



Thacka Beck Flood Alleviation Scheme, Penrith, Cumbria

Archaeological Trial Trenching



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SUMMARY

A flood alleviation scheme is proposed in and around the town of Penrith, Cumbria, along the course of Thacka Beck. Thacka Beck is a partially man-made watercourse, and has supplied the town with its main water supply for many centuries. Planning permission has been granted for a storage pond facility associated with a flood alleviation scheme (FAS), but with a condition that a programme of archaeological work is undertaken prior to construction to assess the potential impact on any below ground archaeological remains. This condition was based on information obtained during previous archaeological investigations on the site in 2005 and 2008 when an archaeological watching brief was carried out by Oxford Archaeology North (OA North) during ground investigation (GI) works (OA North 2009); no features or structures of archaeological significance were observed, but deposits of well-preserved organic matter were recovered during the GI works in 2008, beneath a layer of river gravel, or lacustrine inwash. Unfortunately, it was not possible to date the organic matter but similar deposits are known from sites in Lancashire, namely Fenton Cottage and Stafford's Dike dating to the early Bronze Age, and in association with the construction of Kate's Pad, a prehistoric trackway. Consequently, Cumbria County Council Historic Environment Services (CCCHES) requested a scheme of archaeological evaluation trenching. In order to meet the planning condition, OA North undertook the work between 24th and 27th August 2009.

Six trenches were excavated, Trenches 1 to 6, measuring approximately 30m in length and 2m wide. The only feature uncovered, excluding field drains, was a nineteenth century field boundary wall (**606**). Deep alluvial deposits, comprising layers of sands, silts and gravels, were encountered in each trench, and the natural deposit, in the form of glacial till, was only encountered in Trenches 1 and 3 (**102** and **304**, respectively) below fluvial deposits. Organic deposits within the fluvial layers were located in Trenches 2 and 4, although due to health and safety constraints it was only possible to sample Trench 2 in the form of a bulk sample (sample 101) and monolith (sample 100). A sample of organic matter taken during the watching brief in late 2008 was from a depth below 1.65m below ground level, beneath a layer of river gravel or lacustrine inwash, and was seen to contain abundant *cf Scheuchzeria palustris* (Rannoch rush) rhizomes (*ibid*). However, during the evaluation fieldwork the level of the water table was such that conditions prevented sampling at a similar depth.

The assessment of the charred and waterlogged plant remains from fluvial deposits **203** in Trench 2 (sample 101) was found to be rich in well-preserved plant remains and reflected conditions of both wet and waste/cultivated ground. Unfortunately, the deposits are undated and, therefore, at present any archaeological activity can not be placed within a chronological framework. The state of pollen preservation observed during the assessment suggests that much of the pollen was derived locally. The pollen assemblage at a depth of 0.6m-0.61m from the ground surface from the monolith (sample 100) (fluvial deposit **202**) suggests a largely cleared landscape, with both pastoral and arable cultivation, possibly being practised either nearby or from the river catchment area. The number of pollen grains from herbaceous taxa relative to that from trees and shrubs suggest that there was little woodland present in the vicinity.

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The archaeological evaluation excavations was undertaken by Andy Bates and Annie Hamilton Gibney. The report was compiled by Andy Bates. The environmental assessment was also undertaken by Sandra Bonsall and Elizabeth Huckerby, the finds were assessed by Chris Howard-Davis, and the drawings were produced by Alix Sperr. The project was managed by Emily Mercer, who also edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

1.1.1 A flood alleviation scheme is proposed in and around the town of Penrith, Cumbria, along the course of Thacka Beck. Thacka Beck is a partially man-made watercourse, and has supplied the town with its main water supply for many centuries. Planning permission has been granted for a storage pond facility associated with a flood alleviation scheme (FAS), but with a condition that a programme of archaeological work is undertaken prior to construction to assess the potential impact on any below ground archaeological remains. This condition was based on information obtained during previous archaeological investigations on the site in 2005 and 2008 when an archaeological watching brief was carried out by Oxford Archaeology North (OA North) during ground investigation (GI) works (OA North 2009); no features or structures of archaeological significance were observed, but deposits of well-preserved organic matter were recovered during the GI works in 2008, beneath a layer of river gravel, or lacustrine inwash. Unfortunately, it was not possible to date the organic matter but similar deposits are known from sites in Lancashire, namely Fenton Cottage and Stafford's Dike dating to the early Bronze Age, and in association with the construction of Kate's Pad, a prehistoric trackway (*ibid*).

1.1.2 Based on the results of the watching brief and environmental analysis, Cumbria County Council Historic Environment Services (CCCHES) advised that a scheme of archaeological trial trenching was required at the site of the proposed storage pond. OA North were commissioned to undertake this second phase of works in order to meet the planning condition. Consequently, a project design was compiled (*Appendix 1*) and, following its approval by CCCHES, the trial trenching was undertaken between 24th and 27th August 2009. This report sets out the results of the evaluation in the form of a short document.

1.2 LOCATION AND GEOLOGY

1.2.1 Penrith lies between the Rivers Eamont and Petteril, on the south-western edge of the Eden Valley. The storage pond site, by the Gilwilly Industrial Estate, lies within fields to the north-west of Penrith and is bounded to the south by the Thacka Beck and to the east by the West Coast Mainline (NY 5078 3077, Fig 1).

1.2.2 The geology of the Penrith area comprises New Red Sandstone overlain by thick post-glacial deposits, characterised locally by drumlin swarms (Geological Survey of Great Britain 1978). However, the soils in the vicinity of the specific sites are classified only as urban by the Soil Survey (1983) and otherwise remain unclassified.

1.3 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 1.3.1 **Introduction:** this section is intended only as a brief summary of the archaeological development of the Penrith area, to provide a context to the results.
- 1.3.2 **Prehistoric Period (up to AD 43):** prehistoric remains are fairly evenly distributed in the area surrounding the core settlement of Penrith, with slightly larger numbers having been recorded to the west (Cumbria County Council 2002, Map C). No remains have yet been identified that are of a Palaeolithic or Mesolithic date (*op cit*, 28), although there appears to be a degree of continuity between the end of the Mesolithic and the start of the Neolithic; flint artefacts typically belonging to the early Neolithic are essentially indistinguishable from the late Mesolithic (Cherry and Cherry 2002).
- 1.3.3 The Neolithic is a time of significant social changes with the introduction of ceramics, large funerary and ritual monuments, more intensive agricultural practices and the large-scale production of polished stone axes in the Central Lake District. These are found throughout Cumbria, and were traded across Britain and into Europe (Rollinson 1967). The association of henges, stone circles, and long mounds with the movement of axes appears established, and the location of these monuments appears to suggest a shift in emphasis of activity from the coastal plain previously to the edge of the Lake District hills and the Eden Valley (Hodgkinson *et al* 2000, 37).
- 1.3.4 The well-known Neolithic stone circle, Long Meg and her daughters, lies to the north-east of the site (Burl 1979, 90). The Long Meg stone has one face covered by rock art and inside the stone circle are a number of burial cairns, believed to be later in date (Beckensall 2002, 118). Ditched enclosures, thought to be of an earlier date, are known to lie in the immediate vicinity to the Long Meg site (*ibid*). Close by is Little Meg, a burial cairn also showing rock art (*ibid*, 119).
- 1.3.5 Three significant late Neolithic henges are located to the south-east of Penrith at Eamont Bridge. King Arthur's Round Table has been dated to the late Neolithic, around 3000–2400 BC (Burl 1979, 64). It survives as a circular bank with an inner concentric ditch, cut by roads on the northern and eastern sides, and an entrance in the south. Mayburgh Henge, positioned to its west, survives as a circular bank with an entrance in the east. It is also believed to date to the end of the Neolithic or the early Bronze Age (Burl 1979, 231), with the discovery of a bronze axe implying the use of the henge during the Bronze Age. The third henge is Little Round Table, lying to the south. It was described in 1776 as being 300 feet in diameter with a small vallum and the ditch outermost, with 1000 feet separating it from King Arthur's Round Table to the north (Bersu 1940, 202). Excavations in 1939 found no evidence of a bank, but it was suggested that, had a bank been present, it was more likely to have been outside the ditch, contradicting the 1776 observations (*ibid*, 205). Although Ordnance Survey record no visible remains of the henge, a recent visit by the SMR found a 'perfectly good earthwork'.

- 1.3.6 Many Bronze Age finds, such as axes, spearheads, and knives, and monuments, including standing stones, cairns, and cists, are also recorded (Cumbria County Council 2002, 28). A single Iron Age and Romano-British monument, near Sceugh Farm, to the north-east of Penrith, comprises a complex of enclosures and trackways (Lambert *et al* 1996, 17; Scheduled Monument 388). The prehistoric remains closest to the proposed development area are two poorly located finds - a Bronze Age cup and ring marked stone (Frodsham 1989, 16-7; Cumbria County Council 2002, 4), and battleaxes of uncertain prehistoric date (*ibid*; Cumberland Pacquet 1818). No prehistoric remains are recorded within the site, although results from a palaeoenvironmental assessment from the watching brief undertaken on the site in late 2008 (OA North 2009) suggested there was potential for such remains to be uncovered (see *Section 1.3.9*, below).
- 1.3.7 **Roman Period (AD 43 - 410):** the line of a Roman road between Manchester and Carlisle lies to the east of Penrith, and passes through the Roman fort at Brougham, situated to the south-east of the town, positioned to guard the nearby crossing of the River Eamont (Allan 1994, 6; Shotter 1997, 35). A large cluster of Roman landscape elements, structures, and stray finds have been recorded in this area (Cumbria County Council 2002, 29, map D). Two unstratified and poorly-located Roman coins have been discovered within Penrith, but there is no firm evidence to suggest any significant Roman activity ever took place within the town and, certainly no evidence of settlement (*op cit*, 5). There is no record of Roman remains within the site of the proposed storage pond.
- 1.3.8 **Early Medieval Period (AD 410 - 1066):** although there is no documentary evidence for settlement in Penrith prior to the twelfth century, it has been suggested that the street plan indicates pre-Norman settlement, with St Andrew's Church at its centre (Winchester 1979, quoted in Cumbria County Council 2002, 6). A cross-shaft fragment, dated to the late eighth to early ninth century, was found built into the wall of Tynefield House in Penrith (Richardson 1998, 32). This is of considerable importance since it is the only artefact that pre-dates the Viking domination of Penrith during the early tenth century (*ibid*). There are significant tenth century monuments within St Andrew's churchyard, and these have been scheduled (SM 23662), although they are not thought to be in their original locations (Anon 1947, 225). The monuments include the famous Giant's Thumb High Cross and Giant's Grave, the latter comprising two crosses and four hogback stones (*op cit*, 221, 225). There is no record of early medieval remains within the site.
- 1.3.9 **Medieval Period (1066 - 1540):** as is perhaps to be expected, the surviving remains from the medieval period are high status buildings; St Andrew's Church, the earliest parts of which date to the twelfth and thirteenth centuries (Pevsner 1967, 173-4); Penrith Castle, dated to the fourteenth century; Hutton Hall (Anon 1947, 219), which dates to as early as the fourteenth or fifteenth century (Pevsner 1967, 176); and the Gloucester Arms, which was formerly known as Dockray Hall, that dates to the late fifteenth century (*op cit*, 177). A standing structure known as the Plague Stone is on a somewhat smaller scale, but performed an important function during the great plague in

1598, when it was used to transfer corn between the town and country people (DoE 1983, map 3 item 41). Specific below ground remains listed by the Historic Environment Record (HER) include the site of the late medieval friary founded in the late thirteenth century (Haswell 1903, 350; Moorhouse 1971, 137), and the site of the Old Grammar School, which was founded in the fourteenth century (Nicolson and Burn 1777, 410).

- 1.3.10 Thacka Beck is listed on the HER as a medieval earthwork, the course of the waterway running to the south of the storage pond area. It is believed to have been first constructed as a leat in 1300 to take water to Penrith from the River Petteril due to the town's wells being so polluted (Bowen 2005). The watercourse was canalised by a Victorian brick-built culvert as it entered the town.
- 1.3.11 ***Post-Medieval to Modern Periods (1540 to date):*** most of the post-medieval archaeological remains in the immediate surroundings of the proposed development area are buildings. A silver groat of Elizabeth I (who was on the throne from 1558 to 1603) was recovered during the mid-nineteenth century (Carlisle Journal 1846), but no other post-medieval finds have been recorded.
- 1.3.12 ***Previous archaeological interventions:*** a watching brief was undertaken in the area of the storage pond in November 2005, and again in November to December 2008 (OA North 2006 and 2009). During 2005, six test pits were excavated (TP101-106), but did not produce any significant archaeological horizons. Three abraded sherds of nineteenth century pottery within the lower horizon of two of the test pits (TP102 and 104) indicated that the area had probably been subjected to some degree of disturbance, possibly relating to the construction of a nearby railway embankment. During November and December 2008, eight machine-excavated trial pits were excavated (TP201-208) and nine hand-excavated trial holes (borehole inspection pits BH201-208). No features or structures of archaeological significance were observed, although a deposit of well-preserved organic matter was recovered from TP204 at a depth below 1.65m below ground level, beneath a layer of river gravel or lacustrine inwash, and was seen during assessment to contain abundant *cf Scheuchzeria palustris* (Rannoch rush) rhizomes. It was concluded that this deposit developed within a very wet flooding horizon, either sealed possibly in the early Holocene when there was little or no vegetation cover, or during a period of possible forest clearance a some point during the prehistoric period that led to the exposure of the soils and the formation of hillwash. If the latter had occurred then it is comparable with that found in peat deposits at Fenton Cottage and Stafford's Dike in Lancashire dating to the early Bronze Age. Such rhizomes were also found in association with the construction of Kate's Pad, a prehistoric trackway in Lancashire (E Huckerby pers comm; OA North 2009). Unfortunately, it was not possible to date the organic matter. Nevertheless, the Rannoch rush was considered significant archaeologically if it was Bronze Age in date, as well as palaeoenvironmentally if it was proved to be the only example of early Holocene deposits in Penrith and the surrounding area.

2. METHODOLOGY

2.1 TRIAL TRENCHES

2.1.1 In total, six trial trenches were excavated measuring between 30m to 31.88m in length and 2.0m to 2.2m wide. The topsoil was removed by an eight ton 360° mechanical excavator, fitted with a toothless ditching bucket, under archaeological supervision to the surface of the first significant archaeological or natural deposits, whichever was encountered first. Below the modern soil horizon, fluvial deposits comprised of predominantly of sands and gravels. Due to the depth of the glacial till which, in most trenches, was not reached, it was not considered safe to excavate through these deposits at great depth for the complete length of the trench. Therefore, to investigate the fluvial deposits below the soil horizon, a sondage was excavated at both ends of each trench to a maximum depth of 2.0m. In two trenches (Trenches 5 and 6), the level of the groundwater within the river gravels prevented the excavation of one of these two sondages.

