Heritage Central Archaeology Service format, both as a printed document and on computer disks as ASCII files. It is intended that project archive records should be deposited with the Cumbria Record Office, in Carlisle; a microform copy of the project archive records will be deposited with the Tullie House Museums, Carlisle, with the excavated material, and a further copy can be made available

for deposition in the National Archaeological Record (RCHME). The actual details of the arrangements for the deposition/loan of the material from the site (artefacts, ecofacts and samples) will be agreed with the site owner (through their agents) and the receiving institution, which should be a registered museum, approved by the Museums and Galleries Commission. LUAU would make the appropriate arrangements with the designated museum at the outset of the project, for the proper labelling, packaging, and accessioning of all material recovered.

3.3.2 Analysis

Following completion of the site archive, the results of the fieldwork will be reviewed to establish the potential for further analysis. This assessment will take place in close consultation with the client and with the County Archaeologist both of whom will agree the report format at this stage of the work. A programme of analysis should be undertaken to prepare a research archive, as detailed in Appendix 6 of *Management of Archaeological Projects,* as appropriate. This is likely to involve the compilation of an archive report, detailing the stratigraphic history of the site, and a full text recording the significance of the structural, artefactual and environmental evidence. This will include analysis of any environmental samples (with report preparation), and the production of a report on any Roman and other ceramics, metalwork, glass and numismatic finds. It is not possible to provide an accurate estimate of costs until the results of the assessment are known, but a best estimate of costs has been submitted on the basis of the results of the evaluation.

3.3.3 Client excavation report

One bound and one unbound copy of the written synthetic report will be submitted to the Client, and a further copy submitted to the Cumbria County Archaeologist. The report will include a copy of this project design, and indications of any agreed departure from that design. It will present, summarise, and interpret the results of the programme detailed above and will include a full index of archaeological features identified in the course of the project, with an assessment of the overall stratigraphy, together with appropriate illustrations, including detailed plans and sections indicating the locations of archaeological features. It will include reports on finds assemblages as appropriate and any finds recovered from the excavations will be assessed with reference to other local material and any particular or unusual features of the assemblage will be highlighted. The report will also include a complete bibliography of sources from which data has been derived, and a list of further sources identified during the programme of work, but not examined in detail.

This report will identify areas of defined archaeology, and whether the results of the sampling were positive or negative. An assessment and statement of the actual and potential archaeological significance of the site within the broader context of regional and national archaeological priorities will be made. Illustrative material will include a location map, section drawings, and plans; it can be tailored to the specific requests of the client (eg particular scales etc), subject to discussion. The report will be in the same basic format as this project design; a copy of the report can be provided on 3.5" disk (IBM compatible format).

3.3.4 Confidentiality

The excavation report is designed as a document for the specific use of the Client, for the particular purpose as defined in the project design, and should be treated as such; it is not suitable for publication as an academic report, or otherwise, without amendment or revision. Any requirement to revise or reorder the material for submission or presentation to third parties beyond the project design, or for any other explicit purpose can be fulfilled, but will require separate discussion and funding.

3.3.5 Publication

The results of the programme of works detailed above should be placed in the public domain by a number of routes. Firstly, a synthesised report of the results of the work should be compiled, which should be published in an appropriate manner. In addition, the completed project archive (site and research archive) should be copied on to microform and disseminated (as detailed above). A synthesis of the work should be placed in the Cumbria Sites and Monuments Record.

The precise nature and scale of the published report can only be established after the fieldwork has been undertaken, although it is certain that there will be sufficiently important material to warrant the publication

of an article in an appropriate journal, which will probably be Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society.

3.4 Other Matters

3.4.1 Working Hours
Excavation will be undertaken on the basis of a five day week, within daylight hours only.

3.4.2 *Reinstatement*
Because the excavation will be undertaken shortly before the topsoil strip of the easement corridor it is assumed that there will be no requirement for back filling. However, any negative features will be backfilled and the excavation sections will be battered back to facilitate health and safety requirements.

3.4.3 *Access*
It is understood that North West Water Ltd will negotiate access for the archaeological works, although LUAU will as a matter of courtesy contact the tenants and landowners prior to initiating the excavation programme. The precise location of any services within the study area will be provided by the client.

3.4.4 Health and safety
Full regard will be given to all Health and Safety considerations. The Unit Health and Safety Statement conforms to all the provisions of the SCAUM (Standing Conference of Unit Managers) Health and Safety manual, as well as the Lancaster University Health and Safety Statement, and risk assessments are undertaken for all projects. The Unit Safety Policy Statement will be provided to the Client, if required. As a matter of course, a U-Scan device is used prior to the commencement of excavation.

