

An Archaeological Evaluation on land at The Black Bull, Longbenton, Newcastle



Drawing of the west facing section in Trench 4

ARS Ltd Report No. 2011/33
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Executive Summary

In March 2011 Archaeological Research Services Ltd were commissioned by Galliford Try to undertake an archaeological evaluation on land within the car park of The Black Bull Inn, Benton, Newcastle. The purpose of the evaluation was to inform on the presence or absence of archaeological remains prior to the development of the site. The proposed development will comprise nine new homes and a new public house car park.

The evaluation trenches excavated at the Black Bull, Longbenton, failed to locate any features of historic or archaeological detail relating to the 17th century buildings, which once occupied the site. Trenches 4 and 5 located the outer rim of the sandstone quarry, identifying the backfilled deposits used to level the site. Given the shallow depth of the natural sandstone bedrock, it is likely that the foundations for any buildings previously present on the site, have been at a similarly shallow depth, and so have been removed during demolition and subsequent levelling for the car park.

1. Introduction

- 1.1 In March 2011 Archaeological Research Services Ltd were commissioned by Galliford Try to undertake an archaeological evaluation on land within the car park of The Black Bull Inn, Benton, Newcastle. The purpose of the evaluation was to inform on the presence or absence of archaeological remains prior to the development of the site. The proposed development will comprise nine new homes and a new public house car park.

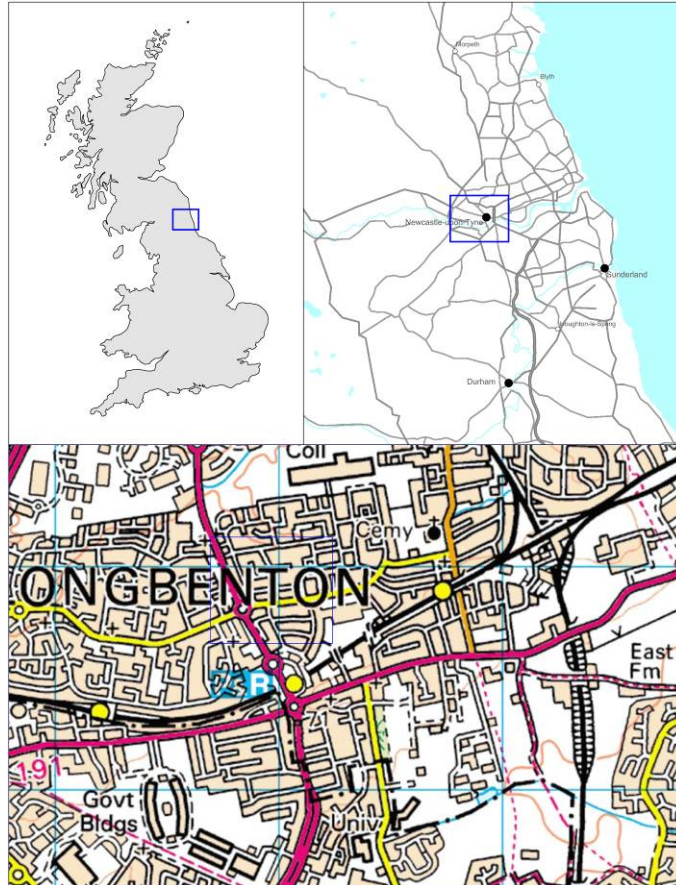


Fig. 1 Site location Ordnance Survey data copyright OS, reproduced by permission, Licence no. 100045420

2. Location and Geology

- 2.1 The development site comprises a tarmac car park, immediately adjacent to Front Street, Benton, and surrounding the Black Bull Inn (NZ 27247 68473). The northern part of the site is under grass beyond which the ground falls away and is covered with dense undergrowth. Fragments of old stone wall survive along the northern boundary, there is a high sandstone rubble wall along the west boundary with traces of abutting structures and blocked openings, and the south boundary retains a short section of low stone wall with chamfered coping with sinkings for railings from the front gardens of former cottages.
- 2.2 The site lies within Longbenton Conservation Area. The Black Bull has been nominated for the draft Local List and will not be affected by the proposed development.
- 2.1. The solid geology of the development area consists of Pennine Middle Coal Measures with drift deposits of Diamicton till (British Geological Survey 1:625,000 digital data).

3. Historical and Archaeological Background

- 3.1. An archaeological desk based assessment was completed in June 1999 (Northern Counties Archaeological Services).
- 3.2. The site lies within the presumed extent of Longbenton medieval village, which may have shifted from an earlier location near to St. Bartholomew's church. Mackenzie described it as "one long street, built upon a rock, and is dry, pleasant and healthy".
- 3.3. The Black Bull, which was rebuilt just before the Second World War, occupies the site of an earlier building which dated to at least 1780. The house on this plan is labelled 'Wilson', presumably Richard Wilson who owned 1/3 of Longbenton Township with William Lake in 1734. The land now occupied by the car park was owned by the Earl of Carlisle. There were contemporary buildings, single-storey stone cottages with pantiled roofs, on the development site to the west of the pub. The street frontage within the development site was thus occupied by two or three blocks of cottages from at least the second half of the 18th century. The land to the rear formed the backlands and was probably used for rubbish dumping, cultivation and livestock.
- 3.4. The 1st Edition OS map of 1858 shows a sandstone quarry within the study area. This is no longer present on the 2nd Edition OS map of 1874. The quarry is represented along with the trench locations in figure 3.

4. Aims and Objectives

- 4.1 The aim of the archaeological evaluation was to gather sufficient information to establish the extent, condition, character and date of any archaeological features and deposits within the area of proposed development, and to record any features or deposits at an appropriate level.

5. Methodology

- 5.1 The archaeological evaluation comprised five trenches (Fig. 2). The trench locations were determined based upon the results found in the desk-based assessment (Northern Counties Archaeological Services 1999), and positioned in order to target the former buildings which occupied the site, as well as any potential waste deposits to their rear.
- 5.2 The trenches were opened by machine using a toothless ditching bucket in level spits until the natural level was reached, at which point the trenches were examined and cleaned by hand. All machine excavation was carried out under careful archaeological supervision.
- 5.5 The deposits were recorded according to the normal principles of stratigraphic excavation. Each context was recorded on pro-forma records which included the following: character and contextual relationships; detailed description (dimensions and shape; soil components, colour, texture and consistency); interpretation and phasing as well as cross-references to the drawn, photographic and finds registers.
- 5.6 Each trench was planned at 1:50. Trench sides were also drawn in section at a scale of 1:50. All deposits and the base of each trench were levelled and heights are expressed in metres above Ordnance Datum.