2.1.2 All trenches were excavated in a stratigraphical manner, whether by machine or by hand. Trenches were initially set out by use of differential Global Positioning System (dGPS) equipment, which is accurate to +/- 0.25m, with further survey work complete with a Total Station Theodolite (TST). All survey data was incorporated into a CAD system, locating all trenches and features with the survey co-ordinated system related to the Ordnance Survey (OS). Altitude information will be established with respect to OS Datum.

2.1.3 Selected pits and postholes were normally half-sectioned, linear features subjected to no more than a 10% sample, and extensive layers, where possible, sampled by partial rather than complete removal. All information identified in the course of the site works was recorded stratigraphically, using a system adapted from that used by Centre for Archaeology Service of English Heritage, with sufficient pictorial record (plans, sections, and monochrome contacts) to identify and illustrate individual features. Field investigations were recorded on *pro forma* sheets. Plans and sections were drawn at sections at an appropriate scale (1:50, 1:20 and 1:10). The photographic record comprised digital and 35mm monochrome formats.

2.2 FINDS

2.1.1 The finds' recovery and sampling programmes were carried out in accordance with best practice (following current Institute for Archaeologists guidelines). All artefacts recovered from the evaluation trenches were retained.

2.2 ENVIRONMENTAL ASSESSMENT

2.2.1 An environmental bulk sample 101 was taken from fluvial deposit **203**, and a monolith sample (100) was taken through the fluvial deposits (Fig 7), from Trench 2. The purpose was to assess the deposits for pollen and other plant

remains, which have the potential to provide information on the economy and environment of a site. Previous investigations on the site (OA North 2009) demonstrated that plant remains had been preserved in the fluvial deposits and, therefore, there was the potential that these might be indicative of anthropogenic activity.

2.2.2 Charred and waterlogged plant remains: the bulk sample (101) was wet-sieved through a series of mesh sizes (2mm, 500microns and 250 microns), and examined wet. The flot was scanned with a Leica MZ60 stereo microscope, and the plant material was recorded and provisionally identified. The data are shown in Table 2. Botanical nomenclature follows Stace (1997). Plant remains were recorded as present

2.2.3 Pollen: the sediments were described and recorded in the field (see *Appendix 2*). The samples were cleaned and described in the laboratory, see Table 1. In total, four sub-samples were taken for pollen assessment at depths of 0.6-0.61m and 0.77-0.78m (fluvial deposit **202**), and 0.84-0.85m and 0.9-0.91m (fluvial deposit **203**) from the present ground surface (PGS).

| DEPTH (M) (PGS) | SEDIMENT TYPE | CONTEXT No |
|--------------------|--|---------------|
| 0.0-0.24 | Topsoil | 200 |
| 0.24-0.35 | Subsoil | 201 |
| 0.35-0.58 | Sandy fluvial deposit with flecks of charcoal | 202 |
| 0.58-0.74 | Silty-sandy fluvial deposit with some organics | 202 |
| 0.74-0.86 | As 202 with less sand, frequent organic remains | 202 |
| 0.86-0.92 | Organic mud with sand | 203 |

Table 1: Description of deposits from monolith sample 101

2.3 ARCHIVE

2.3.1 A full professional archive has been compiled in accordance with current IfA and English Heritage guidelines (English Heritage 1991). The paper and digital archive will be provided in the English Heritage Centre for Archaeology format and will be submitted to the Carlisle Record Office on completion of the project. Copies of the report will also be submitted to the Historic Environment Record. The Arts and Humanities Data Service (AHDS) online database *Online Access index of Archaeological Investigations* (OASIS) will be completed as part of the archiving phase of the project.

3. TRIAL TRENCH RESULTS

3.1 INTRODUCTION

- 3.1.1 In total, six trenches were excavated, measuring between 30m to 31.88m in length, and 2m to 2.2m wide, positioned within the area of the proposed storage pond (Fig 2). Fluvial deposits were located in each trench below the soil horizon. The nature of these deposits was tested by the excavation of sondages at each end of the trench, as detailed in the Methodology (*Section 2.1*). However, it was not possible to excavate a sondage at the south-western end of Trench 5 and at the eastern end of Trench 6 due to the incursion of groundwater directly below the soil horizon.
- 3.1.2 No archaeological features were recorded relating to activity on, or occupation of, the site prior to the post-medieval period. A single post-medieval boundary wall was located in Trench 6. Environmental samples, in the form of a monolith, and a single bulk sample from an organic deposit, **203**, were taken in Trench 2 (see *Section 2.2*). A full list of excavated contexts is listed in *Appendix 2* and the finds are discussed in *Section 3.8* and listed in *Appendix 3*.

3.2 TRENCH 1

- 3.2.1 Trench 1 measured 30m in length, 2.2m wide, and was excavated on a north/south orientation to a maximum depth of 2m (Fig 2; Plate 1). Topsoil **100** and subsoil **103** were removed to reveal a fluvial deposit, **101**, at a depth of 0.65m below ground level (bgl). A single field drain was recorded cutting across the trench in a north-west/south-east direction. A sondage through the river deposits at the northern end of the trench (Fig 3; Plate 2) reached a maximum depth of 2m, with glacial till, **102**, positioned at a depth of 1.4m and sloping in a southerly direction (Fig 3; Plate 2). A similar sondage at the southern end of the trench was excavated to maximum depth of 2m, but no glacial deposits were encountered (Fig 4; Plate 3). No deposits of an archaeological significance were located within Trench 1.

3.3 TRENCH 2

- 3.3.1 Trench 2 measured 30m in length, 2.1m wide, and was excavated on a north-east/south-west orientation (Fig 2; Plate 4). Sondages were excavated at both ends of the trench to reach a maximum depth of 2m (Figs 5 and 6; Plates 5 and 6). Topsoil **200** and subsoil **201** were removed to reveal fluvial deposits **202** and **208**, between 0.42m and 0.6m bgl. A single field drain was noted cutting across the centre of the trench (Fig 2).
- 3.3.2 The sondage at the south-western end of the trench was excavated through river silts **202** to a depth of 2m, whereupon the water table was encountered (Fig 5; Plate 5). The sondage at the north-eastern end of the trench was excavated through a series of river silts and gravels, **203** to **207**, to the same depth whereupon the water table was again encountered (Fig 6; Plate 6). Deposit **203**

contained some organic remains. To sample this layer safely a smaller sondage was hand dug in the north-eastern half of the trench, from which monolith 100 and bulk sample 101 were taken (Fig 7).

3.4 TRENCH 3

3.4.1 Trench 3 measured 30m in length, 2.2m wide, and was excavated on a north-north-west/south-south-east orientation, with sondages at both ends of the trench reaching a maximum depth of 1.54m (Fig 2; Plate 7). Topsoil **300** and subsoil **301** were removed, measuring a maximum of 0.52m in thickness, below which fluvial deposits **302**, **303** and **305** were located. No features were present truncating these layers. The sondage at the northern-most end of the trench was excavated to a maximum depth of 1.54m through river silts **305** and **302**, whereupon glacial till **304** was encountered (Fig 8; Plate 8). The sondage at the southern-most end of the trench was excavated to a depth of 1.18m through a silty-clay river deposit, **303**, to a maximum depth of 1.54m, whereupon the glacial till **304** was again located (Fig 9; Plate 9). No deposits of archaeological significance were found within the trench.

3.5 TRENCH 4

3.5.1 Trench 4 measured 30m in length, 2m wide, and was excavated on a north-east/south-west orientation, with a sondage at both ends of the trench reaching a maximum depth of 1.8m (Fig 2; Plate 10). Topsoil **400** and subsoil **401** were removed, measuring 0.66m in thickness, to reveal a series of fluvial deposits (**402-408**). Two field drains were located truncating these deposits, on east/west and north-west/south-east orientations (Fig 2).

3.5.2 The sondage at the northern-most end of the trench was excavated to a maximum depth of 1.8m, though a series of river gravels and silts, deposits **402** to **405** (Fig 10; Plate 11). At a depth of between 1.14m and 1.3m, and measuring 60mm in thickness, organic remains were observed in deposit **404**. However, the trench rapidly infilled with groundwater causing the sides to collapse and, therefore, it was not considered feasible to sample the deposit. The sondage at the southern-most end of the trench was excavated to a maximum depth of 1.8m, through river silt **407** and river gravel **408** (Fig 11; Plate 12). No other deposits of archaeological significance or palaeoenvironmental potential were encountered within the trench.

3.6 TRENCH 5

3.6.1 Trench 5 measured 31.7m in length, 2m wide, and was excavated on a north-west/south-east orientation, with a sondage excavated at the north-western end of the trench to a depth of 2m (Fig 2; Plate 13). Topsoil and subsoil, **500** and **504**, were removed to reveal fluvial deposits at a depth of 0.4m bgl. Three field drains were recorded truncating these river deposits, on both north-east/south-west and north-west/south-east orientations (Fig 2). The fluvial deposits were investigated by the excavation of a sondage at the north-western

end of the trench. It was excavated to a maximum depth of 2m, through river gravels **502** and river silt **503** (Fig 12, Plate 14). Water incursion at the south-western end of the trench prevented safe excavation of a second sondage. No deposits of an archaeological significance were observed within the trench.

3.7 TRENCH 6

3.7.1 Trench 6 measured 31.6m in length by 2m wide, and was excavated to a maximum depth of 2m, on an east-north-east/west-south-west orientation (Fig 2; Plate 15). Topsoil and subsoil **600** and **601** were removed, measuring 0.75m in thickness. In the centre of the trench, on a north-east/south-west orientation, the foundation of a post-medieval boundary wall, **606** was revealed directly below the turf (Plate 16). Stones, **607**, to the south of the wall foundation are interpreted as rubble from the wall. The foundation measured 1.3m wide and 0.3m deep. No construction cut was visible in the soil horizon, although this may not have been visible due to soil formation processes.

3.7.2 At a depth of 0.75m, fluvial deposits were encountered. A sondage at the northern-most end of the trench was excavated to a depth of 2m. Within the sondage a series of river silts and clays, **602** to **605**, often with frequent water-worn stone inclusions, were excavated (Fig 13; Plate 17). An attempt at excavating a sondage at the southern-most end of the trench was prevented by the water table being encountered at a depth of 0.86m.

3.8 FINDS

3.8.1 In all, 90 fragments of artefacts or ecofacts were recovered during the investigation, coming from topsoil deposits **100**, **200**, **300**, **400**, **500**, **600**, and wall **606** (*Appendix 3*). The majority of the material recovered comprised pottery (72 fragments), with, in addition, eight fragments of clay tobacco pipe, seven fragments of glass, two fragments of iron, and one plastic object. The entire assemblage was in relatively good condition, with most fragments being in excess of 50mm in maximum dimension. Sherds were unabraded, and joins were relatively frequent, perhaps suggesting that some were recent.

3.8.2 The range of fabrics present suggests a late date for most of the pottery, probably the late nineteenth century at the earliest, with only one sherd, a feather-edged plate from topsoil **200**, Trench 2, possibly dating to earlier in the nineteenth century. Although there were few diagnostic sherds, the range of vessels represented indicates a domestic origin for the material, with both utilitarian kitchenwares and finer tablewares (mainly white earthenwares, some transfer-printed) being present, and a small porcelain doll's head from topsoil **200**, Trench 2, would seem to add to this impression. The small amount of glass suggests a similar domestic context, being mainly blue and green mould-blown vessels, and a single more decorative fragment of opaque press-moulded tableware.

3.8.3 Only one clay tobacco pipe bowl could be dated, again indicating late nineteenth century deposition, the remainder being undiagnostic stem fragments. The two iron objects are clearly structural fittings, probably intended to support guttering.

3.9 ENVIRONMENTAL ASSESSMENT RESULTS

3.9.1 **Charred and waterlogged plant remains:** the sample (101) contained very abundant waterlogged plant remains, with some charcoal fragments (see Table 2, below). Wood, leaf and amorphous plant remains were abundant and insect remains were present. Seeds from plants of wet ground, such as fens, bogs, ditches, marshes and heathland were frequent. They included bogbean (*Menyanthes trifoliata*), alder (*Alnus glutinosa*), sedges (*Carex*) and rushes (*Juncus*). Alongside this assemblage of plants, which were to be expected by a river, were seeds from plants of cultivated or waste ground suggesting nearby cultivation. These included pale persicaria (*Persicaria lapathifolia*), knotweed (*Polygonum aviculare*), corn spurrey (*Spergula arvensis*), and common chickweed (*Stellaria media*).

| SPECIES/MATERIAL | COLLOQUIAL NAME | ABUNDANCE |
|---|---------------------------|-----------|
| Food and economic plants | | |
| Malus/Pyrus | Apple/pear pips | + |
| Plants of cultivated or waste ground | | |
| <i>Chenopodium album</i> | Fat-hen | ++ |
| <i>Persicaria lapathifolia</i> | Pale persicaria | ++ |
| <i>Polygonum aviculare</i> | Knotweed | ++ |
| <i>Spergula arvensis</i> | Corn spurrey | + |
| <i>Stellaria media</i> | Common chickweed | ++ |
| Grassland plants | | |
| <i>Stellaria graminea</i> | Lesser stitchwort | + |
| Wet ground plants | | |
| <i>Alnus glutinosa</i> | Alder seed | + |
| <i>Alnus glutinosa</i> | Alder catkin axis | + |
| <i>Carex lenticular</i> | Sedges, two sided fruits | ++ |
| <i>Carex trigonus</i> | Sedges three sided fruits | ++ |
| <i>Isolepis setacea</i> | Bristle club-rush | ++ |
| <i>Juncus</i> spp | Rushes | ++ |
| <i>Menyanthes trifoliata</i> | Bogbean | ++ |
| Broad ecological groupings | | |
| <i>Ranunculus repens</i> -type | Creeping buttercup-type | + |
| Matrix components | | |
| Wood fragments | | ++ |

| | | |
|-------------------------|--|----|
| Amorphous plant remains | | ++ |
| Charcoal | | ++ |
| Insect remains | | ++ |
| Quartz grains | | ++ |
| Earthworm egg cases | | + |

Table 2: Assessment of charred and waterlogged plant remains from Trench 2 fluvial deposits (203). Plant remains are scored as + present or ++ frequent

