LAND AT GAWTHORPE HIGH SCHOOL, BURNLEY ROAD PADIHAM, LANCASHIRE

Archaeological Evaluation

Oxford Archaeology North

September 2006

Bovis Lease Lend

Issue No: 2006-07/569
OA North Job No: L9735
NGR: SD 803 355 (centred)
Planning Application Ref: 12/06/0354

CONTENTS

SUMMARY

A planning application (ref: 12/06/0354) was submitted by Catalyst Education Ltd, acting on behalf of Lancashire County Council, for the demolition of Gawthorpe High School, Burnley Road, Padiham, Lancashire (NGR centred SD 803 335) and the construction of a community college, Shuttleworth College. A new road and turning circle is to be constructed, as part of the new development, over the former Gawthorpe Colliery that appears on the first edition six inch Ordnance Survey map, 1848. Therefore, Lancashire County Archaeological Services (LCAS) advised the local planning authority that a condition should be imposed on the planning consent for a programme of archaeological evaluation, to assess the archaeological significance of the site. A brief was issued by LCAS detailing the requirements. In accordance with this, Oxford Archaeology North (OA North) was commissioned by Bovis Lend Lease, acting on behalf of Catalyst Education Ltd, to excavate a single evaluation trench, 10m in length and 2m wide, in the area of impact by the development over the location of the colliery.

The excavation of the trench showed that a layer of stone chippings, ***112***, upon which the current tarmac surface, ***111***, had been laid, was located directly above the glacial till. It is suggested that this area had been truncated to possibly below the original level of glacial till, removing any structural remains of the Gawthorpe Colliery buildings. Within the evaluation trench, culvert ***109*** was identified, considered to be contemporary with the colliery workings, although no dating evidence was retrieved. This led from the former colliery in the direction of the River Calder. No finds were retrieved from the evaluation trench.

The evaluation suggests that the area investigated has been adversely impacted by the construction and associated ground works for the current school. Therefore, all but the deepest in-cut archaeological features or deposits associated with Gawthorpe Colliery have been lost. It is possible, however, that deposits may still exist within Long Plantation to the south of the excavated trench as it is at a noticeably higher level, and may not have suffered the level of disturbance from the construction of Gawthorpe High School.

ACKNOWLEDGEMENTS

Oxford Archaeology North would like to express thanks to Victor Jackson of Bovis Lend Lease for commissioning the work, and to Simon Pratt and Mark Rance of Bovis Lend Lease for their co-operation during the course of the project.

The fieldwork was undertaken by Andy Bates and Kathryn Levey. All finds were assessed by Chris Howard-Davis. The drawings were compiled by Marie Rowland, and the report written by Andy Bates. Emily Mercer managed the project.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

1.1.1 A planning application (ref 12/06/0354) has been submitted by Catalyst Education Ltd, acting on behalf of Lancashire County Council, for the demolition of Gawthorpe High School, Padiham, Lancashire (NGR centred SD 803 335; Fig 1) and the construction of a community college, to be called Shuttleworth College. The proposed development includes the construction of a new access road and turning circle over the remains of the former Gawthorpe Colliery (PRN 6800), which is marked on the first edition six inch Ordnance Survey (OS) map of 1848. A condition of the planning consent, imposed by Burnley Borough District Council, is that an archaeological investigation be undertaken prior to development to assess the significance of the site. Bovis Lend Lease, acting on behalf of Catalyst Education Ltd, requested a formal brief (*Appendix 1*) be issued by Lancashire County Archaeological Services (LCAS) for the required archaeological work. This brief included a visit to the Historic Environment Records (HER) and the excavation of a single 10m long and 2m wide evaluation trench targeting the possible remains of Gawthorpe Colliery within the area of impact. Oxford Archaeology North (OA North) submitted a project design (*Appendix 2*), and were commissioned to undertake the work in July 2006.

1.1.2 This report sets out the results of the work, incorporating data extracted from the HER to provide an historical context. The concluding chapter includes a discussion of the results, assesses the archaeological value of the site, and the impact of the development on the identified archaeological remains.

1.2 SITE LOCATION AND GEOLOGY

1.2.1 The site is bound to the north-west by the boundary for Gawthorpe Hall (PRN 2112), the principle building of which is a Grade I listed building under the Planning (Listed Buildings and Conservation Areas) Act 1990, and the park and gardens Grade II listed on English Heritage's Register of Parks and Gardens of Historic Special Interest (Fig 1). To the south, the site is bound by Burnley Road (A671), and to the north-east by a field and a caravan park over the former White Gate Quarry (Fig 1). The area of investigation is currently under tarmac used for access and parking cars, at the front of the Gawthorpe High School.