- 5.7 A photographic record was maintained including photographs of each trench. All images were taken in digital format, and contain a graduated photographic scale.

6. Evaluation Results

- 6.1. The area immediately to the north of the agreed trench locations contained Japanese Knotweed. The trench locations were therefore altered to avoid this prohibited area and prevent the spread of the weed (Fig. 3).

6.2 Trench 1 (Figs. 6 & 7)

Trench 1 was located in the southwest corner of the site, in the car park area, and oriented north - south. The trench measured 12m in length and 2m in width. The area of the trench was covered by a layer of tarmac (101), with a depth of 0.10m, which had to be broken in order to excavate. Directly below the tarmac was a shallow course of yellow, hardcore material (102) with a depth of 0.13m. The hardcore level (102) directly overlay the natural yellow sandstone bedrock (103). Cut into the natural sandstone (103) in the south of the trench, was a Victorian, salt-glazed sewage pipe. A ridge in the very south of the trench had the potential to be a foundation stone course for the buildings which occupied the site previously, but further investigation proved that they were natural faults in the sandstone, and the initial shape was coincidental.

6.3 Trench 2 (Figs. 8 & 9)

Trench 2 was located to the south of the study area, in the car park area, and was oriented north - south. The trench measured 12m in length and 2m in width. The area of the trench was covered by a layer of tarmac (201), with a depth of 0.10m, which had to be broken in order to excavate. Directly below the tarmac was a shallow course of yellow, hardcore material (202) with a depth of 0.02m. The hardcore level (202) directly overlay the natural yellow sandstone bedrock (203). In the south of the trench a small pit (204) was uncovered with an east – west length of 0.71m and a north – south length of 0.68m. The depth was 0.06m and the pit contained no archaeological evidence or datable material. It is possible that this pit represented a heavily truncated cut of the original foundation walls of the buildings which previously occupied the site.

6.4 Trench 3 (Fig. 10)

Trench 3 was located to the west, on the central grass verge of the site and oriented east - west. The trench measured 5m in length by 2m in width. The initial layer of topsoil (301) was excavated to a depth of 0.06m, to reveal a layer of dark brown, silty made ground (302). The made ground contained fragments of building debris and brick rubble, but also modern plastics and porcelain. The made ground (302) existed to a depth of 0.16m and directly overlay the natural yellow sandstone (303).

6.4 Trench 4 (Figs 10 & 11)

Trench 4 was located centrally in the study area, and to the east of trench 3. The trench measured 10m in length by 2m in width, although the trench had to be stepped to the east, because of the loose nature of the deposits in the eastern section. The trench was oriented north – south. The dark brown topsoil (401) existed to a depth of 0.58m. Directly below the topsoil (401) was a large layer of made ground. The made ground existed only to the eastern side of the trench, which cut sharply downward, beyond the section. The made ground contained four individual deposits, deposited in the same period, likely when the site was levelled.

6.4.1. Directly underlying the topsoil (401) were deposits 402 and 403. 402 and 403 were layers of crushed sandstone, of varying shades of yellow, probably redeposited waste from the quarrying process. Directly underlying the crushed sandstone (403) was a layer of charred material (404). Directly underlying the charred material (404) was a layer of dark brown, re-deposited clay (405). As the surrounding area consists of shallow sandstone bedrock, it is possible that this deposit has come from another site, to replace the quarried out material. Directly underlying the re-deposited clay (405) was the natural sandstone (406). The Backfill of the old quarry took place around 1874. This is backed up by it not being represented in the 2nd Edition OS map of 1897.

6.5 *Trench 5 (Fig. 12)*

Trench 5 was located to the east of Trench 4 and oriented east - west. The trench measured 4m in length by 2m in width. Because of the unstable nature of the deposits in this trench, an attempt was made to step it along the north and south edges. These steps were not adequate to enter the trench safely, as the depth of deposits extended beyond 3.4m. This area was evidently part of the sandstone quarry, which would account for the sudden, dramatic drop of the natural level. The deposits in this trench mirrored the made ground backfill deposits seen in the west facing section of Trench 4.

7. **Discussion**

7.1 The evaluation trenches excavated at the Black Bull, Longbenton, failed to locate any features of historic or archaeological detail relating to the 17th century buildings, which once occupied the site. Trenches 4 and 5 located the outer rim of the sandstone quarry, identifying the backfilled deposits used to level the site. Given the shallow depth of the natural sandstone bedrock, it is likely that the foundations for any buildings previously present on the site, have been at a shallow depth, and so were removed during demolition and subsequent levelling for the car park.

8. **Publicity, Confidentiality and Copyright**

8.1. Any publicity will be handled by the client.

8.2. Archaeological Research Services Ltd will retain the copyright of all documentary and photographic material under the Copyright, Designs and Patent Act (1988).

9. **Statement of Indemnity**

9.1 All statements and opinions contained within this report arising from the works undertaken are offered in good faith and compiled according to professional standards. No responsibility can be accepted by the author/s of the report for any errors of fact or opinion resulting from data supplied by any third party, or for loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in any such report(s), howsoever such facts and opinions may have been derived.

10. **Acknowledgements**

10.1 Archaeological Research Services Ltd would like to thank all those involved with this work, in particular David Atkinson from Galliford Try and Jennifer Morrison, Tyne and Wear Archaeological Officer.

