

KIRKBY STEPHEN TO MIDLAND COTTAGES WwTW,

CUMBRIA



Archaeological Evaluation



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SUMMARY

Oxford Archaeology North (OA North) was commissioned by United Utilities to carry out an archaeological evaluation along the route of a transfer pipeline during July and November 2006. Following the results of the earlier desk-based assessment and walkover survey (OA North 2005), the Cumbria County Council Historic Environment Service (CCCHES) recommended that a further stage of evaluation was necessary, comprising a series of both targeted and randomly-located evaluation trenches. The evaluation programme covered a 1km corridor of land around the proposed pipeline route from Kirkby Stephen to Midland Cottages Waste Water Treatment Works, Cumbria (NY 7716 0760 to NY 7621 0678).

The six sites initially identified during the desk-based assessment and walkover survey were initially to be targeted by five trenches, and a further six were located sporadically along the pipeline easement to achieve the most extensive coverage possible of the study area. The Roman road (Site **01**), a mound (Site **54**) and the enclosures (Sites **33**, **34** and **53**) were investigated by means of the evaluation trenches but it was considered that two proposed trenches, which traversed the park enclosure (Site **30**), would have represented a risk to public safety and, as such, the position of these two was relocated to alternative locations which best covered the remaining study area.

The results of the evaluation trenching demonstrated that the area is largely devoid of archaeological features. Land drainage was observed in most of the trenches, and there was some evidence for piecemeal stone extraction having occurred in parts of the study area since the late medieval period. The evaluation trenching revealed nothing of any considerable archaeological significance.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank United Utilities for commissioning the project. Chris Healey, Kelly Clapperton, Katherine Levey and Thomas Mace carried out the evaluation. Chris Healey wrote the report, Christine Howard-Davis examined the finds and Mark Tidmarsh produced the drawings. Alison Plummer managed the project and also edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 United Utilities propose to construct a new transfer pipeline from Kirkby Stephen to Midland Cottages Wastewater Treatment Works, Cumbria (NY 7716 0760 to NY 7621 0678). The Assistant Archaeologist at Cumbria County Council's Historic Environment Service (CCCHES) advised that the route passed through an area of archaeological potential. Specifically, in the vicinity of the proposed route there were several prehistoric, Romano-British and medieval settlement and agricultural sites recorded in the Historic Environment Record. It was, therefore, considered that important archaeological remains may survive along the route, which would be damaged or destroyed by the proposed works. Because of this, CCCHES recommended that a rapid archaeological desk-based assessment and walkover survey be carried out, and on the strength of this survey (OA North 2005) a further programme of evaluation was subsequently recommended by CCCHES.
- 1.1.2 The evaluation trenching was undertaken in July and November 2006 and targeted sites identified as at risk during the desk-based assessment and walkover survey, and at random intervals between these sites. This report sets out the results of the archaeological evaluation in the form of a short document, outlining the findings.

1.2 LOCATION, TOPOGRAPHY AND GEOLOGY

- 1.2.1 The following topographical, geological, archaeological and historical background information is reproduced from the desk-based assessment and walkover survey report (OA North 2005), although it is not the intention to wholly duplicate that report here. The proposed development route runs from the foot of Stenkrith Hill, to the south of Kirkby Stephen (NY 7716 0760), south-west as far as the proposed Kirkby Stephen - Midland Cottages Waste Water pumping station, which lies on the east side of the A685 (Fig 2). From there it continues in a south-westerly direction along the east side of the A685, before crossing over to Midland Cottages, which lie immediately to the east of the former Midland Railway, now the Settle to Carlisle Railway (NY 7621 0678).
- 1.2.2 The land along the proposed route lies at approximately 200m above mean sea level in the north, and rises fairly steadily to approximately 250m in the south (Ordnance Survey 1984). The landscape is typically a mix of gentle river valleys and more rugged higher ground (Countryside Commission 1998), with a number of large streams and rivers forming important elements.
- 1.2.3 The solid geology of the area is a complex mix of limestone, red sandstone and mudstone, ranging from the Carboniferous to the Triassic eras in date (OA North 2003, 9). The drift geology largely derives from glacially-deposited till (boulder clay), although alluvial material is also present along the river valleys

(*op cit*, 10). The overlying soils are general typical brown earths of the Eardiston Association (*ibid*).

1.3 HISTORICAL BACKGROUND

- 1.3.1 **Prehistoric:** there is considerable evidence for prehistoric activity within the general area, much of it within the study area. Evidence for activity in Cumbria following the end of the last Ice Age is generally sparse however, and tends to be concentrated along the coast and in the south-western part of the county (Young 2002). Closer to the development area remains dating to this period are rare, although two bone harpoon points discovered at Crosby-on-Eden in 1875 are probably Late Upper Palaeolithic or early Mesolithic in date, although they were considered at the time to have come from Terra del Fuego (Hodgson 1895). Artefacts dating to the Neolithic period have been found across the local area, and include flint tools (Cherry and Cherry 1987, 64-7) and polished stone axes (Sowerby 1948, 3; Richardson 1980). During the Bronze and Iron Ages settlement sites became more permanent and there are several thought to date to this period from across the area (Higham and Jones 1975; RCHME 1936, 236).
- 1.3.2 The study area passes through the centre of an area rich in sites of probable or definite prehistoric date (Higham and Jones 1975). Several of these are listed in the gazetteer accompanying the desk-based assessment and walkover survey report (OA North 2005), including a round barrow (Site **35**) thought to be of Bronze Age date but possibly with an earlier cremation (Greenwell 1877), a Neolithic polished stone axe (Site **03**), part of a quern of Bronze Age or Iron Age date (Site **05**), a hillfort, presumably of Iron Age date (Site **10**), and a defensive earthwork, again assumed to be late prehistoric (Site **45**). There are several other sites of unknown date including a number of dykes and earthworks, which may form part of a large multi-phased prehistoric landscape that covered the whole area.
- 1.3.3 **Roman:** it is likely that a number of the settlement sites in the general area continued in use through the late prehistoric period and into the Roman occupation. Only one example of this type of site has been excavated, at Waitby, and although it shared features in common with sites considered to be prehistoric in date pottery dated to the fourth century AD was recovered from it (Webster 1972). It is likely that the Romans did have some form of presence in the area, even if it was only diplomatic and economic, and numerous finds of coins have been reported from the general area (Shotter 1988; 1989; 1991; 1992). There is as yet though, no known Roman settlement in the immediate area.
- 1.3.4 Within the study area two sites of Roman date are recorded. The first of these relates to the discovery of coins (Site **04**), although the exact details of the location are not known (Shotter 1988; 1989). A Roman road (Site **01**) is also thought to have run through Kirkby Stephen (Site **01**), the line of which would continue into the study area (Anderson and Swailes 1985). This is based on evidence in the form of the word 'street' occurring in a number of locations and a limited attempt at mapping its location, although its existence has yet to be proved.