1.2.2 The site is situated on the Lancashire Coal Fields, which date to the Westphalian period (310-300 million years ago) of the Upper Carboniferous. Underlying the coal measures is Millstone Grit, also of the Upper Carboniferous, formed in the Numurian period (327-310 million years ago; Edwards and Trotter 1954). The overlying drift geology comprises glacial till with some areas of sand west of Blackburn (Countryside Commission 1998). The soils, as mapped by the Ordnance Survey Soil Survey of England and Wales (1983), are predominantly of the Brickfield 3 series, which are cambic

stagnogley soils, deriving from the underlying geology. In addition, there are small areas of the Wallsea 2 series, a pelo-alluvial gley, essentially alluvial in nature (*ibid*).

1.3 HISTORICAL BACKGROUND

1.3.1 The manor of Gawthorpe lay within the historical township of Habergham Eaves, within the Royal Forest of Pendle. The township was dissolved in 1894, with nearly half being added to the expanding township of Burnley and the remainder becoming the civil parish of Habergham Eaves (Farrer and Brownbill 1912, 454-68). During the medieval period Gawthorpe and Padiham were held jointly by the manor of Ightenhill (Eyre 1973, 55). Gawthorpe lay in the north-western part of the former township, and may have evolved from land in the vill of Ightenhill, granted to John del Eves for the use of Ughtred Shuttleworth in 1389 (Farrer and Brownbill 1912, 454-68). In 1470 Nicholas Lawrence, son of Nicholas Shuttleworth, is recorded as owner of the estate, since when the estate was held by the Shuttleworth family through to the twentieth century with Ughtred James Kay-Shuttleworth; who succeeded to Gawthorpe on the death of his mother in 1872, later Baron Shuttleworth who became lord lieutenant of the county in 1908. In 1842 Janet Shuttleworth had married Dr James Kay, and it is from this marriage that the hyphenated name of Kay-Shuttleworth derives.

1.3.2 Gawthorpe Hall is a Grade II listed building, located near the western boundary of the township of Habergham Eaves (NGR SD 80681 34088; PRN 2112), in a valley close to the former bed of the river Calder, *c* 0.5km to the north-north-east of the site under evaluation. Stockbridge Drive, leading to Gawthorpe Hall, lies adjacent to the north-western boundary of Gawthorpe High School playing field, marked as a tree-lined avenue on the first edition OS map of 1848 (Fig 2). The house is considered an admirable example of a stone-built mansion of the late Elizabethan period, three storeys in height over spacious basements designed with much regard for external symmetry (*op cit*). It was built by Rev Lawrence Shuttleworth between 1600 and 1605, and is thought to incorporate into the structure of the current tower an earlier keep or peel tower (*ibid*). The hall appears to have been abandoned in the later part of the eighteenth century, but was refitted and refurbished early in the nineteenth century by Robert Shuttleworth. A more thorough restoration was completed in 1850 by Sir James Shuttleworth under the direction of leading architect Sir Charles Barry, who rearranged some of the rooms, raised the tower and chimneys, and replaced a pieced parapet in the Elizabethan style for the plain upper portion of the original parapet (*ibid*).

1.3.3 Coal mining within the township is recorded as early as the sixteenth century, when Richard Townley registered a complaint that eighty of the King's tenants had entered and removed coal from coal mines, or 'coal beds', which he leased from the crown (Farrer and Brownbill 1912, 468). Coal mining in the wider area of the Lancashire and Manchester coal fields is recorded as early as the fourteenth century (Atkinson 1988).

1.3.4 The nineteenth century buildings of Gawthorpe Colliery were located to the south of Gawthorpe Estate and the current school buildings (NGR SD 80379 33429; PRN 6800). Two colliery buildings are marked on the first edition OS map of 1848 (Fig 2), along with two coal pits; one adjacent and to the west of the colliery buildings, and one to the south of Burnley Road (Fig 2). It is possible that these two pits would be linked by a tunnel on an incline, the resulting natural draft being sufficient to clear all but the most serious influxes of gas (Atkinson 1998, 7). During the 1840s Gawthorpe Colliery was worked under the ownership of Miss Janet Shuttleworth, along with a second colliery at Ightenhill, and may have shared its entrance with Whitegate Quarry to the east, which continued to be worked up until *c* 1945 (Nadine 1997, 83-84). Three coal seams were worked at the colliery of 28, 42 and 60 inches thick, the later being the Padiham Thick Seam (*ibid*). The colliery was no longer extant by the time of the first edition 25 inch OS map of 1894, being covered by an extension to Long Plantation.

1.3.5 A later, larger, colliery was begun in 1870 by the Executors of John Hargreaves at the Habergham Colliery, often called Cheapside Colliery, located *c* 250m to the east of the former Gawthorpe Colliery site (*op cit*, 85-7). However, the coal got from Habergham Colliery was actually raised at Gannow Pit (NGR SD 817 325), and screened at Smallshaw Colliery (NGR SD 802 345) (*ibid*). Due to problems of manpower in the Hargreaves Collieries during the Second World War, Habergham Colliery was closed in August 1941 (*ibid*).

