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THE RIVER TERRACE, CATON, Lancashire

Archaeological Excavation Assessment Report



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SUMMARY

An archaeological excavation was carried out by Oxford Archaeology North (OA North), on behalf of United Utilities Ltd, on Caton River Terrace, Caton, Lancashire (SD 529 643), during November and December 2002. The work was required to investigate a concentration of flint fragments retrieved during topsoil stripping in advance of a pipeline.

The excavation revealed extensive plough truncation across the site, and no unequivocal archaeological features were recorded. There was, however, a large assemblage of worked Mesolithic and Neolithic flint and chert within the ploughsoil across the site, suggesting that the riverside location had once been a significant focus of prehistoric activity. An assemblage of finds from the medieval and post-medieval periods attest to the probable dumping of waste material on the land in later periods.

This assessment examined the results of the excavation, and assessed the potential for future analysis of each category of data with regard to the project's research aims. The process has been designed to correspond to the objectives laid out in the guidance document *Management of Archaeological Projects* 2nd Edition (English Heritage 1991a). An updated research design is presented, and an appropriate programme of analysis outlined. It is recommended that, after analysis, a report be published in an appropriate regional archaeological journal.

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The fieldwork was undertaken by Ian Miller, Gunnar Hellström, John Roberts, Susan Kay, Lisa Keys, Eryn Williams, Spencer Smith, Paul Clark, David Tonks, and Neil Wearing. The report was compiled by Ian Miller, and the illustrations were manipulated by Emma Carter. The flints were examined by Daniel Elsworth, and other finds categories by Chris Howard-Davis and Sean McPhillips. The report was edited by Mark Brennand and Alison Plummer, who also managed the project. The project was funded by United Utilities Ltd.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 Oxford Archaeology North (OA North) was invited by United Utilities Ltd to submit a project design (*Appendix 1*) for an archaeological excavation on Caton River Terrace, Caton, Lancashire (SD 529 643). The work was required to investigate a concentration of flint objects retrieved during the course of a watching brief that had been maintained throughout a topsoil strip in advance of a pipeline.
- 1.1.2 The flint objects included numerous worked pieces, including several cores and a leaf-shaped arrowhead. These were in addition to a sherd of pottery tentatively dated to the Bronze Age. Prehistoric pottery finds are very poorly represented in Lancashire, and such large assemblages of flint objects are rarely found. Such finds tend to be indicative of a prehistoric occupation or settlement site. Leaf-shaped arrowheads are thought to be representative of the Early Neolithic and usually appear as isolated finds, perhaps as casual losses from hunting and related activities (Middleton 1996).
- 1.1.3 The fieldwork was carried out by OA North in November and December 2002, and this report sets out the results of the work in conjunction with a method statement, and assesses the data generated within a local and regional context.

1.2 LOCATION, GEOLOGY AND TOPOGRAPHY

- 1.2.1 The site lies within the Lune Valley, which separates the Bowland Fells from Morecambe Bay, and represents a transitional zone between the coastal plain and the high fells (Fig 1). The landscape of the Lune Valley area is gently sloping and undulating, contained by steep scarp slopes with the river as the central feature. The lush pasture in the Lune Valley has long supported prosperous farms, and this is reflected in the number of large farms which are scattered along the valley sides (Countryside Commission 1998, 92).
- 1.2.2 The underlying solid geology of the general area is relatively complex with several faults running north-west/south-east through the area. In the immediate locale of the study area, the geology comprises mostly Namurian grey mud and siltstones with intercalated sandstones, which date from the Carboniferous period (*ibid*). The solid rocks are overlain by a complex of glacial deposits comprising mainly thick tills but with extensive areas of moundy sand and gravel deposited from glacial meltwater (*op cit*, 93).
- 1.2.3 The greater part of Caton township has an undulating topography, with the land sloping north from Clougha Pike and Ward's Stone, some 560m above sea level, to the wooded valley of Artle Beck, then rising again to Caton Moor, where a height of 361m is reached. From Caton Moor, the land descends into the Lune Valley. Caton village lies on a level terrace at c 50m

above sea level, whilst Artle Beck rises near the eastern border of the township, and reaches the river Lune to the east of Caton.

1.3 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 1.3.1 **Prehistoric period:** evidence for Late Upper Palaeolithic activity in north Lancashire is rare, although cave sites excavated on the north side of Morecambe Bay have revealed remains dating from this period (Young 2002). The extent of habitation at that time is unclear, although the area was evidently inhabited soon after glacial conditions gave way to a more temperate climate. Evidence for early Mesolithic sites tends to be concentrated on the higher ground to the south-east, in the Pennines in particular (eg Howard-Davis 1996), although artefacts dating to this period have also been found in cave sites (Young 2002). Late Mesolithic sites are more abundant; a substantial flint scatter site was discovered in Halton Park during field walking by members of the Lancaster Archaeological Society (Penney 1978a; 1978b, 43). Over 300 items of lithic material were discovered, which comprised local black chert and non-local pebble flint. Further work on the southern bank of the Lune at Halton produced another group of some 300 fragments of flint blades, cores, and flake waste material (Williams 1998). Such sites, however, are rare in the context of Lancashire north of the Ribble (Cowell 1996, 23), although recent work at Hornby also identified a small collection of artefacts likely to date to the same period (OA North 2002).
- 1.3.2 There appears to be a degree of continuity between the late Mesolithic and Early Neolithic periods in terms of lithic technology. The introduction of pottery, adoption of agriculture and appearance of a new type of tool the polished stone axe are typically taken to be signifiers of the arrival of Neolithic traditions, although the physical changes are often difficult to identify. Neolithic settlement sites are rarely identified in the North of England, although monuments such as burial mounds and stone circles are more evident.
- 1.3.3 *Roman period:* Caton lies on the route of a Roman road joining Lancaster and Burrow, and probably joined with the Ribchester to Burrow road, perhaps at its crossing of the Wenning (Shotter 1997, 22). The route is attested by the discovery of a milestone in Artle Beck in 1803. The inscription (*RIB* 2272) reads 'For the Emperor Caesar Trajan Hadrian Augustus, Chief Priest, with Tribunician power, three times Consul, Father of his Country, from... 4 miles' (Collingwood and Wright 1965; 1990). It seems possible that another Roman route may have led along the valley floor towards Caton from the Roman brick, tile, and pottery kiln sites in Quernmore, situated some 4km to the south-east of Caton. At one site, that at Lythe Brow, there is a great deal of evidence in the form of debris resulting from pottery and brick making, which appears to fall within the period AD 80–150 (Shotter and White 1990, 51). However, there is no firm evidence for the presence of a road between Quernmore and Caton.
- 1.3.4 *Early Medieval period:* evidence for early medieval activity is limited throughout northern Lancashire; few artefacts of the period have been

recovered, and there is almost no archaeological evidence for settlement. However, logic suggests that the rural settlements of the Roman period either continued or declined gradually, and by the end of the period, a considerable density of Scandinavian place names implies that large numbers of settlements were in existence, either newly founded, or renamed (Newman 1996, 103). Indeed, *Escowbeck* may have Scandinavian origins, meaning 'the beck by the ash tree hill' (Mills 1986, 82), whilst Caton is perhaps derived from the Old English cae (hedge) and ton (settlement), meaning a hedged settlement (Bulmer 1913, 242).

- 1.3.5 *Medieval period:* Caton is recorded in the Domesday Survey of 1086 as one of the 12 manors held by Torfin, out of the great estate once held by Tostig, and was from then on held of the honour of Lancaster (Farrer and Brownbill 1906; 1914, 79) by the Gernet family of Heysham. By 1297, however, Caton was held by a younger branch of the Gernet family, who adopted the surname Caton to distinguish themselves from the senior line who lived at Halton (Potts 1984, 26). The origins of Caton church may also be traced back to at least the thirteenth century, as in 1230 the patronage was renounced by the Gernet family and given to St Mary's Priory at Lancaster (Farrer and Brownbill 1914, 80).
- 1.3.6 The male line of the Caton family died out before 1317, when Thomas de Caton was succeeded by his daughters Alice and Agnes. Thus the manor was divided, one part, with a seat at Gaton Hall, descending through the de Lancaster family to the Harringtons of Farleton and Hornby, and thence to Lord Mounteagle, who held it in the sixteenth century (Farrer and Brownbill 1914, 80–1). The other moiety, whose seat came to be at Gresgarth, descended through the Curwen family through the marriage of Agnes de Caton to John de Curwen (*ibid*), and was later acquired by the Girlingtons of Thurland.
- 1.3.7 During the thirteenth century, a corn mill and a fulling mill were operating on the banks of Artle Beck (op cit, 82), and a charter in the Clifton muniments (LRO DDC1 69) from c 1250 provides some indication of pottery production in Caton. The charter states that Brother Robert of Manneby of the Hospital of Jerusalem in England grants *inter alia*, to Adam of Appledoretheyt, land in Caton 'which Roger the Potter held'. Excavations in 2002 at Escowbank Farm, c 150m to the south-west of the current site, revealed evidence for pottery production in the form of wasters and kiln fabric, although no kiln structures were recorded (OA North 2003). Other late medieval industry thought to have been operating in Caton includes the production of potash for the early lyes and soaps for the woollen trade (Davies-Shiel 1974, 52).
- 1.3.8 **Post-medieval period:** in 1673, Caton was predominantly an agricultural community with a population of c 450 (Caton Village Exhibition Committee 1979). The growth of the settlement was linked to the development of water-powered industry, with as many as eight mills operating at one time during the post-medieval period. Some of these water-powered mills drew their power from the Artle Beck. After providing power for Crossgill Mill and the Gresgarth corn mill, for instance, a millrace taking water from the beck powered in turn Forge Mill, Rumble Row, Willow Mill and Low Mill (Price

and Trippier 1974, 45). These mills manufactured a variety of textiles, including silk, flax and cotton, and bobbins. There was also an iron forge in Caton, which appears to have been operating during the later eighteenth century, and was perhaps associated with the blast furnace at Halton (Chaloner 1964, 357-8).