- 1.3.5 **Early Medieval:** physical evidence dating to the early medieval period is scarce in the region, although it is likely to have formed part of the Anglian kingdom of Northumbria by the early seventh century (Anderson and Swailes 1985, 12). Local place-names including the Anglian word ‘tun’, such as Wharton demonstrate this (*op cit*, 13), although the majority suggest a strong Norse influence across the entire area (Smith (ed) 1967). Kirkby Stephen is thought to mean ‘village or farmstead with a church’ (*op cit*, 8-9) and Waitby and Nateby both contain the Norse word for farmstead (*op cit*, 20 and 24). Physical evidence for the period is not particularly forthcoming, however, although an important group of carved stone crosses and hog back grave stones are known in Kirkby Stephen itself, including the famous ‘Loki’ stone (Birkbeck 2000, 4).
- 1.3.6 There are no recorded sites of early medieval date within the study area, although it is possible that some of the earlier settlement sites would have continued in use into this period.
- 1.3.7 **Medieval:** the entire study area is within the parish of Kirkby Stephen and much of it, along with parts of Nateby, Wharton and Hartley, is recorded as being granted by Ivo de Talebois to the convent of St Mary in York in 1088 (Nicolson and Burn 1777, 533-4). This grant was confirmed by subsequent bishops of Carlisle and remained the case until the sixteenth century. Following the Dissolution it was granted to the Musgrave family of Hartley in 1547, who sold most of it to Lord Wharton in 1548 (*op cit*, 535). Kirkby Stephen was granted a market charter in 1351-2 (Whellan 1860, 742), making it the most significant settlement in the area. The majority of the manors of Nateby, Waitby and Wharton were held by local families, although most came into the hands of first the Musgraves and then the Lowthers by the beginning of the eighteenth century (*op cit*, 747-8).
- 1.3.8 A small number of sites of medieval or probable medieval date are recorded within the study area, all of which relate to agricultural activity. These include lynchets (Sites **07-8** and **31**), ridge and furrow (Site **09** and **22**), Wharton Park (Site **30**) and a field system (Site **40**). Wharton Park is described by Whellan thus: ‘[it] was very large...[and] was extended over the ancient village, which was destroyed, and the inhabitants driven to Wharton Dikes, on the opposite side of the Eden’ (1860, 748).
- 1.3.9 **Post-Medieval:** the landscape probably changed very little during the early part of the post-medieval period, it being rural and relatively isolated. The consolidation of land holdings by the Lowther family saw a decline in the fortunes of the former Wharton estate and by 1860 the hall is described as having ‘long been in ruins; a small part of it is still occupied as a farm-house’ (Whellan 1860, 748). Kirkby Stephen was positioned on an important road route to the North East from Kendal, but it was not until the 1840s and 1850s, with the coming of the railways, that the area was truly opened to new development (LUAU 1993, 14). The railways at first linked Kirkby Stephen to Barnard Castle and Tebay, before an Eden Valley branch was added, and this was followed by the construction of the Midland Railway’s route between Settle and Carlisle (*ibid*). As a result Kirkby Stephen became ‘the main centre of trade and distribution’ (*ibid*).

1.3.10 Many of the sites within the study area date to the post-medieval period. Some of these relate to the railway and other important transport facilities (Sites **02**, **11**, **14**, **16-7** and **21**). Others relate to quarrying and lime burning, both part of what was evidently an important industry in the area (Sites **06**, **15**, **27-9**, **44** and **48**). The remaining sites are more unique, such as Jubilee Park (Site **20**) or the water mill (Site **18**), while others are of unknown function (Sites **19**, **33-4** and **41**).

2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 OA North submitted a project design (*Appendix 1*) in response to a request from United Utilities for an archaeological evaluation of a proposed water transfer pipeline route in Kirkby Stephen. The project design was adhered to in full except where Health and Safety concerns prevented this (*Section 2.2.1* below), and the work was consistent with the relevant standards and procedures of the Institute of Field Archaeologists, and generally accepted best practice.

2.2 EVALUATION

2.2.1 A verbal brief required that 5% of the study area be subject to evaluation. This took the form of ten linear trenches each measuring approximately either 25m x 2m or 50m x 2m. Initially five of the trenches were located in areas highlighted by the desk-based assessment and walkover survey as being of high archaeological potential (Fig 2). A further six trenches were located sporadically along the pipeline easement to achieve the most extensive coverage possible of the study area. The following sites were targeted by the evaluation trenches: the Roman road (Site **01**; Trench 9); the boundaries of the park (Site **30**); the three enclosures (Sites **33**, **34** were targeted by Trench 8; and Site **53** was targeted by Trench 10) and the mound (Site **54**; Trench 1). During the evaluation it became apparent that excavation adjacent to the standing wall which comprised part of the park enclosure (Site **30**; Plate 1) would constitute a considerable risk to public safety given its height and insecure appearance. It was thus decided, in consultation with the client and the curator, that it was appropriate to remove the two trenches which were located across the enclosure wall from the evaluation programme.

2.2.2 The programme of trial trenching was intended to establish the presence or absence of archaeological deposits and, if established, test their date, nature and quality of preservation. The evaluation assessed the character of archaeological deposits to the depth of the natural geology.

2.2.3 The trenches were excavated mechanically with a toothless ditching bucket 1.60m wide to the level of the natural subsoil or to the level of potential archaeological deposits under close archaeological supervision. When potential archaeological deposits were encountered the trenches were hand cleaned and the deposits excavated manually as per the Project Design (*Appendix 1*). The trenches were accurately located by means of Total Station surveying equipment, tied into existing topographical features.

2.2.4 **Recording:** results of the evaluation were recorded using a system devised from that used by the Centre for Archaeology of English Heritage. The archive includes both a photographic record and accurate large-scale plans and sections at an appropriate scale (1:10 and 1:20). Recording was principally in the *pro forma* Trench Record sheet for each trench, which notes the orientation, dimensions and description of the topsoil and subsoils present in the trench.

Features thought to be of possible archaeological potential were recorded using *pro forma* Context Record sheets.

2.3 FINDS

- 2.3.1 All finds recovered were bagged and recorded by context number, retained for assessment, processed and stored according to current standard practice based on guidelines set by the Institute of Field Archaeologists. The finds were analysed by an OA North in-house specialist.

2.4 ARCHIVE

- 2.4.1 A full professional archive has been compiled in accordance with the project design (*Appendix 1*), and in accordance with current IFA and English Heritage guidelines (English Heritage 1991). The paper and digital archive will be deposited in the Cumbria County Record Office in Kendal on completion of the project.

3. EVALUATION RESULTS

3.1 INTRODUCTION

- 3.1.1 In total, ten trenches were excavated. The trench lengths and alignments varied as ground conditions and circumstance dictated, with a total of approximately 400m² of trenching opened, comprising either 25m or 50m long trenches (Fig 2).
- 3.1.2 All the trenches contained topsoil of varying thickness. Natural geology varied across the pipeline corridor, from sandy-clay through boulder clay to solid rock geology protruding from the clay drift.