3.9.2 **Pollen:** although some pollen grains were preserved in the four samples taken from the monolith 100), the concentrations at depths of 0.77-0.78m, 0.84-0.85m and 0.9-0.91m were low. However, at a depth of 0.6-0.61m (fluvial deposit 202) the pollen was plentiful (9.8% tree and shrub pollen, 86.5% pollen of herbaceous plants, less than 3% heather pollen and less than 2% fern spores) and suggested that the landscape was largely cleared when the deposit was laid down. The presence of wheat (*Triticum*) and cereal-type pollen, together with black bindweed (*Fallopia convolvulus*), knotgrass (*Polygonum aviculare*), and mustard (*Sinapis*-type) pollen are indicative of cereal cultivation. Although pollen concentrations were low in the other three samples, the number of pollen grains from herbaceous plants was higher relative to that from trees and shrubs. Charcoal particles were only recorded at a depth of 0.6-0.61m.

| POLLEN SAMPLE DEPTH (M) | 0.6-0.61 | 0.77-0.78 | 0.84-0.85 | 0.9-0.91 |
|---------------------------------------|----------|-----------|-----------|----------|
| CONTEXT NO | 202 | 202 | 202 | 203 |
| Trees and shrubs: | | | | |
| <i>Alnus glutinosa</i> - alder | 7 | 2 | 2 | 1 |
| <i>Betula</i> – birch | 1 | 4 | | |
| <i>Corylus avellana</i> -type - hazel | | 2 | 1 | 1 |
| <i>Fraxinus excelsior</i> - ash | 1 | | | |
| <i>Quercus</i> - oak | 2 | | | 1 |
| Rosaceae shrub pollen | 2 | | | |
| <i>Salix</i> - willow | | 1 | | |
| Ericales: | | | | |
| <i>Calluna vulgaris</i> - heather | 2 | 1 | 1 | |
| Possible crops: | | | | |
| Cereal - type | 6 | | | |
| Triticum | 4 | | | |
| <i>Secale</i> --rye | | 1 | | |
| Herbs: | | | | |
| Apiacea - cow parsley family | 1 | | | |
| <i>Artemisia</i> -mugwort | 1 | | | |

| | | | | |
|--|----|----|----|---|
| <i>Centaurea nigra</i> - common knapweed | 2 | | | |
| <i>Aster</i> -type-daisy type | 1 | | | |
| <i>Cirsium</i> -thistles | 1 | | | |
| <i>Taraxacum</i> -type - dandelion-type | 17 | 2 | 2 | 2 |
| Brassicaceae - <i>Capsella</i> -type-shepher's purse | 2 | 1 | 1 | |
| Brassicaceae - <i>Sinapis</i> -type-mustards | 3 | 1 | | |
| Caryophyllacea-pink family | 1 | | | |
| Chenopodiaceae - goosefoot family | 1 | | | |
| Cyperaceae - sedges | 16 | 6 | 8 | |
| <i>Fallopia convolvulus</i> -black bindweed | 3 | | | |
| <i>Filipendula</i> -meadowsweet | | 2 | 2 | 9 |
| Lamaceae-deadnettle family | 1 | | | |
| <i>Plantago lanceolata</i> - ribwort plantain | 6 | 1 | | |
| <i>Plantago</i> sp - plantains undiff | 1 | | | |
| Poaceae - grasses | 30 | 13 | 15 | 4 |
| <i>Polygonum aviculare</i> -knotgrass | 1 | | | 1 |
| <i>Ranunculus</i> - buttercup | 2 | | 3 | |
| Srcophulariaceae _ figwort family | 3 | | | |
| <i>Succisa pratensis</i> - sheep's bit scabious | 2 | | | |
| <i>Rumex</i> -sorrels | 4 | 2 | 1 | |
| <i>Urtica</i> - nettles | | 1 | | |
| Unknown herbs | 3 | 1 | 1 | |
| Aquatics: | | | | |
| <i>Potamogeton</i> -pondweed | | 3 | | |
| <i>Typha angustifolia</i> -lesser bulrush | 1 | 1 | 1 | 1 |
| <i>Typha latifolia</i> - bulrush | | 2 | | |
| Mosses, ferns and liverworts: | | | | |
| <i>Dryopteris</i> -buckler fern | | | 1 | |
| <i>Polypodium</i> – polypody | | | 2 | 1 |
| <i>Pteridium aquilinum</i> - bracken | 1 | | | 1 |
| Pteridopsida (monolete) – monolete ferns | 2 | 1 | 1 | 1 |
| | | | | |
| Indeterminate grains | 31 | 4 | 3 | 2 |

| | | | | |
|-----------------|-----|--|--|--|
| Charcoal | +++ | | | |
|-----------------|-----|--|--|--|

Table 3: Results of the pollen assessment from monolith 100. The data are expressed as the actual number of pollen grains recorded and charcoal as present or absent.

4. CONCLUSIONS

4.1 DISCUSSION

- 4.1.1 The excavation of the six trial trenches uncovered the remains of a single nineteenth century field boundary wall foundation (**606**) in Trench 6, and a number of field drains throughout most trenches. A small collection of nineteenth century finds were recovered from the topsoil in all trenches and the boundary wall foundation. No evidence of archaeologically significant remains or deposits was identified at the site.
- 4.1.2 River deposits were encountered in each trench in the form of layers of sands, silts and gravels. In most trenches, this was observed continuing beyond the maximum excavated depth of the trial trench. The natural deposit, in the form of glacial till, was located in Trenches 1 and 3 only (**102** and **304**, respectively), and both trenches were located on ground of a slightly higher position than Trenches 2 and 4 to 6.
- 4.1.3 Deposits of palaeoenvironmental potential were located in Trenches 2 and 4. However, due to health and safety constraints it was only practicable to sample deposits from Trench 2. A sample of organic matter taken during the watching brief in late 2008 (OA North 2009) was from a depth below 1.65m bgl, beneath a layer of river gravel or lacustrine inwash, and was seen to contain abundant *cf Scheuchzeria palustris* (Rannoch rush) rhizomes (*ibid*). However, during the evaluation fieldwork the level of the water table was such that conditions prevented sampling at a similar depth.
- 4.1.4 The assessment of the charred and waterlogged plant remains from fluvial deposits **203** in Trench 2 (sample 101) was found to be rich in well-preserved plant remains and reflected conditions of both wet and waste/cultivated ground. Although no archaeological features were identified, the presence of seeds from plants found growing on waste or cultivated ground, together with macroscopic charcoal fragments, suggests anthropogenic activity in the river catchment. Unfortunately, the deposits are undated and, therefore, at present this activity can not be placed within a chronological framework, although this could be rectified by selecting material suitable for scientific dating from the samples.
- 4.1.5 Interpretation of pollen data from fluvial deposits is generally more problematic, due to the nature of the deposits and the possible source of the pollen within them. (Moore *et al* 1991, 25). The pollen may have derived from plants growing on the flood plain and the surrounding landscape, but there is also the possibility that it is either contemporary pollen that has been transported downstream and deposited within the fluvial deposits, or that it has derived from the erosion of much older deposits upstream. Furthermore, if the pollen is well-preserved it suggests a more local source, but if it is poorly preserved, and crumpled in appearance, it suggests that it has been transported from further afield. With this in mind, the state of pollen preservation at the

storage pond site at Thacka Beck suggests that much of the pollen was derived locally.

- 4.1.6 The pollen assemblage at a depth of 0.6-0.61m from the ground surface from the monolith (sample 100) (fluvial deposit **202**) suggests a largely cleared landscape, with both pastoral and arable cultivation, possibly being practised either nearby or from the river catchment area. The grass (Poaceae) and ribwort plantain (*Plantago lanceolata*) pollen are characteristic of grassland, whereas wheat (*Triticum*), cereal-type, mustard-type (*Sinapis*-type), black bindweed (*Fallopia convolvulus*) and black bindweed (*Fallopia convolvulus*) pollen are characteristic of arable cultivation. Some areas of waste ground were probably also present with dandelions (Asteraceae, *Taraxacum*-type) and other herbs growing. However, the low concentrations of pollen in the three lower samples (fluvial deposits **202** and **203**) do not allow any firm interpretations as to the possible nature of the landscape, although the number of pollen grains from herbaceous taxa relative to that from trees and shrubs suggest that there was little woodland present in the vicinity.

BIBLIOGRAPHY

PRIMARY SOURCES

Geological Survey of Great Britain, 1978 *Geology of Northern England, 1:250,000*, Lancaster University

Ordnance Survey, 1983 *Soil Survey of England and Wales*

SECONDARY SOURCES

Allan, M, 1994 *The Roman Route Across the Northern Lake District: Brougham to Moresby*, Lancaster

Anon, 1947 Proceedings, *Cumberland Westmorland Antiq Archaeol Soc*, n ser, **47**, 199-233

Beckensall, S, 2002 *Prehistoric Roack Art in Cumbria: Landscapes and monuments*, Stroud

Bersu, G, 1940 King Arthur's Round Table. Final Report, including the Excavations of 1939, with an appendix on the Little Round Table, *Trans Cumberland Westmoreland Antiq Arch Soc*, **40**, n ser, 169-206

Bowen, V, 2005 *Penrith at the Crossroads of History*
http://www.penrithandnorthlakesu3a.org.uk/NewNewsletters/Dec_Jan2005/penrith_at_the_crossroads_of_his.htm

Burl, A, 1979 *The Stone Circles of the British Isles*, New Haven

Carlisle Journal, 1846 Transcript of news article dated 10th January 1846, in HER file 4911

Cherry, PJ and Cherry, J, 2002 Coastline and Upland in Cumbrian Prehistory – A Retrospective, *Trans Cumberland Westmorland Antiq Arch Soc*, 3rd ser, **2**, 1-20

Cumberland Pacquet, 1st September 1818 News article recording the find of a Roman coin and two battleaxes

Cumbria County Council, 2002 *Extensive Urban Survey, Archaeological Assessment Report, Penrith*, unpubl

Department of the Environment (DoE), 1983 *List of Buildings of Special Architectural or Historic Interest, District of Eden, Cumbria: Area of the former urban district of Penrith*

English Heritage, 1991 *Management of Archaeological Projects*, 2nd edition, London

English Heritage, 2006 *Mayburgh Henge*, <http://www.english-heritage.org.uk/server.php?show=ConProperty.154>

Frodsham, PNK, 1989 Two Newly Discovered Cup and Ring Marked Stones from Penrith and Hallbankgate, with a Gazetteer of all known Megalithic Carvings in Cumbria, *Trans Cumberland Westmorland Antiq Arch Soc*, n ser, **89**, 1-19

Haswell, F, 1903 Notes on the Friary at Penrith, *Cumberland Westmorland Antiq Archaeol Soc*, n ser, **3**, 350-2

Hodgkinson, D, Huckerby, E, Middleton, R, and Wells, CE, 2000 *The Lowland Westlands of Cumbria*, Lancaster

Lambert, J, Hair, N, Howard-Davis, C, Newman, R, and Oliver, T, 1996 *Transect Through Time: The Archaeological Landscape of the Shell North Western Ethylene Pipeline*, Lancaster Imprints **1**, Lancaster

Moorhouse, S, 1971 Medieval Britain in 1970 II. Post-Conquest, *Med Archaeol*, **15**, 137-79

Moore, PD, Webb, JA, and Collinson, ME, 1991 *Pollen Analysis*, Oxford, 2nd ed.

Nicolson, J, and Burn, R, 1777 *The History and Antiquities of the Counties of Westmorland and Cumberland*, **2**, London

OA North, 2006 *Penrith Flood Alleviation Scheme, Penrith, Cumbria: Archaeological Watching Brief*, unpubl rep

OA North, 2009 *Thacka Beck Flood Alleviation Scheme, Penrith, Cumbria: Archaeological Watching Brief*, unpubl rep

Pevsner, N, 1967 *The Buildings of England: Cumberland and Westmorland*, Harmondsworth

Richardson, C, 1998 A catalogue of recent acquisitions to Tullie House Museum and reported finds from the Cumbrian area 1990-1996. Part I: Tullie House accessions, *Cumberland Westmorland Antiq Archaeol Soc*, n ser, **98**, 1-60

Rollinson, W, 1967 *A History of Man in the Lake District*, London

Shotter, D, 1997 *Romans and Britons in North-West England*, Lancaster

Stace, C, (1997), *New Flora of the British Isles*. Cambridge University Press: Cambridge, pp 1130.

