



Wastewater Treatment Works, Shap, Cumbria

Archaeological Evaluation



Oxford Archaeology North

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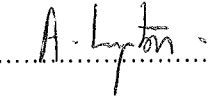
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SUMMARY

United Utilities have submitted proposals for an extension to the northern side of the existing Wastewater Treatment Works at Shap, Cumbria (NY 55806 15803). The site lies within an area of archaeological potential, and, accordingly, Cumbria County Council's Historic Environment Services (CCCHES) issued a brief recommending a programme of archaeological investigation prior to the commencement of the development. The following report details the results of the archaeological evaluation undertaken by Oxford Archaeology North during August 2010.

Four trenches, each measuring 25m by 2m, were excavated across the development area, forming 195m², or 5% of the total ground area. Monolith environmental samples were removed from a deposit of peat observed within Trenches 1, 2 and 3.

Although the village of Shap lies in an area of Cumbria rich in prehistoric remains, the majority of these lie in the high ground. The site itself was devoid of archaeological remains, and it is possible that the waterlogged nature of the valley bottom discouraged intensive land-use, both historically and in the recent past.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank United Utilities for commissioning the project.

The fieldwork was undertaken by Kelly Clapperton with assistance from John Onraet and Nate Jepson. The report was written by Kelly Clapperton, and the illustrations were produced by Mark Tidmarsh. The project was managed by Alison Plummer, who also edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

1.1.1 United Utilities have submitted proposals for an extension to the northern side of the existing Wastewater Treatment Works at Shap, Cumbria (NY 55806 15803; Fig 1). The site lies within an area of archaeological potential, and, accordingly, Cumbria County Council's Historic Environment Services (CCHES) issued a brief recommending a programme of archaeological investigation prior to the commencement of the development. Oxford Archaeology North (OA North) compiled a project design for an archaeological evaluation, which was approved by the Planning Archaeologist at CCHES (*Appendix 1*). The desk-based research element of the project was undertaken in 2008 (OA North 2008) and this was followed by an archaeological watching brief (in variation to the project design) during the excavation of geological test pits (OA North 2010). The following report details the results of the subsequent evaluation fieldwork.

1.2 LOCATION, TOPOGRAPHY AND GEOLOGY

1.2.1 The Wastewater Treatment Works is located to the north-west of Shap, approximately 15km to the south of Penrith, Cumbria. The River Lowther is situated *c* 1km to the west, while the development site lies on relatively flat land immediately to the north-east of Shap Beck, 250m-260m AOD (Ordnance Survey 2002).

1.2.2 The solid geology comprises Tournaisian and Viséan rock of the Carboniferous Limestone Series (BGS 2007), while the overlying geological deposits consist of glacial till (Countryside Commission 1998). These are sealed by typical brown earths of the Waltham Series (Ordnance Survey 1983). A layer of peat was observed during archaeological monitoring of geotechnical works (OA North 2010), located below the subsoil.

2. METHODOLOGY

2.1 INTRODUCTION

- 2.1.1 The aim of the archaeological evaluation was to establish the presence or absence of previously unknown archaeological features, and/or deposits, and if present, to test their character, date, depth and quality of preservation.
- 2.1.2 The evaluation comprised the excavation of four 25m by 2m trial trenches, corresponding to 195m², or a 5% sample area of the development. These were located to allow as extensive coverage of the site as possible (Fig 2).

2.2 EVALUATION TRENCHING

- 2.2.1 Topsoil and overburden were removed by a 360° 7 ton mechanical excavator, to an average depth of 1.10m, until natural geology was encountered, under constant archaeological direction. Trenches were cleaned by shovel scraping and recorded on *pro forma* sheets produced by OA North. Section drawings were illustrated on permatrace and at a scale of 1:20. A photographic archive was created comprising colour-slides, monochrome prints and digital record shots, with appropriate scales.
- 2.2.2 All the trenches were surveyed using a Leica 1200 Series GPS, and located in respect to the Ordnance Survey Datum.
- 2.2.3 Monolith samples of the peat layer observed in trenches 1, 2 and 3, were removed from the trench sections to allow an assessment for analysis potential to be determined at a later date.

2.3 ARCHIVE

- 2.3.1 A full and professional archive has been compiled in accordance with the Project Design (*Appendix 1*), and with current IFA and English Heritage guidelines (1991). The archive will be deposited in the County Record Office in Carlisle, and copies of the report will be sent to the client and the Cumbria County Council Historic Environment Record, also in Kendal.

3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 INTRODUCTION

- 3.1.1 The following section presents a brief summary of the historical and archaeological background of the development site. A wider, more comprehensive study of the research area is provided in the 2008 desk-based research report (OA North 2008), which should be read in conjunction with this report.