3.2 TRIAL TRENCHING RESULTS

- 3.2.1 **Trench 1:** immediately to the south-west of Jubilee Park (Fig 2), this trench was positioned in order to target the mound (Site 54) identified in the earlier walkover survey. The northern section of the trench was intended to produce a section across the mound. The trench was 25m long and was excavated to a maximum depth of 0.44m, the greatest depth at which natural geology was encountered. It was aligned approximately east/west and half-way along its length sloped downwards towards the west.
- 3.2.2 A 0.16m thick deposit of topsoil sealed the whole of Trench 1. A deposit of orangey-red silty-sand, **102**, was below the topsoil, in the approximate centre of the trench. This deposit was visible in both sections of the trench, although it was thicker (0.19m thick maximum) in the northern section, being only 0.02m thick at its maximum in the southern section. The deposit was seen to contain small sub-angular stones and very small, and therefore, undiagnostic fragments of brick. A fragment of modern electrical wiring was recovered from this deposit but was not retained. Immediately beneath deposit **102** a 0.03m thick layer of lime mortar, **103**, was observed; it extended beyond the north and south limits of **102**, comprising a total length of 10.30m. Beneath this mortar layer (**103**) and above the natural geology (**104**) a 0.20m thick layer of dark greenish-brown sandy-clay subsoil, **105**, was observed. This deposit did not produce any dateable material.
- 3.2.3 **Trench 2:** the trench was originally intended to cross the line of Site 30 but this was not possible due to a potential threat to public safety. It was decided to use the trench coverage to investigate a linear depression seen to the south of the allotments adjacent to the A685 (Fig 2). The trench was aligned approximately east/west on a slope which itself ran steeply from east to west. The linear depression was located at the approximate halfway point of Trench 2 (Fig 3).
- 3.2.4 The linear depression was recorded as cut **203** (Fig 2; Plate 2), which was 0.66m wide, and was seen to cut into the orangey-brown natural geology, **204**. It was filled with a deposit of silty-sand, **202**, which contained up to 85% large sub-angular stones (to a maximum of 400mm across) in addition to lesser

deposits of smaller stones. Whilst no dating evidence was recovered from **202**, it seems probable that this represents an episode of quarrying.

- 3.2.5 **Trench 3:** this trench was aligned approximately north/south (Fig 3), and was positioned across an irregular depression on the surface of the north elevation of Whinny Hill. The trench sloped downwards from its southern end towards the north, measured 25m long and was excavated to a maximum depth of 0.20m, where the natural geology was encountered.
- 3.2.6 The depression, **305**, which was visible crossing the trench on the surface on a very approximate east/west alignment, appeared to be wholly reflected in the sub-surface topography (Fig 4). It appeared to represent a natural gully formed perhaps by a flooding episode removing material into the ravine to the west.
- 3.2.7 To the south of depression **305**, a linear feature, **304**, was observed entering the trench on the west side on an approximately north-west/south-east alignment (Fig 4; Plate 3). Feature **304** appeared to end roughly in the centre of the trench, and was excavated by half-section (Fig 4). The sides of feature **304** were regular and smooth, and the profile was U-shaped overall with a flat base, cutting into the orangey-brown sandy-clay geology, **302**. The fill, **303**, failed to produce any dateable material, and was observed as dark brown friable silty-sand with scant inclusions of small sub-rounded stones.
- 3.2.8 **Trench 4:** initially this trench and Trench 5 were proposed as a single 50m trench, but the more varied appearance of the surface topography within the pipeline easement invited the division of the single proposed trench into two 25m long trenches. Trench 4 was aligned approximately north/south and was positioned close to the field boundary wall bordering the A685 road (Fig 2). The topography here was level overall, but close to the road an uneven area was observed. The evaluation trench revealed only natural sandy-clay geology, **402**, at a maximum depth of 0.38m, beneath the topsoil deposit, **401**. No archaeological features or horizons were observed in this trench.
- 3.2.9 **Trench 5:** this trench was aligned approximately north/south, measured 25m in length (Fig 2) and was excavated to a maximum depth of 0.26m. The topography was level overall but a very slight depression was observed in the approximate centre of the trench. Beneath the 0.26m thick layer of topsoil, **501**, natural geology, **502**, was observed as orangey-brown sandy-clay. No archaeological features or horizons were observed in this trench.
- 3.2.10 **Trench 6:** this trench was positioned along the western side of Whinny Hill, to the south-east of the A685 road on an approximately north-north-west/south-south-east alignment (Fig 2). The topography at this point was relatively level although the ground rose towards the southern end of the trench, which measured 50m in length and was excavated to a maximum depth of 0.24m. The 0.24m thick layer of topsoil, **601**, sat above the orangey-brown sandy-clay natural geology, **602**. No archaeological features or horizons were observed in this trench, although four sherds from the same fragment of a Roman grey-ware vessel, probably dating from the third or fourth century were recovered from the topsoil **601**.

- 3.2.11 **Trench 7:** this trench was positioned along the south-western side of Whinny Hill on an approximately north-east/south-west alignment to the east of the A685 road (Fig 2). The existing ground surface was seen to rise a little towards the southern end of the trench, which was 50m long and was excavated to a maximum depth of 0.23m. The 0.23m thick layer of topsoil, **701**, was seen to sit directly onto the orangey-brown sandy-clay natural geology, **702**. In this trench the natural geology was badly scored with a number of animal burrows which ran across and along the trench.
- 3.2.12 **Trench 8:** was located on the northern side of the A685 road, immediately to the north-east of Midland Cottages, and at the western end of the pipeline easement (Fig 2). The trench had to be moved eastwards from the originally proposed position in order to avoid a water main which crossed the easement on a north/south alignment. The topography was such that the western end of the trench was the highest point, sloping gently away to the east. This trench was 25m long and was excavated to a maximum depth of 0.66m.
- 3.2.13 Beneath the 0.25m thick layer of topsoil, **801**, the trench was characterised for the most part by sandy-clay geology, **804**, in the eastern section of the trench, frequently punctured by solid rock geology at approximately 45° to vertical. A large cut feature, **803**, was cut into this geology (Fig 5; Plate 4), although it extended beyond the limit of excavation and may have comprised a sub-circular feature or the terminus of a linear feature. Pit **803** was filled with stone rubble, **802**, of greatly varying sizes and shapes, and this deposit produced one fragment of green-glazed pottery probably dating to the fifteenth or sixteenth century.
- 3.2.14 **Trench 9:** this trench was located on the brow of the hill immediately to the south of Jubilee Park and to the east of the local road to Halfpenny House. From this road the land rose gently to the east before falling steeply just beyond the field towards the Broading Sike river (Fig 2). The trench measured 25m in length, 1.9m in width and reached a maximum depth of 0.6m. The topsoil, **900**, consisted of a mid-brown friable sandy-clay with the occasional small sub-rounded stone and reached a depth of 0.15m. This overlay a mid-brown sandy-clay, **901**, with <20% inclusions of poorly sorted small to medium sub-rounded stones. One field drain, **902**, was identified towards the western edge of the trench. This was 0.3m wide and ran north-east/south-west across the trench. It was filled with **903** which comprised fragments of angular sandstone rubble within a dark brown silty-clay matrix. No finds were recovered from this feature for dating, but the form appeared to be relatively recent. No other features of archaeological significance were observed.
- 3.2.15 **Trench 10:** was aligned generally north/south immediately to the east of Jubilee Park, on a slope towards the dismantled railway line. The trench measured 50m long, 1.9m wide and was on average 0.4m deep. The topsoil, **1000**, comprised of a mid-brown sandy-clay similar to that found in Trench 9, and was approximately 0.15m thick. The subsoil, **1001**, was a mid-brown sandy-clay with <50% small- to medium sub-rounded stone inclusions. Towards the southern end of the trench the subsoil was more a red-brown clay with <50% gravel inclusions. A stone-lined field drain, **1002**, was identified towards the northern end of the trench, traversing it on a north-west/south-east alignment.