3.4.5 *Project Monitoring*
Whilst the work is undertaken for North West Water Ltd, the Cumbria County Archaeologist will be kept fully informed of the work and its results. Any proposed changes to the project design will be agreed with him in co-ordination with the Client. LUAU will arrange a preliminary meeting, if requested, and the Cumbria County Archaeologist will be informed in writing at the commencement of the project.

LUAU will consult with North West Water Ltd regarding access to land within the study area. This consultation will include, if required, the attendance of a representative of that company at any meetings convened with the Cumbria County Archaeologist, or his representative to discuss progress or the report.

4. WORK TIMETABLE

4.1 Contingency

The incorporation of contingency costing is a requirement within the guidelines of the Institute of Field Archaeologists (IFA) to allow for the recording of archaeological material that could not be anticipated prior to the initiation of the programme.

The programme has been estimated on the basis of the results of the evaluation and assume that a similar complexity of archaeological stratigraphy and finds will be discovered. If the excavation programme reveals complex archaeological deposits there may need to be a programming contingency of up to 3 days.

4.2 Project timetabling

The phases of work for both sites would comprise:
i *Machine Clearance*
3 day.

ii *Excavation*

A period of two weeks has been allowed for this work.

iii *Analysis/Archive/Report*
over a period 1.5 months

LUAU can execute projects at very short notice once an agreement has been signed with the client. The project (fieldwork, report and archive) is scheduled for completion within twelve weeks from its commencement.

5. OUTLINE RESOURCES

5.1 Contingency

The basic costs assume that the excavations will not identify complex and extensive stratigraphy and/or the discovery of a significant artefactual assemblage beyond that anticipated from the evaluation results. The results of the evaluation suggest that there may be little requirement for environmental sampling and analysis and this is reflected within the present costs.

The post-excavation programme will be subject to the results of the excavation and the requirements for analysis of environmental samples. If contingency costs are required for the excavation of complex archaeological deposits or significant artefact assemblages, there will need to be a corresponding post-excavation contingency to enable the analysis of the increased amounts of raw data. The contingency costs for post-excavation and excavation are presented within Section *6*.

A contingency sum is defined to come in to force, in the event of finding complex archaeological stratigraphy, or the recovery of a significant assemblage. The decision to draw upon any contingency funding will be subject to discussions with the County Archaeologist and the client.

5.2 Resources

The following resource base will be necessary to achieve the proposals detailed above. The breakdown of the total cost of the project is provided on the accompanying covering letter.

5.2.1 Excavation
10 man-days Project Officer
40 man-days Project Assistants

5.2.2 Analysis and Report
13 man-days Project Officer
8 man-days Supervisor (CAD)
4 man-days Project officer (Finds)

The project will be under the project management of **James Quartermaine BA Surv Dip MIFA** to whom all correspondence should be addressed. Unit staff are experienced, qualified archaeologists, each with several years professional expertise. Project Officers in Unit terminology are senior supervisors, capable of organising and running complex area excavations as well as short-term evaluations to rigorous timetables.

The site director will be James Wright (LUAU Project Officer).
The finds analysis will be undertaken by Chris Howard-Davis (LUAU Project Officer)