3.2 HISTORICAL BACKGROUND

- 3.2.1 ***Prehistoric Period:*** there is high potential for Neolithic and Bronze Age activity in the immediate vicinity of the proposed development. The former Shap Avenue lies close to the site, however, most of the standing stones forming the monument have long since been removed or destroyed. In addition, there are a number of monuments in the wider area dating from the Neolithic and Bronze Age, including stone circles, cairns and barrows, which testify to the extensive use of this area. Scheduled stone circles include those located at Shap, approximately 2.7km to the south-south-east (SM 22498); at Oddendale, c 4.5km to the south-east (SM 22450); and near Castlehowe Scar, about 3km to the east (SM 22451). Other scheduled monuments in the area include cairns at Burn Banks, approximately 4.5km to the west (SM 22516); those on Knipescar Common, 4km to the north-west (SM 22510); Long Scar Pike, 6km to the south-east (SM 22454); and at White Raise, 3.3km to the south-west (SM 2249 and SM 22492). Barrow sites include a bowl barrow and round barrow at Scarside Plantation, 4km to the north-west (SM 22513 and 22512); a bowl barrow on Wickerslack Moor, 4km to the east (SM 22479); and bowl barrows on Iron Hill, 4km to the east-south-east (SM 22458 and 22463).
- 3.2.2 ***The Romano-British Period:*** Roman forts are located at Low Borrowbridge, 15.4km to the south-east of the development site, and Brougham is approximately 13km to the north. Both forts are on the Roman road from Manchester to Carlisle, which roughly aligns with the current A6, although in the vicinity of Shap the Roman road is located approximately 5km to the east.
- 3.2.3 ***The Medieval Period:*** Shap was the site of the Abbey of St Mary Magdalene, a house of Premonstratensian or 'White' Canons, and the only Norman abbey in Westmorland (SM 22495; located over 1km to the south-west of the study area). It was originally founded in c 1191 at Preston Patrick in Kendal, some 20 miles south of Shap, by Thomas de Workington, and was moved to *Hepp* (Shap) in c 1201 (Butler and Given-Wilson 1979, 344). In addition to their ecclesiastical duties, the canons of Shap Abbey were also major landowners in the area and, as such, their administrative and financial interests would have affected much of the region. Although, at its most populated, the abbey housed only 20 canons (there may have been extra lay-members), it is evident that it controlled much of the surrounding area extending from Shap westwards

towards the north-east bank of the old Haweswater Lake and then southwards to include Swindale, and Sleddale. Of greatest impact on the farming landscape were the localities of the abbey granges, often characterised by large-scale farming and huge barns for harvest stores (in this area often for wool or hay). The well-developed dyke system around the land immediately in the vicinity of the abbey (LUAU 1997b *Section 4.2.24*) is likely to have been associated with the canons (*ibid*, *Section 6.6.18*). The existence of the abbey at Shap, with its ecclesiastical, administrative, and agricultural importance for the neighbourhood, would have contributed towards the development and use of roads and packhorse routes in the area. The canons of Shap Abbey would have travelled to and from their administrative and diocesan centre of Carlisle and they would have needed to transport goods to and from the market centres of Penrith and Kendal (*ibid*).

- 3.2.4 Excavations in 2000 at Parker's Croft, Shap, located approximately 850m to the south-east of the development site, uncovered the remains of an early medieval settlement (Heawood and Howard Davis 2002). The remains of three post-built structures were investigated, two of which extended beyond the excavation area, as well as several shallow pits, numerous further postholes, and two linear features. The finds from the site were very limited, with only two fragments of abraded Romano-British pottery, and several pieces of crude, ceramic loomweight.
- 3.2.5 Shap village is very linear in its layout, suggesting that it developed as a form of ribbon-settlement along the Old Shap Road, the current A6, during the Medieval period. Strip-like crofts would have extended beyond the properties fronting the road, and a lane would have ran along the rear for access; a Back Lane can actually be identified on current maps (OS 2002). This style of layout probably originated in the twelfth century as a result of the consolidation of Anglo-Norman power (OA North 2008). The medieval development was located along the north-western edge of the current village.
- 3.2.6 ***The Post-medieval Period:*** the only known archaeological features known to lie in close proximity or within the footprint of the development site are those dating to the Post-medieval Period (OA North 2008). These comprise field drainage ditches and a footbridge over Shap Beck.

3.3 PREVIOUS ARCHAEOLOGICAL WORK

- 3.3.1 As part of this development project a series of four geotechnical test pits were excavated within the footprint of the development site in November 2009 (OA North 2010). Although no features of archaeological significance were observed, a layer of peat was identified at a depth of 0.30m below the ground surface, and had the potential to produce archaeological and palaeoenvironmental evidence. The small size of the test pits was not conducive to identifying or investigating archaeological remains.