This drain measured 0.35m wide by 0.2m high. The channel was still clear and measured approximately 0.1m square. The drain lining, **1003**, consisted of unworked sub-rounded sandstone one course high, and it was capped by a similar arrangement of stones. No finds were recovered from the feature, although it may relate to the small barn to the immediate north-west of the easement.

4. FINDS

4.1 INTRODUCTION

4.1.1 In total, the finds comprised 47 fragments of artefacts predominantly recovered from the topsoil deposits in Trenches 4-10. Their distribution is shown below.

Trench	Pottery	Glass	Clay Tobacco Pipe	Other	Totals
4	4	2	1	1	8
5	5		1		6
6	6			3	9
7	3				3
8	2		3	1	6
9	7		1		8
10	7				7
Totals	34	2	6	5	47

Table 1: Summary of finds distribution

4.1.2 The majority of the material recovered was pottery. All were small or medium-sized fragments, unabraded and in generally fair condition. Few of the finds examined are likely to be earlier than the mid-late nineteenth century. Only fragments from Trenches 6 and 8 were of any antiquity. Four small joining fragments of Romano-British greyware came from Trench 6. In the absence of any diagnostic features, this plain bodysherd cannot be closely dated, and, as it was found in association with late nineteenth century or later material, it is likely to be residual. A well-preserved green-glazed jar rim from Trench 8 (**802**) could be of later fifteenth or sixteenth century date, but it must be remembered that some Cumbrian potteries, for instance that at Silverdale to the south, continued to produce green-glazed jars and jugs into the eighteenth century.

4.1.3 The remainder of the pottery was kitchenwares and tablewares of later nineteenth and twentieth century date. Spalling on fragments from Trench 10 suggests that midden spreading could have been the principal vector of deposition. There was, in addition, a small group of clay tobacco pipe fragments, probably of contemporary date. A small fragment of window glass from Trench 4 could be as early as the late seventeenth-eighteenth century, as could a fragment of blown vessel glass from the same context.

4.1.4 Only three fragments of metalwork were recovered. A sixpence, dated 1942, was found in context **801** (Trench 1), a large iron nail in Trench 6, and an obviously recent fragment of copper alloy from Trench 4 (**401**). Both of the chert fragments from topsoil **601** may possibly have been worked, although at

best they could only be described as comprising fragments of very rude blades. As both seem to have been broken or shattered in antiquity it is difficult to ascribe either a date range to these objects.

- 4.1.5 As the majority of the finds were from recovered from the topsoils, which represent relatively insecure contexts. As a small post-medieval assemblage from rural Cumbria it has limited significance, although the Roman pottery from **601** may indicate activity near to the study area. The finds add very little to the interpretation and dating of the site, and none warrant further analysis.

5. DISCUSSION

5.1 CONCLUSION

- 5.1.1 The evaluation trenches within the study area at Kirby Stephen revealed little about the character of the area in either the historic or the prehistoric period, beyond demonstrating the relative invisibility of local agriculture and indicating some small-scale exploitation of the naturally abundant stone resource, probably from the late medieval period onwards.
- 5.1.2 Stone had historically been quarried where readily available since the Roman period (Parsons 1990, 1), and remained a principal component of status architecture, such as churches or manor houses (Moorhouse 1990, 128), or of buildings of a defensive nature (Brunskill 1997, 182). In the north-west of England in particular, houses belonging to less wealthy individuals continued to be built in traditional timber or timber-and-earth forms until the latter part of the nineteenth century (*ibid*). The sources of stone seen protruding from the clay drift in the evaluation trenches will probably have been suitable for providing local and thus expedient sources of rubble, as well as stone for working into implements such as mortars (Moorhouse 1990, 129). Dry-stone construction in the proximity of such outcrops was thus expedient for many farm buildings and their ancillary structures (Brunskill 1987, 134). The backfilling of quarry pits as far back as the medieval period with rubble material to such an extent that it is invisible on the surface has archaeological parallels in Yorkshire (Moorhouse 1990, 143).

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7. ILLUSTRATIONS

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Plate 2: Possible quarry pit **203**, facing south-east