11. References

British Geological Survey <http://www.bgs.ac.uk/>

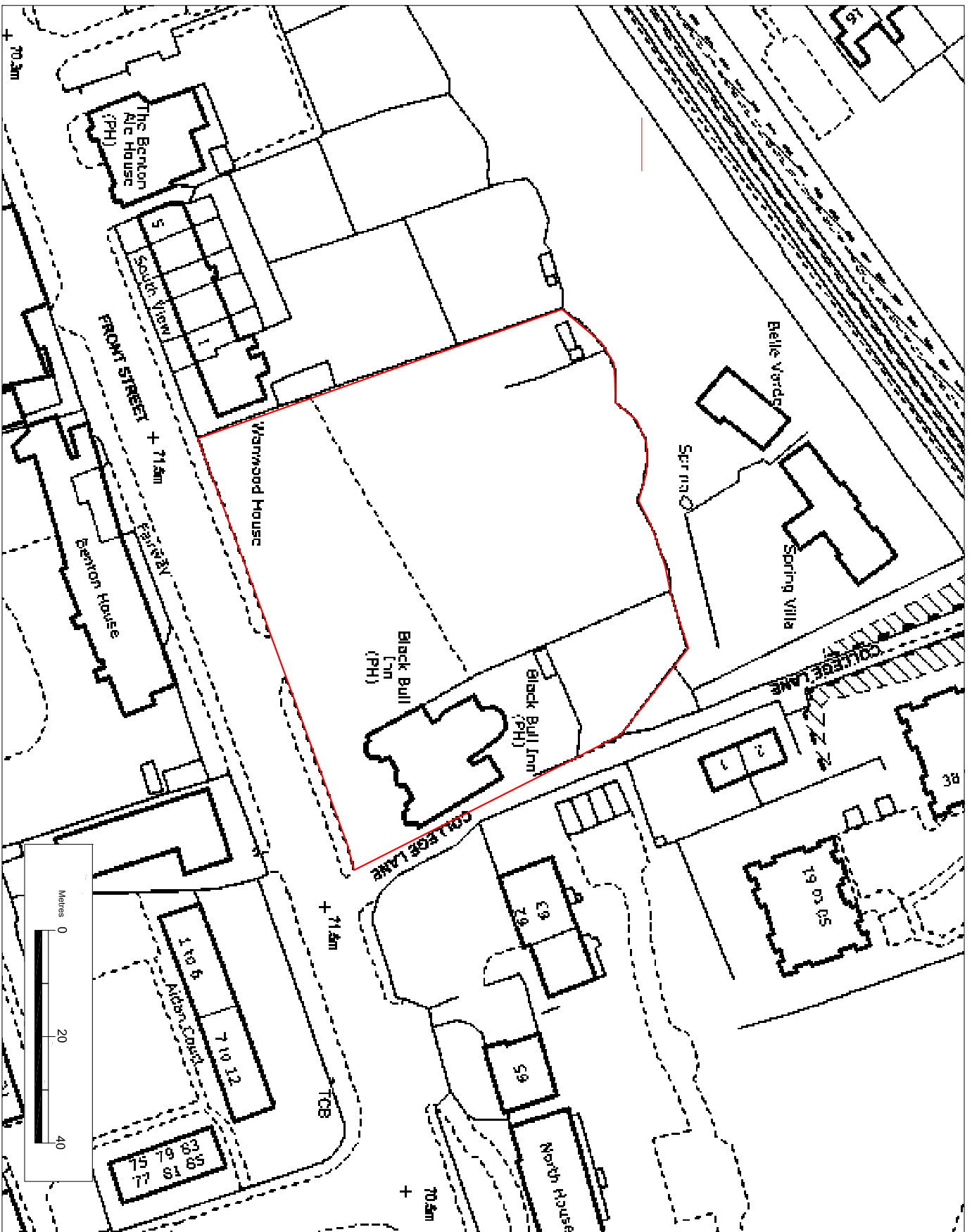


Figure 2

Study Area

Scale = 1:1000 @ A4

Key:



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Figure 3

Trench locations

Scale = 1:250 @ A3

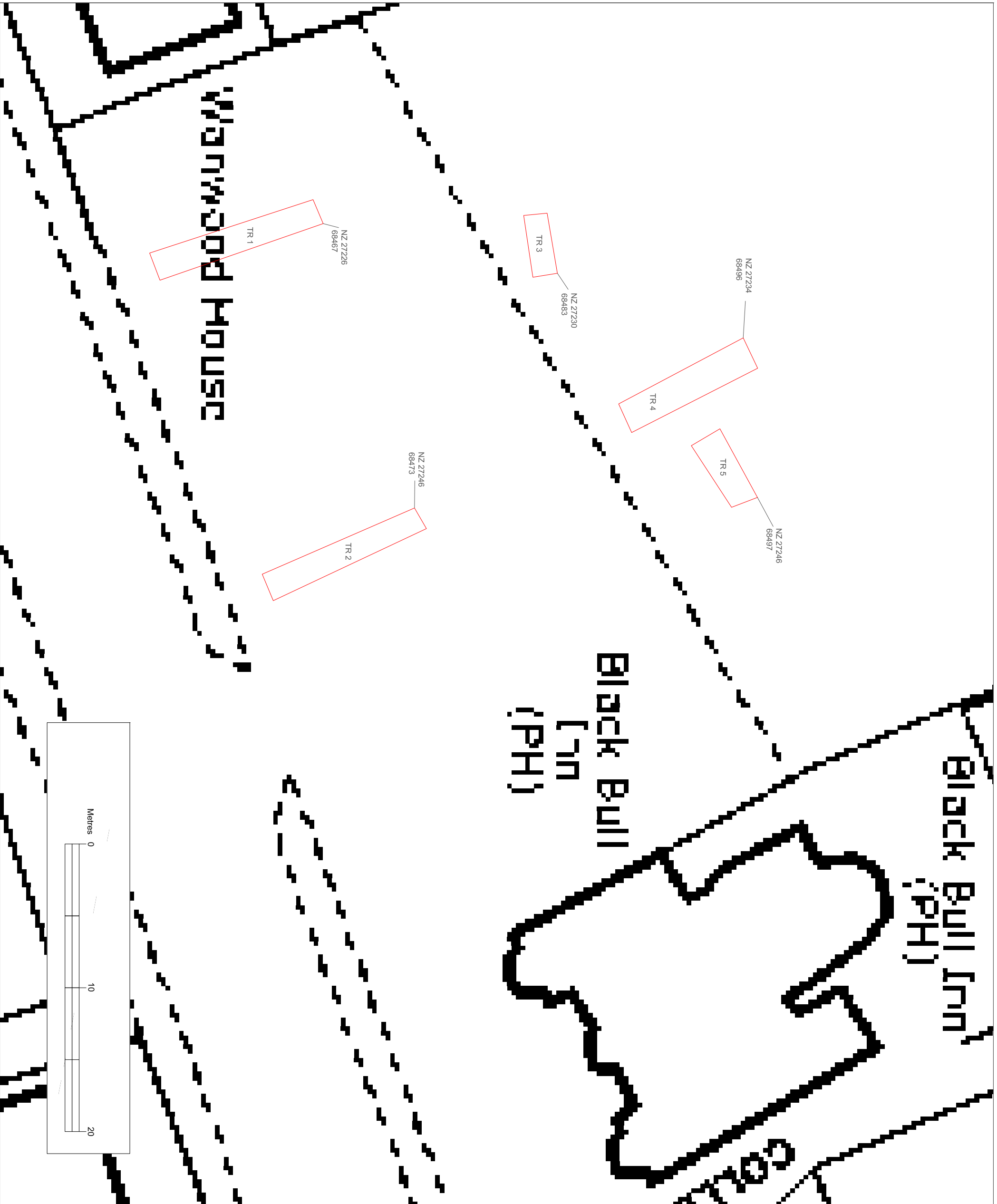
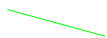
Key:



