

Springmill Impounding Reservoir to Watergrove Water Treatment Works Pipeline, Lancashire and Greater Manchester

Historic Research and Watching Brief



Oxford Archaeology North

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United Utilities

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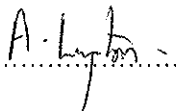
National Grid Reference: SD 8768 1689 to SD 9059 1755

Prepared by: Thomas Mace
Position: Acting Assistant Supervisor
Date: May 2009

Checked by: Alison Plummer
Position: Senior Project Manager
Date: September 2009

Signed.....

Approved by: Alan Lupton
Position: Operations Manager
Date: September 2009

Signed.....

Receiving Museum
Museum Accession No

Oxford Archaeology North
Mill 3
Moor Lane Mills, Moor Lane
Lancaster
LA1 1GF
t: (0044) 01524 541000
f: (0044) 01524 848606

© Oxford Archaeological Unit Ltd (2009)
Janus House
Osney Mead
Oxford
OX2 0EA
t: (0044) 01865 263800
f: (0044) 01865 793496

w: www.oxfordarch.co.uk
e: info@oxfordarch.co.uk

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SUMMARY

United Utilities proposed the construction of a new pipeline connecting Springmill Impounding Reservoir to Watergrove Water Treatment Works (SD 8768 1689 to SD 9059 1755). The proposed pipeline runs from Springmill Reservoir, just south of Whitworth, Lancashire, to Watergrove Water Treatment works in Greater Manchester, where the pipeline will terminate. As the scheme affects areas of archaeological potential Lancashire County Council's Archaeology Service (LCAS) recommended that a formal watching brief be undertaken for the moorland section of the pipeline, lying between Watergrove Water Treatment Works and Whitworth Rake. This comprises around two thirds of the route, with the remainder lying within the highway. This approach was verbally agreed by the Planning Archaeologist at Greater Manchester Archaeological Unit Sites and Monuments Record (GMAUSMR). Following the preparation of a Project Design (*Appendix 1*), Oxford Archaeology North (OA North) were commissioned to undertake the recommended work.

The historical research demonstrated that in Whitworth itself the pipeline passes through the site of a woollen mill at Mossy Croft. Although evidence from historic maps suggests the pipeline misses the buildings, it does however, cross the former tenter fields just west of the mill. These tenter fields were cut off from the mill by the construction of the Facit branch of the former Lancashire and Yorkshire railway and later built over by the Wallbank estate. The mill building itself survived the railway and stood immediately to the west of the track. It is shown (but not named) on the Ordnance Survey 1:2,500 map surveyed in 1890, but was replaced by Albert Mill (cotton) to the north-east bridging the River Spodden.

The watching brief took place in May 2007. Overall, the watching brief recorded only limited evidence for archaeological activity within the easement. Topsoil stripping had commenced several weeks prior to the watching brief taking place, which greatly reduced the potential visibility of archaeological features. Two areas of ridge and furrow were observed towards the eastern end of the easement, near Watergrove Treatment Works. No further archaeological work is recommended for the pipeline easement.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank United Utilities for commissioning the work. Thanks are also due to Norman Redhead of Greater Manchester Archaeological Unit and Doug Moir of Lancashire County Archaeology Service, Preston.

The historic research and watching brief was undertaken by Thomas Mace, who also compiled the report. Mark Tidmarsh produced the drawings. Alison Plummer managed the project, and edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 United Utilities proposed the construction of a new pipeline connecting Springmill Impounding Reservoir to Watergrove Water Treatment Works. The proposed pipeline runs from Springmill Reservoir in the west, just south of Whitworth, Lancashire in a northerly direction following the dismantled Lancashire and Yorkshire railway into Whitworth itself and turning in an easterly direction towards Watergrove Water Treatment works in Greater Manchester. As the scheme affects areas of archaeological potential Lancashire County Council's Archaeology Service recommended that a formal watching brief be undertaken for the moorland section of the pipeline, lying between Watergrove WTW and Whitworth Rake. OA North submitted a project design for the archaeological programme of work (*Appendix 1*), and following its approval by both the LCAS and the GMAUSMR, OA North was commissioned to undertake the work. This report sets out the results of the watching brief, which was carried out in May 2007.
- 1.1.2 Topsoil stripping had been completed several weeks prior to the watching brief taking place and this greatly reduced the potential for archaeological features to be observed. However, a thorough inspection of the stripped easement was undertaken, along with a watching brief of very limited areas of topsoil stripping.