ILLUSTRATIONS

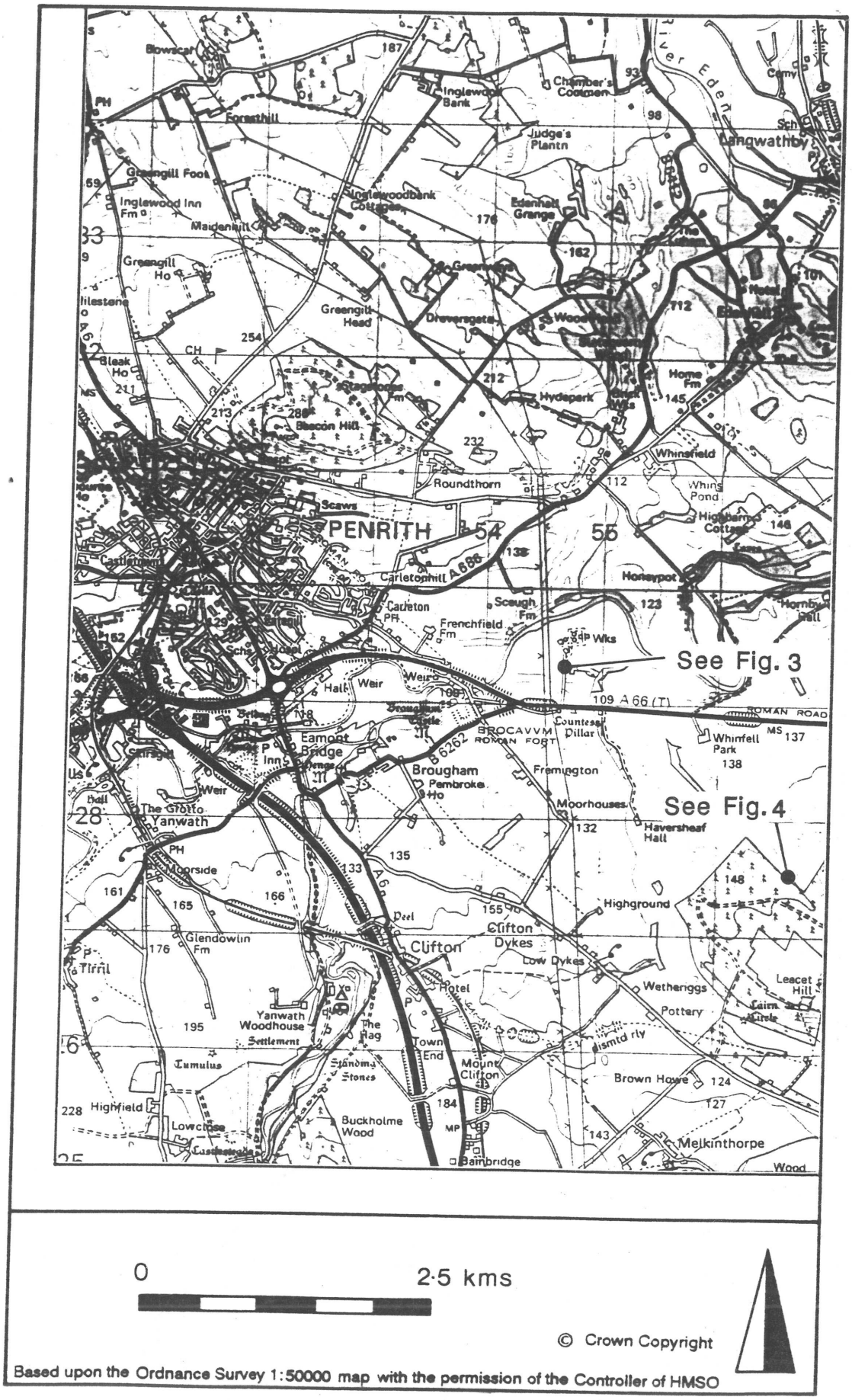

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Fig 