Plate 3: Linear feature **304**, facing south-east

Plate 4: Overview of quarry pit **803** in plan, facing east-south-east

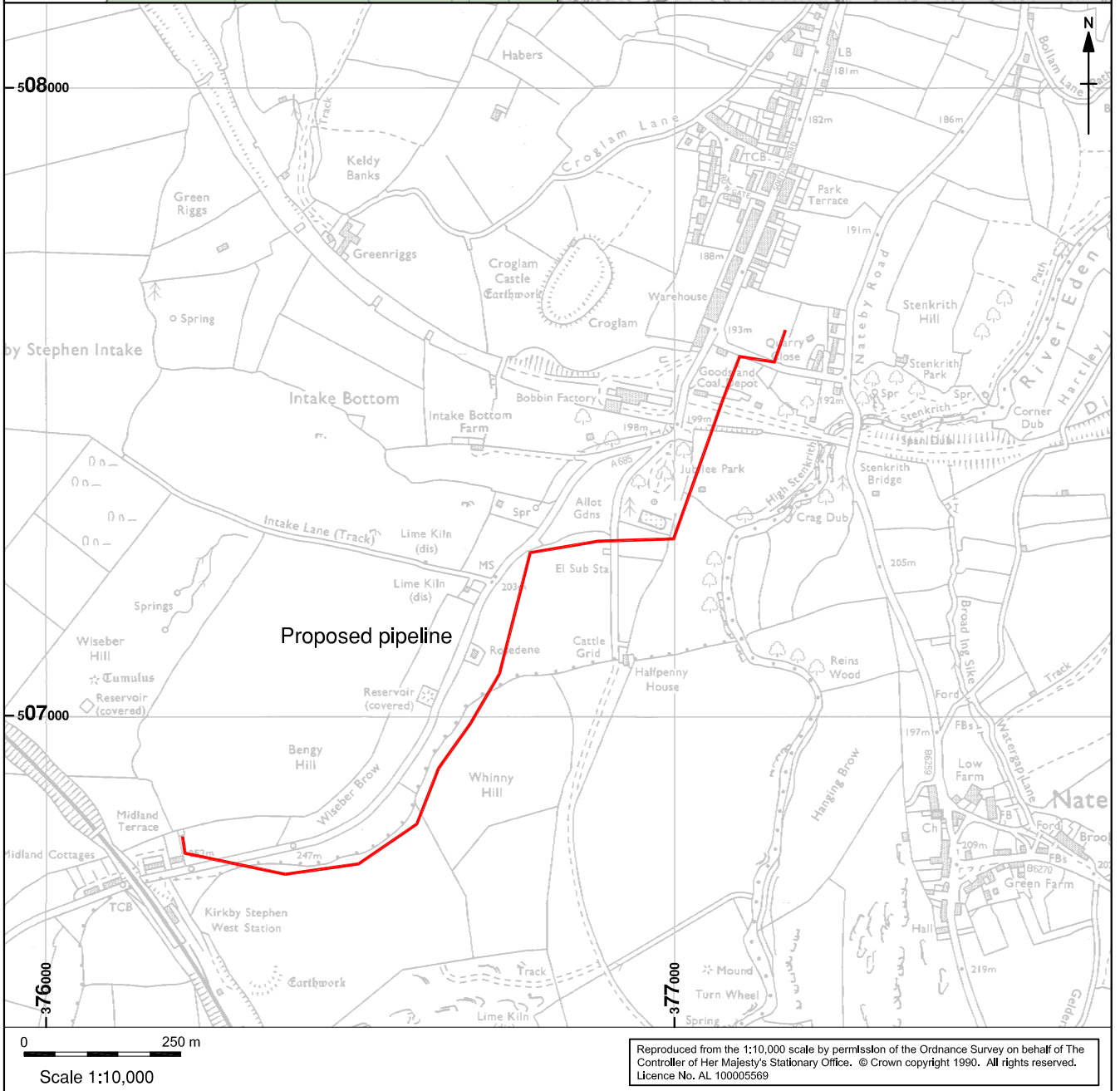


Figure 1: Site Location

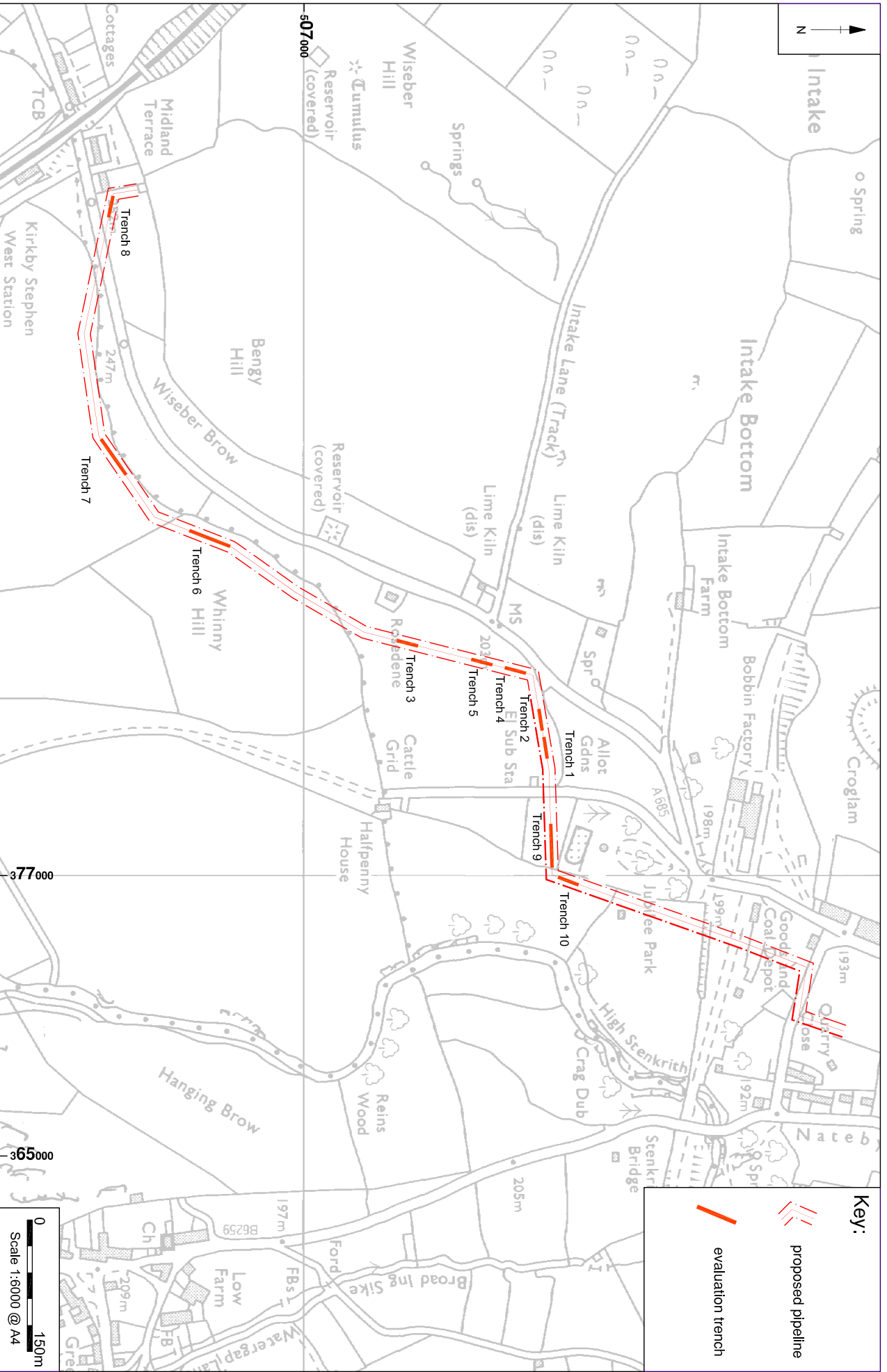


Figure 2: Evaluation trench location plan

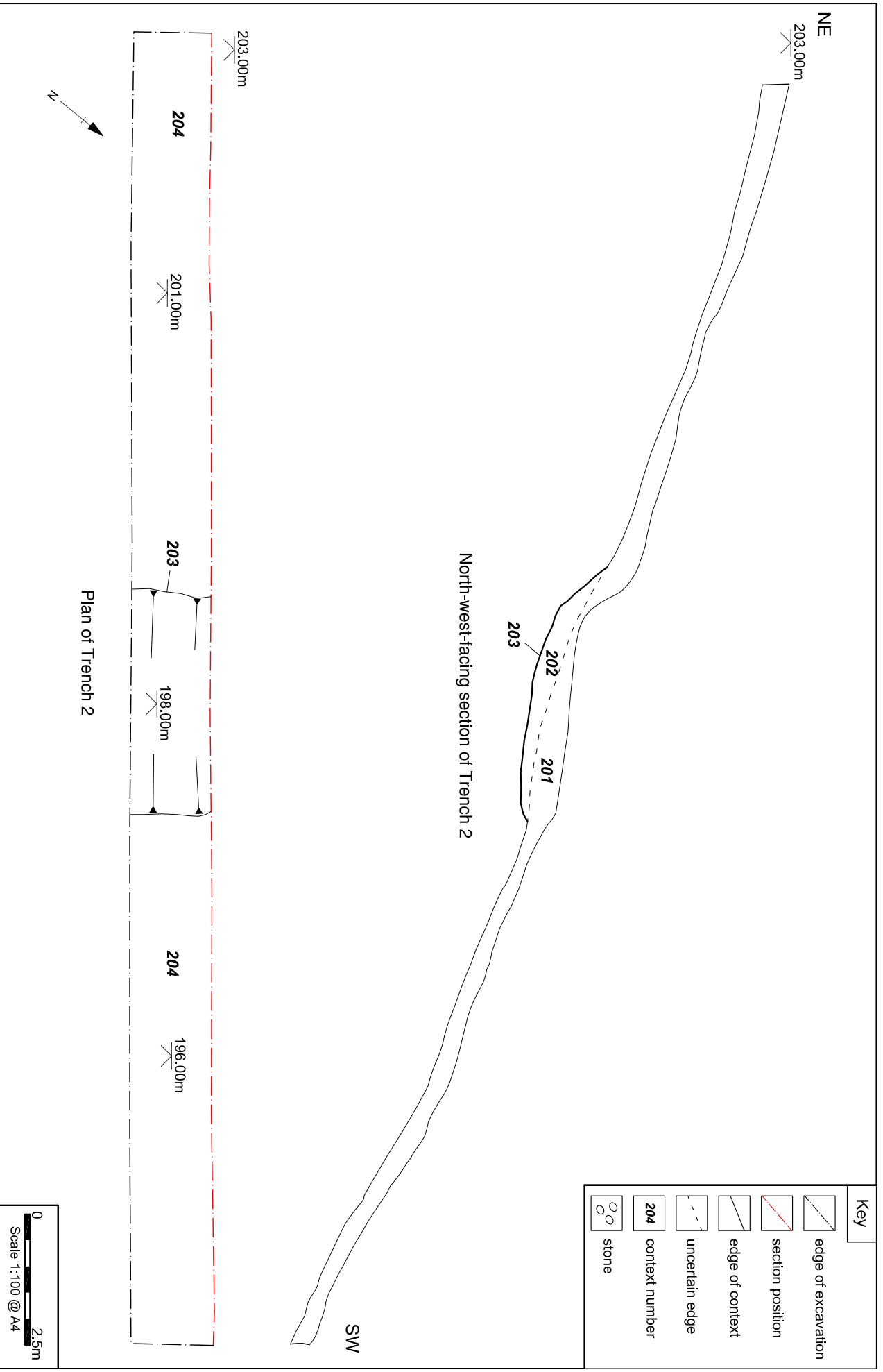


Figure 3: Plan and section, Trench 2

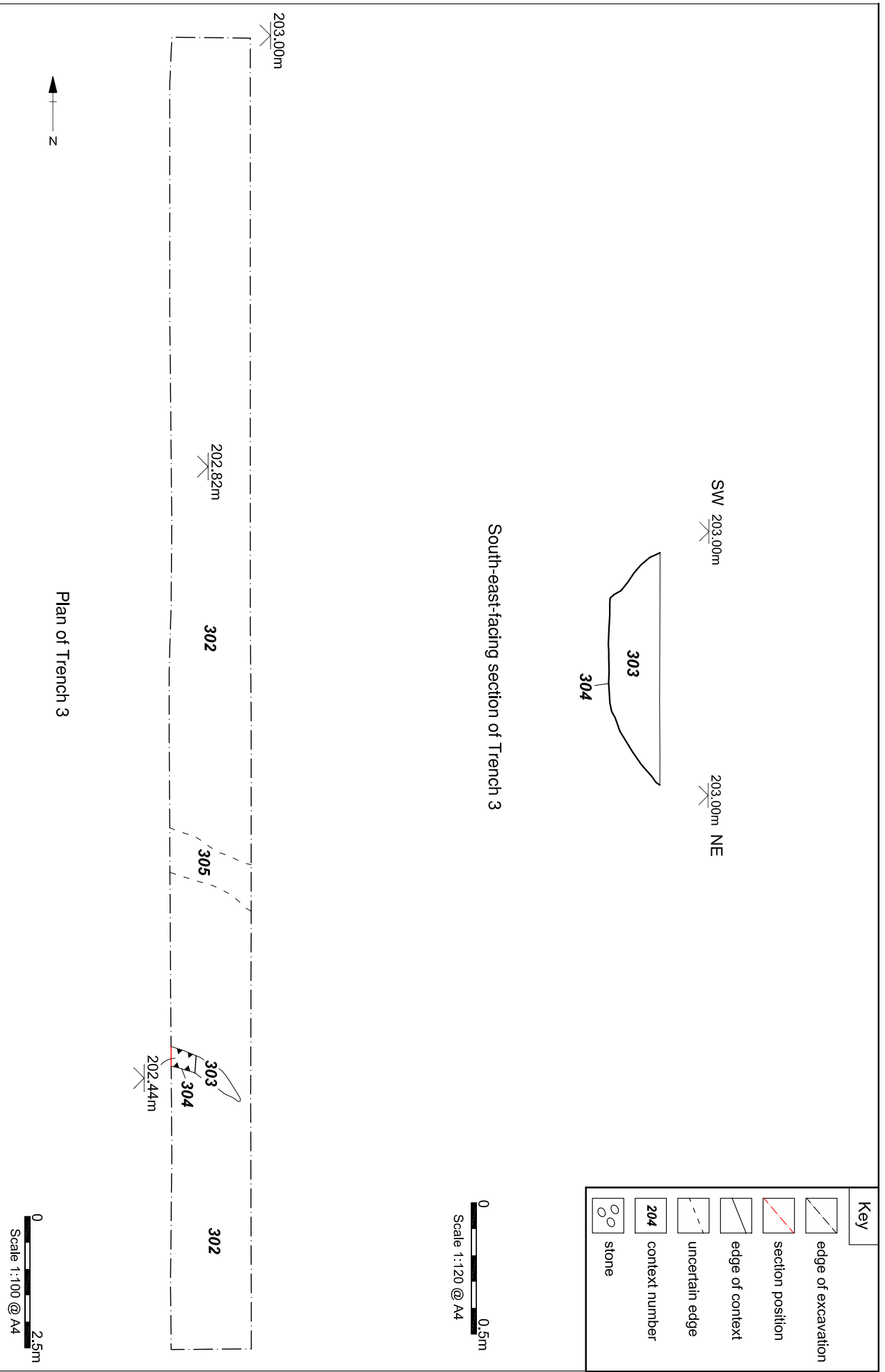


Figure 4: Plan and section, Trench 3

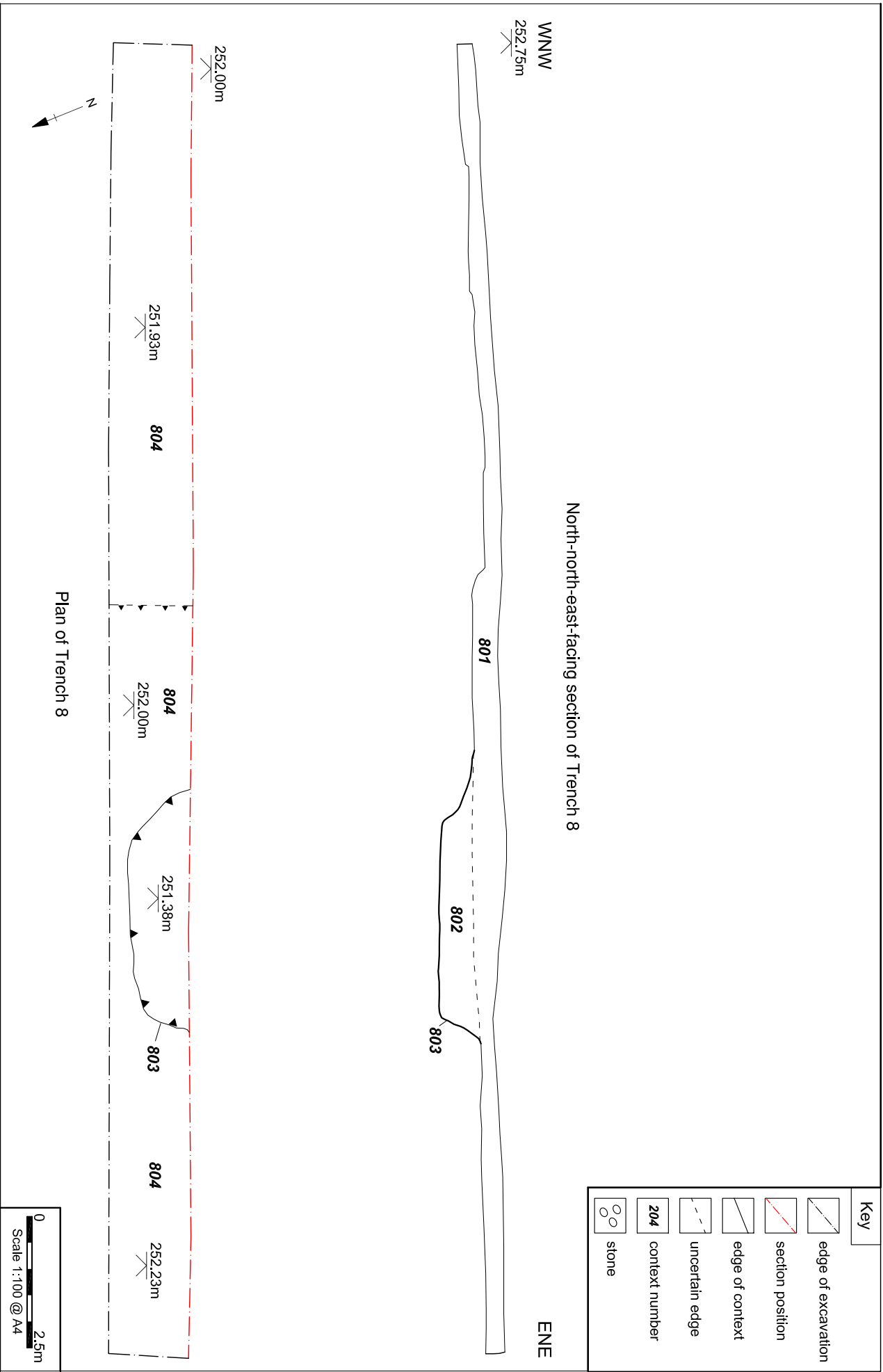


Figure 5: Plan and section Trench 8



Plate 1: Boundary wall (Gazetteer site **30**)



Plate 2: Possible quarry pit **203**, facing south-east



Plate 3: Linear feature **304**, facing south-east



Plate 4: Overview of quarry pit **803** in plan, facing east-south-east

APPENDIX 1: PROJECT DESIGN

KIRKBY STEPHEN TO MIDLAND COTTAGES WwTW TRANSFER PIPELINE, CUMBRIA

**Archaeological Evaluation
Project Design**



Oxford Archaeology North

December 2005

United Utilities

OA North Job No: L9509

Commercial in Confidence

1 INTRODUCTION

- 1.1 This project design has been compiled for United Utilities (hereafter the client). It presents proposals for the evaluation of a proposed new transfer pipeline from Kirkby Stephen to Midland Cottages Wastewater Treatment Works, Cumbria. Section 2 of this document states the objectives of the project, Section 3 deals with OA North's methodology. Section 4 addresses other pertinent issues including details of staff to be involved, and project costs are presented in Section 5.