2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 The project design (*Appendix 1*) was closely adhered to throughout the archaeological investigations and all works were consistent with relevant standards and procedures of the Institute of Field Archaeologists, and generally accepted best practice. However, due to circumstances beyond the control of OA North, the topsoil stripping was undertaken several weeks in advance of the archaeologists being notified. A thorough inspection of the stripped easement was undertaken, along with a watching brief of very limited areas of topsoil stripping.

2.2 HISTORIC RESEARCH

2.2.1 A study area focused on the vicinity of the proposed development was, was examined for sites of archaeological interest, in order to provide a historical context for the results of the watching brief.

2.2.2 **Greater Manchester Archaeological Unit, Sites and Monuments Record (GMAUSMR):** the Sites and Monuments Record held in Manchester was consulted to establish the presence of sites of cultural interest already known in the area.

2.2.3 **Country Record Office (CRO), Manchester:** the record office holds Ordnance Survey (OS) maps and other cartographic and documentary sources related to the study area.

2.2.4 **Oxford Archaeology North (OA North):** OA North has an extensive archive of secondary sources relevant to the study area, as well as numerous unpublished client reports on work carried out both as OA North and in its former guise of Lancaster University Archaeological Unit (LUAU). These were consulted where necessary.

2.3 WATCHING BRIEF

2.3.1 This programme of field observation aimed to record accurately, in those areas visited, any deposits exposed during the areas visited of the topsoil strip within the easement. The work comprised 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 during observation.

2.3.2 All archaeological contexts were recorded on OA North's *pro-forma* sheets, using a system based on that of the English Heritage Centre for Archaeology. A monochrome and colour slide photographic record was maintained throughout and, where appropriate, scaled profiles were produced of archaeological features at a scale of 1:20.

2.4 ARCHIVE

- 2.4.1 The results of all archaeological work carried out, including a copy of this report, will be provided in the English Heritage Centre for Archaeology format. In this instance, the archive will be submitted to the County Record Office (Preston). A copy of the final report will also be deposited with the Rochdale Local Studies Library.
- 2.4.2 The Arts and Humanities Data Service (AHDS) online database *Online Access to index of Archaeological Investigations* (OASIS) has been completed as part of the archiving phase of the project.

3. BACKGROUND

3.1 LOCATION, TOPOGRAPHY AND GEOLOGY

- 3.1.1 Whitworth is situated in the Rossendale Valley, Lancashire, in the foothills of the Pennines, between the towns of Bacup to the North and Rochdale to the South (Fig 1). The township of Whitworth embraces the entire length of the Whitworth Valley and covers an area seven miles square. It comprises the communities of Healey, Whitworth, Facit and Shawforth being linked by the A671, part of a great turnpike road built in the eighteenth century.
- 3.1.2 This area is part of the Manchester Pennine Fringe, which occupies the transitional zone between the open moorlands of the Dark Peak and the southern Pennines and the densely populated urban conurbation of Manchester. The Pennine Fringe lies broadly within an elevational range of 100-300m OD. The topography of ridges and valleys is characterised by historical mineral extraction, industrial heritage and existing land-use (Countryside Commission, 1998).
- 3.1.3 The Manchester Pennine Fringe runs along the edge of the Millstone Grit uplands of the south Pennines and Dark Peak, The fringe areas have been carved partly from Millstone Grit and partly from overlying Coal Measures (Countryside Commission, 1998). The underlying solid geology, as mapped by the Ordnance Survey Geological Survey, consists of the Lower Coal Measures (Westphalian A) of the Carboniferous period (Ordnance Survey 1983).

3.2 HISTORY AND ARCHAEOLOGY

- 3.2.1 **Mesolithic period:** the moorland section between Watergrove wastewater treatment works and Whitworth Rake has the potential to disturb prehistoric remains. Most common are scatters of flints from the Mesolithic period, probably representing traces of travelling hunter-gatherer bands, but some remains of Bronze Age and later settlement activity could also be present (Barrowclough 2008). A confirmed Mesolithic find was a flint core (SMR 1855) recovered from Whittle Hill (SD 827 190) and recent work by Littleborough Archaeological Society has also recovered finds from nearby Knowl Hill and Great Ding (SD 84 16). Lancashire and Greater Manchester as a whole has one of the highest concentrations of Mesolithic (c 8000-4000 BC) findspots in Britain (Cowell 1996, 21).
- 3.2.2 The survival of this material is dependent upon a number of factors, primarily the location and period of exposure. Areas presenting evidence of specific activities, such as butchery, are likely to be located on higher land within the application site. While small, temporary camps and their associated finds would probably be located within a lowland area, which would have provided a higher degree of shelter and access to a fresh water supply (Collcutt 2004). The known topography of the pipeline route would indicate potential for recovering invaluable information about this period.
- 3.2.3 **Neolithic period:** activity from this period comprises mainly lithic sites from the environs of the study area and includes a small Neolithic lithic scatter from