1.3.9 By the nineteenth century, most settlements of any size in the Lune Valley depended not just on agriculture, but on mining, quarrying and manufacturing (Winstanley 2000, 1). By 1841, the population of Caton was 1310 (Slater 1851, 119), which increased to a peak of 1434 by 1851 (Caton Village Exhibition Committee 1979). By this time, Caton had the cottage industries familiar to settlements of its size during this period, including tailors, shoemakers, blacksmiths, a maltster, wheelwright and a miller (Slater 1851, 119).

2. METHODOLOGY

2.1 **PROJECT DESIGN**

2.1.1 A project design (*Appendix 1*) was submitted by OA North in September 2002, in response to a request from United Utilities Ltd for an archaeological excavation as mitigation for the effects of a pipeline in an area of archaeological sensitivity. The project design was formulated following discussions with the Lancashire County Archaeology Service.

2.2 ARCHAEOLOGICAL EXCAVATION

- 2.2.1 The excavation was undertaken along a 200m section of the pipeline easement, which had already undergone topsoil stripping. Prior to the excavation of the pipeline easement, seven test pits were excavated to examine the geology and the survival of stratigraphy (Fig 2). Subsequently, a 4m wide strip, centred on the proposed line of the pipe trench, was subject to manual cleaning and examination.
- 2.2.2 A representative sample of the exposed features was subject to complete archaeological excavation. Recording comprised a full description and accurate location of all features and deposits encountered. A photographic record was also maintained, comprising monochrome prints, colour slides, and digital format. The exact position of each flint object encountered during the excavation was recorded three-dimensionally using a total station.
- 2.2.3 The recording methods employed by OA North accord with those recommended by English Heritage's Centre for Archaeology (CfA). Recording was in the form of *pro forma* Context Sheets for each of the discrete features and deposits identified, together with an accompanying plan. The surface features were surveyed by EDM tacheometry using a total station linked to a pen computer data logger, the accuracy of detail generation being appropriate for a 1:250 output. The survey was enhanced by manual survey on site using AutoCAD 14 within the pen computer. The position of the excavation was located with respect to surrounding landscape features, and was also recorded using a total station linked to a pen computer data logger.

2.3 ARCHIVE

2.3.1 A full archive of the archaeological investigation has been produced to a professional standard in accordance with current English Heritage guidelines (English Heritage 1991a). The project archive represents the collation and indexing of all the data and material gathered during the course of the project, including processing and analysis of any features and finds recovered during fieldwork, in accordance with UKIC guidelines (Walker 1990). The paper archive will be deposited with the Lancashire Record Office in Preston, and a copy of the report will be forwarded to the Lancashire Historic Environment Record.

3. ORIGINAL RESEARCH AIMS

3.1 ACADEMIC AIMS

- 3.1.1 Given the commercial nature of the project, the main research aim of the excavation was to characterise the survival of the archaeological remains on the site.
- 3.1.2 Building on this, the second major aim of the work was to further understanding of the development of Early Neolithic land-use of this part of the Lune Valley. The study of the transition between the Mesolithic and Neolithic periods is recommended as a priority in the English Heritage draft document *Research Agenda* (1997).

3.2 OBJECTIVES

3.2.1 The main objectives were to relate the findings to the other known late Mesolithic / Early Neolithic sites both locally and within the region, and to date the elements of the site to establish whether any sequence is discernible.

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4. SUMMARY OF RESULTS

4.1 INTRODUCTION

4.1.1 The area of excavation was confined to a section of the pipeline easement. In total, an area measuring 170m by 12m was subject to detailed examination (Fig 2), crossing the area where the flint artefacts had been recovered during the topsoil strip. Much of the overlying topsoil and ploughsoil horizons were removed by mechanical excavator under archaeological supervision prior to the commencement of the current project, although vestiges of these deposits remained *in-situ* within the trench.

4.2 **PREHISTORIC ACTIVITY**

- 4.2.1 The vast majority of the flint objects were recovered from homogeneous soil horizons, which appeared to be of late origin, and therefore much of this material was residual (Fig 3).
- 4.2.2 A single possible prehistoric feature (14) was recorded at the eastern end of the pipe trench (Fig 3), represented by a relatively shallow sub-circular pit or scoop (Fig 4), with a stone-rich fill (11). There was, however, some doubt as to whether this was anthropogenic in origin, or simply represented the former site of a tree or natural feature. To the immediate north of this feature was single possible posthole (12), although similarly it was not certain whether this was an anthropogenic feature, and it remains undated.

4.3 ROMANO-BRITISH ACTIVITY

4.3.1 A single sherd of unstratified Romano-British pottery was recovered. The excavation produced no features or deposits to which such a date can be ascribed.

4.4 MEDIEVAL ACTIVITY

4.4.1 Evidence for medieval activity on the site was represented by fragments of pottery. However, these were all recovered from topsoil horizons, suggesting they had been deposited as rubbish from Caton village. The excavation produced no features or deposits to which a medieval date can be ascribed, unlike the work to the south-east, where quantities of pottery, apparantly kiln waste, were recovered (OA North 2003). *Escowbeck* may have Scandinavian origins, meaning 'the beck by the ash tree hill' (Mills 1986, 82), whilst Caton is perhaps derived from the Old English *cae* (hedge) and *ton* (settlement), meaning a hedged settlement (Bulmer 1913, 242).

4.5 **POST-MEDIEVAL ACTIVITY**

4.5.1 The most obvious post-medieval activity recorded was agricultural cultivation, which appeared to have caused a relatively high degree of plough truncation across the entire site. An assemblage of post-medieval pottery recovered from

the ploughsoil suggests that household rubbish was still being disposed of within the area.

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5. RESULTS OF THE ASSESSMENT

5.1 **AIMS AND OBJECTIVES OF THE ASSESSMENT**

- 5.1.1 The aim of this assessment was to evaluate all classes of data from the excavations undertaken at Caton River Terrace in 2002, in order to formulate a project design for a programme of further analysis appropriate to the potential demonstrated by the site archive. A statement of the significance of the results from each element of the archive is given below. These statements are based on the assessment work undertaken, related to the original academic themes expressed in the project design.
- 5.1.2 The objectives of this assessment correspond to, and are prescribed by, Appendix 4 of Management of Archaeological Projects 2nd edition (English Heritage 1991a). They are to:
 - assess the quantity, provenance and condition of all classes of material: stratigraphical, artefactual and environmental;
 - comment on the range and variety of that material;
 - assess the potential of the material to address questions raised in the course of this project design, or in the draft report of the earlier excavations of the site;
 - formulate any further questions arising from the assessment of this material.
- 5.1.3 This assessment will present:
 - a factual summary, characterising the quantity and perceived quality of the data contained within the site archive;
 - a statement of the academic potential of the data;
 - recommendations on the storage and curation of the data.

5.2 MATERIAL ASSESSED

5.2.1 The entire paper and material archive was examined for the purposes of this assessment. Quantifications are incorporated within the individual assessments.

5.3 **PROCEDURES FOR ASSESSMENT**

5.3.1 The method of assessment used varied with the class of information examined. All classes of finds were examined in full, with observations supplemented by the finds' records generated during the course of the excavation.

5.4 STRATIGRAPHIC DATA

- 5.4.1 Due to the extensive agricultural truncation of the deposits on site, there was little surviving stratigraphy and no complex sequence of phasing.
- 5.4.2 *Quantification*: there is a total of 29 context records, which may be broadly divided between phases as follows:

Pre-Roman (natural origin)	3
Roman	-
Medieval	-
Post-medieval	-
Undated	2
Unstratified	24

5.4.3 The 2002 excavation archive comprises the following:

Digital plans	1
Sections	9
Monochrome prints	88
Colour slides	61

- 5.4.4 **Potential:** due to the cultivation truncation, the stratigraphic data is not significant in itself, with the possible exception of feature 14. They will, however, provide the framework within which all other analyses will take place.
- **5.5 ROMAN POTTERY** (*Sean McPhillips*)
- 5.5.1 *Quantification:* only a single sherd of a Romano-British ceramic vessel was recovered from the site. The sherd was examined for the purposes of this assessment and the preliminary catalogue supplemented and enhanced accordingly.
- 5.5.2 *Evaluation:* the fragment of Roman pottery was small and abraded, and is likely to have been subjected to a considerable amount of post-depositional disturbance. It was of a soft, orange fabric, similar to the material produced at the Quernmore kiln site. The sherd is likely to be of a second-century date.
- 5.5.3 *Potential:* the Roman pottery can contribute little to the understanding of the site.