- 1.2 Following the results of a recent desk-based assessment and walkover survey undertaken by OA North (2005), Cumbria County Council's County Historic Environment Service (CCCHES) has recommended that a programme of evaluation trenching be undertaken for a number of sites identified along the proposed pipeline route, and at random intervals between these sites.
- 1.3 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 of Field Archaeologists (IFA) registered organisation, registration number 17**, and all its members of staff operate subject to the IFA Code of Conduct.

2 OBJECTIVES

- 2.1 **Evaluation:** to implement a programme of trial trenching examining a number of sites identified by the desk-based assessment and a representative sample of all areas to be affected by the pipeline.
- 2.2 **Report and Archive:** a written report will assess the significance of the data generated by the evaluation within a local and regional context.

3 METHOD STATEMENT

- 3.1.1 The following sites, as identified by the OA North Desk-based assessment, will be targeted by the evaluation trenching: Roman road (Site **01**); the boundaries of the park (Site **30**); the three enclosures (Sites **33**, **34** and **53**) and the mound (Site **54**). The remainder of the evaluation trenches will be randomly located along the pipeline route to provide a representative sample of all areas where archaeological remains are potentially threatened. In total, 320m of trench will be excavated.
- 3.1.2 **Evaluation Methodology:** the topsoil will be removed by machine (fitted with a toothless ditching bucket, approximately 1.6m in width) under archaeological supervision to the surface of the first significant archaeological deposit. 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 must be investigated and recorded unless otherwise agreed by the CCCHES. The trenches will not be excavated deeper than 1.20m to accommodate health and safety constraints; any requirements to excavate below this depth will involve recosting.
- 3.1.3 All trenches will be excavated in a stratigraphical manner, whether by machine or by hand. Any investigation of intact archaeological deposits will be exclusively manual. A minimum sample of 50% of archaeological features must be examined by excavation. Selected pits and postholes will normally only be half-sectioned, linear features will be subject to no less than a 25% 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*.