4. FIELDWORK RESULTS

4.1 INTRODUCTION

4.1.1 Four trenches each measuring 25m by 2m were excavated across the development area, forming 195m², or 5% of the total ground area (Fig 2). One metre sample sections were drawn of each trench, and monolith environmental samples (ES) were removed from Trenches 1, 2 and 3. The following section provides a brief description of each of the trenches.

4.2 RESULTS

4.2.1 **Trench 1** (Figs 2 and 3; Plate 1): Trench 1 was aligned north-west/south-east, and varied between 0.90m and 1.10m in depth. It comprised a mid reddish-brown, friable topsoil, **100**, present to a depth of 0.29m. This sealed subsoil, **101**, a mid orange-grey, plastic silty-clay. In turn this overlay a layer of dark greyish-black peat, **102**, 0.36m thick, and lying above natural geology, **103**. The natural was a light yellowish-grey, plastic sandy-clay, with inclusions of up to 10% sub-rounded boulders (measuring up to 0.50m in diameter). A monolith, ES1, was removed from the north-east side of the trench. A modern field drain was identified running west-north-west/east-south-east across the south-east end of the trench. No features or deposits of archaeological significance were identified.

4.2.2 **Trench 2** (Figs 2 and 3; Plate 2): Trench 2 was orientated north/south, and averaged 1.15m in depth. It comprised topsoil **100** to a depth of 0.32m, overlying subsoil **101**, which averaged 0.25m thick. This sealed peat layer **102**, which measured 0.51m thick, and in turn sealed natural geology **103**. A monolith, ES2, was removed from the eastern section. Two modern field drains were observed running north-west/south-east across the trench. No features or deposits of archaeological interest were observed.

4.2.3 **Trench 3** (Figs 2 and 3; Plate 3): Trench 3 was aligned north-east/south-west, and was excavated to a maximum depth of 1.45m in a sondage towards the south-west end, and averaged 1.10m for the remainder. The trench comprised topsoil, **104**, being identical to **100**, 0.30m in thickness, and sealing subsoil **105**, a mid orange-grey, leached sandy-silt. This measured 0.27m thick, and contained a deposit of rounded boulders towards the south-west end. This in turn sealed clay layer **106**, which was very similar to **101**, and overlay peat deposit **107**, identical to **102**. The shallow peat layer was observed extending for 10m from the south-western end. A monolith, ES3, was removed from the north-west section of the trench. No features or deposits of archaeological interest were identified.

4.2.4 **Trench 4** (Figs 2 and 3; Plate 4): Trench 4 was aligned north-west/south-east, and ranged from 0.55m to 0.95m in depth, sloping towards the north-west. It comprised topsoil **100**, 0.30m thick, and sealed subsoil **109**, a mid grey, soft and tacky silty-clay, 0.27-0.54m thick. Natural geology **103** was observed

beneath this. No peat or features and/or deposits of archaeological interest were observed in this trench.

5. DISCUSSION

5.1 SYNTHESIS

- 5.1.1 The village of Shap lies within an area of Cumbria relatively rich in pre-historic remains, however, the majority of these sites - cairns and barrows – lie in the surrounding high grounds. The treatment works itself, is located within the bottom of the valley, adjacent to Shap Beck.
- 5.1.2 The results of the archaeological evaluation indicate that the north-western area of the development lies within a small peat basin. Trenches 1 to 3 suggest that the peat varied in depth from 0.36m to 0.51m, dipping towards the very western edge of the area. The peat rose to the south and east within Trenches 3 and 4. The deposits overlying the peat are most likely to be colluvial in origin, but their heavily leached nature would indicate that the area has been subject to periodical flooding, as would be expected in a valley bottom.
- 5.1.3 No features or deposits of archaeological significance were encountered during the trial trenching; it was likely that the waterlogged nature of the area would have discouraged development in the distant and recent past.

5.2 RECOMMENDATIONS

- 5.2.1 The peat samples collected on site are considered to be suitable for assessment purposes. Peat is an important heritage asset because the highly acidic and anoxic conditions of the peat allow pollen, plant microfossils and other biological indicators to be preserved within it. These indicators can provide a record of past human activity and environmental conditions, including climate change, and may be the only remaining record of past activity in the prehistoric period. Therefore, it is recommended that the peat samples collected on site be subject to assessment for analysis.