1.3.6 There is no evidence of archaeological sites or finds pre-dating the post-medieval period in the immediate vicinity (within 500m) of Gawthorpe High School, with the exception of the aforementioned Gawthorpe Hall. To the south of Burnley Road, opposite the former colliery, Whitegate Nursery is marked on the first edition 25 inch OS map of 1894 (PRN 22124). At the entrance to the Gawthorpe Colliery on Burnley Road a township boundary stone was located (NGR SD 80441 33371), extant on 1848 OS map, inscribed with the words *Padiham* and *Habergm eaves* on opposing faces (PRN 16711).

2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 The archaeological evaluation was conducted in adherence with the project design (*Appendix 2*). The work was consistent with the relevant standards and procedures of the Institute of Field Archaeologists, and generally accepted best practice.

2.2 BACKGROUND COLLATION

2.2.1 Several sources of information were consulted, in accordance with the project design. The study area comprised a 0.5km radius centred on Gawthorpe High School. The principle source of information was the County Historic Environment Record, with a brief visit made to the County Records Office to consult historic maps. The resultant information was intended to provide an historical context to the evaluation investigation.

2.2.2 ***Lancashire County, Historic Environment Records (HER):*** the Lancashire County HER, formerly the Sites and Monuments Record (SMR), held in Preston was consulted. The HER is a database of all archaeological sites in Lancashire, and is maintained by Lancashire County Council. Aerial photographs of each site are also held by the HER and were consulted. Secondary sources held by the HER were also located.

2.2.3 ***Lancashire County, Records Office (CRO(L)):*** the County Records Office in Preston was visited to examine the Ordnance Survey maps relating to the study area.

2.3 EVALUATION TRENCHING

2.3.1 A single trench, 10m long by 2m wide, was excavated within the development area, positioned to focus on the area of impact by the development on the former colliery buildings; the trench would take in the north-western exterior wall of the larger building of Gawthorpe Colliery. On site the northern end of the trench was moved *c* 2m to the east from that originally proposed in order to avoid a service. The tarmac surface of the current car park, within the area of the trench, was broken up by a JCB mechanical excavator fitted with a breaker. The trench was then excavated using the JCB fitted with a 1.6m wide toothless ditching bucket, under the supervision of an OA North archaeologist. Excavation proceeded in a stratigraphical manner down to either the first archaeological deposits or natural glacial till, with all spoil scanned for artefacts. Any further excavation was completed manually.

2.3.2 The recording comprised a full description and preliminary classification of the deposits and materials revealed on OA North *pro-forma* sheets. A plan was produced showing the location of the trench, with representative sections

being drawn at a scale of 1:10 or 1:20. A photographic record using monochrome and colour slide formats was maintained.

2.3.3 The position of the trenches was located with a total station tied into the Ordnance Survey grid. This was incorporated with digital map data in a CAD system to create the location map.

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, English Heritage (English Heritage 1991) and UKIC (1990) guidelines. The paper and digital archive will be deposited in the Lancashire Records Office, Preston, with a copy to the Lancashire HER.

3. EVALUATION RESULTS

3.1 INTRODUCTION

3.1.1 A single 10m by 2m evaluation trench was excavated (Figs 1 and 3), and a brief description is given below. A context list with more detailed description can be found in *Appendix 3*.

3.2 RESULTS

3.2.1 The excavated trench measured 10m long and 2m wide, orientated in a north/south direction, and reached a maximum depth of 0.97m (Fig 3; Plate 1). The tarmac surface, ***110***, of the current car park measured 0.15m thick, below which stone chippings, ***112***, formed a levelling layer for the tarmac, 0.25m to 0.5m thick. Deposit ***116*** at the northern end of the trench was coarse sand, 0.07m thick, and thought to be residual sediment associated with stone chippings ***112***.

3.2.2 Below these twentieth century deposits, glacial till, ***115***, was located. Cut into the till and orientated in a north-west/south-east direction was culvert ***109*** (Plate 2). This comprised large millstone grit capping stones, occurring at the same level as the glacial till. One stone was lifted sufficiently to observe the culvert's interior cavity, which was largely filled with mid grey clay derived from the surrounding till, ***111***. Covering the culvert was a thin layer of mid grey clay, ***113***, used to backfill the culvert's construction cut ***114***. The culvert was not excavated as the capping stones could not be safely man-handled, but it is thought to relate to activities of the nineteenth century Gawthorpe Colliery. No finds were retrieved during the excavation of the evaluation trench.

4. DISCUSSION

4.1 CONCLUSIONS

4.1.1 No evidence of the colliery buildings associated with Gawthorpe Colliery were located within the evaluation trench. However, culvert ***109*** is thought to relate to the colliery, either for the supply of clean water or the removal of dirty water, potentially from or to screens used to wash the coal. The direction of the culvert is to the north-west, towards the River Calder.