- 3.1.4 The evaluation trenches will be backfilled, although no further reinstatement will take place. The CCCHES Assistant Archaeologist will be notified as to the presence of any significant archaeology.
- 3.1.5 **Environmental Sampling:** environmental samples (bulk samples of 30 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). Subject to the results of the evaluation an assessment of any environmental samples will be undertaken by the in-house palaeoecological specialist, who will examine the potential for further analysis. The assessment would examine the potential for macrofossil, arthropod, palynological and general biological analysis. The costs for the palaeoecological assessment are defined as a contingency and will only be called into effect in agreement with the CCCHES Assistant Archaeologist and the Client.
- 3.1.6 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 palaeozoological specialists with considerable expertise in the investigation, excavation and finds management of sites of all periods and types, who are readily available for consultation.
- 3.1.7 **Recording:** all information identified in the course of the site works will be recorded stratigraphically, 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.
- 3.1.8 Results of the field investigation will be recorded using a paper system, adapted from that used by Centre for Archaeology of English Heritage. The 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). Levels will be tied into the Ordnance Datum. All artefacts and ecofacts will be recorded using the same system, and will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration.
- 3.1.9 **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.
- 3.1.10 **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.

- 3.1.11 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.
- 3.1.12 **Contingency plan:** in the event of significant archaeological features being encountered during the evaluations, discussions will take place with the CCCHES Assistant Archaeologist, as to the extent of further works to be carried out, and in agreement with the Client. All further works would be subject to a variation to this project design. In addition, 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 costing and would be in agreement with the client.

3.2 REPORT/ ARCHIVE

- 3.3.1 **Interim Statement:** in the event that further work is recommended an interim statement will be issued. In this instance or in the event that the client specifically requests an interim statement it should be noted that all illustrations will be copies of field drawings and not completed CAD drawings.
- 3.3.2 **Final Report:** two copies of the final report will be submitted to the client and a further two to CCCHES Both paper and digital copies will be provided on CD-ROM in pdf format. The report will present the following information:
- (i) **Summary:** a summary statement of the findings;
 - (ii) **Introduction:** the background to the project including location details;
 - (iii) **Methodology:** an outline of the methodology of all elements of the programme of work;
 - (iv) **Historical Background:** an historical background to the site;
 - (v) **Results:** an account of the past and present land use of the study area;
An account of archaeological features identified during the course of the evaluation trenching;
 - (vi) **Discussion:** a discussion of the relative significance of archaeological remains revealed within the study area;
A description of the significance of the archaeological remains revealed in study area in a local and regional context;
 - (vii) **Impact/Recommendations:** the identification of areas where further development will impact upon the archaeological resource in addition to the impacts of the current development;
 - (viii) **Illustrations:** maps, plans, sections and copies of the site photographic archive;
 - (ix) **Appendices:** a copy of the brief and this project design;

- 3.3.3 Provision will be made for a summary report to be submitted to a suitable regional or national archaeological journal within one year of completion of fieldwork, if relevant results are obtained.
- 3.3.4 **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.
- 3.3.5 **Archive:** the results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. This archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the SMR (the index to the archive and a copy of the report). Arrangements for deposition of the full site archive will be made the Cumbria County Record Office.

4 OTHER MATTERS

- 4.1 **Project Monitoring:** whilst the work is undertaken for the Client, the CCCHES Assistant Archaeologist will be kept fully informed of the work. Any proposed changes to the project design will be agreed with the Assistant Archaeologist and the Client.
- 4.1.1 **Access:** OA North will consult with the Client regarding access to the site.
- 4.1.2 **Health and Safety:** 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.
- 4.1.3 **Work Timetable:** the evaluation trenching is expected to take approximately six days to complete. The report will be completed within approximately eight weeks following completion of the fieldwork.
- 4.1.4 **Staffing:** the project will be under the direct management of **Alison Plummer BSc (Hons)** (OA North Senior Project Manager) to whom all correspondence should be addressed.
- 4.1.5 Present timetabling constraints preclude who will be undertaking the evaluation trenching, although it is likely that this will be undertaken by an OA North supervisor suitably experienced in this field.
- 4.1.6 **Insurance:** OA North has professional indemnity to a value of £2,000,000, employer's liability cover to a value of £10,000,000 and public liability to a value of £15,000,000. Written details of insurance cover can be provided if required.

APPENDIX 2: FINDS CATALOGUE

Trench	Ctx	OR	Material	Category	No	Description	Date
4	401	5	Ceramic	Vessel	4	Self-glazed redwares, some slip decoration.	Late eighteenth-nineteenth century
4	401	6	Glass	Vessel	2	Thin greenish pane-edge window fragment. Pale bluish blown vessel fragment.	Eighteenth century or later
4	401	7	Ceramic	Tobacco pipe	1	Plain stem fragment.	Nineteenth-twentieth century
4	401	8	Copper alloy	Object	1	Thin rectangular object. Part of ratcheted mechanism..	Twentieth century or later
5	501	12	Ceramic	Vessel	5	One fragment brown-glazed redware, one fragment industrial slipware, one fragment white earthenware, two fragments blue and white transfer-printed white earthenware.	Nineteenth century or later
5	501	13	Ceramic	Tobacco pipe	1	Plain stem fragment.	Nineteenth-twentieth century
6	601	1	Iron	Object	1	Large nail or headless spike.	Not closely dateable
6	601	2	Ceramic	Vessel	6	Four joining fragments fine soft reduced fabric, two joining fragments self-glazed redware.	First-fourth century; nineteenth-twentieth century
6	601	3	Stone	Chert	2	Two fragments of possibly worked tabular chert.	
7	701	14	Ceramic	Vessel	3	Two joining fragments sponge-decorated Mocha-type ware, one fragment blue and white transfer-printed white earthenware.	
8	802	4	Ceramic	Vessel	1	Rim fragment, upright jar in fine oxidised fabric with dark olive green glaze.	Mid-late fifteenth-seventeenth century
8	801	9	Nickel silver	Coin	1	Sixpence. George VI, 1942.	1942
8	801	10	Ceramic	Tobacco pipe	3	Two plain stem fragments, one small bowl fragment.	Nineteenth-twentieth century
8	801	11	Ceramic	Vessel	1	One fragment base of salt-glazed stoneware mug or jug. Probably late Westerwald product.	Late eighteenth century or later
9	901	15	Ceramic	Vessel	7	One fragment redware with white internal slip, one fragment black-glazed redware, three fragments blue and white transfer-printed white earthenware, one fragment rim or blue-decorated whiteware jug, one fragment porcelain figure (small wing).	Nineteenth-early twentieth century
9	901	16	Ceramic	Tobacco pipe	1	Plain stem fragment.	Nineteenth-twentieth century
10	1000	17	Ceramic	Vessel	7	Two fragments ? bone china, three fragments sprigged creamware saucer, one fragment blue and white transfer-printed white earthenware, one fragment redware dish with white internal glaze.	Late eighteenth-twentieth century

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