Brandwood Moor (Lancashire SMR PRN 1127) at SD 850 200. Probably the most significant site is a substantial antiquarian flint tool assemblage from neighbouring Knowl Hill (Greater Manchester SMR PRN 348) comprising over one thousand artefacts from four collection sites (Collcutt 2004). Other lithic sites include finds from Cheesden Pasture, and Great Ding which include Early Neolithic (c 4000 - 3200 BC) arrowheads, scrapers and blades (*ibid*).

- 3.2.4 **Bronze Age:** the Bronze Age period (c 2500 - 700 BC) is represented by two burial cairns within the study area, one at Whitelow Hillock (Lancashire SMR PRN 1939) (SD 8050 1626) and another located east of Bank Lane, Shuttleworth (Lancashire SMR PRN 1940) (SD 805 172). The Whitelow cairn was excavated by the Bury Archaeological Group between 1961 and 1965 producing a rich assemblage of grave goods, including five ceramic urns and eight cremations (Collcutt 2004). The primary burial was one of a female with associated grave goods. The Shuttleworth cairn, which was delineated by a series of kerb stones, was the subject of a rescue excavation in advance of quarrying and was found to comprise an inhumation within a stone cist; the remains of an infant lay below the cist (*ibid*). These are the only known Bronze Age sites within the study area, but it is considered likely that other, less conspicuous, monuments may exist nearby (*ibid*).
- 3.2.5 **Iron Age:** there are no known archaeological remains from the Iron Age
- 3.2.6 **Romano-British period:** no known archaeological remains survive from this period (AD 43-410) within the study area. However, a hoard of coins and other metal artefacts was recovered from Nangreaves, 8km to the west. The date range from the assemblage covers the period AD 253 - 293. The nearest known major Roman road led from Manchester to Ribchester and can be seen at Edgworth, c 10km west of the study area (*ibid*).
- 3.2.7 **Early Medieval period:** as with other parts of Lancashire, and the North West region as a whole, very little evidence for the early medieval period (AD c 410-1066) survives. Some settlement in the broad area may be inferred from place-name evidence, wherein Old English elements survive. The first part of the name Rossendale is connected to the Welsh *rhos*, meaning moor, which indicates some British contribution (*ibid*).
- 3.2.8 **Medieval:** place-name evidence implies that many of the local settlements would have been established during the earlier years of this period. For example, the name Shuttleworth dates to the early thirteenth century (*ibid*), but again, the SMRs list no sites from this period (1066-1485). A walkover survey undertaken in 2003 (Collcutt 2004) has identified evidence for farmsteads and field systems, such as that at Cheesden Pasture (SD 830 170), which may have had medieval origins. This settlement has a dwelling with associated outbuildings, and has a radial field system incorporating fossilised ridge and furrow. Such settlements, although undated, typically have their origins in the medieval period (Collcutt 2004). Topographical evidence of medieval activity might also be inferred from the Ordnance Survey sheets for the area. These show field patterns whose irregularity suggests that they may originate from the medieval period (*ibid*).
- 3.2.9 **Post-medieval period:** there are extensive cartographic and documentary sources available to cover the general area many of which are industrial sites

from the mid-nineteenth to the early twentieth centuries (*op cit*). Many of these are shown on the first and second edition Ordnance Survey maps (1851 and 1893), and are related to the continuing mineral (stone and coal) extraction process, including mine shafts, adits, dams, sluices, reservoirs, tramways and quarry workings (*op cit*). As well as mineral extraction industries, towards the end of the eighteenth century a small woollen industry was supported on the moor within the study area (*ibid*). A number of mills exist and several abandoned millponds known as “lodges” are present on the moors. A woollen mill is known to have existed at Mossy Croft, Whitworth within the study area. This was later replaced by Albert Mill (cotton) to the north-east, bridging the River Spodden. A reference to the mill can be found in Worrall’s *Cotton Spinners and Manufacturers Directory*, (1891, 191). It lists Albert Mill, Whitworth, as an integrated mill (both spinning and weaving) with 28,080 spindles and 651 looms. The mill was owned by Whitworth Manufacturing Co Ltd and run by John Hoyle, Manager.