5.6 MEDIEVAL AND POST-MEDIEVAL POTTERY (IAN MILLER)

- 5.6.1 *Quantification:* in total, 38 fragments of medieval and 57 fragments of postmedieval pottery were recovered during the excavation. All were examined for the purposes of this assessment, and the preliminary catalogue supplemented and enhanced accordingly. No formal attempt was made to subdivide the assemblage by fabric, although the potential, practicality, and validity of this exercise was assessed.
- 5.6.2 *Evaluation*: the medieval pottery was predominantly late twelfth to fourteenth century in date, although a significant amount of fifteenth- and sixteenth-century material was also produced. Belonging to the earlier date range, Gritty wares and Partially Reduced Grey wares (McCarthy and Brooks 1992, 22) were the most numerically significant fabrics present. The former may be broadly dated from the late twelfth to mid-thirteenth centuries, with the latter becoming dominant during the later thirteenth and fourteenth centuries (*op cit*, 29). The fifteenth and sixteenth centuries were represented by Late Medieval Reduced Grey wares.
- 5.6.3 The medieval assemblage appeared to show a wide range of fabrics, comprising Northern Gritty-type wares, Partially Reduced wares, and Late Medieval Reduced Grey wares. The assemblage appeared to comprise exclusively locally produced material; no imports from producers outside the region were identified. The bulk of the medieval assemblage comprises kitchen wares in a range of fabrics, although several jug and jar forms are also present. Many of the fragments were small and abraded, although a few of the larger fragments were less abraded, implying little disturbance since their deposition.
- 5.6.4 The post-medieval assemblage was dominated by kitchenware from the eighteenth and nineteenth centuries. Significantly, there were no fragments present within the assemblage to which a seventeenth-century date may be firmly ascribed.
- 5.6.5 *Potential*: the bulk of the pottery was recovered from the topsoil, and as such can add little to the interpretation of the site. When viewed alongside the assemblage from Escowbank Farm (OA North 2003), to the south-east, however, the material adds to the emerging picture of medieval and post-medieval ceramic manufacture and use in Caton. Together, the two assemblages represent an important addition to the corpus of medieval ceramics from rural Lancashire.

5.7 CLAY PIPE (*Sean McPhillips*)

- 5.7.1 *Quantification:* a total of 20 fragments of clay tobacco pipe was recovered during the excavation. All were examined for the purposes of this assessment and the preliminary catalogue supplemented and enhanced accordingly.
- 5.7.2 *Evaluation*: the bulk of the assemblage (18 fragments) comprised stem fragments with few diagnostic features. No stem-marks were noted. The two bowl fragments were similarly undecorated, and their small size precluded

accurate dating. However, most are likely to date from the eighteenth and nineteenth centuries.

5.7.3 *Potential*: the vast majority of the clay tobacco pipe assemblage was recovered from the topsoil, and as such can add little to the interpretation of th site.

5.8 COPPER ALLOY (*Chris Howard-Davis*)

- 5.8.1 *Quantification:* two copper-alloy objects were recovered during the excavation. Both were examined for the purposes of this assessment and the preliminary catalogue supplemented and enhanced accordingly.
- 5.8.2 **Evaluation:** the two small fragments of copper alloy were both recovered from the topsoil (01) and are in relatively good condition. They comprise a fragment of strip with engraved lines along both edges, and a round button with looped shank. The former cannot be dated, and the latter is post-medieval, probably no earlier than the late eighteenth century.
- 5.8.3 **Potential:** further study of the copper-alloy objects will add little to the understanding and interpretation of the site, except to contribute to the understanding of taphonomic process. In view of the fact that both fragments are from the topsoil (01) they are effectively unstratified, and will not warrant further study. In order to comply with recommended practice, the objects should be x-rayed, but in view of their fragmentary nature and stratigraphic provenance this does not seem to be necessary. A brief catalogue of the material should be prepared.

5.9 IRONWORK (*Chris Howard-Davis*)

- 5.9.1 *Quantification:* a total of six iron objects was recovered during the excavation from topsoil *01* and horizon *07*. All were examined for the purposes of this assessment and the preliminary catalogue supplemented and enhanced accordingly. None have been x-rayed.
- 5.9.2 *Evaluation:* all fragments are small and the objects within are largely obscured by corrosion products, so that identification remains provisional. Three appear to be hand-forged nails, a long-lived and largely undatable type, the remaining fragments being largely amorphous fragments of strip or rectangular-sectioned bar.
- 5.9.3 **Potential:** further study of the ironwork will add little to the understanding and interpretation of the site, except to contribute to the understanding of taphonomic process. In view of the fact that five of the six fragments are from the topsoil (θI) and therefore effectively unstratified, they will not warrant further study. In order to comply with recommended practice, the objects should be x-rayed, but in view of their fragmentary nature and stratigraphic provenance this does not seem to be necessary. A brief catalogue of the material should be prepared.

5.10 GLASS (*Chris Howard-Davis*)

- 5.10.1 *Quantification:* a total of 26 fragments of glass was recovered during the excavation. All were examined for the purposes of this assessment and the preliminary catalogue supplemented and enhanced accordingly.
- 5.10.2 *Evaluation*: the assemblage comprises 21 fragments of sheet window glass and five of vessel glass. Nothing in the group of window glass can be dated earlier than the post-medieval period, with three small mid-pane fragments of thin greenish 'Forest Glass' of late seventeenth-eighteenth-century date from topsoil 01. The remainder of the window glass, from topsoil 01 and layer 23 (TP4), is unlikely to pre-date the twentieth century. Three of the five fragments of vessel glass are small pieces of dark olive green wine bottle, typical of the eighteenth century. Where the form can be determined (the fragment from layer 23 in TP4), it suggests a late eighteenth-century cylindrical example. A small diameter colourless blown vessel from topsoil 01, with a pushed-in base and clearly defined pontil mark, is probably of nineteenth-century date. The small melted fragment from layer 26 (TP5) is in a pale bluish metal, the colour of which has probably been changed by secondary burning.
- 5.10.3 *Potential*: bearing in mind that the main focus of the site must lie with the substantial collection of flintwork recovered, further study of the glass will add little to the understanding and interpretation of the site, except to contribute to the understanding of taphonomic process. It has a very limited potential to contribute to dating, and will not warrant further study, although a brief catalogue of the material should be prepared.
- 5.11 LITHICS (Daniel Elsworth)
- 5.11.1 Quantification: in total, 510 items were examined, of which 30 were discarded as non-artefactual, the majority being stones of inappropriate material. Of the remaining 480, 258 consisted of types of chert and 222 were made of types of flint. Of the total number of items, 227 were from topsoil 01, three were from fill 06 and layer 07, two were from fill 11 of feature 14 and five were from layer 28. A further 21 were from TP2, two were from TP3, and one was from TP5. Some 216 pieces were unstratified.
- 5.11.2 *Evaluation:* the vast majority of the artefacts (372) were waste material, mainly consisting of flakes of different types (174 items), irregular chunks (120 items), and very small debitage (36 items). Amongst the waste were 31 cores of various types, mostly single platform, eight unused pebbles, and three possible burins.
- 5.11.3 Of the 108 tools, almost all were broken or damaged. They mainly consisted of blades (39) and retouched blades and flakes (16 and 84 respectively). There were also 11 scrapers, six leaf-shaped arrowheads, four backed or blunted blades, two crescent microliths, and a borer.
- 5.11.4 The flint is variable, but can be broken down by colour into a few basic groups of a pale yellow to orange brown material, pale grey to off-white material, mid-

grey material, dark brown, 'toffee' brown, mid greenish/grey brown, and the occasional piece of pink or red.

- 5.11.5 *Potential:* the vast majority (443) of the 480 lithic items were from either the ploughsoil or were unstratified. Stratigraphically, therefore, there is limited potential for further interpretation, although there are potential relationships with some of the features identified during excavation, which may prove to be significant. The artefacts themselves, however, include a number of typologically sound examples, which would provide useful examples of Late Mesolithic/Early Neolithic lithic technology for North Lancashire.
- 5.11.6 Few examples of sites of this period have been excavated in lowland North Lancashire. The largest example, at Heysham Head, *c* 12km to the west, was not adequately reported and failed to provide conclusive evidence of the nature of the site (Salisbury and Sheppard 1994). A group of 133 artefacts, at least some of which were of similar date, was discovered within the buried soil horizon below a Bronze Age funerary cairn *c* 8km to the north at Borwick (Olivier 1987), and similarly beneath a funerary mound on the bank of the River Kent at Levens Park in South Cumbria (Cherry and Cherry 2002). A small collection of artefacts of a similar type was also recently identified at Hornby, *c* 5km to the north-west (OA North 2002).
- 5.11.7 The site at Caton is also significant because it forms part of a group of sites identified in the vicinity of the Crook O'Lune. The other two both consisted of surface scatters one from a ploughed field (Penney 1978a; Penney 1978b, 43), the other eroding from the river bank (Williams 1998). The three sites together show a definite homogeneity and have produced in excess of 1400 artefacts. An earlier archaeological assessment to the west of the Crook O'Lune failed to identify any similar remains (Lambert 1996, 33), which might suggest that activity in the area is restricted to the land to the east, or that evidence was missed.
- 5.11.8 Unfortunately, none of the lithics were recovered from secure stratified contexts, and thus there is no material for scientific dating. The single feature (14) may not be anthropogenic, and did not contain a high density of flint or chert compared to the surrounding area. Therefore, there is little potential to date the activity associated with the lithic scatters by scientific methods.
- **5.12 STONE** (*Chris Howard-Davis*)
- 5.12.1 *Quantification*: apart from the flintwork, only a single stone object was recovered. It is a well-worn whetstone, but it was unstratified.
- 5.12.2 *Evaluation:* the irregular shape suggests that it is what might be termed an *ad hoc* whetstone, utilising a suitably-sized stone found in the locality, in this case a greyish-pink fine sandstone. The two extensively worn surfaces suggest that it has been used for sharpening blades, and deep scratches on the surface would seem to be plough-damage. Such objects are effectively impossible to date, beyond noting that it is highly unlikely to have any chronological link with the flintwork from the site:

5.12.3 *Potential:* this object has no potential to contribute to further understanding or interpretation of the site. A brief catalogue entry should be prepared.