1 Site Location Plan

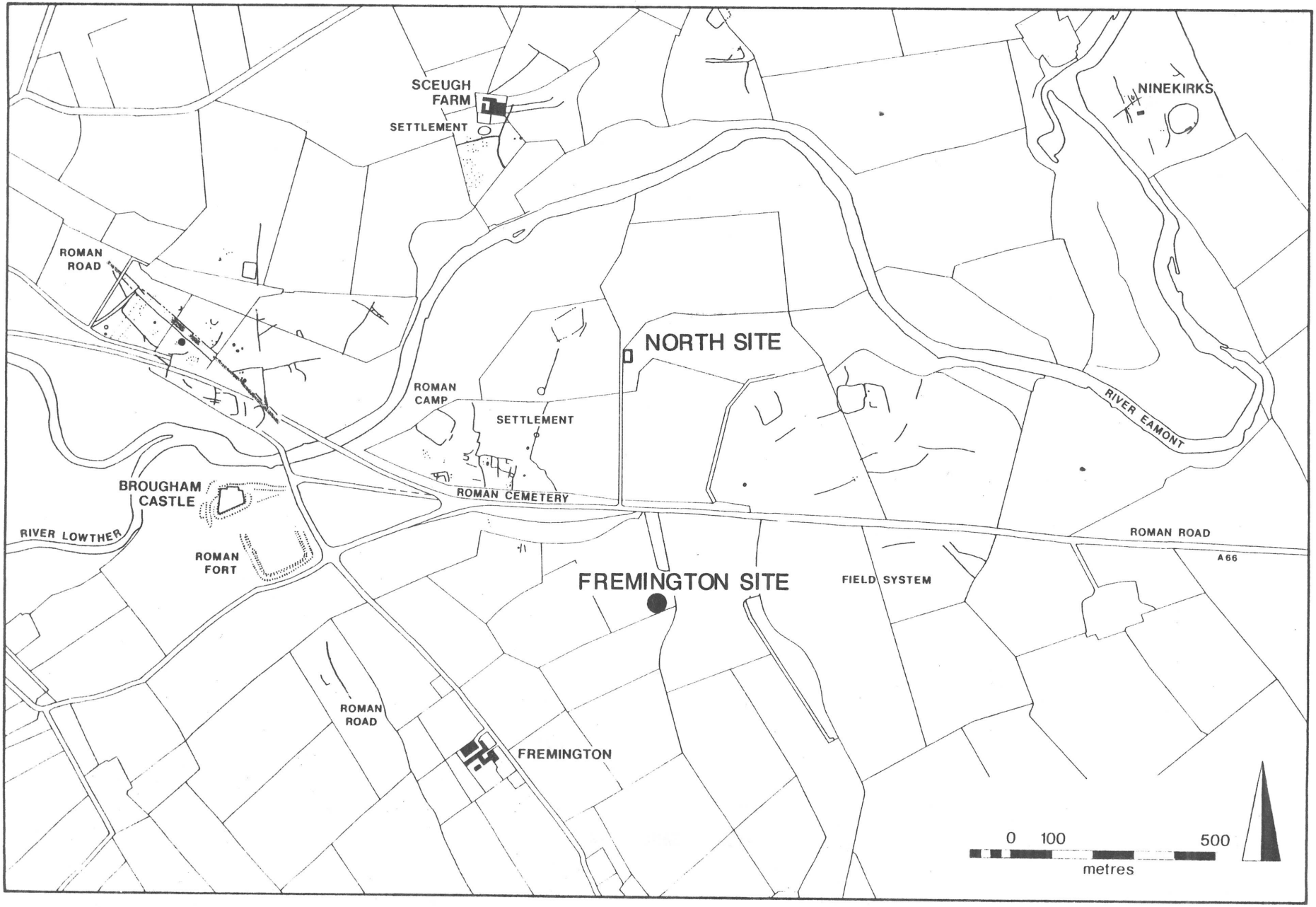


Fig.2 Archaeological Contexts of the