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7. ILLUSTRATIONS

7.1 LIST OF FIGURES

Figure 1: Site location map

Figure 2: Evaluation trench location plan, superimposed upon footprint of the proposed development

Figure 3: Sections

7.2 LIST OF PLATES

Plate 1: Trench 1 looking north-west

Plate 2: Trench 2 looking north-east

Plate 3: Trench 3 looking north-east

Plate 4: Trench 4 looking north-west

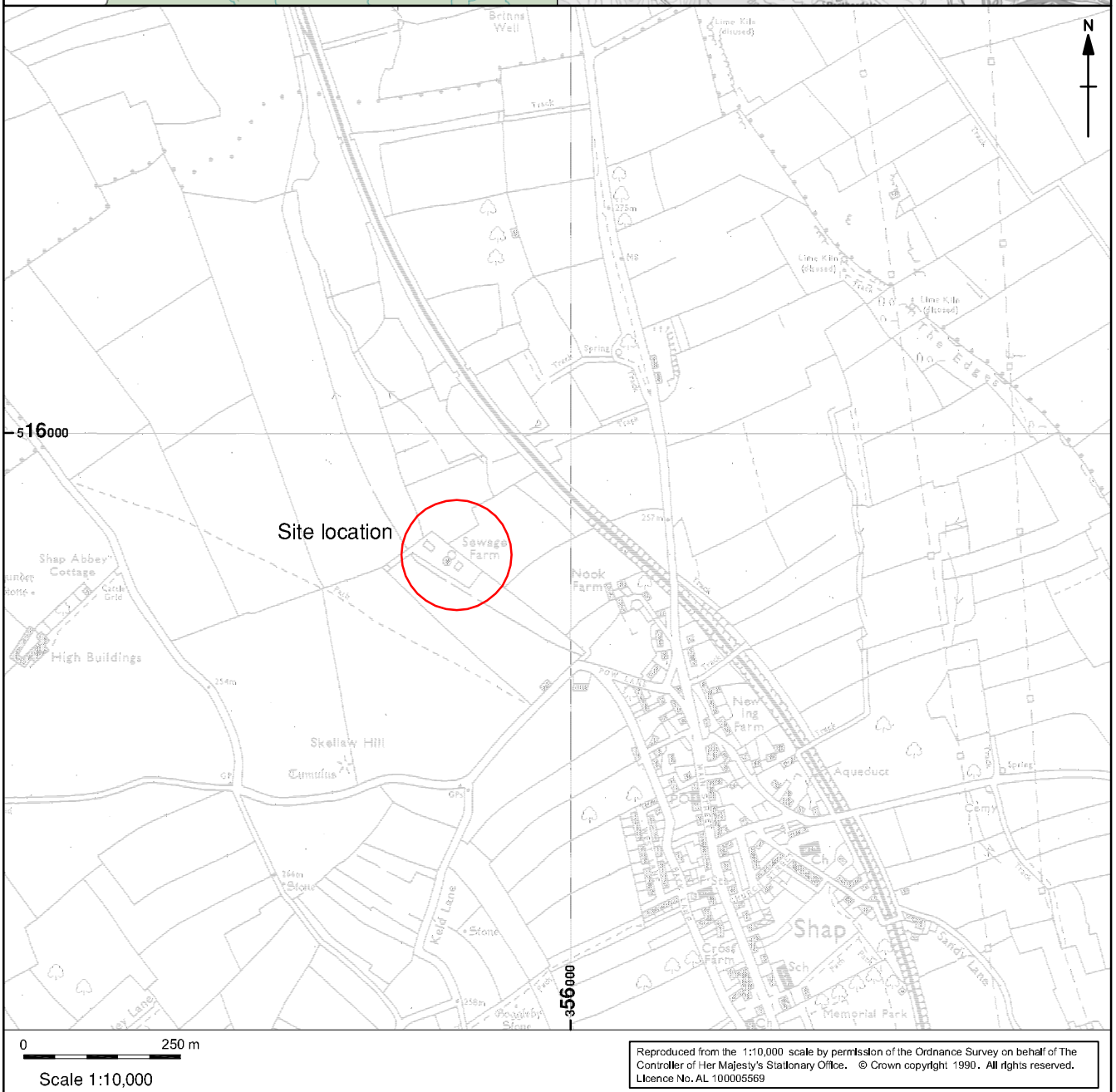
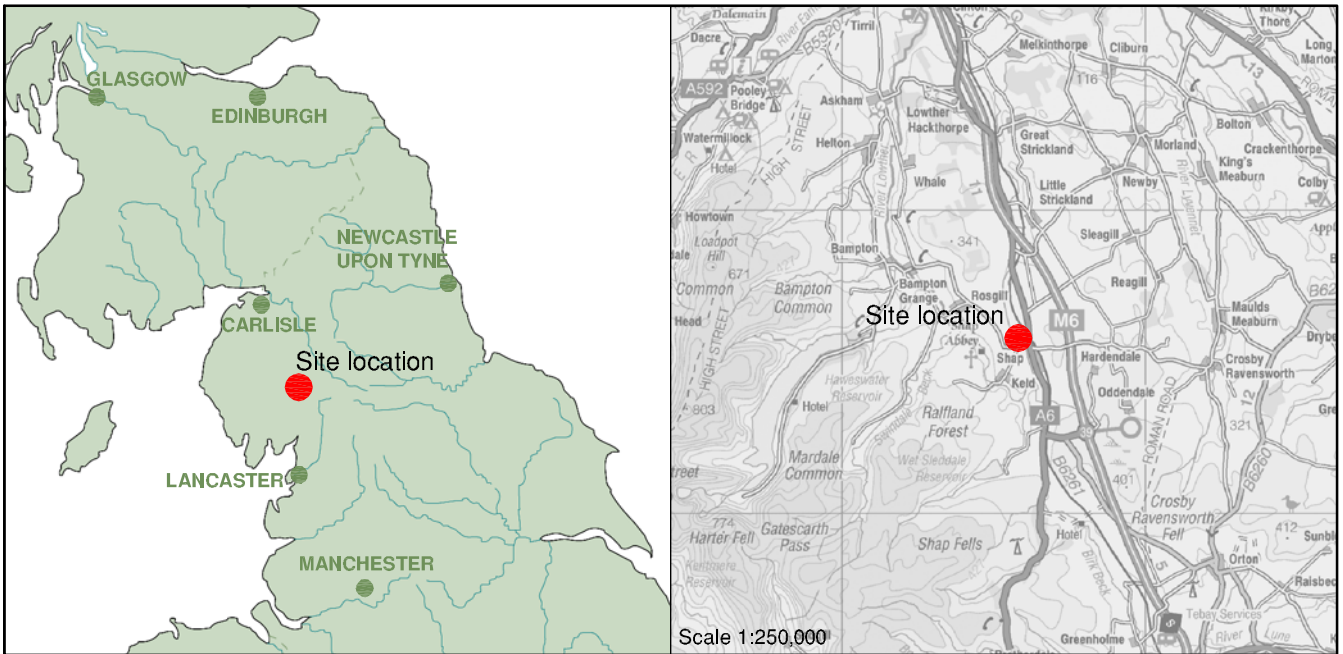