5.13 ANIMAL BONE (*Andrew Bates*)

- 5.13.1 *Quantification:* in total, 12 fragments of animal bone were recovered during the excavation. These included two fragments of a rabbit mandible, two cattle teeth associated with six other tooth fragments, one cattle or red deer skull fragment, and a single burnt (calcined) larger mammal bone fragment.
- 5.13.2 *Evaluation:* all of the animal bone was recovered from cleaning layers of the soil horizon. None of the material is butchered. The cattle teeth would not yet have erupted, and as such come from a young animal.
- 5.13.3 *Potential:* the collection of animal bone is small and undated. As such the material has no further potential for analysis and should be discarded.

6. CURATION AND CONSERVATION

6.1 **RECIPIENT MUSEUM**

It is proposed that the ultimate place of deposition for the finds should be:

Lancashire Museums Service Stanley Street Preston PR1 4YP *Contact:* Stephen Bull, Museum Curator

6.2 CONSERVATION

6.2.1 There were no immediate conservation requirements in the field, or during the assessment.

6.3 STORAGE

- 6.3.1 The complete project archive, which will include records, plans, both black and white and colour photographs, artefacts, ecofacts and sieved residues, will be prepared following the guidelines set out in *Environmental standards for the permanent storage of excavated material from archaeological sites* (UKIC 1990, Conservation Guidelines 3) and *Guidelines for the preparation of excavation archive for long-term storage* (Walker 1990).
- 6.3.2 All finds will be packaged according to the Museum's specifications, in either acid-free cardboard boxes, or in airtight plastic boxes for unstable material.

6.4 GENERAL CONSERVATION

6.4.1 Most of the assemblage is well-preserved and in good condition and thus the conservation requirement is low.

6.5 PACKAGING

6.5.1 The assemblage is currently well-packed and will require no further packaging. Box lists are prepared and will be updated from the database when the identification of objects is complete.

7. STATEMENT OF POTENTIAL

7.1 INTRODUCTION

7.1.1 The archaeological investigation on Caton River Terrace has provided a valuable opportunity to study an area containing a significant concentration of late Mesolithic/Early Neolithic flint objects by means of a modern open-area excavation. This material forms the majority of the archaeological information for the site and as such the prehistoric period is the most important phase to be represented.

7.2 PRINCIPAL POTENTIAL

7.2.1 A large collection of lithic artefacts such as this, albeit largely unstratified or from mixed contexts, represents an important regional assemblage. Although there is only a single feature with any potential association with these artefacts, the site is still rare for North Lancashire. The existence of collections of artefacts of similar date from other sites adjacent to the Crook O'Lune suggests that this was a focus for considerable activity in the Late Mesolithic/Early Neolithic period.

7.3 NATIONAL PRIORITIES ADDRESSED BY THE SITE'S POTENTIAL

7.3.1 In 1991, English Heritage produced a document, *Exploring Our Past*, which included a strategy for dealing with the archaeological problems and opportunities which would be encountered during the following decade (English Heritage 1991b). Many of the ideas first raised in *Exploring our Past* were developed further in a draft *Research Agenda*, circulated to the archaeological profession in 1997. The most recent English Heritage Research Strategy documents are *Exploring our Past Implementation Plan* (2003) and *Discovering the Past, Shaping the Future* (2005), although these are, in effect, strategies for English Heritage itself. The draft *Research Agenda* (1997) is no longer considered current, although the site assemblage can still be considered in relation to the following research objectives.

Processes of Change

- Examine the period of transition from hunter-gatherers to farmers based on the periods potentially represented in the lithic assemblage.
- Consider whether there is evidence for increased sedentism using the resources available at the river, as has been suggested at coastal sites.

Chronological Periods

- Consider the implications of the site and its local context in the understanding of the Mesolithic in the North of England.
- Examine distribution of artefacts in detail.

Themes

- Does the collection of sites in the local and wider area tell us anything about settlement inter-action and hierarchies?
- Examine types of artefact and material to identify local production trends, commonalties and variations.
- Examine the relationship between this site and sites in the wider area, particularly the uplands, which have been investigated in more detail.

Methodological and Technical Development

- Reassess the resource now identified from all of the sites in the local landscape at the Crook O'Lune.
- Consider how this could inform future excavation and mitigation strategies for similar sites.
- Examine environmental sampling strategies.
- Consider statistical and spatial modelling analysis of the results of further assessment of the lithic assemblage.
- Place the material into the wider context of environmental and landscape evidence.
- Use scientific analysis to examine material types and identify sources.

Managing the Resource

- Consider the possible extent of the archaeological deposit.
- Examine the fragility of the resource and the probable impact of agriculture and river action.
- Inform proposals for future research and investigation.
- Highlight the area's importance to the SMR, to inform future mitigation.

7.4 LOCAL AND REGIONAL PRIORITIES

7.4.1 Sites that can easily be dated to the Late Mesolithic period, while not uncommon in the region, are badly understood and seldom examined in detail, their distribution being biased towards areas of erosion and preferential fieldwork (Hodgson and Brennand 2006). Those that have been studied tend to be from upland areas, in particular the East Pennines (Cowell 1996), while survey would suggest that coastal sites further north in West Cumbria form a band down to Morecambe Bay (Robinson 1982). Few of these have been examined in detail, however. To the south, in Merseyside, excavations have identified sites of a similar period with associated features, but the quantities

of artefacts are often considered too small to make a meaningful interpretation (Cowell and Philpott 2000, 24).

- 7.4.2 The particularly large grouping of sites around the Crook O'Lune represents a significant site in North Lancashire, but recent work in the general vicinity has shown the potential for sites of this period across the area. The significance as a site of transitional Mesolithic/Neolithic date may be further enhanced by the consideration of work in Cumbria. This has not only suggested that coastal sites used during the Mesolithic period may have been essentially sedentary (Bonsall 1981), but has identified examples with artefacts of possible Late Mesolithic and Early Neolithic type, in association with each other (Jones 2001; OA North 2002).
- 7.4.3 Unfortunately, the Caton River Terrace assemblage lacks any detailed stratigraphic relationships, but as a collection of artefacts, when placed in the local context, it forms part of a useful typology for the region and could provide a focus for future research in the area.

8. UPDATED PROJECT DESIGN

8.1 AIMS AND OBJECTIVES OF PROGRAMME OF ANALYSIS

- 8.1.1 *Overall Aims:* the overall aims are:
 - to elucidate the development and chronological history of the site;
 - to contribute to existing archaeological knowledge of Mesolithic and Neolithic activity in the North West;
 - to relate the findings to the wider body of evidence for Mesolithic and Neolithic activity in the North West.
- 8.1.2 *Specific Objectives*: the specific objectives are:
 - 1. to characterise and date the archaeological activity revealed during the course of the excavation through spatial and artefactual analysis;
 - 2. to inform an understanding of the nature of habitation during the Later Mesolithic or Early Neolithic period, through examination of the lithic assemblage and lithic working;
 - 3. to examine the technological characteristics of the flint working, and place them in a regional context;
 - 4. to examine the range of raw materials utilised, and the potential systems of trade and procurement;
 - 5. to document the later history of the site through artefactual analyses.

8.2 **PRESENTATION OF RESULTS**

8.2.1 In accordance with the guidelines outlined in the English Heritage document MAP2 (English Heritage 1991a), it is proposed to present the results of the project in the following stages:

Publication Text: following the analysis and interpretation of the results of the project, a report will be prepared for deposition in the county Historic Environment Record, and a synthesised text will be prepared suitable for publication as a short chapter within a proposed monograph on excavations in rural Lancashire.

Project Archive: the completion of the project will result in an integrated project archive. The archive will be deposited with the Lancashire Museums Service, Preston, and the Lancashire Record Office.

8.3 **PROGRAMME STRUCTURE**

8.3.1 The post-excavation programme will be divided into the following stages:

- analysis;
- integration;
- synthesis;
- preparation of text and illustrative material;
- publication;
- archive deposition.

9. METHOD STATEMENT

9.1 INTRODUCTION

9.1.1 This statement relates the tasks outlined in the task list (*Section 10.3*) to the aims and objectives. The programme of work is tailored to address the specific objectives, which, when achieved, will secure the general objectives outlined in *Section 8.1.2* above.

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9.2 START UP

9.2.1 *Task 1:* at the outset of the project a team meeting will be held to define and co-ordinate the programme of analysis.