4.1.2 The evaluation suggests that deposits above the level of the culvert have been severely truncated and then levelled with layers of stone chippings and tarmac. The original ground surface probably rose gently to the east, as it does in the surrounding area, and the level of the ground surface was reduced to remove this gradient during the construction of Gawthorpe High School. This truncation would have removed the foundations of the colliery buildings.

4.2 IMPACT

4.2.1 Development of the area currently covered by the buildings of Gawthorpe High School to the north of the evaluation trench and the tarmac of the current access route and parking area will have a limited effect on archaeological deposits due to the apparent level of truncation in this area. The area to the south of the evaluation trench is currently covered by the trees of Long Plantation, and a number of these will need to be cleared to make way for the new access route into the proposed Community College. The land in this area to the south of the evaluation trench currently rises up, and is unlikely to have been as severely affected by twentieth century truncation. It is possible that any remains of colliery buildings that were positioned in the area of Long Plantation may have survived.

5. BIBLIOGRAPHY

5.1 CARTOGRAPHIC SOURCES

Ordnance Survey, 1848 *Lancashire Sheet 64*, first edition 1:10560

Ordnance Survey, 1894 *Lancashire Sheet LXIV.01*, first edition 1:25000

Ordnance Survey, 1983 *Soil Survey of England and Wales: Soils of Midland and Western England*

5.2 PRIMARY SOURCES

Lancashire Historic Environment Records (HER)

PRN2112, Gawthorpe Hall

PRN6800, Gawthorpe Colliery

PRN16711, nineteenth century boundary stones

PRN 22124, White Gate Nursery

5.3 SECONDARY SOURCES

Atkinson, G, 1998 *The Canal Dukes Collieries: Worsley 1760-1900*, Manchester

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

Edwards, W, and Trotter, FM, 1954 *British Regional Geology: Pennines and the Adjacent Areas*, London

English Heritage, 1991 *Management of Archaeological Project*, 2nd edn, London

Eyre, K, 1973 *Famous Lancashire Homes*, Clapham

Farrer, W, and Brownbill, D (eds) 1912 *The Victoria County History of Lancashire,* **6**, Newcastle

Nadine, J, 1997 *The Coal Mines of East Lancashire*, British Mining No. 58, Keighley

UKIC, 1990 *Guidelines for the Preparation of Archives for Long-Term Storage*, London

UKIC, 1998 *First Aid for Finds*, London

6. ILLUSTRATIONS

6.1 FIGURES

Figure 1: Site location

Figure 2: Extract from First Edition Ordnance Survey map, 1848, showing Gawthorpe Colliery