Trench



Area of former
sandstone quarry



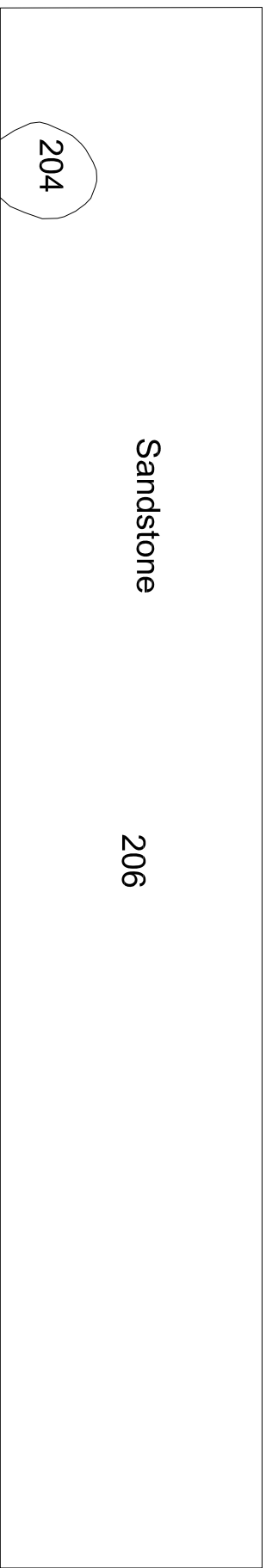
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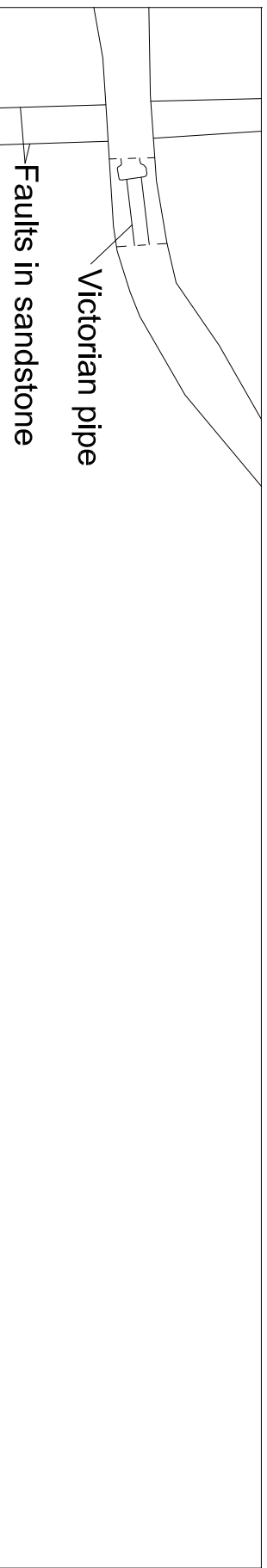
Figure 4