9.3 STRATIGRAPHIC ANALYSIS

9.3.1 **Task 2:** the stratigraphic sequence will form the contextual framework for an integrated report, which, following the incorporation of artefactual data and information pertaining to the flint objects, will facilitate the interpretation of the site. While there are only a few contexts, the material has relevance to the history of the site and taphonomic processes.

9.4 ARTEFACT ANALYSIS

- 9.4.1 **Task 3: Flint Objects:** the material will be fully catalogued, and a typology will be prepared, which will be cross-referenced to that from earlier excavations in the region. The dating of the assemblage will also be refined. A report will be presented in conventional fashion and accompanied by a brief discussion of any noteworthy features of the group, especially with regard to dating and sources of supply. The most important pieces will be illustrated.
- 9.4.2 **Task 4: Other Finds:** the assessments of the remaining finds will be edited and incorporated into the final publication text. Additionally, it is suggested that the ceramic report from Escowbank Farm is incorporated into the publication.

9.5 **PUBLICATION**

- 9.5.1 **Tasks 5 and 6:** following analysis and interpretation of the excavation results, a text will be prepared suitable for publication as a chapter in a proposed monograph on excavations in rural Lancashire. The report will address the research objectives of the project, presenting an integrated synthetic overview of the various artefact analyses and illustration of a selection of the diagnostic flint and chert artefacts. More detailed data will remain in the archive.
- 9.5.2 *The Structure of the Report:* the following section represents a likely breakdown of the proposed publication. It should be noted, however, that this synopsis can only be regarded as a draft, based on the current understanding of the archive.

BACKGROUND

- 1.1 Location/geology, topography and soils (500 words)
- 1.2 Previous excavations: summary (500 words)
- 1.3 The prehistory of the region (1000 words)
- 1.4 Historical overview (500 words)

THE SITE

- 2.1 Introduction (250 words)
- 2.2 Stratigraphy (250 words)
- 2.3 The lithics and later finds (1000 words)
- 2.4 Discussion of spatial distribution (1000 words)

DISCUSSION

3.1 Chronological discussion and conclusion (2500 words)

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ACKNOWLEDGEMENTS

- 9.5.3 The text will be supported by a number of graphics, including line drawings, to illustrate the evidence, and tables to summarise data. A total word length of 8000 words is estimated.
- 9.5.4 **Task 7:** the archive will be finalised for deposition at the Lancashire Record Office, and the finds deposited with the Lancashire Museums Service, in Preston.
- 9.5.5 **Task 8:** the post-excavation process will be overseen and monitored by a project manager, who will ensure the smooth running of the project, and that the analysis is undertaken according to the timetable. The project manager will also oversee academic quality, and edit the final text.

10. RESOURCES AND PROGRAMMING

10.1 NAMED PROJECT TEAM

10.1.1 The team consists of internal OA North staff. The project will be managed by Mark Brennand.

Name	Organisation		Tasks
Mark Brennand	OA North	MB	Project Manager
Fraser Brown	OA North	FB	Project Officer
Caroline Bulcock	OA North	CB	Flint specialist
Chris Howard-Davis	OA North	CHD	Finds specialist
Rachel Newman	OA North	RN	Quality Assurance
Adam Parsons	OA North	AP	Finds illustration
Mark Tidmarsh	OA North	MT	Graphics

10.2 MANAGEMENT STRUCTURE

- 10.2.1 OA North operates a project management system. The team is headed by the Project Manager, who assumes ultimate responsibility for the implementation and execution of this Project Design, and the achievement of performance targets, be they academic, budgetary, or scheduling.
- 10.2.2 The Project Manager may delegate specific aspects of the project to other key staff, who both supervise others and have a direct input into the compilation of the report. They may also undertake direct liaison with the museum named as the recipient of the project archive. The Project Manager will define and control the scope and form of the post-excavation programme.
- 10.2.3 Communication between all concerned in the post-excavation programme is of paramount importance and it is essential that the team involved liaises closely in order that comparable data are obtained. To this end regular meetings and reviews are envisaged between all project staff. All information will be disseminated at regular intervals, thus ensuring that everyone is aware of current progress, strategy and thinking.

10.3 LIST OF TASKS

10.3.1 The project has been broken down into a series of summary tasks, which are set out in *Section 9.1*. In addition to the tasks outlined, there is some time allocated to general project monitoring and management.

No	Task Name	Duration	Resource Names
1	Project set up		
1.2	Contact project team members	0.25 days	MB
1.3	Brief specialist	0.25 days	FB
2	Stratigraphic analysis	1	
2.1	Summary of site stratigraphy	1 day	FB
3	Lithic analysis and report		
3.1	Catalogue	4 days	СВ
3.2	Description of selected pieces	2 days	СВ
3.3	Comparison with other assemblages	2 days	СВ
3.4	Report text	3 days	СВ
3.5	Selection of pieces for illustration	1 day	СВ
3.6	Editing	1 day	CHD
4	Other finds		
4.1	Edit assessment text into report text	1 day	CHD
5	Illustration		
5.1	Site plans distributions	3 days	MT
5.2	Lithic illustration	3 days	AP
5.3	Photography	1 day	AP
6	Report text		
6.1	Introduction, Stratigraphy and finds	1	FB
6.2	Discussion	2	FB
6.3	Bibliography	0.5	FB
7	Finalisation		
7.1	Overall Edit	1 day	MB
7.2	Corrections (text)	1 day	FB
7.3	Corrections (graphics)	1 day	MT/AP
7.4	OA internal QA	1 day	RN
8	Finalisation of Research archive		
8.1	Discard unwanted material	0.5 days	ра
8.2	Repack/prepare finds for deposition	0.5 days	Finds supervisor
8.3	Update archive	0.25 days	Archive manager
8.4	Deposition of Archive	0.5	Finds supervisor
9	Management	2	MB

Management tasks: the management and monitoring allocations include project monitoring, advice and co-ordination, and problem solving.

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APPENDIX 1: PROJECT DESIGN

Oxford Archaeology North

September 2002

CATON RIVER TERRACE, CATON, LANCASHIRE ARCHAEOLOGICAL EXCAVATION

Proposals

The following project design is offered in response to a request from United Utilities for an archaeological excavation in advance of the opening of a pipetrench within the Ribble TA Pipeline easement at Caton, Lancashire.

1 BACKGROUND

1.1 Circumstances of Project

- 1.1.1 United Utilities (hereafter the client) are currently installing new pipelines from Lancaster to Caton, from Lords Lot to Caton, from Borwick to Jackson's Pasture and from Burkes Farm to Lowgill, Lancashire. An archaeological watching brief of the topsoil stripping undertaken recently by Oxford Archaeology (North), has indicated the presence of a potentially significant archaeological site in the field immediately east of the Crook O'Lune, situated between the cycle track and the A683.
- 1.1.2 The County Archaeologist was informed of the discoveries, and has recommended to United Utilities that full archaeological recording takes place prior to any further construction work.
- 1.1.3 Archaeological finds retrieved during the topsoil strip include numerous worked flints, several flint cores, and a leaf-shaped arrowhead. These were in addition to a sherd of pottery tentatively dated to the Bronze Age. Prehistoric pottery finds are very poorly represented in Lancashire. Such large assemblages are rarely found in Lancashire. These finds are indicative of a Prehistoric occupation or settlement site. Leaf-shaped arrowheads are thought to be representative of the Early Neolithic and usually appear as isolated finds, perhaps as casual losses from hunting and related activities (Middleton 1996). In the Early Neolithic lithic scatters remain by far the most common source of evidence. Other archaeological sites in the area include a scatter of worked flints (SMR No 2506) in a field close to the current site, on the opposite bank of the Lune. These were discovered in 1977 by the Lancaster Archaeological Society for the Lune Valley.

1.2 Oxford Archaeology North (OA North)

- 1.2.1 OA North has considerable experience of the evaluation and excavation of sites of all periods, having undertaken a great number of small and large-scale projects throughout Northern England during the past 20 years. Evaluations, assessments, watching briefs and excavations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables. OA North is an Institute of Field Archaeologists (IFA) registered organisation, number 17, and all its members of staff operate subject to the IFA Code of Conduct.
- 1.2.2 OA North has particular experience of the archaeology of the Lune Valley having undertaken the archaeological assessment of the Shell North Western Ethylene Pipeline during 1988.

1.3 Archive Deposition

1.3.1 The results of the excavation 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*) and the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. 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.

- 1.3.2 The paper archive for the archaeological work undertaken at the site should be deposited with the Lancashire Record Office (Preston) and the finds with the Lancashire County Museum. The county museum meets MGC criteria for the long-term storage of archaeological material. Negotiations with the Lancashire County Museum will be commenced immediately upon award of contract.
- 1.3.3 Except for items subject to the Treasure Act, all artefacts found during the course of the project will be donated to the receiving museum.
- 1.3.4 A synthesis (in the form of the index to the archive and a copy of the publication report) will be deposited with the Lancashire Sites and Monuments Record.

2 **AIMS AND OBJECTIVES**

2.1 Academic Aims

- 2.1.1 The main research aim of the excavation will be to characterise the survival of the archaeological remains on the site.
- 2.1.2 Another major aim of the work will be to further understanding of the development of Neolithic land-use of this part of the Lune Valley.

2.2 Objective

2.2.1 The main objective are to relate the findings to the other known Neolithic sites both locally and within the region, to establish whether structural evidence is present, and finally to date the elements of the site to establish whether any sequence is discernible.