- 3.2.10 In addition to the extensive industrial heritage, there are sites that are classified as agricultural (Collcutt 2004), and include farmsteads, field systems settlements and water supplies (*ibid*); however, some of those which developed during the post-medieval period may have had their origins in the medieval period. Settlements that were constructed from the eighteenth century onwards are consistent with parliamentary enclosure field systems, such as at Scout Corner (*ibid*). Many of these also possess small coal pits, suggesting that mining might have supplemented upland farming at this time.

4. WATCHING BRIEF

4.1 RESULTS

- 4.1.1 Generally, the exposed topsoil comprised a dark grey brown silt measuring 0.09m to 0.15m in depth. For the most part, it overlay dark grey-brown silty-clay subsoil, measuring 0.13m deep, although in places this changed to a light grey-yellow sandy-silt, 0.10m deep. The natural geology, where exposed, comprised a mid greyish-yellow sandy-clay (Plate 1).
- 4.1.2 Two areas of ridge and furrow (Plate 2) were observed towards the east of the easement (Fig 2) showing a change in land use; the land is currently used for grazing sheep. The east/west aligned section of the topsoil strip near Watergrove wastewater treatment works exposed approximately 50m of an area of ridge and furrow, aligned north-west/south-east. The ridges here measured 0.38m in height and were spaced approximately 2m apart. The second area of ridge and furrow was exposed further to the west. This area was similarly aligned north-west/south-east, which is parallel to the extant dry stone walls, enclosing the field. The ridges were slightly lower than in the first area, being only 0.25m in height and spaced 2.3m apart.
- 4.1.3 No further archaeological features were identified during the course of the watching brief.

5. DISCUSSION

5.1 SYNTHESIS

- 5.1.1 The fact that the topsoil stripping had been completed several weeks prior to the arrival of archaeologists on site greatly hampered the detection of any archaeological features, especially in places where the ground had been substantially churned by machine tracks or dried out by the sun (Plate 1). With this being the case, areas of apparent change in the colour of the soil were partially excavated to be certain of their nature. No clear man-made interventions could be observed, suggesting these features were natural in origin. Patches of topsoil also remained in some areas.
- 5.1.2 Two areas of ridge and furrow were observed in the eastern section of easement, near Watergrove Water Treatment Works (Fig 2; Plate 2). Both areas of ridge and furrow were aligned with the extant dry stone walls, which enclosed the fields in which they were observed.
- 5.1.3 Overall, the watching brief recorded only limited evidence for archaeological activity within the easement, suggesting that human activity in the area has been largely agricultural and pastoral in nature.

6. BIBLIOGRAPHY

6.1 PRIMARY SOURCES

Ordnance Survey, 1851, *1:10560 First Edition, Lancashire* **80**

Ordnance Survey, 1893, *1:2500 Second Edition, Lancashire* **LXXX.8**

Ordnance Survey, 1983 *Soils of Midland and Western England*, **3**

6.2 SECONDARY SOURCES

Barrowclough, D, 2008 *Prehistoric Lancashire*, Stroud

Collcutt, S (ed), 2004 Section 7 – Cultural Heritage, in *Scout Moor Wind Farm Supplementary Environmental Information*, 163-266

Countryside Commission, 1998 *Countryside Character Volume 2: North West*, Cheltenham

Cowell, R, 1996 The Upper Palaeolithic and Mesolithic, in R Newman (ed), *The Archaeology of Lancashire*, Lancaster, 19-34

Ekwall, E, 1922 *The Place-names of Lancashire*, Manchester

Worrall, J, 1891 *Cotton Spinners and Manufacturers' Directory*, 8th edn, Oldham

7. ILLUSTRATIONS

7.1 LIST OF FIGURES

Figure 1: Location map

Figure 2: Proposed Route of Pipeline

7.2 LIST OF PLATES

Plate 1: View of pipeline easement looking north-west

Plate 2: View of ridge and furrow to the eastern end of the easement, looking north