Trench plans and sections

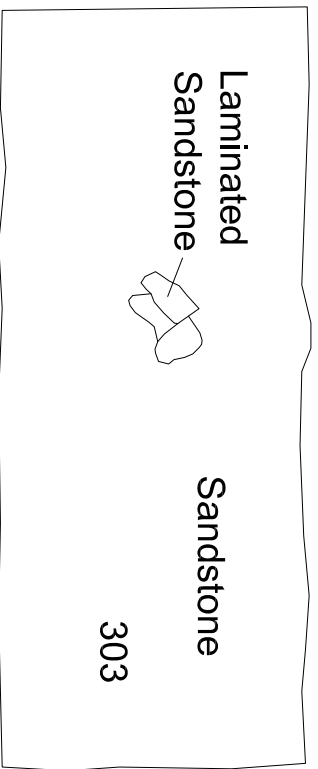
scale = 1:50 @ A3



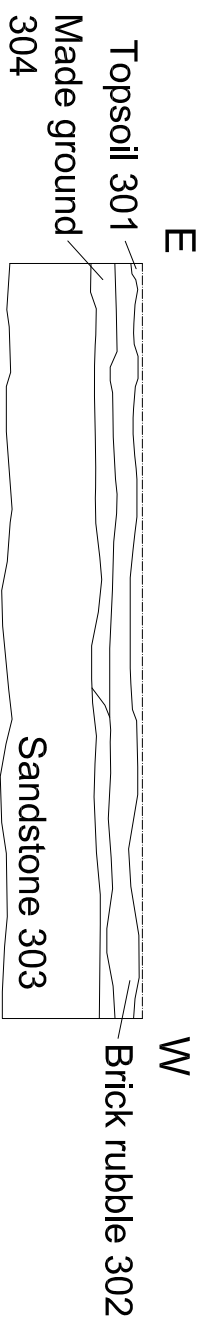
Trench 2



Trench 1

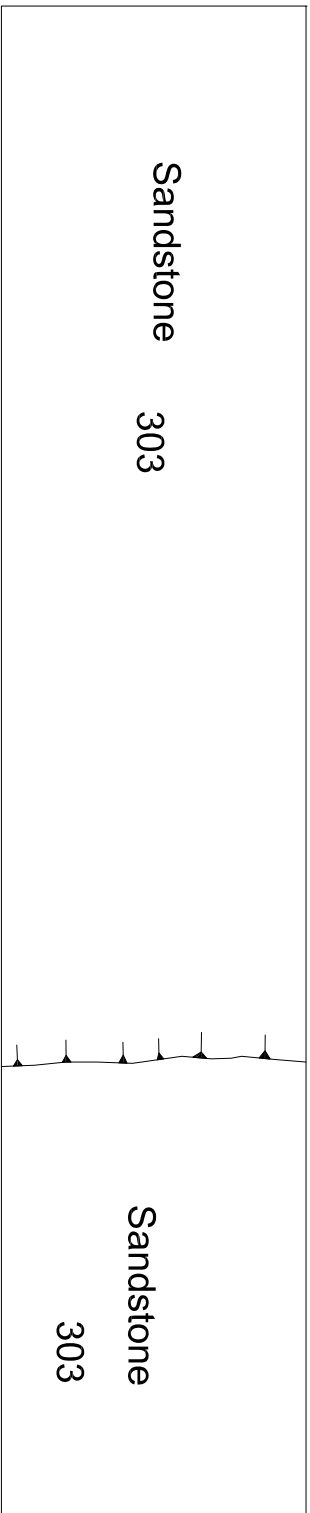


Trench 3

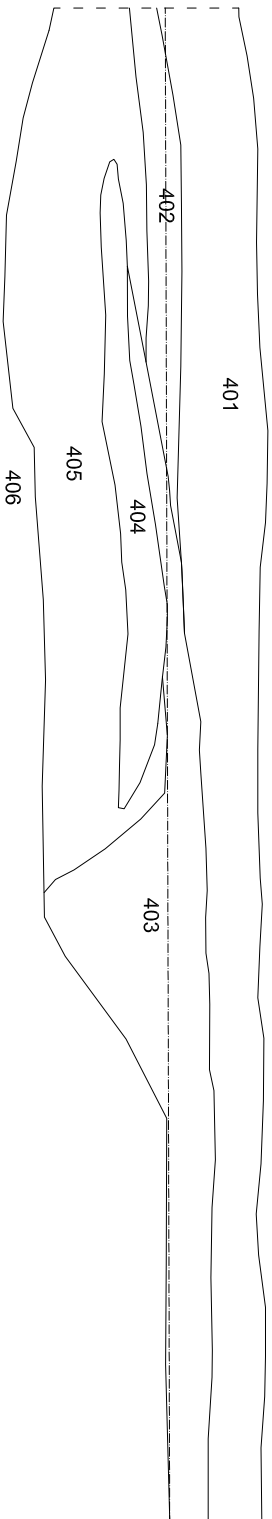


Key:





Trench 4



Trench 4 west facing section

Figure 5

Trench plans and sections

scale = 1:20 @ A4

Key:

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Figure 6. Trench 1



Figure 7. pipe in trench 1



Figure 8. Trench 2



Figure 9. Circular feature in Trench 2



Figure 10. Trench 3



Figure 11. Trench 4



Figure 12. Trench 4, section



Figure 13. Trench 5

APPENDIX II: REGISTERS

Context Register

Context No.	Trench	Description
101	1	Topsoil
102	1	Hardcore
103	1	Sandstone
104	1	Pipe
201	2	Topsoil
202	2	Hardcore
203	2	Sandstone
204	2	Circular pit
205	2	Cut of 204
301	3	Topsoil
302	3	Made ground
303	3	Sandstone
401	4	Topsoil
402	4	Made ground
403	4	Re-deposited sandstone waste
404	4	Re-deposited sandstone waste
405	4	Re-deposited clay
406	4	Sandstone

TYNE AND WEAR SPECIALIST CONSERVATION TEAM

**SPECIFICATION FOR PRELIMINARY EVALUATION WORK TO RECORD
SUSPECTED ARCHAEOLOGICAL DEPOSITS AT THE BLACK BULL, FRONT
STREET, LONGBENTON, NORTH TYNESIDE**

Introduction

The car park of the above public house is proposed for a residential development. The northern part of the site is under grass beyond which the ground falls away and is covered with dense undergrowth. Fragments of old stone wall survive along the northern boundary, there is a high sandstone rubble wall along the west boundary with traces of abutting structures and blocked openings, and the south boundary retains a short section of low stone wall with chamfered coping with sinkings for railings from the front gardens of former cottages.

The site lies within Longbenton Conservation Area. The Black Bull has been nominated for the draft Local List and will not be affected by the proposed development.

An archaeological desk based assessment was completed in June 1999 (Northern Counties Archaeological Services). The appointed archaeologist must familiarise themselves with the results of this previous archaeological work on the site before starting work. A copy of the report is held by the HER.

The site lies within the presumed extent of Longbenton medieval village, which may have shifted from an earlier location near to St. Bartholomew's church. Mackenzie described it as "one long street, built upon a rock, and is dry, pleasant and healthy".

The DBA report concludes that the Black Bull, which was rebuilt just before the Second World War, occupies the site of an earlier building which dated to at least 1780. The house on this plan is labelled 'Wilson', presumably Richard Wilson who owned 1/3 of Longbenton Township with William Lake in 1734. The land now occupied by the car park was owned by the Earl of Carlisle. There were contemporary buildings, single-storey stone cottages with pantiled roofs, on the development site to the west of the pub.

The street frontage within the development site was thus occupied by two or three blocks of cottages from at least the second half of the 18th century. The land to the rear formed the backlands and was probably used for rubbish dumping, cultivation and livestock.

Medieval and post medieval archaeological remains may therefore survive.

HER 786 Longbenton village

Long Benton (Magna Benton) was a member of the barony of Merlay or Morpeth. The barony dates from the beginning of the C12, though whether Benton is explicitly named before the C13 is not clear. When the barony was divided after 1266 so was Benton, one half ending up with the Brandlings of Gosforth, the other with the Stotes of Jesmond. Though there were few freeholders in the Middle Ages, it was a large village, there being 14 taxpayers in 1296, 18 in 1312. It was an exceptionally long, 2-row, settlement, stretching from Four Lane Ends (W) to the modern Tynedale Terrace (E), and at the time of the 1st ed. OS it included several farms. Though a number of 18th century and 19th century stone houses survive the N row has been broken by large pubs and car parks, and the village as a whole is enmeshed in modern housing estates.

HER 1413 Longbenton mill

In 1302 Adam Baret "entered into an agreement with Isabel de Somerville, the lady of half the barony of Merlay, concerning the multure of the mill of Long Benton... It was agreed that Isabel should remit to Adam his multure at Long Benton mill to the 10th measure...". There is no other published reference to the mill, and no clue to its type or location. Perhaps a watermill somewhere on the east bank of the Ouse Burn?

HER 785 Medieval church of St. Bartholomew

The parish of Long Benton stretched from the Tyne (S) to Sandy's Letch (N). The church was originally isolated, standing between the two principal villages of the parish, Long Benton and Killingworth, in a square churchyard. It was perhaps built by one of the Merlays, barons of Morpeth, Roger de Merlay being the owner of the advowson in 1251. Though the church was described as ruinous in 1663, the medieval nave was not demolished and rebuilt until 1790-91 (see HER 7272).