2.3 <u>Post-Excavation and Report Production</u>

2.3.1 The site records, finds and any samples from the excavation programme outlined below will form a checked and ordered site archive as outlined in the English Heritage guideline document *Management of Archaeological Projects* (2nd edition, 1991a) (hereafter MAP 2). Following compilation of the project archive a report will be produced assessing the potential of the archive (including the paper archive, the finds archive and any palaeoenvironmental samples that are taken) for further analysis as defined in MAP 2 Appendix 1. This post-excavation assessment report will make recommendations for further analysis and publication of the results, as appropriate.

3 METHODS STATEMENT

- 3.1 The following work programme is submitted in line with the aims and objectives summarised above.
- 3.2 Prior to the fieldwork commencing OA North will contact the client to obtain any information relating to live services on the site.

3.3 <u>Fieldwork</u>

- 3.3.1 The excavation will be undertaken along a 200m section of the pipeline easement. The easement is 10m in width (to the edge of the retained topsoil). The easement has already undergone topsoil stripping, and the topsoil has been deposited along the northern extent of the easement. A trench 4m in width will be excavated by the use of a mechanical excavator, centred on the proposed line of the pipe trench. Spoil will be deposited along the length of the trench in a manner, which will enable it to be distinguished from the topsoil. The excavation will be undertaken by hand and machine in a stratigraphic manner, and the machine will only be utilised to remove overburden or when any archaeological deposits have been fully recorded.
- 3.3.2 The 4m wide strip, centred on the pipe centre line, of the 200m section of pipe corridor will be cleaned by hand. If any features are exposed by this cleaning then the procedures set out in sections 3.3.3 *et seq* will be implemented. If no archaeological features are encountered then 3 to 5 of test pits up to 2m x 2m will be excavated to allow examination of the stratigraphy. Samples from these pits will be sieved on site for artefacts and ecofacts. Overburden will then be carefully removed in two splits using a mechanical excavator fitted with a toothless ditching bucket under strict archaeological supervision. Following excavation of the first spit the exposed soil or subsoil will be examined for archaeological features and it any are encountered then the procedures set out in sections 3.3.3 *et seq* will be implemented. Following the excavation of the second spit the ground will be cleaned by hand and any archaeological remains present will be suitably recorded as specified below.
- 3.3.3 Pits and postholes will be subject to a 50% by volume controlled stratigraphic excavation, with the remainder of the feature, should it prove necessary to be removed in entirety, excavated quickly keeping only that dating evidence which is securely derived from the feature in question.
- 3.3.4 Linear cut features, such as ditches and gullies, will be subject to a 20% by volume controlled stratigraphic excavation, with the excavation concentrating on any terminals and intersections with other features which would provide important stratigraphic information. As with pits and postholes, should it prove necessary to remove the remainder of the feature to expose underlying features and/or deposits, it will be excavated quickly keeping only that dating evidence which is securely derived from the feature in question.

- 3.3.5 Structural remains will be excavated manually to define their extent, nature, form and, where possible, date. Any hearths and/or internal features will be 100% sample excavated to provide information on their date and function, and the extent of any associated floor surfaces will be determined.
- 3.3.6 It should be noted that no archaeological deposits will be entirely removed from the site unless their excavation is necessary to reveal other features and/or deposits. If the excavation is to proceed below a depth of 1.2m then the sides will be stepped in. Cut features identified against the edges of the excavation will not be excavated below a safe working limit of 1.2m unless it is confirmed by the County Archaeologist that they are of exceptional importance. In such cases, if shoring is required then the costs for this will be derived from the contingency sum outlined below in section 6.
- 3.3.7 Should any particularly deep-cut feature, such as a well pit, be revealed this will be manually excavated to 1.2m. Thereafter, if the County Archaeologist wishes to see the further excavation of any such feature, this could be achieved by reducing the general area of the feature (ie a 1m 'cordon' around the feature) using a machine to allow further safe manual excavation. It should be noted, however, that recourse to such a methodology would incur additional costs, which would be derived from the contingency sum.
- 3.3.8 All information identified in the course of the site works will be recorded stratigraphically, using a system, adapted from that used by the Centre for Archaeology Service of English Heritage, with sufficient pictorial record (plans, sections and both black and white and colour photographs) to identify and illustrate individual features. Primary records will be available for inspection at all times.
- 3.3.9 Results of all field investigations will be recorded on *pro forma* context sheets. The site archive will include both a photographic record and accurate large-scale plans and sections at an appropriate scale (1:20 and 1:10). All artefacts and ecofacts will be recorded using the same system, and, following on-site processing, will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration.
- 3.3.10 Environmental samples (bulk samples of 30 litres volume, to be subsampled at a later stage) will be collected from suitable deposits (ie. the deposits are reasonably well dated and are from contexts the derivation of which can be understood with a degree of confidence).
- 3.3.11 Samples will also be collected for technological, pedological and chronological analysis as appropriate. If necessary, access to conservation advice and facilities can be made available. OA North maintains close relationships with Ancient Monuments Laboratory staff at the Universities

of Durham and York and, in addition, employs artefact and palaeoecology specialists with considerable expertise in the investigation, excavation and finds management of sites of all periods and types, who are readily available for consultation.

- 3.3.12 The position of the excavation will be recorded using a Total Station. The information will be tied in to OD.
- 3.3.13 Any human remains encountered will be excavated following the receipt of a Home Office licence. The removal of such remains will be carried out with due care and sensitivity.
- 3.3.15 Any gold and silver artefacts recovered during the course of the excavation will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act, 1996.
- 3.4 Other Matters
- 3.4.1 Access to the site will be arranged via the Client.
- 3.4.2 The trench will be back filled with the material removed during the excavation.
- 3.4.3 On-site accommodation, in the form of an office space/messing facility and a portaloo will be provided by OA North. These will be located adjacent to the excavation.
- 3.4.4 The client is asked to provide OA North with information relating to the position of live services on the site. OA North will use a cable detecting tool in advance of any machine excavation.
- 3.4.5 Normal OA North working hours are between 9.00 am and 5.00 pm, Monday to Friday, though adjustments to hours may be made to maximise daylight working time in winter and to meet travel requirements. It is not normal practice for OA North staff to be asked to work weekends or bank holidays and should the client require such time to be worked during the course of a project a contract variation to cover additional costs will be necessary.

3.5 Health and Safety

- 3.5.1 OA North provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (1991). OA North will liaise with the client to ensure all health and safety regulations are met. A risk assessment will be completed in advance of any on-site works.
- 3.5.2 All OA North staff will attend the United Utilities contractor's safety induction. No excavation will take place within a 5m area of the existing pipelines that are known to cross the easement.

3.6 <u>Post-Excavation Assessment</u>

- 3.6.1 Following completion of the fieldwork, the results will be collated and the site archive completed in accordance with English Heritage MAP 2, Appendix 3. A post-excavation assessment of the archive and the resource implications of the potential further analysis will be undertaken. The stratigraphic data and the finds assemblage will be quantified and assessed, and the environmental samples processed and a brief assessment of their potential for further analysis made. The assessment results will be presented within a post-excavation assessment report which will make recommendations for a schedule, timescale and programme of analysis in accordance with MAP2 Appendix 4.
- 3.7 Analysis
- 3.7.1 A provisional programme of post-excavation analysis is anticipated. The extent of the programme, however, can only be reliably established on completion of the post-excavation-assessment report. Section 6 covers the estimated costs of the analysis. The proposed programme anticipates both analysis of the site stratigraphy and the artefactual/ecofactual evidence leading to the production of a final report.
- 3.8 <u>Publication</u>
- 3.8.1 It is anticipated that the results of the excavation will be worthy of publication. If possible, the publication text will be prepared in a suitable form for inclusion as a journal article in the appropriate journal as befits its academic status.

4 **RESOURCES AND PROGRAMMING**

4.1 <u>Staff Proposals</u>

- 4.1.1 Day to day management of the project will be undertaken by Alison Plummer BSc (Hons) (OA North Senior Project Manager) to whom all correspondence should be addressed.
- 4.1.2 The excavation will be directed by an OA North project officer. OA North project officers are experienced field archaeologists who have undertaken supervision of numerous small- and large-scale evaluation and excavation projects.
- 4.1.3 The site director will be assisted by a team of two archaeological assistants.
- 4.1.4 The processing and analysis of any palaeoenvironmental samples will be carried out by **Elizabeth Huckerby BA**, **MSc** (OA North project officer), who has extensive experience of the palaeoecology of the North West, having been one of the principal palaeoenvironmentalists in the English Heritage-funded North West Wetlands Survey.
- 4.1.5 The flint assemblage will be examined by **Daniel Elsworth MA (Hons)**, **PIFA**, who has experience of prehistoric lithics in north Lancashire and south Cumbria; his undergraduate dissertation was on the Mesolithic Around Morecambe Bay, he recently examined a small collection of flint artefacts from Hornby, and dealt with an assemblage of over 600 pieces of flint from the Isle of Man. He has also worked on a large Bronze Age cremation cemetery, as well as two burnt mounds, all in the North West.
- 4.1.6 Assessment of any general finds from the excavation will be undertaken by **Sean McPhillips BA**. Sean has worked as a finds supervisor for English Heritage and MOLAS on a number of occasions and has extensive knowledge concerning finds.
- 4.2 Programming
- 4.2.1 A three to four week period is required to carry out the excavation of the $800m^2$ area.
- 4.2.2 Processing and analysis of palaeoenvironmental samples is dependent on the number of samples taken and can not be predicted at this stage, but will be appraised at the assessment stage. A contingency for two Radio Carbon dates has been built into the post-excavation costs.
- 4.2.3 The project archive will be compiled and a MAP 2-style assessment report/updated project design will be produced within six months of the completion of the excavation fieldwork. A copy will be sent to the client and a further two copies to the County Archaeologist. The assessment report/updated project design will outline any requirement for further

analysis of the excavation archive, naming all the specialists to be involved in the post-excavation analysis, and will summarise proposals for eventual publication of the excavation results.