ILLUSTRATIONS

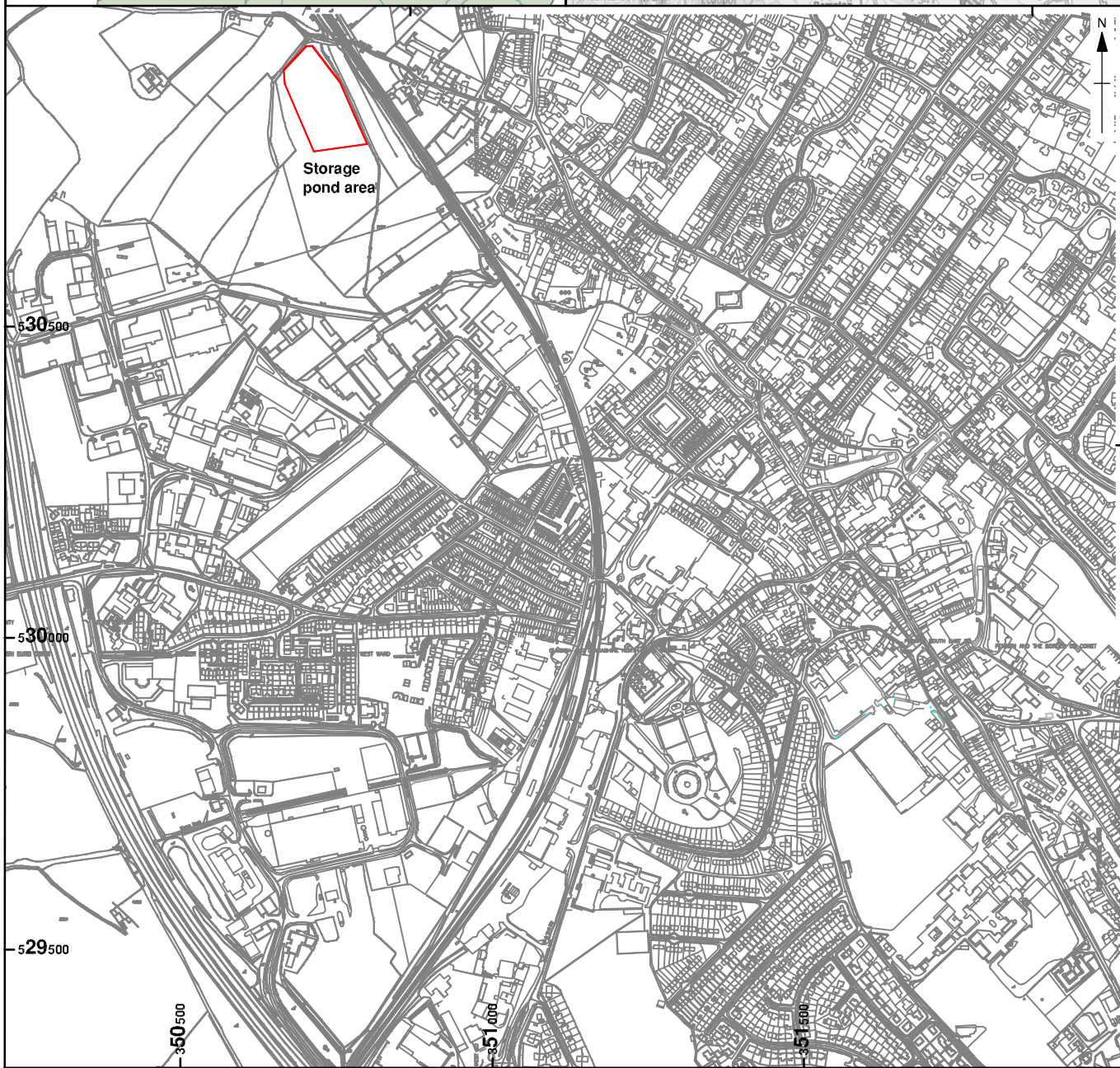
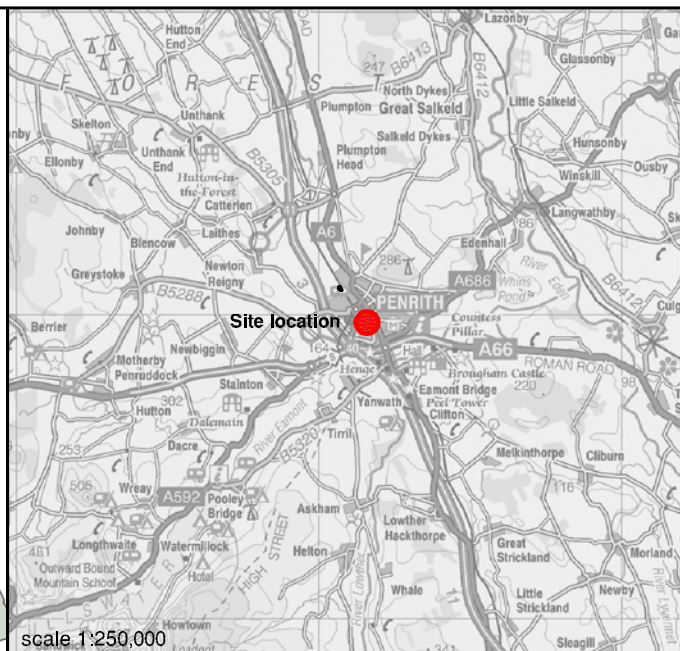
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0 250 m
1:10,000 @ A4



Figure 1: Site location

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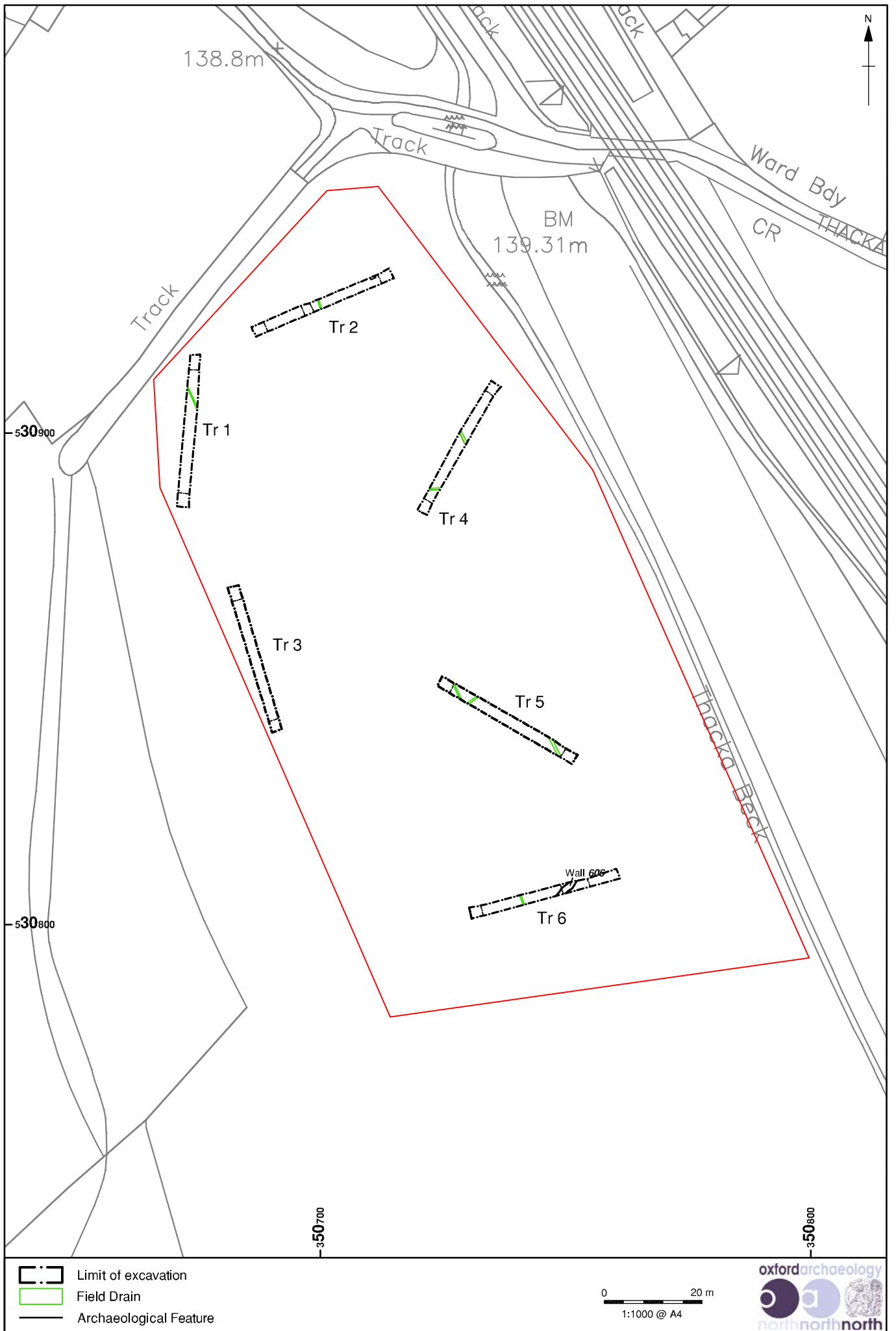


Figure 2: Location of trenches

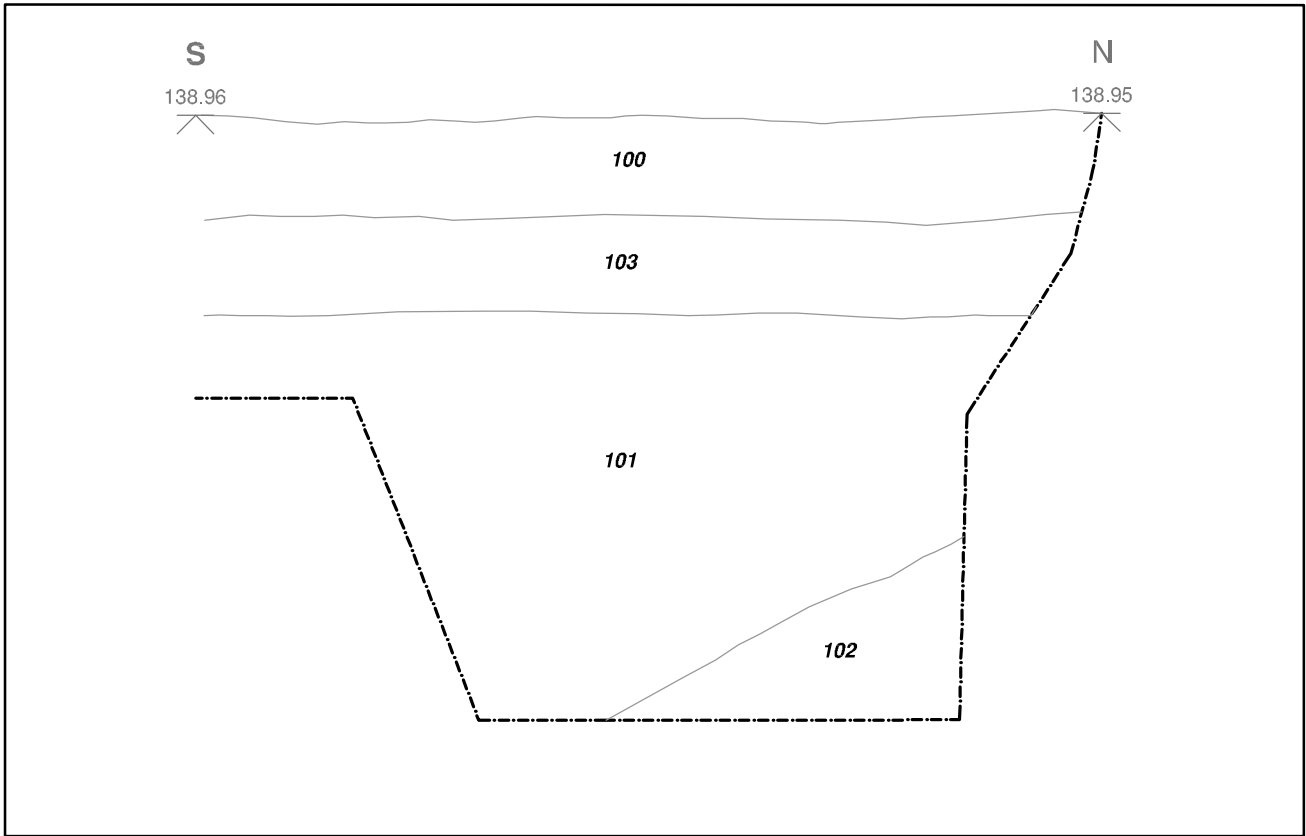


Figure 3: East-facing section of sondage at northern end of Trench 1

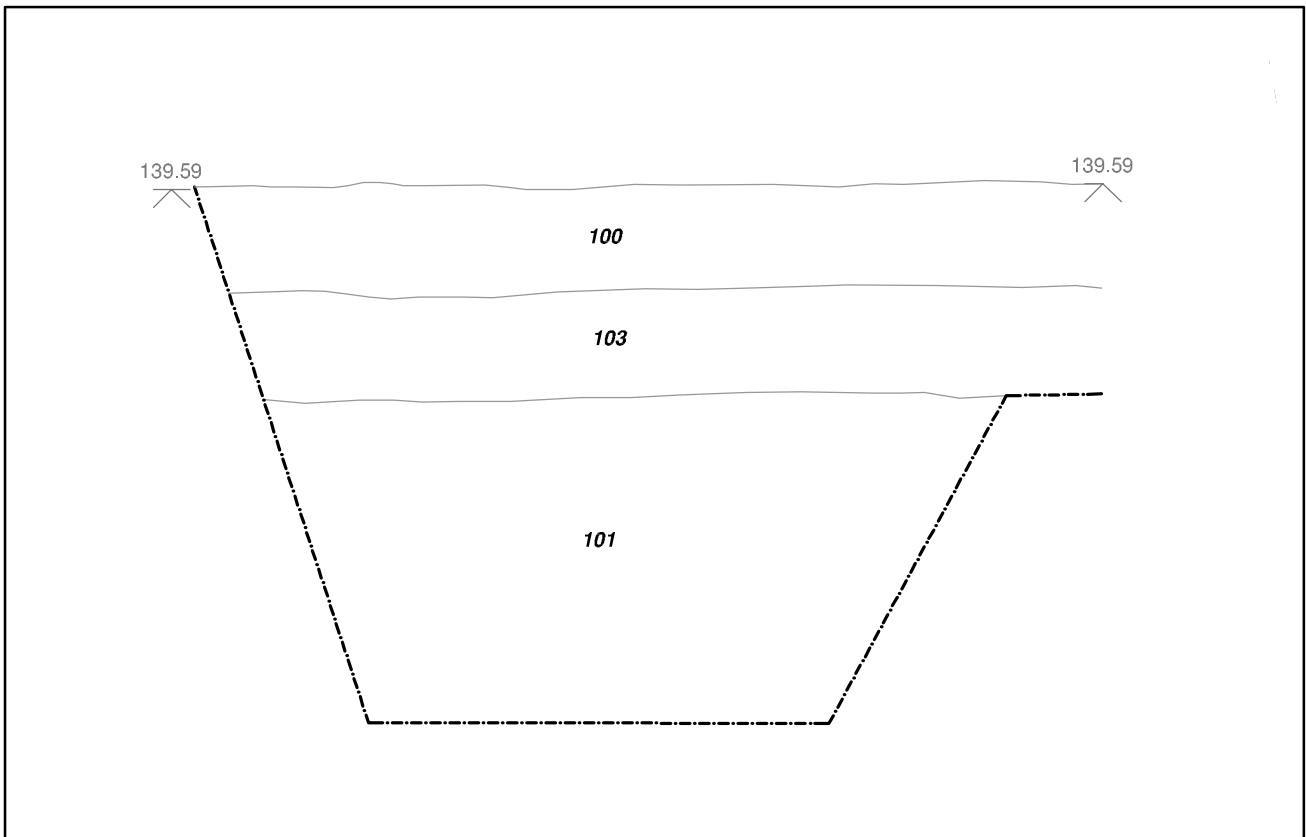


Figure 4: East-facing section of sondage at southern end of Trench 1



Limit of excavation



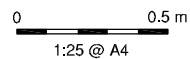
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101