HER 7272 Church of St. Bartholomew

Parish church. 1790 rebuilding of medieval church (HER 785); the medieval nave was rebuilt wider and with a west tower to a design by William Newton. G.B. Richardson's drawing of c. 1840 shows this, and the medieval chancel, with two south lancets, a blocked south door, and two eighteenth century windows, one south, one east. 1842 repairs; 1873-5 repairs and additions. Sandstone ashlar with plinth; Welsh slate roof with stone gable copings, stone spire. Perpendicular style. West tower, nave, north porch, south aisle and porch, chancel with south aisles, north vestry, 2-stage tower has 2-light west window under arched belfry opening. Corner pinnacles to battlements; octagonal spire with weather-vane. South porch has arched door and is battlemented. Interior - plaster with ashlar dressings, collar beam roof trusses with upper king posts. Two small cross-incised grave slabs set above aumbry and piscina. Grave slabs

attached to east nave wall commemorate John Fenwick died 1581, John Killingworth and members of his family died 1587-1700; and to grave slabs to tower wall is for Edward Hindmarsh died 1708 and Ralph Anderson died 1687. 1857 stone font. First World War bronze memorial slab on stone mount on west wall. Non-pictorial glass by L.C. Evetts; nineteenth century glass from east window resited in south organ chamber.

The report recommends evaluation trial trenching.

In accordance with PPG16 and UDP Policy E18/5 a programme of trial trenching is required.

All staff on site must understand the project aims and methodologies.

All work must be carried out in compliance with the codes of practice of the Institute of Field Archaeologists and must follow the IFA Standard and Guidance for Archaeological Field Evaluations, Excavation or Watching Briefs as appropriate.

The North-East Regional Research Framework for the Historic Environment (2006) notes the importance of research as a vital element of development-led archaeological work. It sets out key research priorities for all periods of the past allowing commercial contractors to demonstrate how their fieldwork relates to wider regional and national priorities for the study of archaeology and the historic environment. The aim of NERRF is to ensure that all fieldwork is carried out in a secure research context and that commercial contractors ensure that their investigations ask the right questions. See Later Medieval section in NERRF and research theme MD2 (origin of urban communities) and research priority MDi (settlement).

Also refer to English Heritage Archaeology Division Research Agenda, 1997, p44-45, Theme PC6 (The late Saxon to medieval period) and p52, Theme T3 (rural settlement) <http://www.eng-h.gov.uk/resagend/resagen.pdf>

And to Medieval Settlement Research Group, 1996, Medieval rural settlements: a policy on their research, survey, conservation and excavation, 4 and 6.

Six evaluation trenches are needed to inform the Planning Authority of the character, nature, date, depth, degree of survival of archaeological deposits on this site. The excavation must be carried out by a suitably qualified and experienced archaeological organisation. The work will record and environmentally sample any archaeological deposits of importance found on the plot. The purpose of this brief is to obtain tenders for this work. The report must

be the definitive record for deposition in the Tyne and Wear HER, and it must contain recommendations for any further work needed on this site.

The developer is advised that if archaeological deposits are found in these preliminary trenches, further archaeological work in the form of open area excavation and/or a watching brief will be required.

Notification

The County Archaeologist needs to know when archaeological fieldwork is taking place in Tyne and Wear so that he can inform the local planning authority and can visit the site to monitor the work in progress. The Archaeological Contractor **must** therefore inform the County Archaeologist of the start and end dates of the Evaluation. He **must** also keep the County Archaeologist informed as to progress on the site. The CA must be informed of the degree of archaeological survival and of any significant finds. The Client will give the County Archaeologist reasonable access to the development to undertake monitoring.

Archaeological Brief

The work can be split into two sections;

- 1) evaluation of archaeologically sensitive deposits
- 2) post-evaluation analysis and report production including recommendations for further work on the site, if appropriate

1) Archaeological evaluation

The trenches are shown on figure 9 in the desk based assessment. These can be moved where necessary to avoid services or for other practical purposes.

The dimensions of the trenches are:

Trench 1	12m x 2m	(on site of cottages on the 1780 plan)
Trench 2	12m x 2m	(on site of cottages on the 1780 plan)
Trench 3	5m x 2m	(close to 1780 boundary walls)
Trench 4	10m x 2m	(backland deposits)
Trench 5	5m x 2m	(close to 1780 boundary walls)
Trench 6	4m x 2m	(backland deposits)

in plan **at base**.

Trenches can be widened if feasible in order to step the sides to reach depths over 1.2m where necessary, otherwise shoring will be needed.

Trench positions should be accurately surveyed prior to excavation and tied in to the national grid.

The trenches should be excavated to the depth of natural subsoil if this can be reached safely. However excavation is to be carried out with a view to avoid damage to any archaeological features which appear to worthy of preservation in-situ.

Tasks

Hand excavation, recording and environmental sampling (as stipulated below) of deposits down to the depth specified above.

Any modern overburden or levelling material can be machined-off using a wide toothless ditching bucket under strict archaeological supervision and the remaining deposits are to be excavated by hand.

Excavation is to be carried out by single context planning and recorded on *pro forma* context sheets. Features over 0.5 m in diameter can be half sectioned.

The spoil can be kept close-by and rapidly backfilled into the trenches at the conclusion of this work.

At the same time as the evaluation, the heavily overgrown ground to the north of the car park will be thoroughly examined for any visible surviving backland structures or boundary walls. Any such remains need to be photographed (digital images are acceptable – printed in the finished report and included on the CD for the HER) and their location plotted onto a site plan.

The existing boundary walls on the north and west sides of the site are likely to contain elements of earlier property divisions dating back to the 18th century or even earlier. These too need to be photographed.

Fieldwork - General Conditions

The Archaeological Contractor will provide an outline methodology of excavation and provide details of recording procedures employed.

The Archaeological Contractor must detail measures taken to ensure the safe conduct of excavations, and must consult with the client's structural engineers concerning working in close proximity to the foundations of the surrounding buildings. The Client may wish to see copies of the Archaeological Contractor's Health and Safety Policies.

The Archaeological Contractor must be able to provide written proof that the necessary levels of Insurance Cover are in place.

The Archaeological Contractor must maintain a Site Diary for the benefit of the Client, detailing the nature of work undertaken on a day by day basis, with full details of Site Staff present, duration of time on site, etc. and contact with third parties.

All staff employed by the Archaeological Contractor shall be professional field archaeologists with appropriate skills and experience to undertake work to the highest professional standards.

Recording

A full written, drawn (accurate scale plans, elevations and section drawings) and photographic record (of all contexts in black and white print and colour transparency with clearly visible graduated metric scale) will be made.

Pro-forma context sheets will be used.

All deposits and the base of the trench will be levelled. Levels will be expressed as metres above Ordnance Datum.

Stratigraphy shall be recorded even when no archaeological features have been recognised.