5. **PROJECT MONITORING**

- 5.1 The project will be monitored by a representative of the County Archaeology Service, who will be kept informed of commencement of the work.
- 5.2 A preliminary meeting/discussion will be held with the County Archaeologist at the commencement of the project. Further meetings/discussions will be held during the course of the fieldwork, on completion of the fieldwork and commencement of the assessment, on completion of the assessment, and on completion of the analysis and final publication report detailing the results of the excavation.
- 5.3 OA North will ensure that any significant results are brought to the attention of the Client and the County Archaeologist as soon as is practically possible.

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APPENDIX 2: CONTEXT LIST

CONTEXT	DESCRIPTION
01	Layer – cleaning horizon
02	Layer – silty-clay deposit, Test Pit 1
03	Layer – silty-clay deposit, Test Pit 1
04	Layer – silty-clay deposit, Test Pit 1
05	Layer – charcoal-rich deposit, Test Pit 1
06	Linear feature – fill
07	Layer – cleaning horizon
08	Linear feature – cut
09	Layer – silty-clay deposit
10	Cobble spread
11	Sub-circular feature - fill
12	Fill of possible posthole
13	Possible posthole
14	Sub-circular feature - cut
15	Layer – Test Pit 2
16	Layer – Test Pit 2
17	Layer – Test Pit 3
18	Layer – Test Pit 3
19	Layer – Test Pit 3
20	Layer – Test Pit 3
21	Layer – Test Pit 3
22	Layer – Test Pit 3
23	Layer – Test Pit 4
24	Layer – Test Pit 4
25	Layer – Test Pit 4
26	Layer – Test Pit 5
27	Subsoil in Test Pit 5
28	Subsoil in Test Pit 8
29	Subsoil in Test Pit 7

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Context Quantity		Weight	Material	Date Range						
01	227		Flint and chert	Late Mesolithic – Early Neolithic						
01	56	375g	Pottery	Eighteenth/nineteenth centuries						
01	33	205g	Pottery	Late twelfth to sixteenth centuries						
01	22	30g	Vessel/window glass	Post-medieval						
01	19	35g	Clay tobacco pipe	Eighteenth/nineteenth centuries						
01	5	145g	Iron	Undated						
01	2	5g	Copper alloy	Undated						
01	2	1g	Animal bone	Undated						
01	1	1g	Burnt bone	Undated						
06	3		Flint and chert	Late Mesolithic – Early Neolithic						
07	5	5g	Animal bone	Undated						
07	3	55g	Pottery	Fifteenth to seventeenth centuries						
07	3		Flint and chert	Late Mesolithic – Early Neolithic						
07	1	4g	Pottery	Second century						
07	1	10g	Iron	Undated						
11	2		Flint and chert	Late Mesolithic – Early Neolithic						
23	3	45g	Vessel glass	Post-medieval						
23	1	5g	Pottery	Seventeenth/eighteenth centuries						
23	1	10g	Clay tobacco pipe	Eighteenth centuries						
26	1	26	Glass - waste	undated						
28	5		Flint and chert	Late Mesolithic – Early Neolithic						
<i>TP2</i>	21		Flint and chert	Late Mesolithic – Early Neolithic						
TP3	2		Flint and chert	Late Mesolithic – Early Neolithic						
TP5	1		Flint and chert	Late Mesolithic – Early Neolithic						
U/S	216		Flint and chert	Late Mesolithic – Early Neolithic						
U/S	3	1g	Burnt bone	Undated						
U/S	2	18g	Pottery	Late twelfth to thirteenth centuries						
U/S	1	84g	Stone - ?hone	Undated						

Date. Wed 23/10/00	Project: L9141 Caton RT Ass				31 9	30 8.3	29 8.2	28 8.1	27 8	26 7.3	25 7.2	24 7.1	0	22 6.3	21 6.2	20 6.1	19 6	18 5.3	5.2	5.1	U	ŧ	•	3.6	ა ე	3.4	3.3	8 3.2	3.1	ω	21	4 2	1.3	1.2		Task
		Task			Management	Update archive	Repack/prepare finds for deposition	Discard unwanted material	Finalisation of Research archive	Corrections (graphics)	Corrections (text)	Overall Edit	Finalisation	Bibliography	Discussion	Introduction and finds	Report lext	Photography	Lithic illustration	Site plans distributions	Illustration	Edit assessment text into report text	Other finds	Editing	Selection of pieces for illustration	Report text	Comparison with other assemblages	Description of selected pieces	Catalogue	Lithic analysis and report	Summary of site stratigraphy	Stratigraphic analysis	Brief specialist	Contact project team members	Project set up	Task Name
							s for deposition	aterial	earch archive	s)						CA CA				75		into report text			or illustration		er assemblages	ed pieces		report	tigraphy	sis		members		
					1 day	0.25 days	0.5 days	0.5 days		1 day	1 day	1 day		0.5 days	2 days	1 day		1 day	3 days	3 days		1 day		1 day	1 day	3 days	2 days	2 days	4 days		1 day		0.25 days	0.25 days		Duration
	Rolled Up Task	Summary			Mon 08/01/07	Thu 01/03/07	Wed 28/02/07	Wed 28/02/07	Wed 28/02/07	Tue 27/02/07	Mon 26/02/07	Fri 23/02/07	Fri 23/02/07	Thu 22/02/07	Tue 20/02/07	Mon 19/02/07	Mon 19/02/07	Wed 14/02/07	Fri 09/02/07	Tue 06/02/07	Mon 05/02/07	Thu 01/02/07	Thu 01/02/07	Wed 31/01/07	Tue 30/01/07	Thu 25/01/07	Tue 23/01/07	Fri 19/01/07	Mon 15/01/07	Mon 15/01/07	Mon 08/01/07	Tue 09/01/07	Mon 06/01/07	Mon 08/01/07	Mon 08/01/07	Start
>		1				Thu 01/03/07	Wed 28/02/07	Wed 28/02/07	Thu 01/03/07	Tue 27/02/07	Mon 26/02/07	Fri 23/02/07	Tue 27/02/07	Thu 22/02/07	Wed 21/02/07	Mon 19/02/07	Thu 22/02/07	Wed 14/02/07	Tue 13/02/07	Thu 08/02/07	Wed 14/02/07	Thu 01/02/07	Thu 01/02/07	Wed 31/01/07	Tue 30/01/07	Mon 29/01/07	Wed 24/01/07	Mon 22/01/07	Thu 18/01/07	Wed 31/01/07	Tue 09/01/07	Tue 09/01/07	Mon 08/01/07	Mon 08/01/07	Mon 08/01/07	Finish
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APPENDIX 5: FINANCIAL BREAKDOWN

The total cost quoted for the post-excavation is a fixed price which is inclusive of all management, overheads, and other disbursement costs (travel and expenses), to undertake the programme of work as defined in this project assessment. Any other variations from this programme of work at the client's direction will require recosting. All staff costs are inclusive of holiday entitlement, as well as NI and Superannuation.

- All costs are exclusive of VAT
- Salaries and wages inclusive of NI, Superannuation and overheads
- Project duration beyond 31 March 2007 will require adjustment for inflation.
- Staff costs

Name	Day rate	Days	Cost				
Mark Brennand	242	3	726				
Fraser Brown	158	5.75	908.50				
Caroline Bulcock	158	12	1896				
Chris Howard-Davis	242	2	484				
Rachel Newman	347	1	347				
Adam Parsons	134	4	536				
Mark Tidmarsh	134	4	536				
Total staff costs			5433.50				
Sub total for analysis		£5433.	.50				
Plus VAT at 17.5%		£950.8	6				
Total costs		£6384.	.36				