North Excavation Site

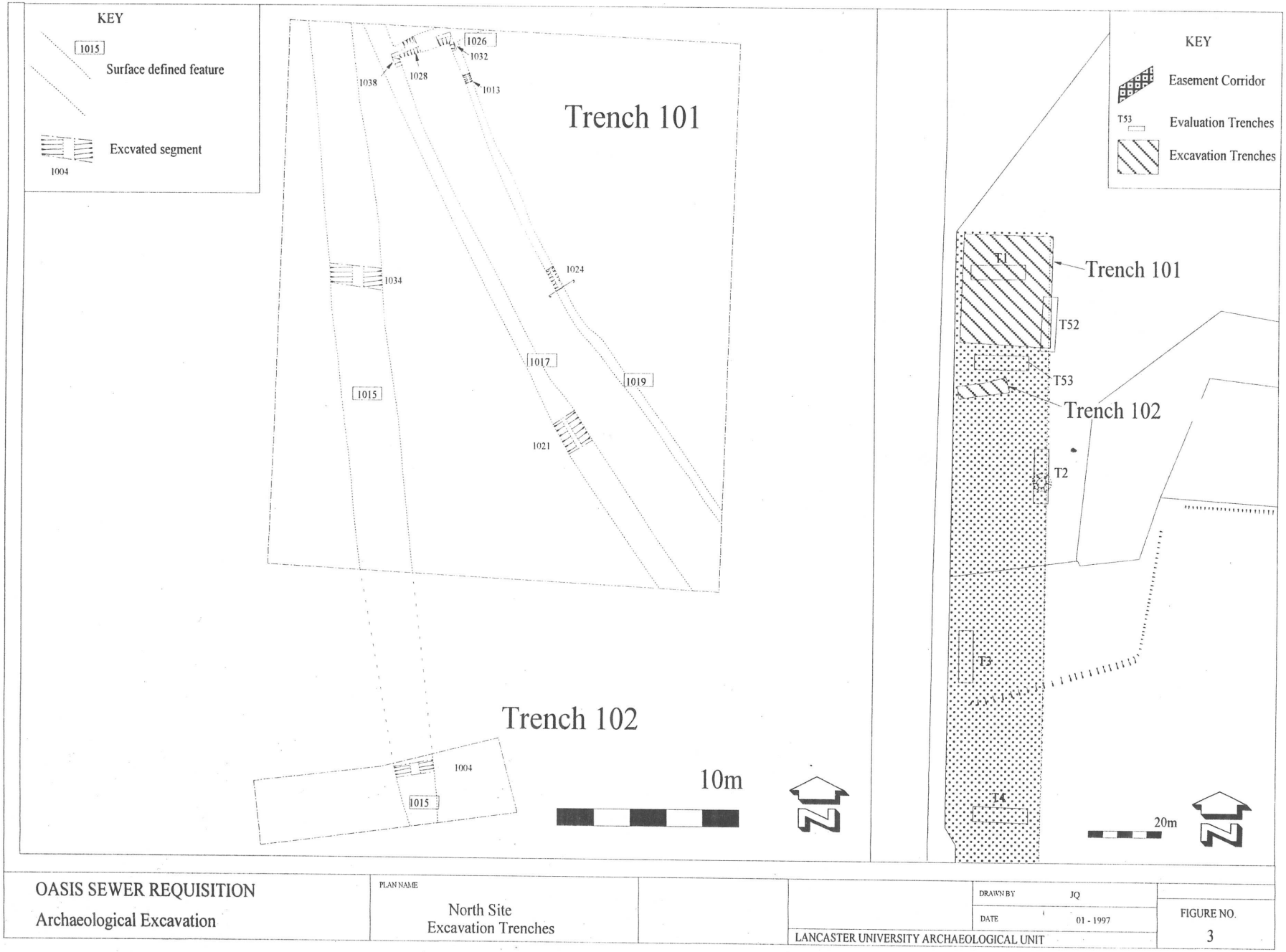
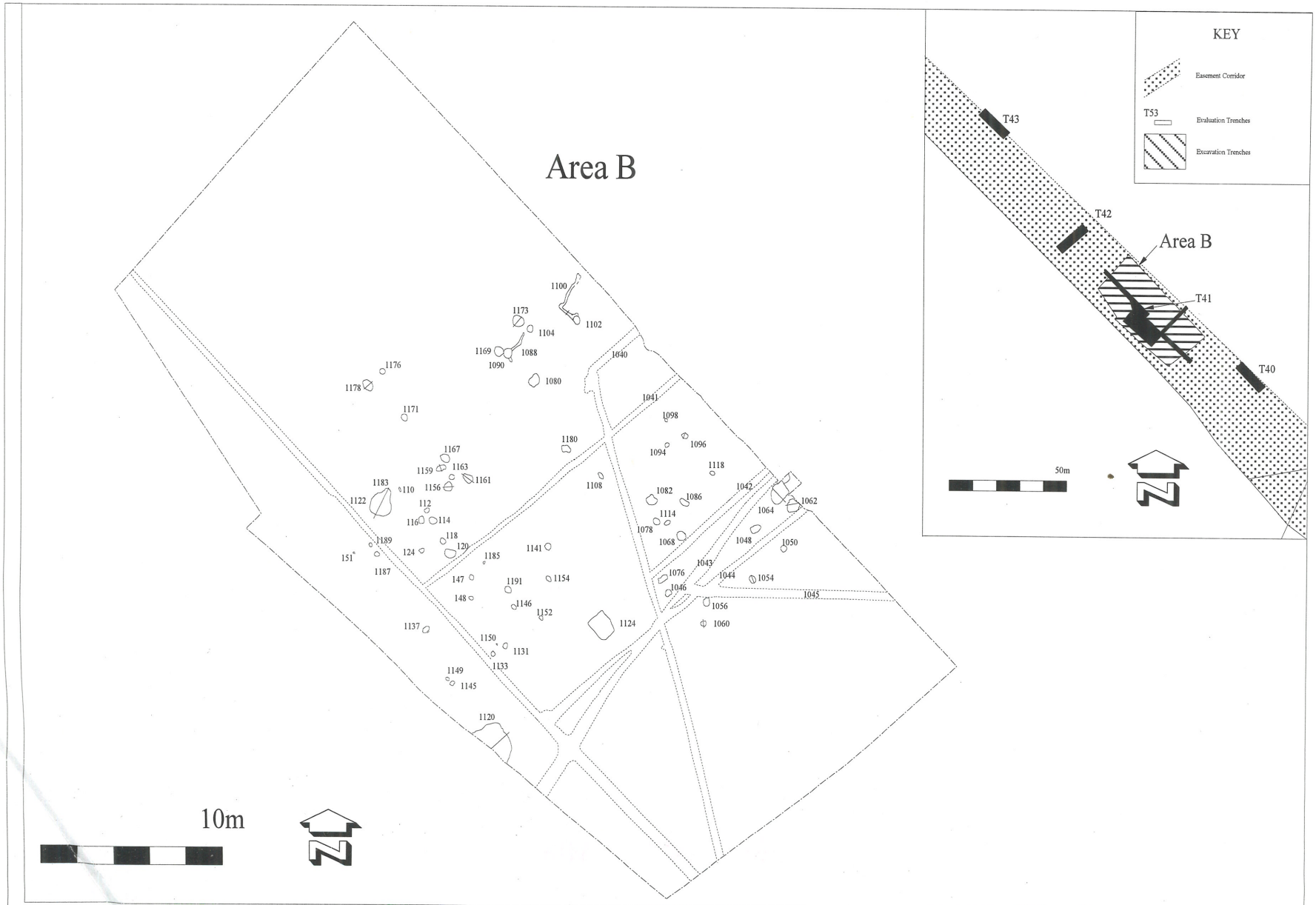