A 'Harris' matrix will be compiled where stratified deposits are recorded.

Environmental Sampling and Scientific Dating

This is a compulsory part of the evaluation exercise.

Scientific investigations should be undertaken in a manner consistent with “The Management of Archaeological Projects”, English Heritage 1991 and with “Archaeological Science at PPG16 Interventions: Best Practice for Curators and Commissioning Archaeologists”, English Heritage, 2003.

Aims of environmental sampling – to determine the abundance/concentration of the material within the features and how well the material is preserved, to characterise the resource (the site) and each phase, to determine the significance of the material and its group value, what crop processing activities took place on the site? What does this tell us about the nature of the site? Is there any evidence for changes in the farming practice through time? How did people use this landscape? Can we place certain activities at certain locations within the site? Function and date of individual features such as pits, hearths etc. Are the charred assemblages the result of ritual deposition or rubbish? Is the charcoal the result of domestic or industrial fuel?

Advice on the sampling strategy for environmental samples and samples for scientific dating etc. must be sought from Jacqui Huntley, English Heritage Regional Advisor for Archaeological Science (0191 3341137 or 07713 400387) **before** the evaluation begins. The sampling strategy should include a reasoned justification for selection of deposits for sampling.

Deposits should be sampled for retrieval and assessment of the preservation conditions and potential for analysis of biological remains (English Heritage 2002). Flotation samples and samples taken for coarse-mesh sieving from dry deposits should be processed at the time of fieldwork wherever possible. Sieving recovers fish, amphibian, small bird and mammal bone, small parts of adult mammals and young infused bones which may be under-represented otherwise. However it is noted that clay soils in this region make sieving difficult. Discuss the potential for sieving with Regional Advisor for Archaeological Science.

Environmental samples (bulk soil samples of 30 litres volume, to be sub-sampled at a later stage) will be collected by the excavator from suitable (i.e. uncontaminated) deposits. It is suggested that a large number of samples be collected during evaluation from which a selection of the most suitable (uncontaminated) can be processed. All tenders will give a price for the full analysis, report production and publication per sample.

Deposits will be assessed for their potential for radiocarbon, archaeomagnetic (guidance is available in the Centre for Archaeology Guideline on Archaeometallurgy 2001) and Optically Stimulated Luminescence dating. Timbers will be assessed for their potential for dendrochronology dating. Sampling should follow procedures in “Dendrochronology: guidelines on producing and interpreting dendrochronological dates”, Hillam, 1998. All tenders will quote the price of these techniques per sample.

The following information should be provided with the environmental samples to be processed – brief account of nature and history of the site, aims and objectives of the project, summary of archaeological results, context types and stratigraphic relationships, phase and dating information, sampling and processing methods, sample locations, preservation conditions, residuality/contamination etc.

Laboratory processing of samples shall only be undertaken if deposits are found to be reasonably well dated, or linked to recognisable features and from contexts the derivation of which can be understood with a degree of confidence.

A range of features, and all phases of activity, need to be sampled for charred plant remains and charcoal. Aceramic features should not be avoided as the plant remains from these features may help to date them. Deep features should be sampled in spits to pick up changes over time. Part, or all of each of the contexts should be processed. In general samples should be processed in their entirety. All flots should be scanned, and some of the residues.

Pollen samples can be taken from features such as lakes, ponds, palaeochannels, estuaries, saltmarshes, mires, alluvium and colluvium, and from waterlogged layers in wells, ditches and latrines etc. Substances such as honey, beer or food residues can be detected in vessels. Activities such as threshing, crop processing and the retting of flax can be identified. When taken on site, pollen samples should overlap. Your regional science advisor can advise on the type of corer or auger which would be most appropriate for your site. Samples need to be wrapped in clingfilm and kept dark and cool. Make a description of the sediments in which the pollen was found, and send this with the sample to be assessed.

Coastal or estuary sites (even those which are now well drained) are suitable for sampling for foraminifera. Diatoms can also be found on marine sites, but also in urban settings (sewers, wells, drains, ditches etc). They only survive in waterlogged conditions. These aquatic microfossils are used as proxy indicators of the former aquatic ecological conditions on site, changes in sea levels and temperature, salinity, PH and pollution. Forams are taken from cores, monolith tins or bulk samples. Diatoms are cut from monolith tins or cores or taken as spot samples.

Insects, which are useful as palaeoenvironmental indicators, survive best in waterlogged deposits such as palaeochannels and wells. They can provide information on climate change and landscape reconstruction as some species are adapted to particular temperatures, habitats or even particular trees. Certain insects can indicate the function of a feature or building (eg. Weevils, which were introduced by the Romans, often indicate granary sites, parasites will indicate the presence of particular animals such as sheep or horse, latrine flies survive in the mineral deposits in latrines, or in the daub of medieval buildings etc). Samples need to be sealed (eg. in a plastic box).

Where there is evidence for industrial activity, macroscopic technological residues should be collected by hand. Separate samples should be collected for micro-slugs (hammer-scale and spherical droplets). Guidance is available in the English Heritage "Archaeometallurgy" guidelines, 2001.

Buried soils and sediment sequences should be inspected and recorded on site by a recognised geoarchaeologist. Procedures and techniques in the English Heritage document "Environmental Archaeology", 2002 and "Geoarchaeology", 2004 should be followed.

Sampling strategies for wooden structures should follow the methodologies presented in "Waterlogged wood. Guidelines on the recording, sampling, conservation and curation of waterlogged wood" R. Brunning, 1996. If timbers are likely to be present on your site, contact a wood specialist beforehand. Pre-excavation planning – determine questions to ask, agree on a sampling strategy, allocate reasonable time and budget. Soil samples should be taken of the sediments surrounding the timber. Keep the timbers wet! Record them asap on-site – plan, photograph, record the size and orientation of the wood (radial, tangential, transverse), any toolmarks, joints, presence of bark, insect damage, recent breaks, and if another piece of wood was on top of or below the piece sampled. Both vertical and horizontal positioning of wattle must be recorded. Wood samples can provide information on woodland management such as medieval coppicing, type of taxa (native or foreign), conversion technology (how the wood was turned into planks), building techniques and type of tools used.

Waterlogged organic materials should be dealt with following recommendations in "Guidelines for the care of waterlogged archaeological leather", English Heritage and Archaeological Leather Group 1995.

Animal Bone

Animal bone can explore themes such as hunting and fowling, fishing, plant use and trade, seasonality, diet, age structures, farrowing areas, species ratios, local environment.

Animal bone assemblages should be assessed by a recognised specialist.