ILLUSTRATIONS

FIGURES

Figure 1: Site Location

Figure 2: Trench Location Plan

Figure 3: The Distribution of Lithics

Figure 4: East-facing section across feature 14

PLATES

Plate 1: General view of site, facing west

Plate 2: Feature 14 after excavation

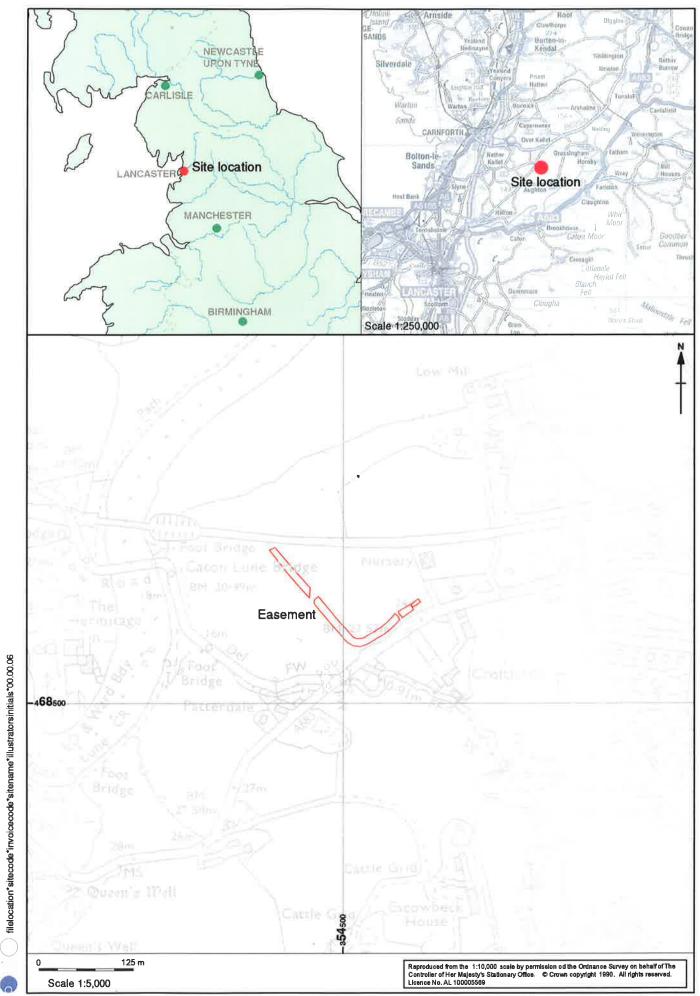
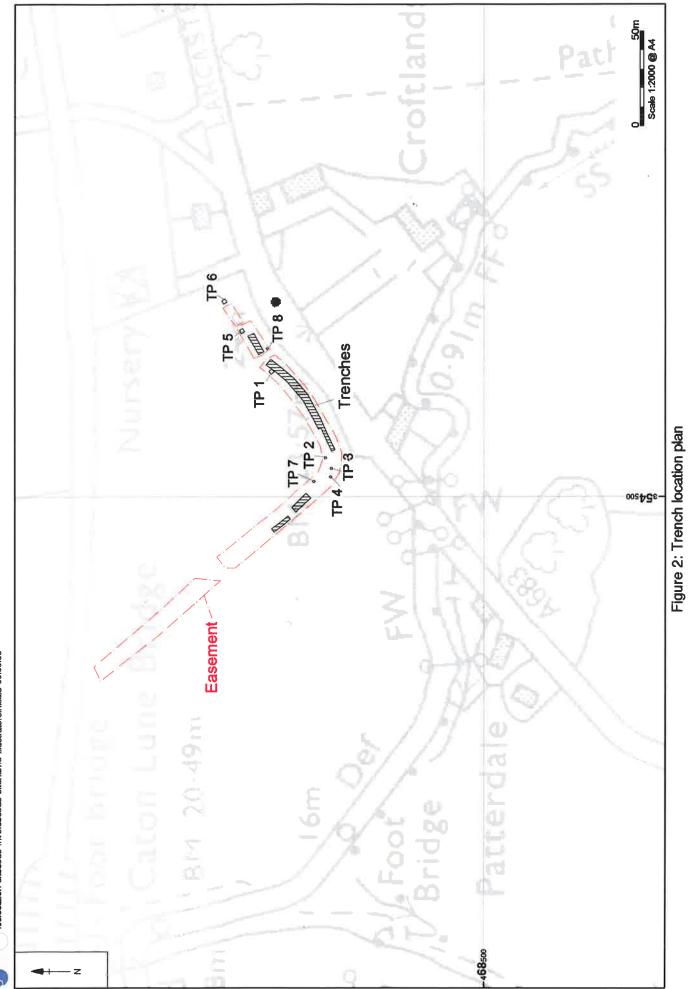


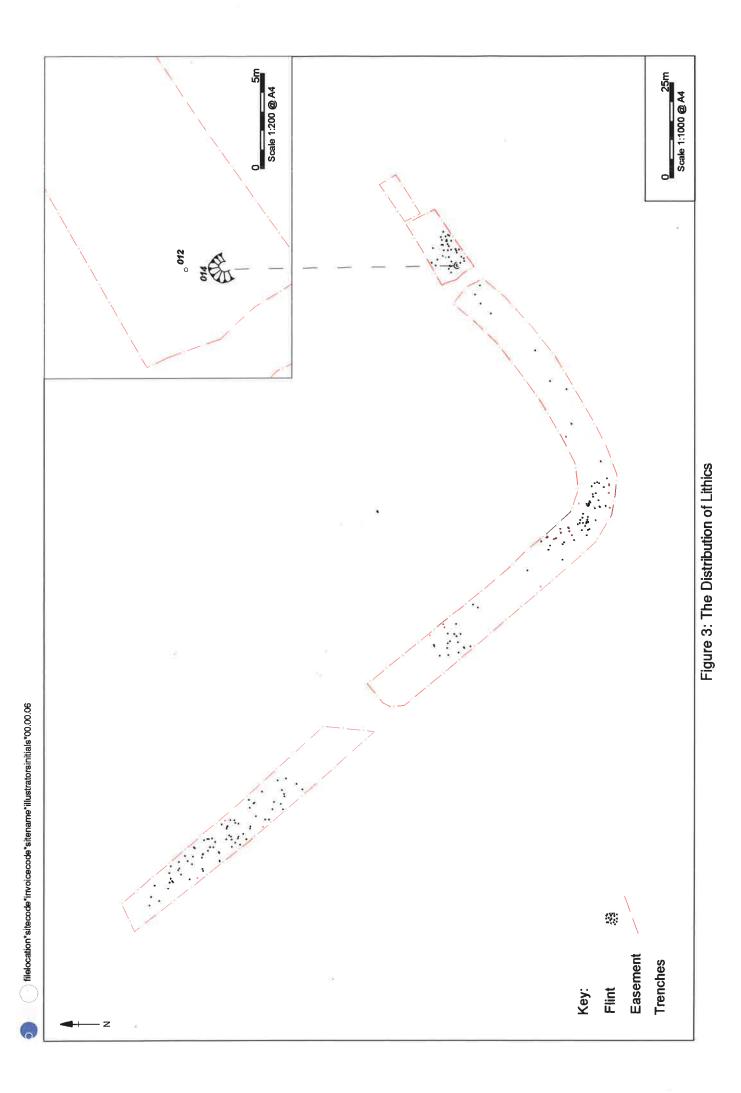
Figure 1: Site Location

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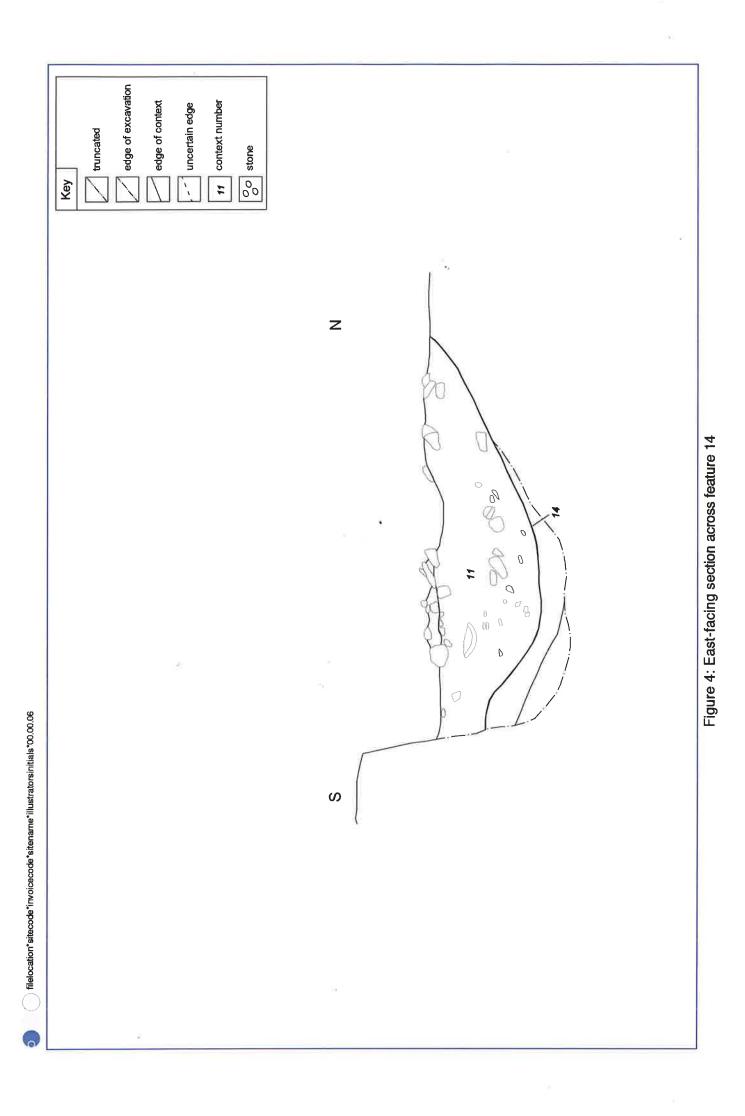




Plate 1: General view.of site, facing west



Plate 2: Feature 14 after excavation





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