Context numbers

137.20

Levels



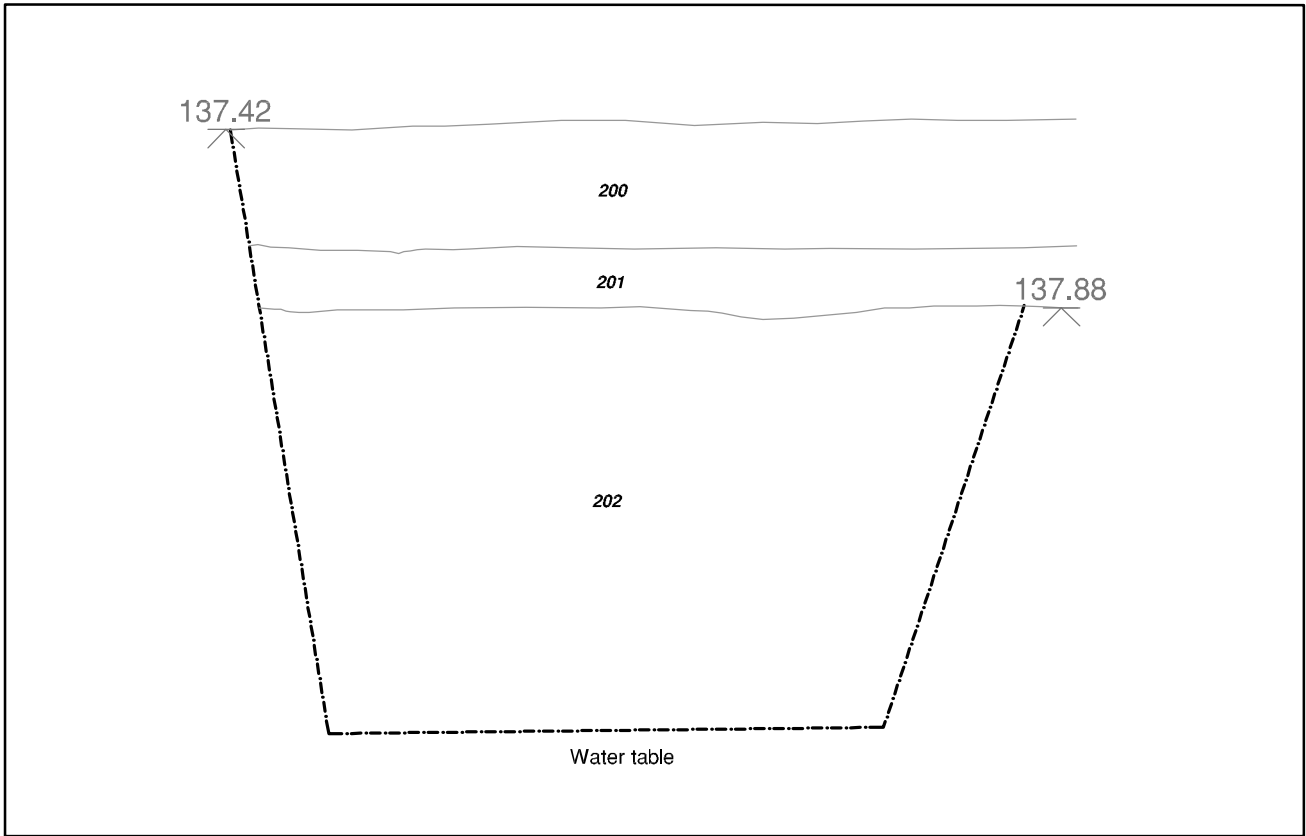


Figure 5: South-east-facing section of sondage at western-most end of Trench 2

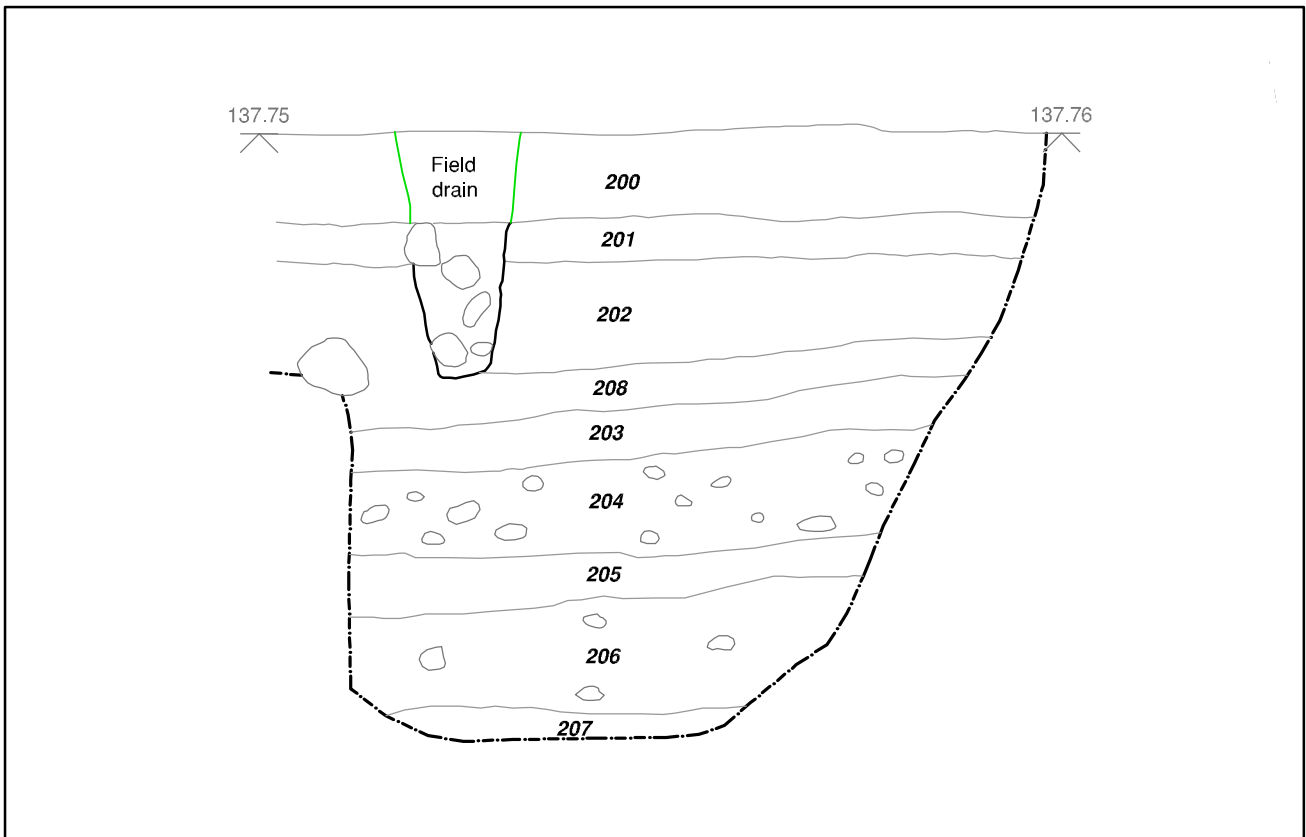






Figure 6: South-east-facing section of sondage at eastern-most end of Trench 2

- | | | | |
|---|------------------------|---|-----------------|
|  | Limit of excavation | 101 | Context numbers |
|  | Archaeological feature | 137.20 | Levels |
|  | Field drain |  | Deposit |

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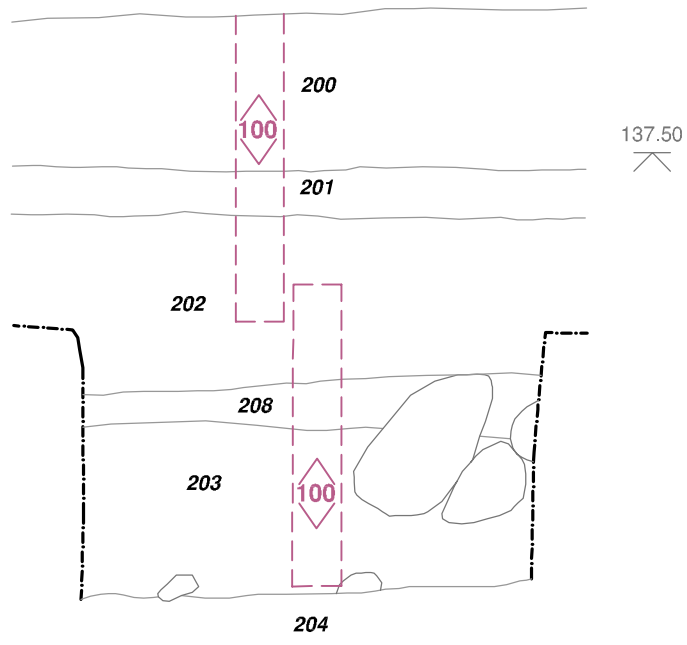


Figure 7: South-east-facing section of sondage at eastern half of Trench 2, showing position of monolith 100

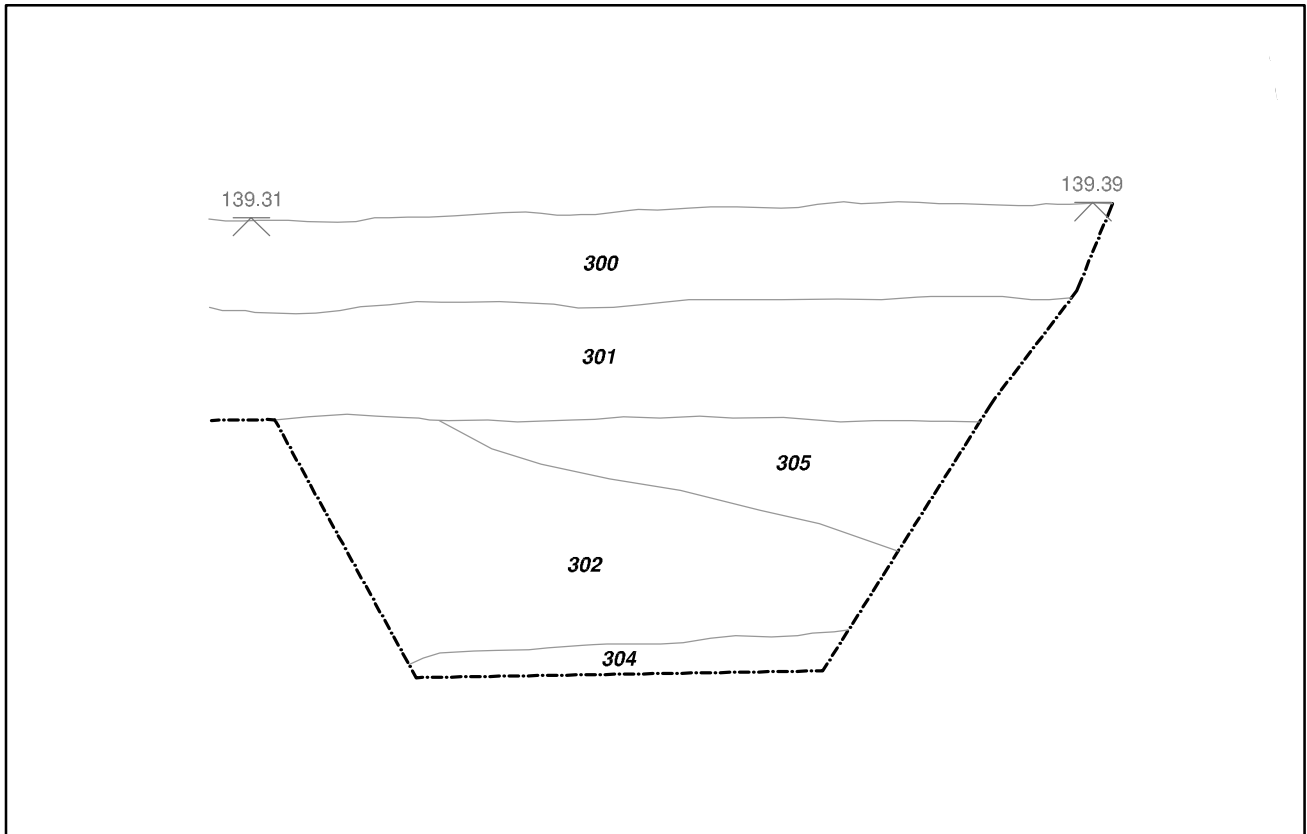
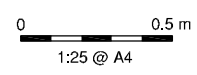


Figure 8: East-facing section of sondage at northern end of Trench 3

- Limit of excavation
- Environmental samples
- Deposit
- 101** Context numbers
- 100 Sample numbers
- 137.20 Levels



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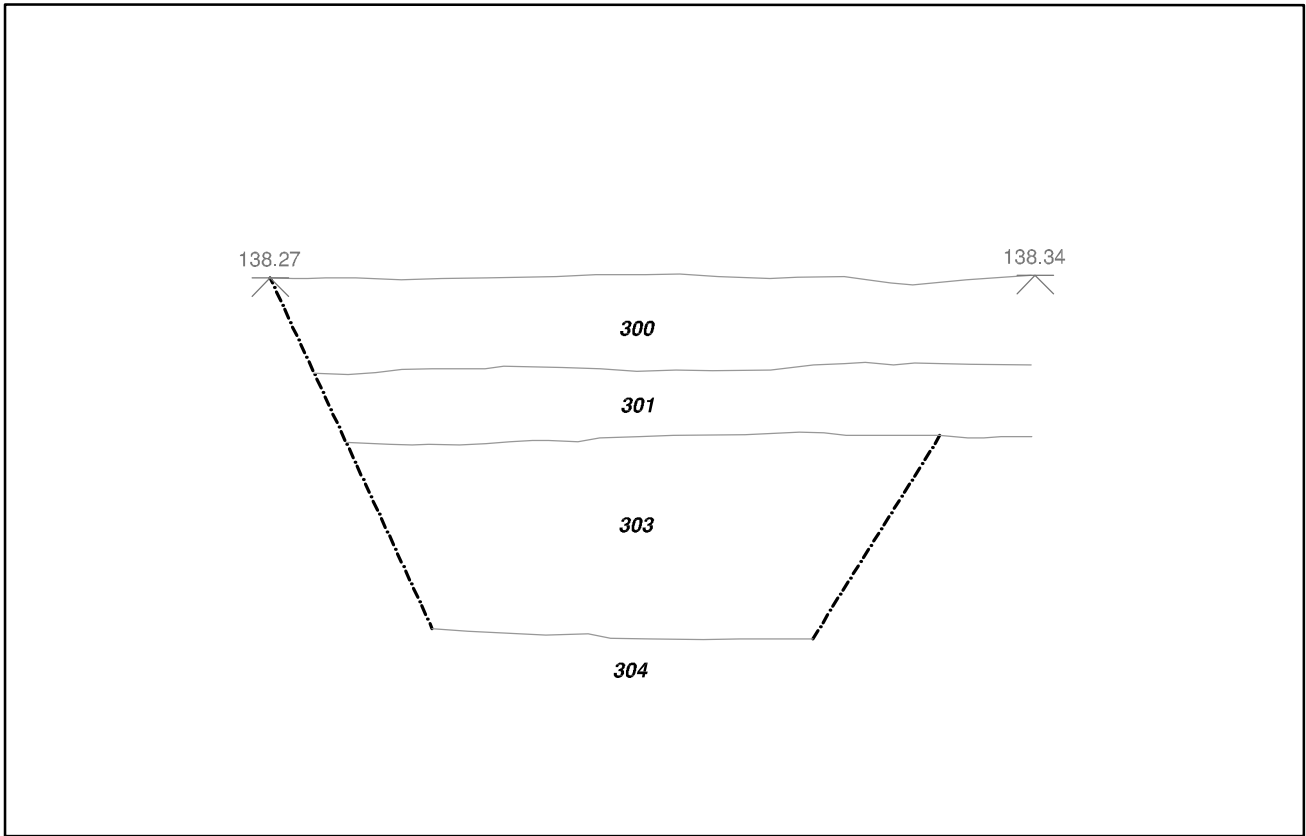