Fig 3 North Site - Trenches 101 and 102, Location and Plan



OASIS SEWER REQUISITION Archaeological Excavation	PLAN NAME South Site Excavation Trenches		DRAWN BY JQ DATE 01 - 1997 LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT	FIGURE NO. 4

Fig 4 Southern Site - Area B, Location and Plan

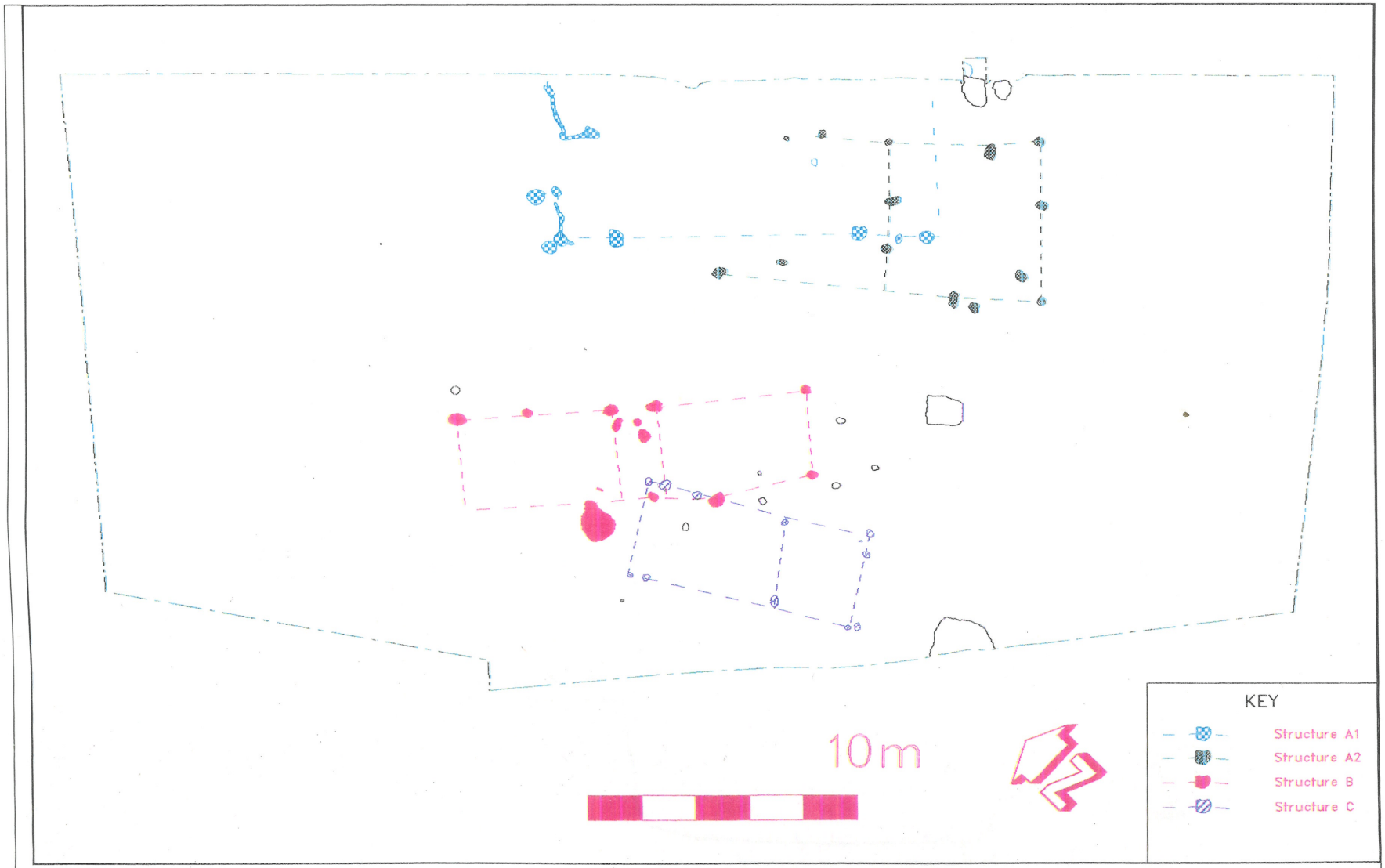


Fig 5 Area B Interpretive Plan

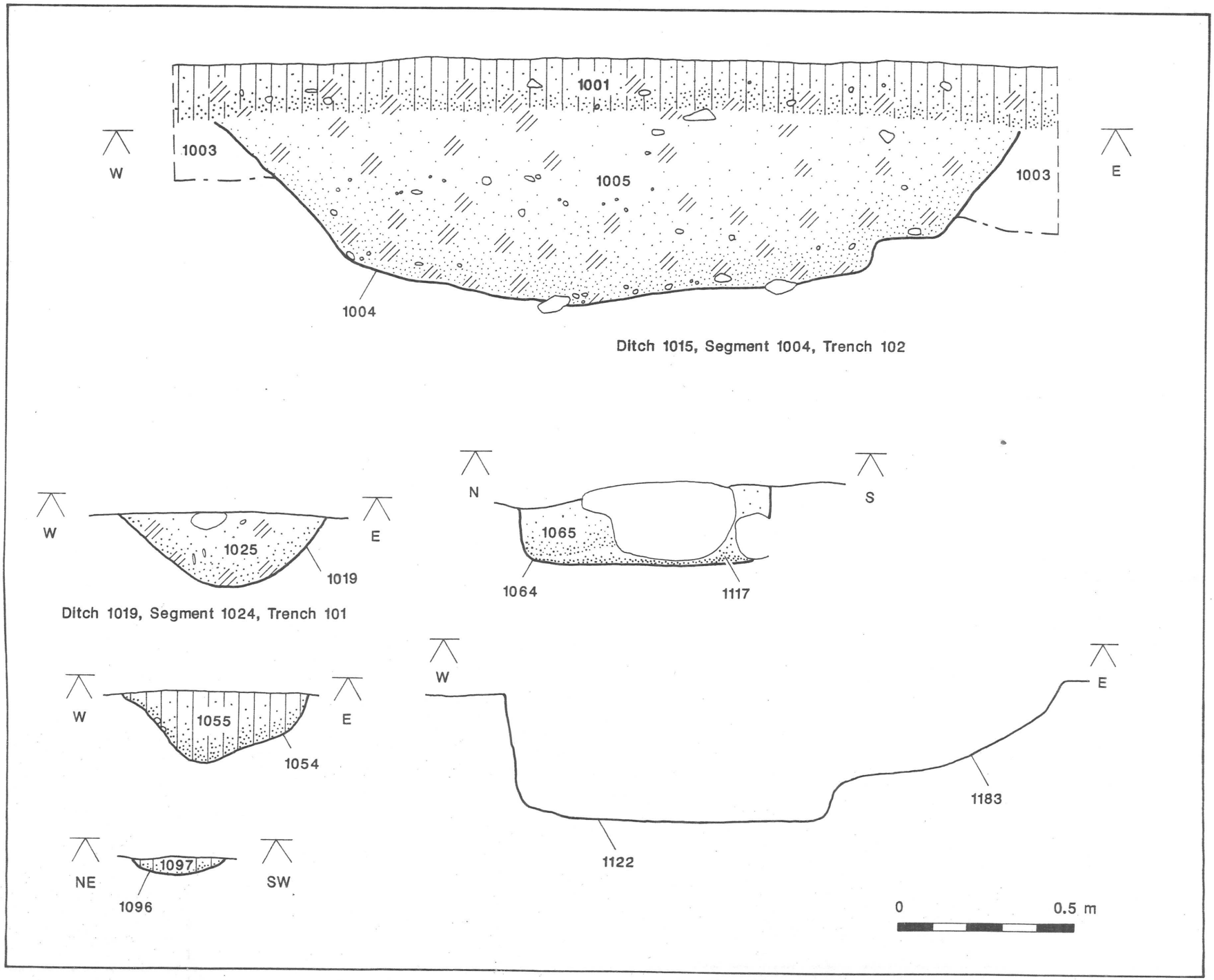