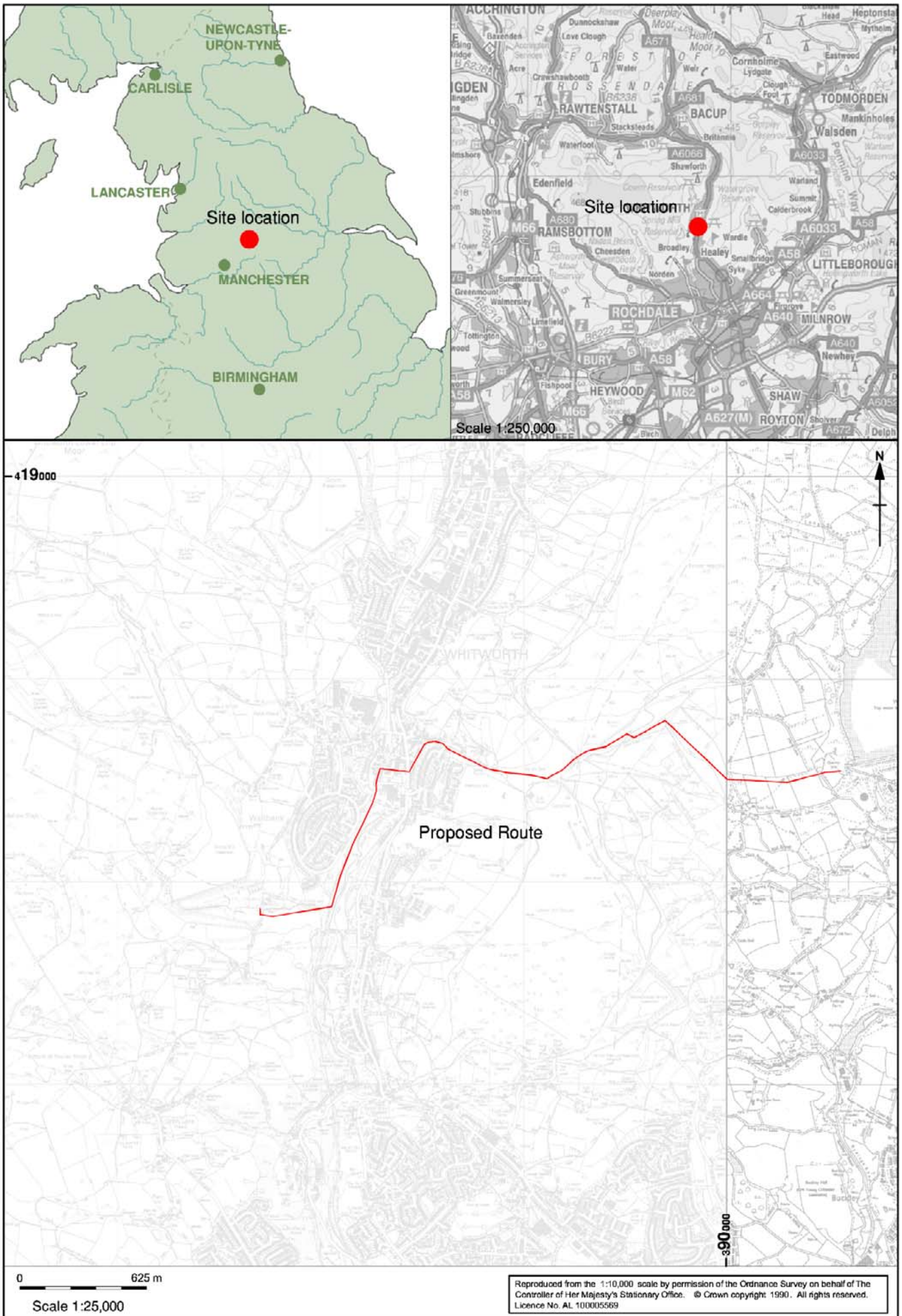


Figure 1: Site Location

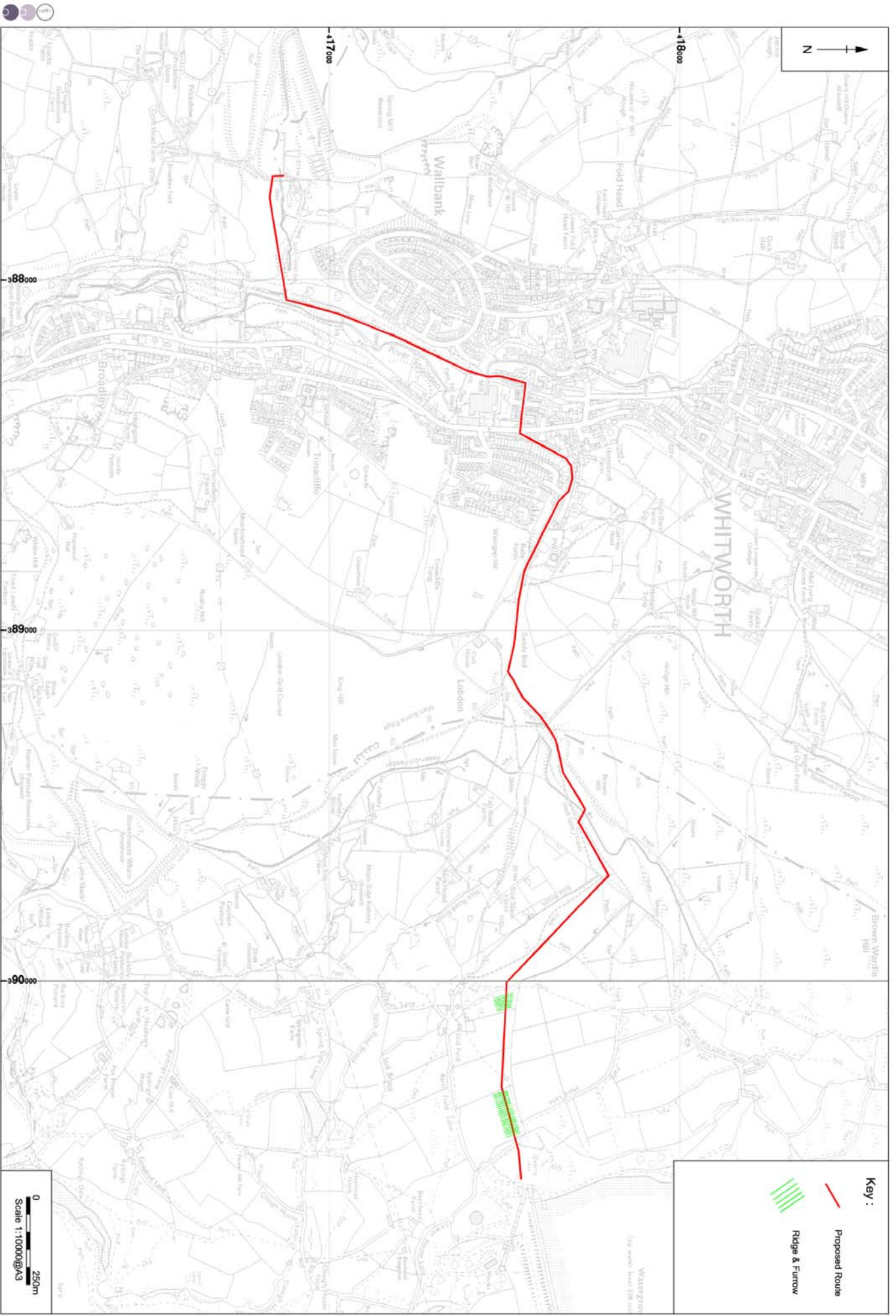


Figure 2: Proposed route of pipeline



Plate 1: View of pipeline easement looking north-west



Plate 2: View of ridge and furrow at the eastern end of the easement, looking north