Figure 9: East-facing section of sondage at southern end of Trench 3

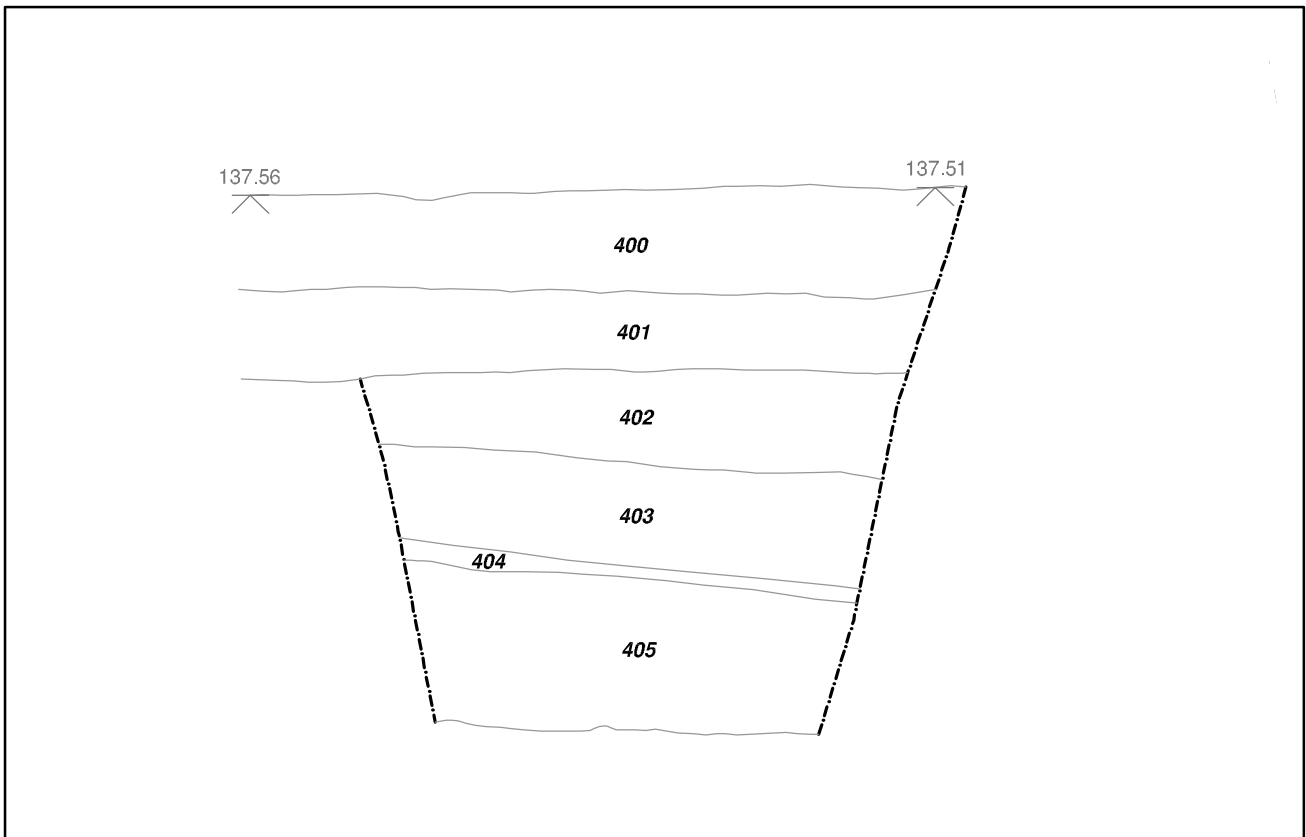


Figure 10: North-west-facing section of sondage at northern most end of Trench 4



Limit of excavation



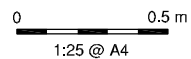
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101

Context numbers

137.20

Levels



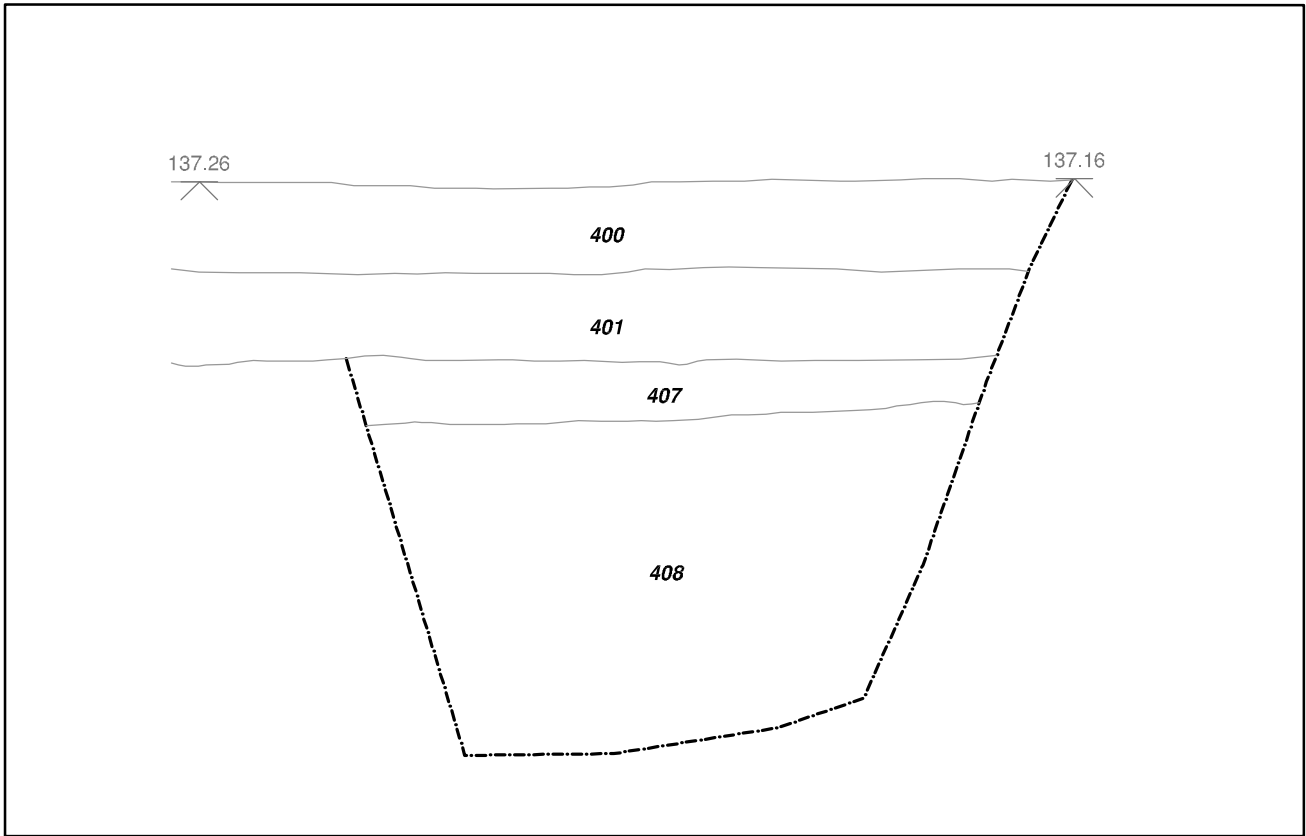


Figure 11: South-east-facing section of sondage at southern-most end of Trench 4

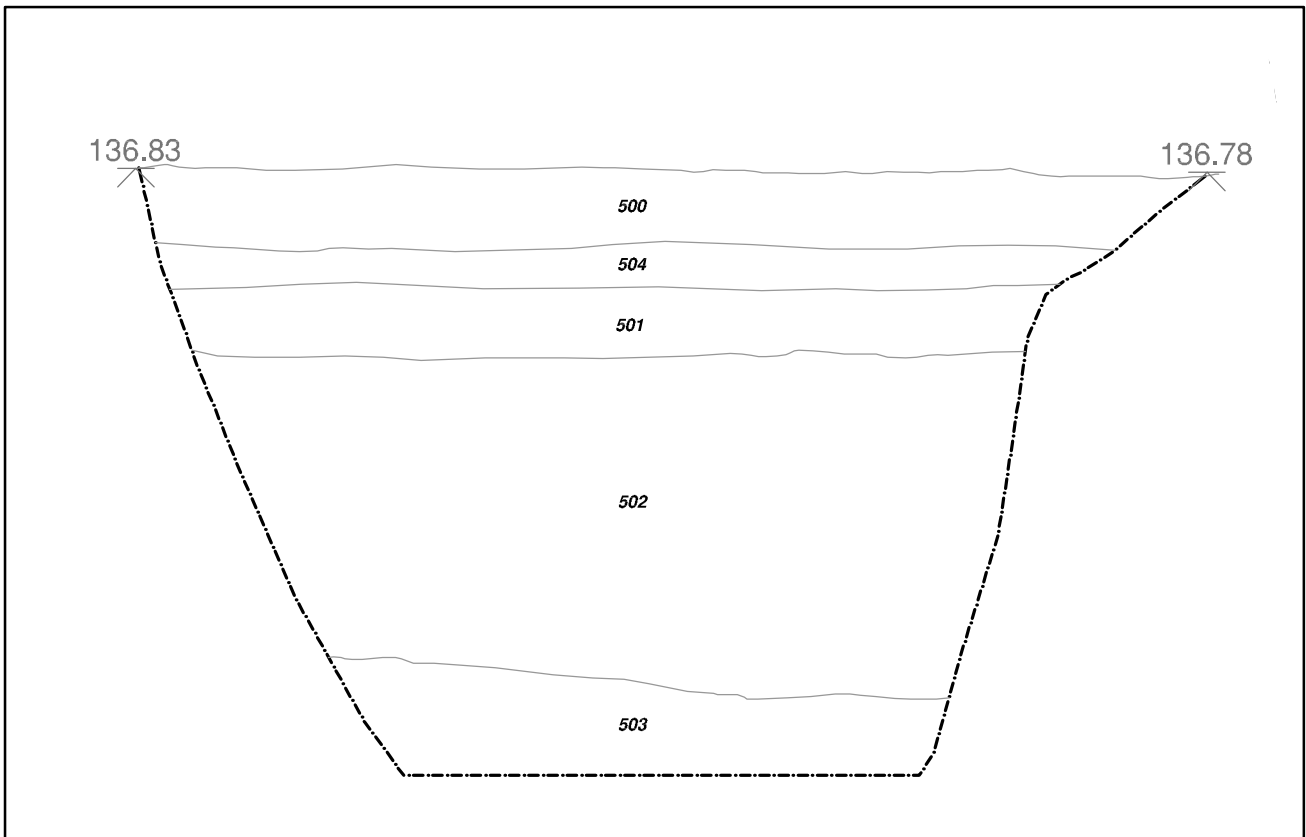


Figure 12: North-east-facing section of sondage at north-western end of Trench 5



Limit of excavation



Deposit

101

Context numbers

137.20

Levels

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1:25 @ A4

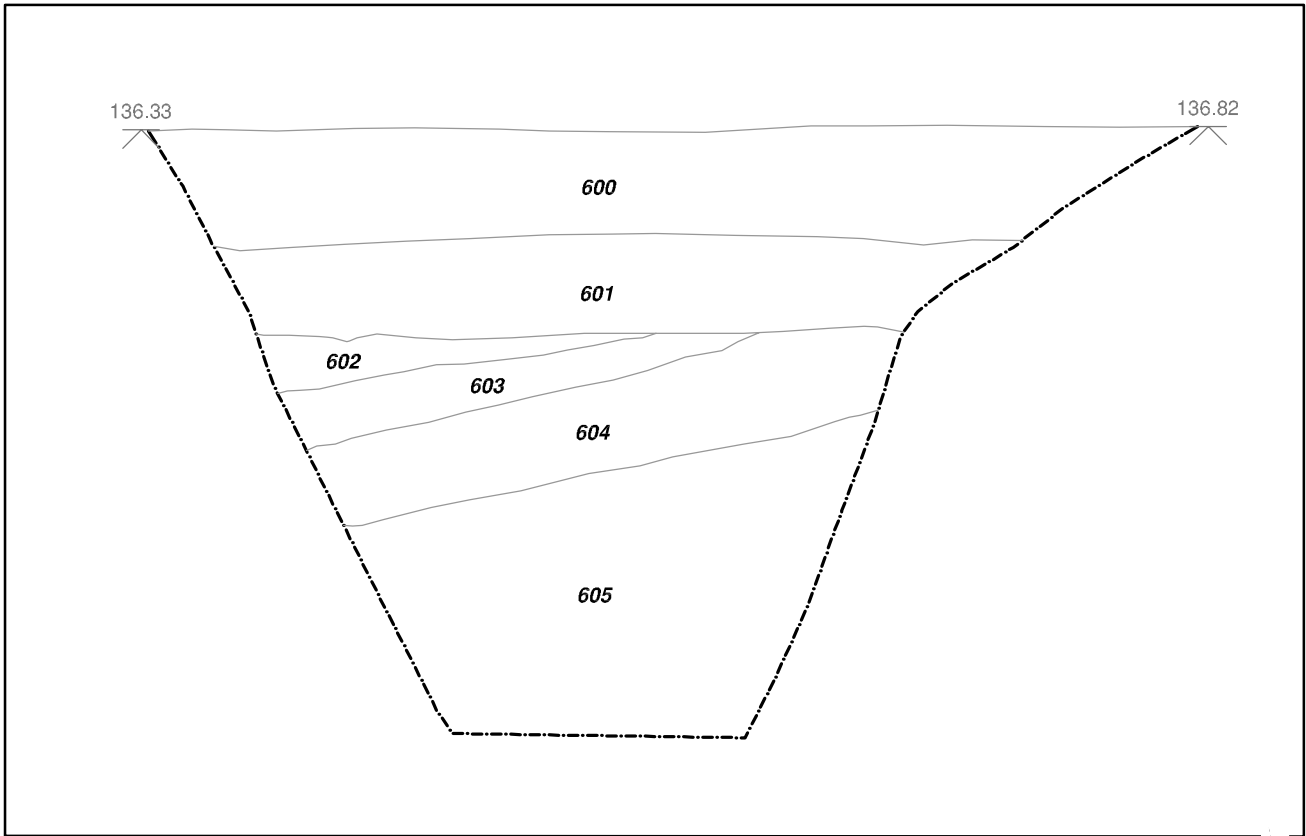


Figure 13: South-east-facing sondage at south-western end of Trench 6



Limit of excavation

101

Context numbers



Deposit

137.20

Levels

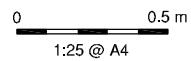




Plate 1: Trench 1, looking north



Plate 2: Sondage at northern end of Trench 1, looking west



Plate 3: Sondage at southern end of Trench 1, looking west



Plate 4: Trench 2, looking south-west



Plate 5: Sondage at western-most end of Trench 2, looking north-west



Plate 6: Sondage at eastern-most end of Trench 2, looking north-west



Plate 7: Trench 3, looking north



Plate 8: Sondage at northern-most end of Trench 3, looking west



Plate 9: Sondage at southern-most end of Trench 3, looking west



Plate 10: Trench 4, looking north-east, with sondage in the foreground back-filled