Figure 3: Plan of the evaluation trench

6.2 PLATES

Plate 1: View of trench, facing south

Plate 2: Culvert ***109***, facing south-east

Figure 1: Site Location and Trench Location

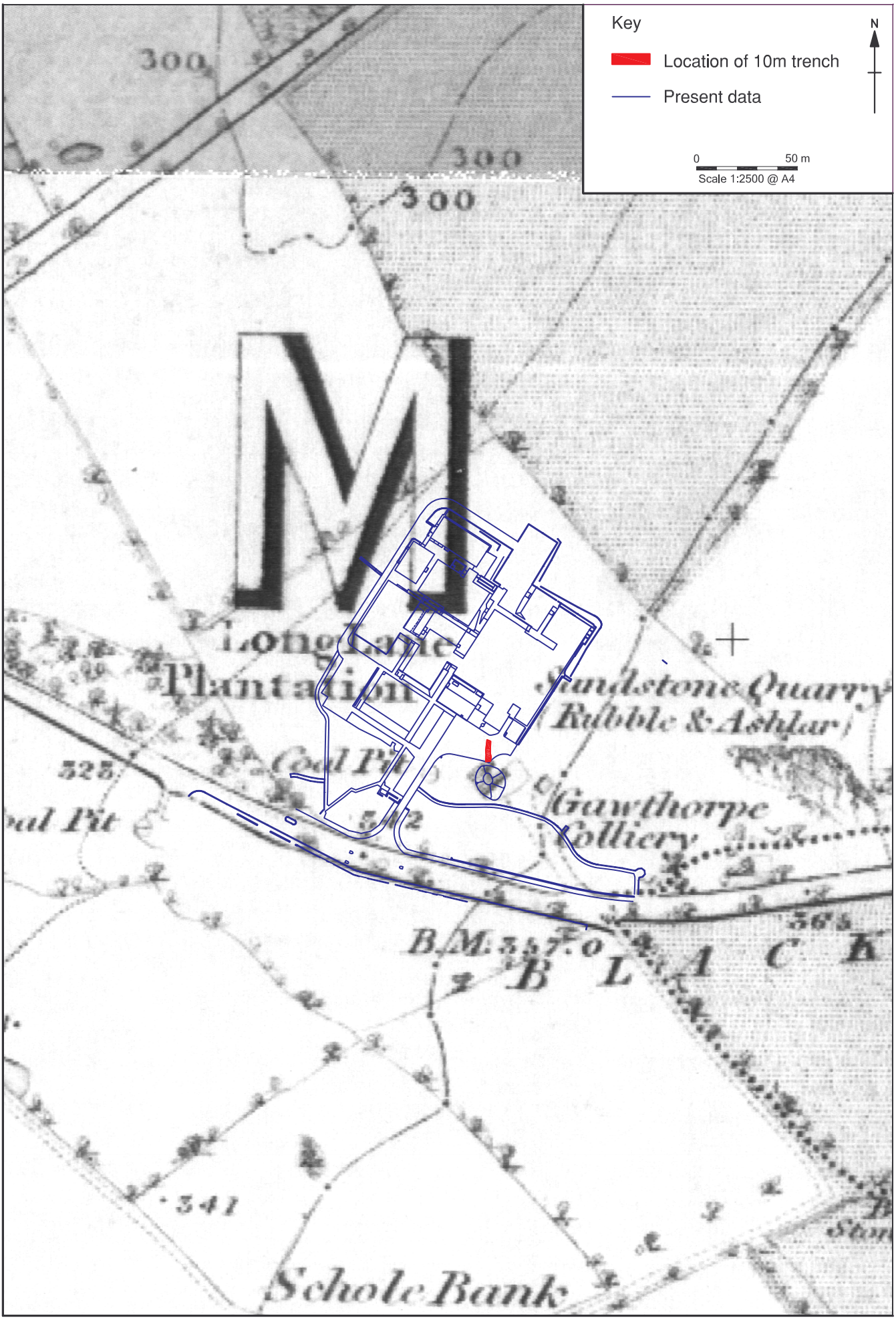

Figure 2: Extract from First Edition Ordnance Survey Map, 1848, showing Gawthorpe Colliery