Figure 1: Site Location

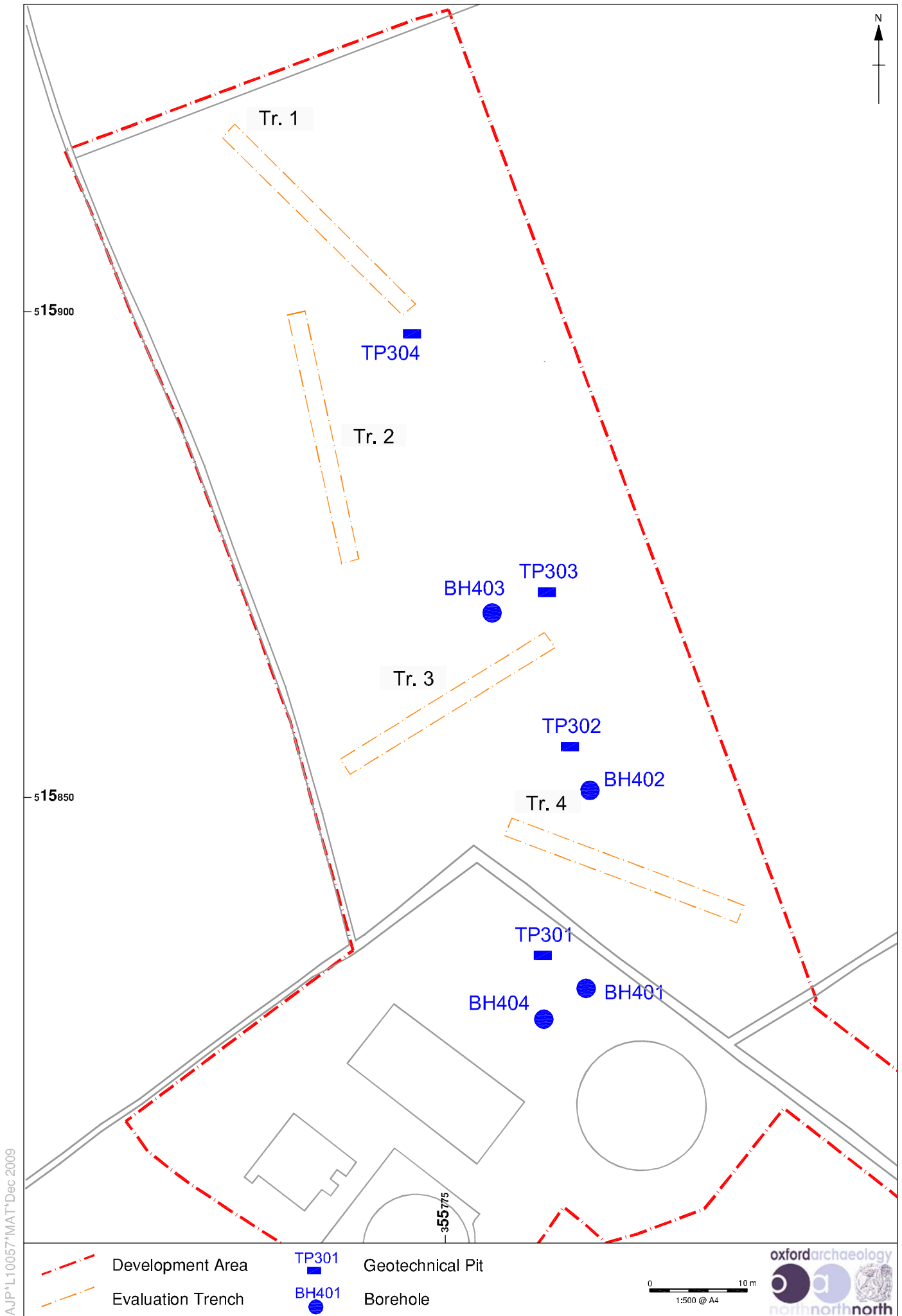






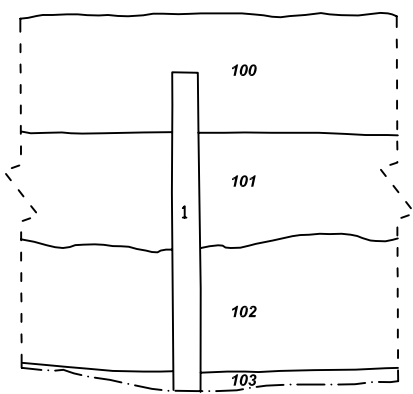
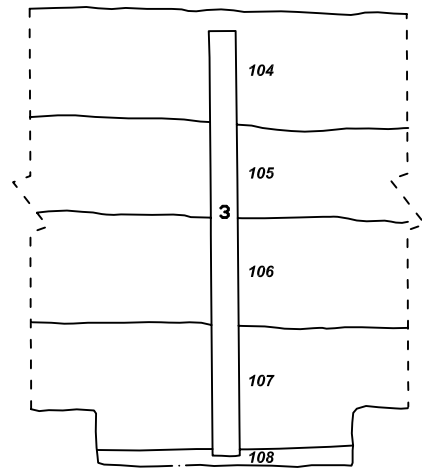


Figure 2: Evaluation trench location plan, superimposed upon footprint of the proposed development

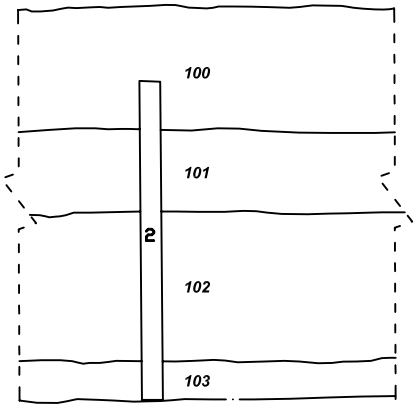
Key	
	sample section
	edge of excavation
	edge of context
	uncertain edge
	context number
	sample



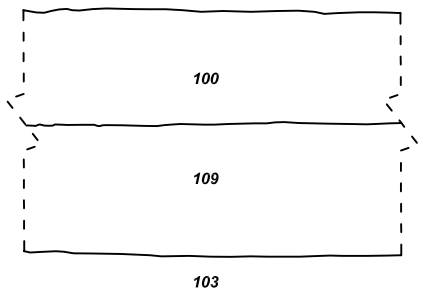
South-west facing section, Trench 1



South-east facing section, Trench 3



West-facing section, Trench 2



North-east facing section, Trench 4

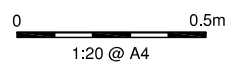


Figure 3: Sections

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Plate 1: Trench 1 looking north-west