Plate 11: Sondage at north-eastern end of Trench 4, looking south-east



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Plate 14: Sondage at north-western end of Trench 5, looking south-west



Plate 15: Trench 6, looking north-east, with sondage in the foreground back-filled



Plate 16: Post-medieval wall foundation **606**, looking north-east



Plate 17: Sondage at south-western end of Trench 6, looking north-west

APPENDIX 1: PROJECT DESIGN

1. INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 The Environment Agency (hereafter the 'client') has commissioned Oxford Archaeology North (OA North) to undertake an archaeological evaluation of an area of land alongside Thacka Beck, which runs between the Rivers Petteril and Eamont, to the north-west of the town of Penrith, Cumbria (centred NGR NY 50733 30854). Planning permission has been granted for a storage pond facility associated with a flood alleviation scheme (FAS) but with a condition that a programme of archaeological work is undertaken prior to construction to assess the potential impact on any below ground archaeological remains. Thacka Beck is a partially man-made watercourse, and has supplied the town with its main water supply for many centuries. Therefore, there is a high archaeological potential associated with the leat.

1.1.2 A programme of archaeological watching brief was carried out by OA North during ground investigation (GI) works on the storage pond site in the winter of 2005 and again in 2008 (OA North 2009). While no features or structures of archaeological significance were observed, some deposits of well-preserved organic matter were recovered during the GI works in 2008, from a depth below 1.65m at the site, beneath a layer of river gravel, or lacustrine inwash. An abundance of *Scheuchzeria palustris* (Rannoch rush) rhizomes was recovered, which probably developed either as a very wet flooding horizon, sealed possibly in the early Holocene when there was little or no vegetation cover, or as a result of possible forest clearance that may have led to the exposure of the soils and the formation of hillwash during the prehistoric period. Similar deposits were found at sites in Lancashire, namely Fenton Cottage and Stafford's Dike dating to the early Bronze Age, and in association with the construction of Kate's Pad, a prehistoric trackway. Unfortunately, it was not possible to date the deposits at Thacka Beck, but if the Rannoch rush is Bronze Age in date then it is of archaeological significance. Furthermore, if the rush is the only example of early Holocene deposits in Penrith and the surrounding area then it is both archaeologically and palaeoenvironmentally significant.

1.1.3 Consequently, Cumbria County Council's Historic Environment Service (CCCHES) advised that a scheme of evaluation trenching of the site was required. There is also a possibility that a programme of archaeological watching brief may be required subsequent to the trial trenching. The following proposals have been prepared in accordance with the CCCHES requirements.

1.2 OXFORD ARCHAEOLOGY NORTH

1.2.1 Oxford Archaeology North has considerable experience of sites of all periods, having undertaken a great number of small and large scale projects throughout Northern England during the past 30 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.

1.2.2 OA North has the professional expertise and resources to undertake the project detailed below to a high level of quality and efficiency. OA North is an Institute for Archaeologists (IfA) registered organisation, registration number 17, and all its members of staff operate subject to the IfA Code of Conduct (rev 2008).

2 OBJECTIVES

2.1 The archaeological investigation aims to evaluate the potential for below ground archaeological remains, and determine their extent, nature and significance that may be threatened by the proposed works. To this end, the following programme has been designed to provide a programme of evaluation trial trenching. The results will provide information as to the impact of the proposed development on any archaeological remains and thereby inform any necessary mitigation strategy. The stages to achieve these ends are as follows:

2.2 **Archaeological Evaluation:** to implement a programme of trial trenching examining a minimum of six 30m x 2m trenches within the outlined area (Fig A).

- 2.3 **Archaeological Watching Brief:** to maintain a permanent archaeological presence during ground works, should it be required subsequent to any evaluation. The purpose is to identify, investigate and record any archaeological remains that may be encountered.
- 2.4 **Report and Archive:** a report will be produced for the client within eight weeks of completion of the fieldwork, unless a report submission deadline is agreed with the client at the time of commission. An archive will be produced to English Heritage guidelines (MAP 2 (1991)).
3. HEALTH AND SAFETY
- 3.1 **Risk Assessment:** 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 (1997). A written risk assessment will be undertaken in advance of project commencement and copies will be made available on request to all interested parties.
- 3.2 **Services and other constraints:** full regard will, of course, be given to all constraints (services etc.) during the evaluation as well as to all Health and Safety considerations. As a matter of course the field team will use a Cable Avoidance Tool (CAT) and Genny prior to any excavation to test for services. However, this is only an approximate location tool, and will be used in conjunction with any information regarding services, i.e. drawings or knowledge of live cables or services, provided by the client prior to the commencement of the fieldwork.
- 3.3 **Contamination:** any known contamination issues or any specific health and safety requirements on site should be made known to OA North by the client to ensure all procedures can be met, and that the risk is dealt with appropriately. Should any presently unknown contamination be discovered during excavation, it may be necessary to halt the works and reassess the risk assessment. Should it be necessary to supply additional PPE or other contamination avoidance equipment this will be costed as a variation.
- 3.4 **Staff issues:** all project staff will be CSCS qualified, proof of which can be provided in the form of CSCS cards.
- 3.5 A portable toilet with hand washing facilities is required and will be provided and located on or adjacent to the site.
- 3.6 **Fencing/hoarding requirements:** unless significant archaeological deposits are discovered and it is necessary for the trenches to remain open for monitoring purposes, the trenches will be backfilled once they have been recorded. It is intended that trenches will be opened and backfilled the same day, thereby no trench will remain open overnight. During the course of archaeological recording the trenches will be demarcated with barrier tape, unless specific requirements are requested by the client for heras security fencing.
4. METHOD STATEMENT
- 4.1 TRIAL TRENCHING
- 4.1.1 The programme of trial trenching will establish the presence or absence of any previously unsuspected archaeological deposits and, if established, will then test their date, nature, depth and quality of preservation. This will enable the outlined area to be adequately sample.
- 4.1.2 **Trenches:** the evaluation is required to examine a minimum of six 30m x 2m trenches. The location and configuration of the trenches has been determined by the client.
- 4.1.3 **Methodology:** the topsoil will be removed by machine (fitted with a toothless ditching bucket) under archaeological supervision to the surface of the first significant archaeological or natural deposit, whichever is encountered first. This deposit will be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions, and inspected for archaeological features. All features of archaeological interest will be investigated and recorded unless otherwise agreed by CCCHES. The trenches will not be excavated deeper than 1.2m to accommodate health and safety constraints; any requirements to excavate below this depth will involve stepping out of the trench sides.
- 4.1.4 All trenches will be excavated in a stratigraphical manner, whether by machine or by hand. Trenches will be located by use of GPS equipment which is accurate to +/- 0.25m, or using

an EDM Total Station, based on a site grid related to the national grid obtained from any available client base mapping. Altitude information will be established with respect to Ordnance Survey Datum.

- 4.1.5 Any investigation of intact archaeological deposits will be exclusively manual. Selected pits and postholes will normally only be half-sectioned, linear features will be subject to no more than a 10% sample, and extensive layers will, where possible, be sampled by partial rather than complete removal. It is hoped that in terms of the vertical stratigraphy, maximum information retrieval will be achieved through the examination of sections of cut features. All excavation, whether by machine or by hand, will be undertaken with a view to avoiding damage to any archaeological features, which appear worthy of preservation *in situ*.
- 4.1.6 All information identified in the course of the site works will be recorded stratigraphically, using a system, adapted from that used by Centre for Archaeology Service of English Heritage, with sufficient pictorial record (plans, sections, and monochrome contacts) to identify and illustrate individual features. Primary records will be available for inspection at all times.
- 4.1.7 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 (1:50, 1:20 and 1:10). All artefacts and ecofacts will be recorded using the same system, and will be handled and stored according to standard practice (following current Institute for Archaeologists guidelines) in order to minimise deterioration.
- 4.1.8 **Contingency plan:** a contingency costing may also be employed for unseen delays caused by prolonged periods of bad weather, vandalism, discovery of unforeseen complex deposits and/or artefacts which require specialist removal, use of shoring to excavate important features close to the excavation sections etc. This has been included in the Costings document and would be in agreement with the client.
- 4.1.9 The evaluation will provide a predictive model of surviving archaeological remains detailing zones of relative importance against known development proposals. An impact assessment will also be provided.

4.2 WATCHING BRIEF

- 4.2.1 Should it be required following the trial trenching, a programme of field observation will accurately record the location, extent, and character of any surviving archaeological features and/or deposits during ground disturbance for the FAS in areas identified as being of archaeological potential, including ground reduction or earth moving activities, and excavation of trenches. These will be carried out under constant archaeological observation unless, with consultation and agreement of the client and other interested parties, it is identified that a more targeted and timetabled archaeological investigation would be more appropriate.
- 4.2.2 **Methodology:** the work will comprise archaeological observation during the excavation, to include the systematic examination of any subsoil horizons exposed during the course of the groundworks, and the accurate recording of all archaeological features and horizons, and any artefacts, identified.
- 4.2.3 Discovery of archaeological remains will require stoppage of the excavation. Areas of potential archaeological remains will require fencing-off from any construction works, preferably with netlon-type fencing, to allow the OA North archaeologist sufficient time to undertake adequate recording under safe conditions. This will be carried out as efficiently as possible in order to minimise disruption. Depending on the deposits revealed, it is anticipated that the average time for the suspension of works will be approximately 2-4 hours.
- 4.2.4 Clearance will be given for construction to proceed once the archaeologist is satisfied that either no remains are present, or that they have been adequately recorded, or that the level of impact will not disturb any deeper remains that can be preserved *in situ*.
- 4.2.5 **Complex or extensive remains:** should the remains be too complex or extensive to be investigated and recorded under watching brief conditions then the area will be fenced-off and the client and Curator will be immediately contacted in order to determine the requirements for further investigation. All further construction works within the marked area will cease

until clearance is given to proceed. All further works would be subject to a variation to this project design.

- 4.2.6 **Investigation and recording:** putative archaeological features and/or deposits identified by the machining process, together with the immediate vicinity of any such features, will be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions, and where appropriate sections will be studied and drawn. Any such features will be sample excavated (i.e. selected pits and postholes will normally only be half-sectioned, linear features will be subject to no more than a 10% sample, and extensive layers will, where possible, be sampled by partial rather than complete removal).
- 4.2.7 During this phase of work, recording will comprise a full description and preliminary classification of features or materials revealed, and their accurate location (either on plan and/or section, and as grid co-ordinates where appropriate). Features will be planned accurately at appropriate scales and annotated on to a large-scale digital plan provided by the client. A photographic record will be undertaken simultaneously.
- 4.2.8 Levels will be recorded and reduced to their OD heights, with all benchmark and TBMS to be shown. The location of all features excavated will be recorded by Total Station with appropriate spot heights and tied into the OS grid. Altitude information will be established with respect to OS Datum. *The location of the remains within the areas of construction will be based on site plans provided by the client containing OS information.*
- 4.2.9 A plan will be produced of the areas of groundworks showing the location and extent of the ground disturbance and one or more dimensioned sections will be produced.

4.3 GENERAL PROCEDURES

- 4.3.1 **Environmental Sampling:** environmental samples (bulk samples of 40 litres volume, to be sub-sampled at a later stage) will be collected from stratified undisturbed deposits and will particularly target negative features (gullies, pits and ditches). An assessment of the environmental potential of the site will be undertaken through the examination of suitable deposits by the in-house palaeoecological specialist, who will examine the potential for further analysis. The assessment would include soil pollen analysis and the retrieval of charred plant macrofossils and land molluscs from former dry-land palaeosols and cut features. In addition, the samples would be assessed for plant macrofossils, insect, molluscs and pollen from waterlogged deposits. The costs for the palaeoecological assessment are defined as a contingency and will only be called into effect if good deposits are identified.
- 4.3.2 Advice will also be sought as to whether a soil micromorphological study or any other analytical techniques will enhance the understanding of the site formation processes, including the amount of truncation to buried deposits and the preservation of deposits within negative features. Should this be required the costs for analysis have been provided as a contingency.
- 4.3.3 **Faunal remains:** if there is found to be the potential for discovery of bones of fish and small mammals a sieving programme will be carried out. These will be assessed as appropriate by OA north's specialist in faunal remains, and subject to the results, there may be a requirement for more detailed analysis. A contingency has been included for the assessment of such faunal remains for analysis.
- 4.3.4 **Human Remains:** any human remains uncovered will be left *in situ*, covered and protected. No further investigation will continue beyond that required to establish the date and character of the burial. CCCHES and the local Coroner will be informed immediately. If removal is essential the exhumation of any funerary remains will require the provision of a Home Office license, under section 25 of the Burial Act of 1857. An application will be made by OA North for the study area on discovery of any such remains and the removal will be carried out with due care and sensitivity under the environmental health regulations. Any delays caused by unforeseen and complex excavation of inhumations may be subject to a variation to the cost of the contract and will be agreed with the client.
- 4.3.5 **Treatment of finds:** all finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds*, 1998 (new edition) and the recipient museum's guidelines.