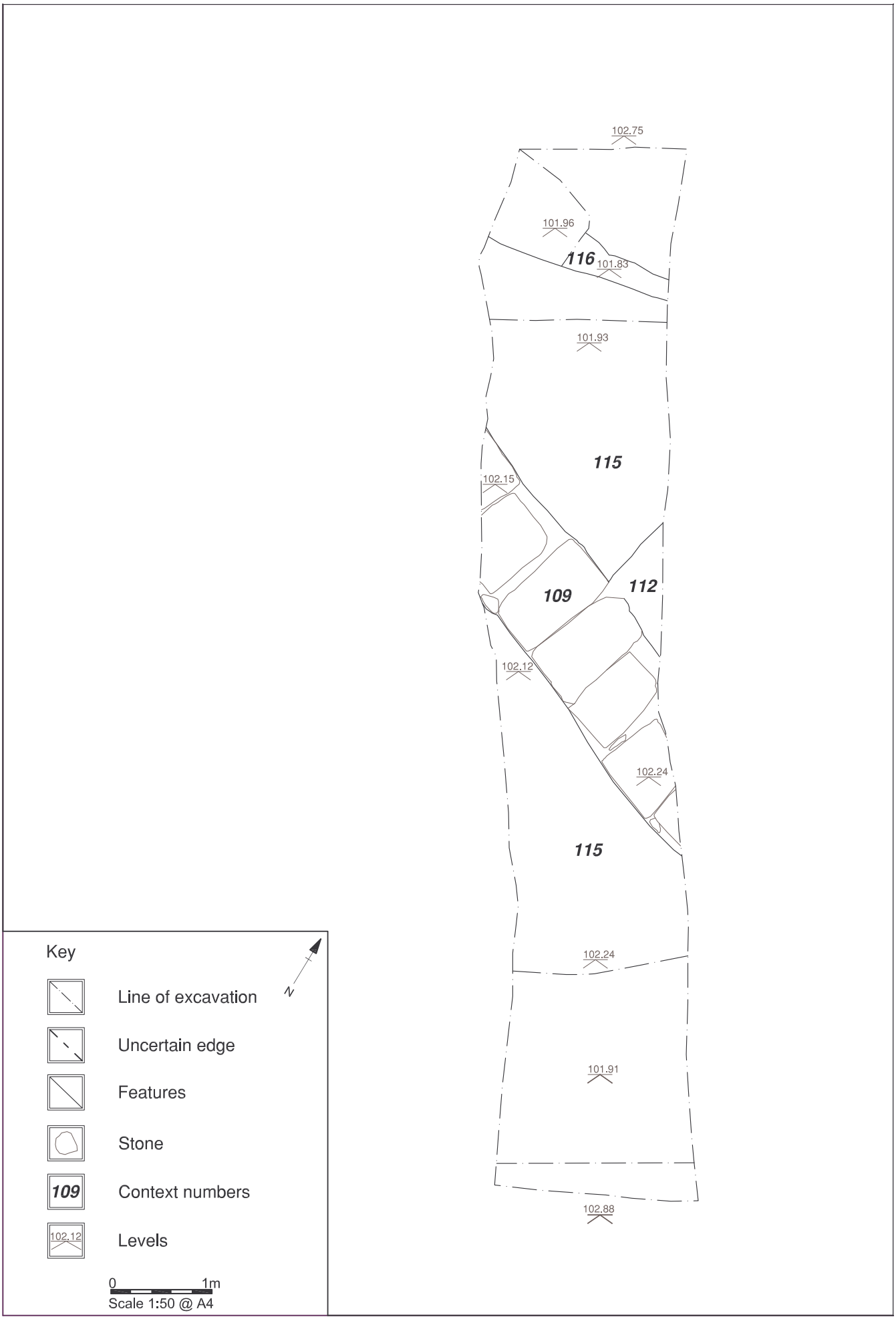

Figure 3: Plan of evaluation trench

Plate 1: View of trench facing south

Plate 2: Culvert 109, facing south-east

APPENDIX 1: PROJECT BRIEF

APPENDIX 2: PROJECT DESIGN

1. INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 Catalyst Education Ltd, acting on behalf of Lancashire County Council, have submitted a planning application (ref: 12/06/0354) for the demolition of Gawthorpe High School, Burnley Road, Padiham, Lancashire (NGR centred SD 803 335). The proposals are to construct a new community college (Shuttleworth). The Local Planning Authority (LPA), Burnley Borough District Council, have been advised by Lancashire County Archaeology Service (LCAS) that there is the potential for archaeological remains to be impacted upon by the proposed works, and that a programme of archaeological evaluation be undertaken to assess the requirements for any additional work prior to the redevelopment.

1.1.2 The site is bound to the north-west by the boundary for Gawthorpe Hall, which is Grade II listed on English Heritage's Register of Parks and Gardens of Historic Special Interest. Gawthorpe Hall was built between 1600 and 1605 for the Shuttleworth family, who by then had been at Gawthorpe for over 200 years. Between 1850 and 1852 the Hall was restored "in a sympathetic Elizabethan style" for Sir James Shuttleworth, by leading architect Sir Charles Barry, who also designed the Houses of Parliament. The Shuttleworth family owned Gawthorpe until 1970, when the house and grounds were given to the National Trust, but it is now leased to Lancashire County Council.

1.1.3 The proposals for redevelopment show a road and turning circle, forming a drop-off zone, which are to be situated on the site of structures associated with the former Gawthorpe Colliery (SMR PRN 6800). The colliery was observed on the Ordnance Survey 1st Edition map of 1844.

1.1.4 Bovis Lend Lease (hereafter the 'client'), acting on behalf of Catalyst Education Ltd, requested LCAS prepare a formal brief for the required archaeological work. Accordingly, Bovis Lend Lease have invited Oxford Archaeology North (OA North) to submit proposals for a limited evaluation, to include the excavation of a trial trench. The following project design has been prepared and should be read in accordance with the brief issued by LCAS.

2. OBJECTIVES

2.1 The assessment aims to evaluate archaeological deposits associated with the former Gawthorpe Colliery that may be threatened by the proposed development, in order to determine their presence, extent, nature and significance. To this end, the following evaluation programme has been designed. The results will provide the LPA with the necessary information to determine the outcome of the planning application, as to whether further mitigation works are required prior to, or during, the development. The required stages to achieve these ends are as follows:

2.2 ***SMR Visit:*** to obtain an overview of the background information regarding the archaeological and historical context of the site, which will form the knowledge base for the evaluation trenching.

2.3 ***Archaeological Evaluation:*** to implement a programme of trial trenching examining one trench measuring 10m x 2m within the proposed turning area and drop-off zone.

2.4 ***Report and Archive:*** the archaeological investigation will culminate with a written report, which will aim to assess the significance of the data generated by this programme within a local and regional context. It will present the results of the evaluation and would make an assessment of the archaeological potential of the area.

3 METHOD STATEMENT

3.1 INTRODUCTION

3.1.1 The following work programme is submitted in line with the objectives summarised above.

3.2 SMR VISIT

3.2.1 The first stage of the archaeological investigation will involve consultation of the Lancashire Sites and Monuments Record (SMR) in Preston and a review of sources held in the OA North library. The information will provide the basis of archaeological and historical knowledge for the site supervisor, and only relevant material will be incorporated into the final evaluation report.

3.3 EVALUATION

3.3.1 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. In this way, it will adequately sample and provide information concerning the threatened available area.

3.3.2 ***Trench configuration:*** the evaluation is required to examine one trench measuring 2m in width (the approximate width of a typical excavator bucket) and 10m in length. The location of this trench will be situated within the proposed drop-off zone and turning circle for buses and coaches, and will be agreed with LCAS prior to the fieldwork commencing.