APPENDIX 1: PROJECT DESIGN

**SPRINGMILL
IMPOUNDING
RESERVOIR TO
WATERGROVE WATER
TREATMENT WORKS
PIPELINE,
LANCASHIRE AND
GREATER
MANCHESTER**

**Archaeological Watching Brief
Project Design**

Oxford Archaeology North

Revised January 2007

United Utilities

OA North Job No. L9736

1. INTRODUCTION

- 1.1 United Utilities (hereafter the client) have proposed the construction of a new pipeline connecting Springmill Impounding Reservoir to Watergrove Water Treatment Works. The majority of the route is located in Lancashire but it also extends into Greater Manchester. As the scheme affects areas of archaeological potential Lancashire County Council's Archaeology Service has recommended that a formal watching brief should be undertaken for the moorland section of the pipeline, lying between Watergrove WTW and Whitworth Rake. The Assistant County Archaeologist at Greater Manchester Archaeological Unit Sites and Monuments Record (GMAUSMR) has verbally agreed this approach.
- 1.2 The moorland section between Watergrove WTW and Whitworth Rake has the potential to disturb prehistoric remains, although none have been reported within the proposed pipeline corridor. Most common are scatters of flints from the Mesolithic period, probably representing traces of travelling hunter-gatherer bands, but some remains of Bronze Age and later settlement activity could also be present (LCAS).
- 1.3 OA North has considerable experience of the assessment, evaluation and excavation of sites of all periods, having undertaken a great number of small and large-scale projects during the past 20 years. Watching briefs, evaluations and excavations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables.
- 1.4 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 The following programme has been designed to evaluate the archaeological resource of the proposed development area. The required stages to achieve this are as follows:
- 2.2 **Rapid Desk-Based Assessment:** a brief appraisal of the data held by the Sites and Monuments Record Offices (SMR) for both counties will be undertaken;
- 2.3 **Permanent Presence Watching Brief:** this will be undertaken during all ground disturbances associated with the moorland section of the proposed development;
- 2.4 **Report and Archive:** production of a report following the collation of data during Sections 2.2 and 2.3 above.

3 METHOD STATEMENT

3.1 WATCHING BRIEF

- 3.1.1 **Rapid Desk-Based Assessment:** an examination will be undertaken of SMR data made available to the project in order to place the findings of the watching brief into a local and regional context.

- 3.1.2 A programme of field observation will record accurately the location, extent, and character of any surviving archaeological features and/or deposits within all topsoil stripping activities associated with the development works. This work will comprise observation during the excavation for these works, 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 during observation.
- 3.1.3 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 (ie 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).
- 3.1.4 It is assumed that OA North will have the authority to stop the works for a sufficient time period to enable the recording of important deposits. It may also be necessary to call in additional archaeological support if a find of particular importance is identified or a high density of archaeology is discovered. This would only be called into effect in agreement with the Client and the County Archaeology Service and will require a variation to costing.
- 3.1.5 **Written Record:** during this phase of work, recording will comprise a full description and preliminary classification of features or materials revealed. All information identified in the course of the site works will be recorded stratigraphically utilising OA North pro-forma. Areas of excavation will be assigned trench numbers and context numbers will be applied to archaeological features.
- 3.1.6 **Site Drawings:** a large-scale plan (provided by the client) will be produced of the area of the groundworks showing the location and extent of the ground disturbance, appropriately labelled to correspond with the written record. Archaeological features will be recorded accurately (either on plan (1:20) and/or section (1:10), and as grid co-ordinates where appropriate).
- 3.1.7 The site drawings will be manipulated in an industry standard CAD package (AutoCAD release 2000) for the production of final drawings.
- 3.1.8 A photographic record will be undertaken simultaneously. This will utilise a 35mm camera for the production of both colour slides and monochrome contact prints. A photographic scale will appear in all images captured. The photographic index will describe and locate each area/feature photographed.
- 3.1.9 **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. The LCAS and the local Coroner will be informed immediately. If removal is essential the exhumation of any funerary remains will require the provision of a Department of Constitutional Affairs 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, and if appropriate, in compliance with the 'Disused Burial Grounds (Amendment) Act, 1981.

- 3.1.10 **Treatment of finds:** no sampling of finds will take place during fieldwork. 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.
- 3.1.11 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 **Treasure:** any gold and silver artefacts recovered during the course of the excavations 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 **Environmental Samples:** 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.

3.2 REPORT AND ARCHIVE

- 3.2.1 **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 finished CAD drawings.
- 3.2.2 **Final Report:** two copies of the final report will be submitted to the client and further copies to the LCAS and GMAUSMR. 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:** a brief 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 watching brief;
 - (vi) **Discussion:** a description of the significance of the study area in its local and regional context;

- (vii) **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;
- 3.2.3 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.
- 3.2.4 **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.
- 3.2.5 **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). This archive, including a copy of the report, will be provided in the English Heritage Centre for Archaeology format. In this instance the archive will be submitted to the County Record Office (Preston). A copy of the final report will be deposited with the Rochdale Local Studies Library.
- 3.2.6 The Arts and Humanities Data Service (AHDS) online database *Online Access to index of Archaeological Investigations* (OASIS) will be completed as part of the archiving phase of the project.

4 PROJECT MONITORING

- 4.1 Monitoring of this project will be undertaken through the auspices of the LCAS Archaeologist and the Assistant Archaeologist at GMAUSMR, both of whom will be informed of the start and end dates of the work.