Fig 6 Segment sections 1004, 1024, 1054, 1064, 1096 and 1122

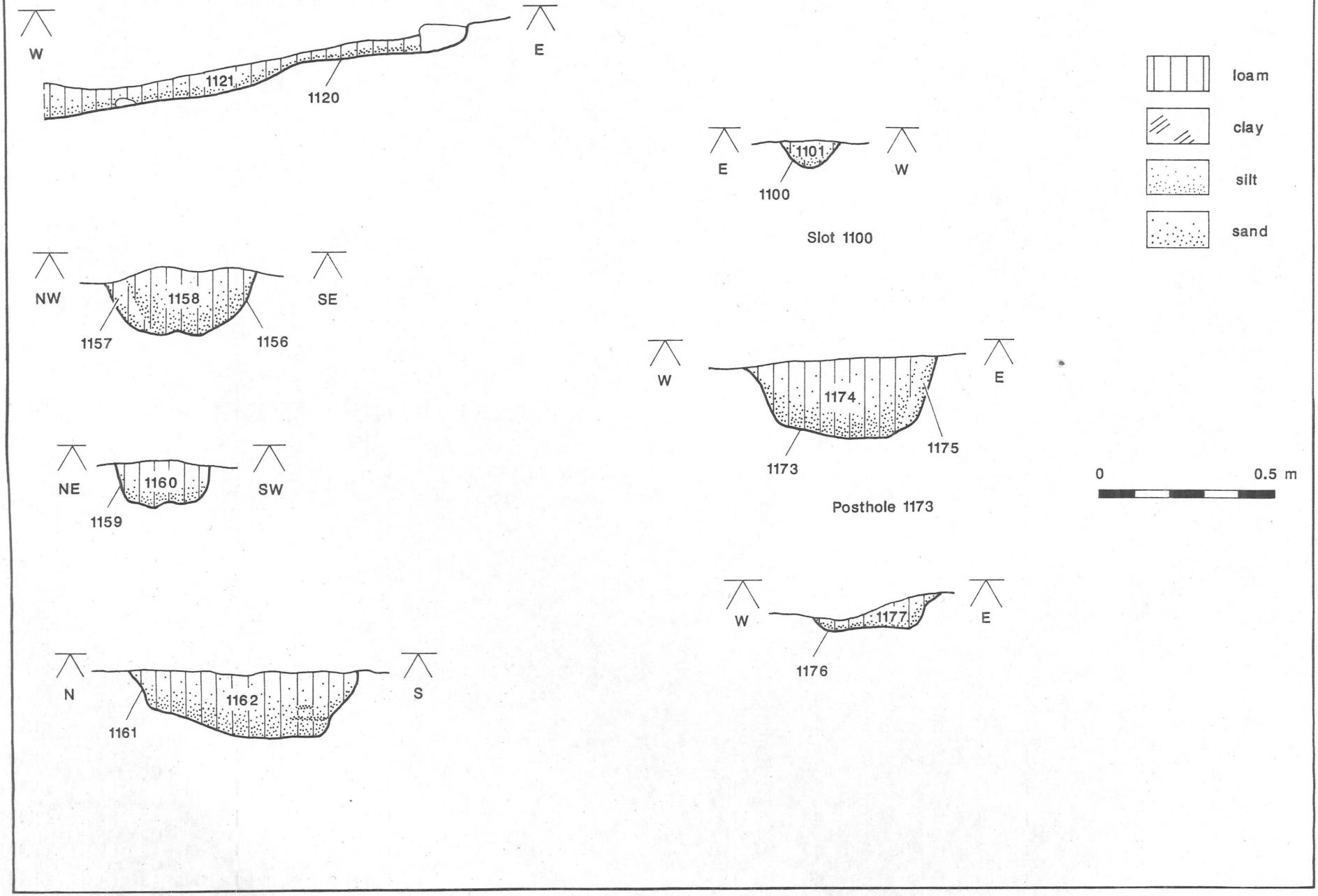


Fig 7 Area B: Posthole and slot sections 1100, 1120, 1157, 1161, 1173 and 1176