3.3.3 A contingency is available for additional trenching measuring up to 10m². This is dependant on the initial evaluation trenching results, and its use will be decided by LCAS.

3.3.4 Trenches will be located by use of GPS equipment, which is accurate to +/- 0.25m, or Total Station. The site grid is to be accurately recorded with respect to the National Grid. Altitude information will be established with respect to Ordnance Survey Datum.

3.3.5 ***Methodology:*** the topsoil will be removed by machine (fitted with a toothless ditching bucket) under archaeological supervision, and will be removed in successive spits of a maximum 0.2m thickness to the surface of the first significant archaeological deposit (pre nineteenth century). This deposit will then be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions, and inspected for archaeological features.

3.3.6 Any concrete surfaces that require breaking out, will be done so under OA North supervision, with a breaking arm mounted on the mechanical excavator. A limited amount of time could be accommodated for this work in the schedule. However, should the concrete surfaces be extensive, heavily reinforced or very thick this is likely to take much longer than anticipated and may be subject to a small variation in the costing to cover any additional plant hire or staff expenses.

3.3.7 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 or will be subject to a variation.

3.3.8 All features of archaeological interest will be investigated and recorded unless otherwise agreed by the LCAS. However, they will not be entirely removed, unless unavoidable, in an attempt to preserve such deposits *in situ*. A 50% sample of any features identified is expected to be half-sectioned and the depths of archaeological deposits assessed. Modern artefacts are to be noted but not retained.

3.3.9 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*.

3.3.10 ***Scanning of spoil heaps:*** the spoil will be scanned by a member of the OA North field team using a metal detector for non-ferrous metal artefacts.

3.3.11 ***Recording:*** 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.

3.3.12 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.

3.3.13 Plans must include OD spot heights for all principal strata and any features.

3.3.14 The stratigraphy of each trench will be recorded even when there are no archaeological deposits identified. In such cases, at least one long section of each trench will be recorded. All sections will contain heights OD.

3.3.15 ***Reinstatement:*** based on current information supplied by the client 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. Should there be a requirement by the client other than that stated this may involve recosting.

3.3.16 ***Fencing/hoarding requirements:*** it is assumed that the client will advise on the arrangements/requirements for the site to be protected from public access. The trench should be opened and backfilled on the same day, ensuring that there is no deep excavation open overnight. However, should heras fencing or similar be required by the client during the daytime excavation this has been costed as a contingency item.

3.3.17 ***Environmental Sampling:*** deposits will be sampled and assessed for their potential for palaeoenvironmental analysis. 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). It may be necessary for OA North's environmental manager to attend site to discuss the sampling strategy, depending on the deposits, and request advice from English Heritage's Regional Science Advisor.

3.3.18 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. This will be undertaken in accordance with English Heritage Guidelines (2002).

3.3.19 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. It will also consider the potential for the dating of peat deposits and requirements for any radiocarbon and archaeomagnetic dating.

3.3.20 The costs for the palaeoecological assessment are defined as a contingency and will be called into effect if suitable deposits are identified.

3.3.21 ***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.

3.3.22 ***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. 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 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. The cost of removal or treatment will be agreed with the client and costed as a variation.

3.3.23 ***Treatment of finds:*** all identified finds and artefacts will be retained, excluding modern material, 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.

3.3.24 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. They will be assessed in terms of the potential for further investigation and preservation needs.

3.3.25 Only those finds that are of a quality worthy of display will be fully conserved, but metalwork and coinage from stratified contexts may be X-rayed. Any conservation requirements will be discussed with the client and costed as a variation.

3.3.26 ***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, which may require costing as a variation in discussion with the client.

3.3.27 ***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 charged in agreement with the client.

3.3.28 The evaluation will provide a predictive model of surviving archaeological remains detailing zones of relative importance against known development proposals. In this way, an impact assessment will also be provided.

3.3.29 ***Access:*** liaison for basic site access will be undertaken through the client and it is understood that there will be access for both pedestrian and plant traffic to the site.

3.4 REPORT AND ARCHIVE

3.4.1 ***Report:*** one bound and one unbound copy of a written synthetic report will be submitted to the client. A digital copy of the report will be supplied as a pdf on CD ROM to the SMR held by LCAS within eight weeks following the completion of the fieldwork. However, this may need to be revised in agreement with LCAS should any specialist reports be outstanding. 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
- the dates on which the fieldwork was undertaken
- a concise, non-technical summary of the results
- an explanation to any agreed variations to the brief, including any justification for any analyses not undertaken
- a description of the methodology employed, work undertaken and results obtained
- an historical and archaeological background
- plans and sections at an appropriate scale showing the location and position of deposits and finds located
- a list of and dates for any finds recovered and a description and interpretation of the deposits identified. This artefact analysis will include illustration of finds crucial to dating and interpretation
- a description of any environmental or other specialist work undertaken and the results obtained
- a copy of this project design and the LCAS project brief, and indications of any agreed departure from the details
- the report will also include a complete bibliography of sources from which data has been derived.