4.3.6 All identified finds and artefacts will be retained, although certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained on advice from the recipient museum's archive curator.

4.3.7 **Treasure:** 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. Where removal cannot take place on the same working day as discovery, suitable security will be employed to protect the finds from theft.

4.4 REPORT

4.4.1 One copy of a written synthetic report will be submitted to the client, together with a digital copy on CD, and three copies to the Cumbria HER within eight weeks of completion of the work. The report will include;

- a site location plan related to the national grid
- a front cover to include the planning application number, where relevant, and the NGR
- a concise, non-technical summary of the results
- the circumstances of the project and the dates on which the fieldwork was undertaken
- description of the methodology
- a summary of the historical background of the study area
- appropriate plans showing the location and position of features
- a statement, where appropriate, of the archaeological impact
- photographs as appropriate
- a copy of this project design, and indications of any agreed departure from that design
- the report will also include a complete bibliography of sources from which data has been derived, and a list of any further sources identified but not consulted

4.4.2 **Confidentiality:** all internal reports to the client are designed as documents for the specific use of the client, for the particular purpose as defined in the project brief and project design, and should be treated as such. They are not suitable for publication as academic documents or otherwise without amendment or revision.

4.5 ARCHIVE

4.5.1 The results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with Appendix 3 of the current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). This archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the HER (the index to the archive and a copy of the report). OA North practice is to deposit the original record archive of projects (paper, magnetic and plastic media) with the County Record Office, Kendal, and the material archive will be submitted to an appropriate museum.

4.5.2 **OASIS:** the data will be entered into OASIS records, the online database of archaeological events.

5. OTHER MATTERS

5.1 ACCESS

5.1.1 Liaison for basic site access will be undertaken through the client. It is understood that there will be access for both pedestrian and plant traffic to the site.

5.2 REINSTATEMENT

5.2.1 The ground will be backfilled so that the topsoil is laid on the top, and the ground will be roughly graded with the machine. Should there be a requirement by the client, other than that stated, this will involve recosting.

5.3 INSURANCE

- 5.3.1 OA North has a professional indemnity cover to a value of £2,000,000; proof of which can be supplied as required.

5.4 PROJECT MONITORING

- 5.4.1 Whilst the work is undertaken for the client, the County Archaeologist or representative will be kept fully informed of the work and its results, and will be notified a week in advance of the commencement of the fieldwork. Any proposed changes to the project design will be agreed with CCCHES in consultation with the client.

5.5 WORK TIMETABLE

- 5.5.1 **Trial trenching:** it is anticipated that three days will be required to complete this element. A trench location plan accompanies these proposals.
- 5.5.2 **Archaeological Watching Brief:** the duration of the archaeological presence for the watching brief will be dictated by the client's schedule of works.
- 5.5.3 **Report and Archive:** the report and archive will be produced following the completion of all the fieldwork. The final report will be available within eight weeks of completion of the fieldwork, and the archive deposited within six months.

5.6 STAFFING

- 5.6.1 The project will be under the direct management of **Emily Mercer** (OA North Senior Project Manager) to whom all correspondence should be addressed.
- 5.6.2 The trenching will be supervised by either an OA North project officer or supervisor experienced in this type of project, with an assistant. The watching brief will be undertaken by an OA North supervisor or assistant supervisor experienced in this type of project, who will be responsible for liaison with the site contractors and the client, and other relevant interested parties with regards to on-site work and procedures. Due to scheduling requirements it is not possible to provide staff details at the present time.
- 5.6.3 Assessment of the finds from the evaluation will be undertaken under the auspices of OA North's in-house finds specialist **Christine Howard-Davis** (OA North finds manager). Christine has extensive knowledge of finds from many periods in the North West.
- 5.6.4 Assessment of any palaeoenvironmental samples will be undertaken by or under the auspices of **Elizabeth Huckerby MSc** (OA North project officer). Elizabeth has extensive knowledge of the palaeoecology of the North West through her work on the English Heritage-funded North West Wetlands Survey.

BIBLIOGRAPHY

- English Heritage, 1991 *Management of Archaeological Projects*, 2nd edn, London
- Institute for Archaeologists (IfA), 2001, revised October 2008, *Standard and guidance for archaeological field evaluations*, unpubl
- OA North, 2009 *Thacka Beck Flood Alleviation Scheme, Penrith, Cumbria: Archaeological Watching Brief*, unpubl
- SCAUM (Standing Conference of Archaeological Unit Managers), 1991 *Health and Safety Manual*, Poole
- United Kingdom Institute for Conservation (UKIC), 1990 *Guidelines for the preparation of archives for long-term storage*, London
- United Kingdom Institute for Conservation (UKIC), 1998 *First Aid for Finds* London

APPENDIX 2: TRENCH AND CONTEXT DESCRIPTIONS

| Trench 1 | Dimensions: 30m by 2.2m | Orientation: north /south |
|-----------------|--|----------------------------------|
| Context | Description | Depth |
| 100 | Topsoil. A very dark grey fine sand-silt-clay. | 0.35m |
| 101 | Fluvial deposit. Varied from a mid-orange fine sand-silt to a mid-brown grey silty-clay, with <i>c</i> 40% to 50% small to medium-sized sub-rounded stone inclusions. | 0.4m+ |
| 102 | Glacial till. A mid-grey orange clay with <i>c</i> 20% to 30% small to medium sized sub-rounded stone inclusions. | Unknown |
| 103 | Subsoil. A mid-orange-brown fine sand-silty-clay. | 0.3m |

| Trench 2 | Dimensions: 30m by 2.1m | Orientation: north-east /south-west |
|-----------------|--|--|
| Context | Description | Depth |
| 200 | Topsoil. A very dark grey fine sand-silt-clay. | 0.3m |
| 201 | Subsoil. A dark reddish-brown fine sand-silty-clay. | 0.14m |
| 202 | Fluvial deposit. A mid-reddish-brown fine sand-silty-clay. | 0.4m |
| 203 | Fluvial deposit. A dark grey clayey-silt. | 0.2m |
| 204 | Fluvial deposit. A mid-grey coarse sand gravel, containing <i>c</i> 80% small to medium-sized sub-rounded stone inclusions. | 0.34m |
| 205 | Fluvial deposit. A mid-orange gravel, comprised <i>c</i> 90%+ small to medium-sized sub-rounded stone inclusions. | 0.22m |
| 206 | Fluvial deposit. A mid-grey gravel, comprised <i>c</i> 90%+ medium-sized sub-rounded stone inclusions. | 0.4m |
| 207 | Fluvial deposit. A mid-orange silt. | 0.1m+ |
| 208 | Fluvial deposit. A light grey silty medium sand. | 0.14m |

| Trench 3 | Dimensions: 30m by 2.2m | Orientation: north /south |
|-----------------|---|----------------------------------|
| Context | Description | Depth |
| 300 | Topsoil. A very dark grey fine sand-silt-clay. | 0.32m |
| 301 | Subsoil. A mid-orange brown fine sand-silty-clay. | 0.2m |
| 302 | Fluvial deposit. A mid-orange-brown medium sand-silty-clay, with c 60% to 70% small to medium-sized sub-rounded stone inclusions. | 0.78m |
| 303 | Fluvial deposit. A mid-orangey-grey medium sand-silty-clay with c 20% small to medium-sized stone inclusions. | 0.3m |
| 304 | Glacial till. A mid-orangey-grey clay, with c 20% small stone inclusions. | Unknown |
| 305 | Fluvial deposit. A mid- orangey-brown silty-clay. | 0.42m |

| Trench 4 | Dimensions: 30.0m by 2.2m | Orientation: north-east /south-west |
|-----------------|---|--|
| Context | Description | Depth |
| 400 | Topsoil. A very dark grey fine sand-silt-clay. | 0.36m |
| 401 | Subsoil. A dark-brown grey fine sand-silty-clay. | 0.3m |
| 402 | Fluvial deposit. A mid-orange gravel, comprised c 95%+ small to medium-sized sub-rounded stones. | 0.34m |
| 403 | Fluvial deposit. A mid-orange-brown silty-fine sand. | 0.34m |
| 404 | Fluvial deposit. A dark brown clayey-silty fine sand. | 0.06m |
| 405 | Fluvial deposit. A mid-dark grey silty-sand. | 0.52m |
| 406 | Fluvial deposit. A mid-pinkish-brown fine sandy-silt. | Unknown |
| 407 | Fluvial deposit. A light orangey-grey silty-sand | 0.22m |
| 408 | Fluvial deposit. A mixed deposit of mid-grey and mid-orange gravel, comprised of 95%+ small to medium-sized sub-rounded stone. | 1.1m+ |

| Trench 5 | Dimensions: 31.88m by 2m | Orientation: north-west/south-east |
|-----------------|--|---|
| Context | Description | Depth |
| 500 | Topsoil. A very dark grey fine sand silt clay. | 0.32m |
| 501 | Fluvial deposit. A mixed deposit of mid-orangey brown and mid-blue grey silty coarse sand. | 0.24m |
| 502 | Fluvial deposit. A mixed deposit of mid-grey and mid-orange gravel, comprised c 95% small to medium sized sub-rounded stone. | 1.14m |
| 503 | Fluvial deposit. A mixed deposit of mid-grey and mid-orange fine sandy silt. | 0.40m+ |
| 504 | Subsoil. A mid-orangey brown fine sand silty clay. | 0.30m |
| 505 | Fluvial deposit. A mixed deposit of mid-grey and mid-orange gravel, comprised c 95% small to medium sized sub-rounded stone. | Unknown |

| Trench 6 | Dimensions: 31m by 2m | Orientation: east /west |
|-----------------|--|--------------------------------|
| Context | Description | Depth |
| 600 | Topsoil. A very dark grey fine sand-silt-clay. | 0.36m |
| 601 | Subsoil. A mid-orangey-brown fine sand-silty-clay. | 0.39m |
| 602 | Fluvial deposit. A light grey fine sand-silty-clay. | 0.18m |
| 603 | Fluvial deposit. A mid-orangey-grey clay. | 0.2m |
| 604 | Fluvial deposit. A mid-orangey-brown coarse sand-silt with c 20% to 30% small to medium-sized sub-rounded stones inclusions. | 0.35m |
| 605 | Fluvial deposit. A mid-orangey-grey coarse sand-silty-clay with c 20% to 30% small to medium-sized sub-rounded stone inclusions. | 0.95m+ |
| 606 | The base of a grubbed-out post-medieval field boundary wall. Comprised sub-rounded stone, a maximum of 0.39m by 0.25m by 0.24m in size, in a very dark grey fine sand-silty-clay matrix (topsoil 600). It measured 1.3m in width and 4.5m in length as seen within the excavated trench. | 0.3m |
| 607 | Rubble from wall 606 . Sub-rounded stone a maximum of 0.22m by 0.18m by 0.15m in size, within the topsoil. | 0.15m |
| 608 | Fluvial deposit. A mid-grey-brown medium sandy-silt with c 20% small to medium-sized sub-rounded stone inclusions. | 0.24m |
| 609 | Fluvial deposit. A mid-grey-orange medium sand gravel, with c 70% small to small sub-rounded stone inclusions. | Unknown |

APPENDIX 3: FINDS CATALOGUE

Ctxt = Context number; OR = Object Record number; MAT = Material; Cat = Category; No = Number of fragments

| CTXT | OR | MAT | CAT | NO | DESCRIPTION | PERIOD |
|------|------|---------|--------|----|---|---|
| 100 | 1010 | Ceramic | Vessel | 8 | Six fragments of plain white earthenware; two fragments of black-glazed redwares | Late eighteenth century or later |
| 100 | 1012 | Glass | Vessel | 1 | Small fragment of blue bottle | Late nineteenth-early twentieth century |
| 100 | 1011 | Plastic | Object | 1 | Object | Modern |
| 200 | 1007 | Ceramic | Vessel | 8 | Two fragments of white earthenware; two fragments of underglaze transfer-printed white earthenware; one ?creamware plate with blue feathered edge; two fragments of black-glazed redware; one small porcelain doll's head | Late nineteenth-early twentieth century |
| 200 | 1009 | Glass | Vessel | 1 | Small fragment of blue bottle | Late nineteenth-early twentieth century |
| 200 | 1008 | Glass? | | 1 | Melted and de-mineralised glass | |
| 300 | 1017 | Ceramic | Vessel | 10 | Two fragments of black-glazed redware; four fragments of underglaze transfer-printed white earthenware; two fragments of white earthenware; two fragments of late yellow ware | Late nineteenth-early twentieth century |
| 300 | 1016 | Glass | Vessel | 1 | Body fragment of dark green bottle | Late nineteenth-early twentieth century |
| 400 | 1006 | Ceramic | Vessel | 10 | Three fragments of black-glazed redware; three fragments of white earthenware; three fragments of underglaze transfer-printed white earthenware; one fragment of late yellow ware | Late nineteenth-early twentieth century |
| 500 | 1004 | Ceramic | Vessel | 6 | Three fragments of late stoneware; one fragment of black-glazed redware; two fragments of blue-sponged white earthenware | Late nineteenth-early twentieth century |

| | | | | | | |
|------------|------|---------|--------------|----|---|---|
| 500 | 1005 | Ceramic | Tobacco pipe | 1 | Undiagnostic stem fragment | Late nineteenth-early twentieth century |
| 600 | 1001 | Ceramic | Tobacco pipe | 3 | Two undiagnostic stem fragments, one bowl | Late nineteenth century |
| 600 | 1002 | Ceramic | Vessel | 8 | One fragment of late slip-decorated redware; one fragment of black-glazed redware; two fragments of redware with white internal slip; two fragments of white earthenware; two fragments of blue-painted white earthenware | Late nineteenth-early twentieth century |
| 600 | 1003 | Glass | Vessel | 2 | One fragment of opaque white press-moulded vessel; one fragment of dark green bottle | Late nineteenth-early twentieth century |
| 600 | 1000 | Iron | Fitting | 2 | Two structural fittings. Probably for securing drainpipes | Modern |
| 606 | 1013 | Ceramic | Vessel | 22 | Six fragments of black-glazed redware (two joining rim); four fragments of late yellow ware; one fragment of underglaze transfer-printed white earthenware; 11 fragments of white earthenware | Late nineteenth-early twentieth century |
| 606 | 1015 | Ceramic | Tobacco pipe | 4 | Three fragments of undiagnostic stem, one small fragment of a bowl | Late nineteenth-early twentieth century |
| 606 | 1014 | Glass | Vessel | 1 | Body fragment of dark green bottle | Late nineteenth-early twentieth century |