Plate 2: Trench 2 looking north-east



Plate 3: Trench 3 looking north-east



Plate 4: Trench 4 looking north-west

APPENDIX 1: PROJECT DESIGN

SHAP WASTEWATER TREATMENT WORKS, SHAP, CUMBRIA

Archaeological Evaluation: Project Design



Oxford Archaeology North

August 2010

United Utilities

NGR: NY 55806 15803
OA North Ref No: L10057

1. INTRODUCTION

1.1 PROJECT BACKGROUND

- 1.1.1 United Utilities (hereafter UU, or the ‘client’) has submitted proposals for an extension to the northern side of the existing wastewater treatment works at Shap, Cumbria (NY 55806 15803). The site lies within an area of archaeological potential and, accordingly, Cumbria County Council’s Historic Environment Service (CCCHES), issued a brief (dated 7th July 2008) for a programme of archaeological investigation to be undertaken to further inform the planning process. The following document represents a project design for an evaluation to be undertaken prior to the enactment of any development on site and has been compiled in accordance with the CCCHES brief.
- 1.1.2 The wastewater treatment works (Fig 1) are located to the north-west of Shap, approximately 15km to the south of Penrith (NGR NY 55806 15803). The river Lowther is located approximately 1km to the west. The works are located on relatively flat land between 250-260m AOD (Ordnance Survey 2002). The underlying solid geological deposits comprise Tournaisian and Visean rock of the Carboniferous Limestone Series (BGS 2007). Overlying this are typical brown earths of the Waltham Series (Ordnance Survey 1983).

1.2 ARCHAEOLOGICAL BACKGROUND

- 1.2.1 This section should be read in conjunction with the desk-based assessment (OA North 2008) and geotechnical watching brief (OA North 2010). In total, six sites of archaeological interest were identified within the study area during the desk-based research and comprised a Bronze Age barrow (Site **01**), which is a Scheduled Monument, located at the southern extent of the study area; the remains of medieval strip fields (Site **05**) at the north-eastern extent of the study area; a post-medieval pump (Site **03**), associated with a farm; a listed barn (Site **02**) at the south-east extent of the study area; and the site of a probable post-medieval sluice (Site **06**) at the south extent of the proposed development area. In addition a area of cultivation terraces of unknown date (Site **04**) was identified towards the western extent of the study area. Of these sites, only one (Site **06**) was located in the vicinity of the proposed development. The subsequent walkover survey identified a further three post-medieval sites. These comprised Site **07**, a stone bridge over Shap Beck, Site **08** a collapsed water smoot and Site **09**, a series of field drainage ditches. Only Site **09** will be directly affected by the development works.
- 1.2.2 Despite the small number of known sites within the study area, and the fact that none lies within the zone of development impact, the archaeological potential of the area is high due to the presence of a number of Neolithic and Bronze Age monuments in the wider area, including Shap Stone Avenue, the course of which crosses the south-western portion of the study area, with the Skellaw Hill Barrow (Site **01**) on the same alignment.
- 1.2.3 The geotechnical watching brief observed the excavation of four test pits within the proposed development area. These were excavated through 0.4m

of topsoil and 0.3m of subsoil which sealed layers of silt and peat which were between 0.1 and 0.3m thick. These in turn overlay at least 1m of alluvial silts before the natural bedrock was encountered between 2 and 2.5m below ground level (OA North 2010).

1.3 OXFORD ARCHAEOLOGY NORTH

1.3.1 OA North has considerable experience of working in Cumbria, having undertaken a great number of small and large scale projects throughout Northern England during the past 27 years, including work in and around Carlisle, Appleby, Kendal and Penrith. 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.

1.3.2 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 of Field Archaeologists (IFA) **registered organisation, registration number 17**, and all its members of staff operate subject to the IFA Code of Conduct (1994).

2 OBJECTIVES

2.1 The programme of work aims to evaluate the archaeological resource and potential for further archaeological deposits, in order to determine their extent and nature of the remains that may be threatened by the proposed development. This information will be used by CCCHES to determine any requirements for mitigation of the proposed development. The required stages to achieve these ends are as follows:

2.2 **Archaeological Evaluation:** to undertake evaluation trenching of c 195m² of the proposal area to determine the quality, extent and importance of any archaeological remains on the site (in accordance with the IfA standards (1999b)).

2.3 **Report and Archive:** a report will be produced for the client within twelve weeks, 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 METHOD STATEMENT

3.1 ARCHAEOLOGICAL EVALUATION

3.1.1 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. The evaluation will provide a predictive model of surviving archaeological remains detailing zones of relative importance against known development proposals. In this

way, it will adequately sample the threatened available area and provide an impact assessment.