3.4.2 ***Confidentiality:*** all internal reports to the client are designed as documents for the specific use of the client, for the particular purpose as defined in the project brief and project design, and

should be treated as such. They are not suitable for publication as academic documents or otherwise without amendment or revision.

3.4.3 ***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 will include summary processing and analysis of all features, finds, or palaeoenvironmental data recovered during fieldwork, which will be catalogued by context.

3.4.4 The deposition of a properly ordered and indexed project archive in an appropriate repository is essential and archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the Lancashire SMR (the index to the archive and a copy of the report). OA North practice is to deposit the original record archive of projects with the Lancashire Record Office in Preston.

3.4.5 All artefacts will be processed to MAP2 standards and will be assessed by our in-house finds specialists. The deposition and disposal of any artefacts recovered in the evaluation will be agreed with the legal owner the Museum of Lancashire. LCAS will be notified of the arrangements made.

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 to LCAS, at the time of notification of commencement, and on request to all other 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. As a matter of course the Unit uses a U-Scan device prior to any excavation to test for services, however, this is **only an approximate location tool**. Any drawings or knowledge of live cables or services that may pose a risk to OA North staff during evaluation **must be made known to the project manager** of OA North before site work. This will ensure the risk is dealt with appropriately.

4.3 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.

4.4 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 PROJECT MONITORING

5.1.1 Whilst the work is undertaken for the client, LCAS will be kept fully informed of the work and its results, and will be notified at least one week in advance of the commencement of the fieldwork. Any proposed changes to the project design will be agreed with LCAS in consultation with the client.

5.1.2 The Museum of Lancashire's officer, Edmund Southworth, will also be notified of the start date of the fieldwork in writing.

5.2 WORK TIMETABLE

5.2.1 ***SMR Visit:*** one day will be required to undertake this element.

5.2.2 ***Evaluation Trenching:*** approximately one day will be required to complete this element.

5.2.3 ***Report:*** the report and archive will be produced following the completion of all the fieldwork. The final report will be available within four weeks of completion of the fieldwork, and the archive deposited within six months.

5.3 **INSURANCE**

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

6. STAFFING

6.1 The project will be under the direct management of **Emily Mercer BA (Hons) MSc AIFA** (OA North Senior Project Manager) to whom all correspondence should be addressed.

6.2 The evaluation will be supervised by either an OA North project officer or supervisor experienced in this type of project. Due to scheduling requirements it is not possible to provide these details at the present time. All OA North project officers and supervisors are experienced field archaeologists capable of carrying out projects of all sizes.

6.3 Assessment of the finds from the evaluation will be undertaken under the auspices of OA North's in-house finds specialist **Christine Howard-Davis** (OA North finds manager). Christine has extensive knowledge of finds from many periods, although she does have considerable experience with Roman finds, being involved with the excavations at Ribchester and at present with the Carlisle Millennium Project.

6.4 Assessment of any palaeoenvironmental samples will be undertaken by or under the auspices of **Elizabeth Huckerby MSc** (OA North project officer). Elizabeth has extensive knowledge of the palaeoecology of the North West through her work on the English Heritage-funded North West Wetlands Survey.

REFERENCES

English Heritage, 1991 *Management of Archaeological Projects*, second edition, London

English Heritage, 2002 *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation*,

SCAUM (Standing Conference of Archaeological Unit Managers), 1997 *Health and Safety Manual*, Poole

UKIC, 1990 *Guidelines for the Preparation of Archives for Long-Term Storage*, London

UKIC, 1998 *First Aid for Finds*, London

APPENDIX 3: CONTEXT LIST

Context	Description	Interpretation
109	Culvert, fill of ***114***. Comprised capping stones of a maximum size of 0.86m by 0.55m by 0.17m. Not excavated.	Stone culvert.
110	Tarmac surface, 0.15m thick.	Tarmac.
111	Fill of the cavity of culvert ***109***. Comprised a mid-grey clay derived from the surrounding glacial till.	Glacial till mixed with other sediments.
112	Stone chippings, a late twentieth century levelling deposit for tarmac ***110***, 0.25 to 0.5m thick.	Levelling.
113	Fill of ***114***. A mid grey clay, a maximum of 10mm thick.	Backfill over culvert ***109***. Essentially re-deposited glacial till originally excavated from construction cut ***114***.
114	Linear cut, not excavated.	Construction cut for culvert ***109.***
115	A mid grey clay with areas of mid orangey grey clay.	Natural deposit of glacial till.
116	A mid grey coarse sandy clay.	Sediment associated with ***112***.