5 WORK TIMETABLE

- 5.1 The rapid desk-based assessment is expected to take in the region of one day to complete.
- 5.2 The duration of the watching brief will be dependent upon the progress of the contractor.
- 5.3 The client report will be completed within eight weeks following completion of the fieldwork.

6 STAFFING

- 6.1 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.

- 6.2 Present timetabling constraints preclude detailing at this stage exactly who will be undertaking the rapid desk-based assessment and watching brief, but both of these elements of the project are likely to be supervised by an OA North project supervisor experienced in these types of project. All OA North project officers and supervisors are experienced field archaeologists capable of carrying out projects of all sizes.

7 INSURANCE

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

APPENDIX 2: CONTEXT LIST

Context Number	Location	Category	Description
1	Fields directly to the south of Brown Hill	Topsoil	Topsoil overlying fields directly to the south of Brown Hill. Dark blackish-brown, friable, silt (<0.15m thick).
2	Fields directly to the south of Brown Hill	Subsoil	Possible subsoil underlying (1) in fields directly to the south of Brown Hill. Mid grey brown, compact, sandy-silt (<0.13m thick).
3	Fields directly to the south of Brown Hill	Natural?	Variable natural layer underlying the subsoil in fields to the south of Brown Hill. Variable; mid-greyish yellow, compact, sandy-clay (>0.08m). <2% small sub-rounded and sub-angular stones.
4	Fields directly to the south of Brown Hill	Fill	Fill of linear hollow 5. Dark brown, friable, very rooted, silt. No inclusions. Excavated using a mattock and shovel.
5	Fields directly to the south of Brown Hill	Natural	Linear natural hollow aligned north-east/south-west, running south of the reservoir feeder to the east of Slack Gate. The feature is 8.10m in length and is 1.18m wide and less than 0.12m deep. It is wide-mouthed shallow, with a gradual break of slope at the top and bottom of the feature.
6	Fields directly to the south of Brown Hill	Natural	Compact, light whitish-grey natural clay layer, underlying fields to the south of Brown Hill. Possible variation of 3.
7	North-west/ south-east aligned section of the pipeline to the south-east of extant reservoir feeder	Topsoil	Dark, blackish-brown, friable, silt (<0.09m), overlying a possible subsoil 8. No inclusions. Some post-medieval pottery shards, glass and clay pipe fragments were recovered from the topsoil.
8	North-west/ south-east aligned section of the pipeline to the south-east of extant reservoir feeder	Subsoil	Mid brown, friable, sandy-silt layer (<0.10m thick) overlying the natural clay layer 9.
9	North-west/ south-east aligned section of the pipeline to the south-east of extant reservoir feeder	Natural	Compact, light greyish-yellow variable clay/clayey sand layer.
10	First field encountered at the western end of east/west aligned	Ridge and Furrow	Approximately 50m area of ridge and furrow aligned north-west/south-east. <1.20m wide. The east/west aligned topsoil strip exposed approximately 9-10m of the feature. Max height <0.38m. Spaced roughly 2.0m

	topsoil strip near Watergrove WTW		apart. Aligned with extant dry stone walls to the east of area. Shows change of land use; currently used for grazing sheep.
11	First field encountered at the western end of east/west aligned topsoil strip near Watergrove WTW	Topsoil	Dark blackish brown, friable, very rooted silt topsoil. <2% small sub-rounded stones. Possibly the same as 14 . Some fragments of post-medieval pottery and glass were recovered from the cleaning surface.
12	First field encountered at the western end of east/west aligned topsoil strip near Watergrove WTW	Natural	Compact, mid orangey brown, silt-sand. Possibly the same as 15 .
13	Field near eastern end of east/west aligned topsoil strip, near Watergrove WTW	Ridge and Furrow	Area of ridge and furrow, showing change in land use; currently used for grazing sheep. Aligned north-west/south-east, parallel to extant dry stone walls, enclosing the field. <0.25m height difference. <0.40m wide troughs spaced approximately 2.30m apart.
14	Field near eastern end of east/west aligned topsoil strip, near Watergrove WTW	Topsoil	Blackish brown, friable silt topsoil (<0.25m), containing some broken pottery and glass shards.
15	Field near eastern end of east/west aligned topsoil strip, near Watergrove WTW	Natural	Orange brown, compact sandy-clay.