- 3.1.2 **Trenches:** the evaluation is required to examine a minimum sample of 5% of the mains development area. This corresponds to 195m², which will be investigated through the excavation of four trenches, each 25m long by 2m wide. The exact configuration and location of the trenches will be established prior to the fieldwork to allow an even spread across the site whilst also targeting areas of certain development impact.
- 3.1.3 **Methodology:** any topsoil and modern overburden will be removed by machine (fitted with a toothless ditching bucket) under archaeological supervision to the surface of the first significant archaeological deposit, or to the top of the alluvium, 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 must be investigated and recorded unless otherwise agreed by CCCHES. It is not proposed to remove alluvial deposits other than within the confines of a localised sondage (in order to record any evidence that might allow an interpretation of the deposition, the presence of buried soil horizon, or the presence of artefacts) that can be rapidly recorded and backfilled.
- 3.1.4 The trenches will not be excavated deeper than 1m to accommodate health and safety constraints, without shoring or stepping out of the trench sides. Should this be required, this may be costed as a variation to cover those resources necessary. All trenches will be excavated in a stratigraphical manner, whether by machine or by hand. Trenches will be located by use of a total station, or gps, and altitude information will be established with respect to Ordnance Survey Datum.
- 3.1.5 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*.
- 3.1.6 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, colour slides and monochrome contacts) to identify and illustrate individual features. Primary records will be available for inspection at all times. 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 of Field Archaeologists guidelines) in order to minimise deterioration.

- 3.1.7 **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 and will be subject to the agreement of CCCHES and the client.
- 3.1.8 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.
- 3.1.9 **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.
- 3.1.10 **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.
- 3.1.11 **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. 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 **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.

- 3.1.13 **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.

3.2 REPORT

- 3.2.1 One bound and one unbound copy of a written synthetic report will be submitted to the client, and three copies to the Cumbria HER within twelve weeks of completion of the fieldwork, unless an alternative deadline is agreed with the client beforehand. It will present, summarise, and interpret the results of the programme detailed above in order to come to as full an understanding as possible of the archaeology of the development area. The report will include;

- a site location plan related to the national grid
- a front cover to include the planning application number 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, including the sources consulted
- a summary of the historical background of the study area
- appropriate plans showing the location of the site
- a statement, where appropriate, of the archaeological implications of the proposed development
- monochrome and colour 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
- plans and sections showing the positions of deposits and finds
- an index to the project archive

- 3.2.2 **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.

3.3 ARCHIVE

- 3.3.1 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) and UKIC (1990). 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.

4 HEALTH AND SAFETY

- 4.1 OA North provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (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.
- 4.2 Full regard will, of course, be given to all constraints (services etc) during the evaluation as well as to all Health and Safety considerations. OA North provides a Health and Safety Statement for all projects and maintains a Company Safety policy. As a matter of course the field team will use a Cable Avoidance Tool (CAT) prior to any excavation to test for services. However, this is only an approximate location tool. Any **information regarding services**, i.e. drawings or knowledge of live cables or services, within the study area and held with the client should be made known to the OA North project manager prior to the commencement of the evaluation.
- 4.3 A portable toilet with hand washing facilities will be provided and located on or adjacent to the site unless the client would prefer to arrange alternative facilities. This is costed as a contingency.
- 4.4 Any known contamination issues or any specific health and safety requirements on site should be made known to OA North by the client or main contractor on site to ensure all procedures can be met, and that the risk is dealt with appropriately.
- 4.5 Should areas of previously unknown contamination be encountered on site the works will be halted and a revision of the risk assessment carried out. Should it be necessary to supply additional PPE or other contamination avoidance equipment this will be costed as a variation.

5 OTHER MATTERS

5.1 ACCESS

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

5.2 REINSTATEMENT

- 5.2.1 It is understood that there will be no requirement for reinstatement of the ground beyond backfilling. The ground will be backfilled so that the topsoil is laid on the top, and the ground will be roughly graded with the machine.

5.3 FENCING/HOARDING REQUIREMENTS

- 5.3.1 It is understood from the client that there is no requirement to provide fencing for the excavated area, as the land should be free of public ingress and livestock.

5.4 PROJECT MONITORING

- 5.4.1 Whilst the work is undertaken for the client, CCCHES 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 INSURANCE

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

5.6 WORK TIMETABLE

- 5.6.1 **Archaeological Evaluation:** it is anticipated that this element would require two to three days.
- 5.6.2 **Report:** the final report will be submitted to the client within twelve weeks, unless an earlier deadline is agreed beforehand.
- 5.6.3 **Archive:** the archive will be deposited within six months.

5.7 STAFFING

- 5.7.1 The project will be under the direct management of Stephen Rowland and Alison Plummer (OA North Senior Project Managers) to whom all correspondence should be addressed.
- 5.7.2 The Evaluation will be directed by either Marc Storey (OA North Project Officer) or Kelly Clapperton (OA North Supervisor), who will be assisted by one to three archaeologists as appropriate. All OA North Project Officers and Supervisors are experienced field archaeologists capable of carrying out projects of all sizes.
- 5.7.3 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, but particularly from the local area, being involved with the Carlisle Millennium Project.
- 5.7.4 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.

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