The specialist will need to know a brief account of the nature and history of the site, an account of the purpose, methods (details of sampling) for recovery of animal bones, and the main aims and results of the excavation, details of any specific questions that the excavator wants the animal bone specialist to consider, information about other relevant finds from the excavation (e.g. bone tools, fishing equipment, weaving equipment), specific information about each context that has produced significant quantities of animal bone (recovery method, phase, context type, position in relation to major structures, contamination by more recent material, some indication of the amount of bone (by weight or by container size). See “Ancient Monuments Laboratory Advisory Note, “Assessment of animal bone collections from excavations”, Sebastian Payne, 1991 and “The Assessment of a collection of animal bones”, S. Davis, n.d., Ancient Monuments Laboratory.

Human Remains

Human remains must be treated with care, dignity and respect.

Excavators must comply with the relevant legislation (essentially the Burial Act 1857) and local environmental health concerns. If found, human remains must be left in-situ, covered and protected. The archaeological contractor will be responsible for informing the police, coroner and County Archaeologist. If it is agreed that removal of the remains is essential, the archaeological contractor will apply for a licence from the Home Office and their regulations must be complied with.

Site inspection by a recognised osteologist is desirable for isolated burials and essential for cemeteries. The remains will be recorded in-situ and subsequently lifted, washed in water (without additives). They will be marked and packed to standards compatible with “Excavation and post-excavation treatment of cremated and inhumed human remains”, McKinley and Roberts, 1993. After excavation, the remains will be subject to specialist assessment.

Analysis of the osteological material should take place according to published guidelines “Human Remains from Archaeological Sites, Guidelines for producing assessment documents and analytical reports, English Heritage, 2002.

Some of the potential benefits from the study of human skeletons – demography, growth profiles, patterns of disease, genetic relationships, activity patterns, diet, burial practices, human evolution. New scientific techniques available include DNA and stable isotope analyses.

The final placing of the remains after scientific study and analysis will be agreed beforehand.

Further guidance is available in:

“Guidance for best practice for treatment of human remains excavated from Christian burial grounds in England”, The Church of England and English Heritage, 2005 (www.english-heritage.org.uk/upload/pdf/16602_HumanRemains1.pdf)
“Church Archaeology: its care and management”, Council for the Care of Churches, 1999

The Advisory Panel on the Archaeology of Christian burials in England can provide free well-informed advice with consideration of relevant religious, ethical, legal, archaeological and scientific issues. Panel’s website: <http://www.britarch.ac.uk/churches/humanremains/index.html> or email the secretary simon.mays@english-heritage.org.uk

Treasure

Defined as:

- Any metallic object, other than a coin, provided that at least 10% by weight of metal is precious metal and that is at least 300 years old when found

- Any group of two or more metallic objects of any composition of prehistoric date that come from the same find
- All coins from the same find provided that they are at least 300 years old when found, but if the coins contain less than 10% gold or silver there must be at least ten
- Any object, whatever it is made of, that is found in the same place as, or had previously been together with, another object that is Treasure
- Any object that would previously have been treasure trove, but does not fall within the specific categories given above. Only objects that are less than 300 years old, that are made substantially of gold or silver, that have been deliberately hidden with the intention of recovery and whose owners or heirs are unknown will come into this category

If anything is found which could be Treasure, under the Treasure Act 1996, it is a legal requirement to report it to the local coroner within 14 days of discovery. The Archaeological Contractor must comply with the procedures set out in The Treasure Act 1996. Any treasure must be reported to the coroner and to The Portable Antiquities Scheme Finds Liaison Officer, Rob Collins (0191 2225076 or Robert.Collins@newcastle.ac.uk) who can provide guidance on the Treasure Act procedures.

2) Post-excavation and report production

Finds Processing and Storage

Finds shall be recorded and processed in accordance with the IFA Guidelines for Finds Work

Finds will be assessed by an experienced finds specialist.

The Archaeological Contractor will process and catalogue the finds in accordance with Museum and Galleries Commissions Guidelines (1992) and the UKIC Conservation Guidelines, and arrange for the long term disposal of the objects on behalf of the Client. A catalogue of finds and a record of discard policies, will be lodged with the finds for ease of curation.

Assessment should include x-radiography of all iron objects (after initial screening to exclude recent debris) and a selection of non-ferrous artefacts (including all coins). Refer to "Guidelines on the x-radiography of archaeological metalwork, English Heritage, 2006.

If necessary, pottery sherds and bricks should be recommended for Thermoluminescence dating.

Finds processing, storage and conservation methods must be broadly in line with current practice, as exemplified by the IFA "Standard and guidance for the collection, documentation, conservation and research of archaeological materials", 2001. Finds should be appropriately packaged and stored under optimum conditions, as detailed in the RESCUE/UKIC publication "First Aid for Finds" (Watkinson and Neal 1998). Proposals for ultimate storage of finds should follow the UKIC publication "Guidelines for the Preparation of Excavation Archives for Long-term Storage" (Walker 1990). Details of methodologies may be requested from the Archaeological Contractor.

Other useful guidance – "A Strategy for the Care and Investigation of Finds", English Heritage, 2003, "Finds and Conservation Training Package", English Heritage, 2003.

All objects must be stored in appropriate materials and conditions to ensure minimal deterioration. Advice can be sought from Jacqui Huntley of English Heritage (0191 3341137 or 07713 400387) where necessary.

The report

1. The Archaeological Contractor must produce an interim report of 200 words minimum, two weeks after the completion of the field-work, for the Client and the Planning Authority, with a copy for information to the County Archaeologist. This will contain the recommendations for any further work needed on site.
2. The production of Site Archives and Finds Analysis will be undertaken according to English Heritage Guidelines (Managing Archaeological Projects 2nd Edition).
3. A full report with the following features should be produced within six months of the completion of the field-work. All drawn work should be to publication standard. The report must include:
 - * Location plans of trenches and grid reference of site
 - * Site narrative – interpretative, structural and stratigraphic history of the site
 - * Plans showing major features and deposit spreads, by phase, and section locations
 - * Sections of the two main trench axes and through excavated features with levels
 - * Elevation drawings of any walls etc. revealed during the excavation
 - * Artefact reports – full text, descriptions and illustrations of finds
 - * Tables and matrices summarising feature and artefact sequences.
 - * Archive descriptions of contexts, grouped by phase (not for publication)
 - * Deposit sequence summary (for publication/deposition)
 - * Colour photographs of trenches and of archaeological features and finds
 - * Laboratory reports and summaries of dating and environmental data, with collection methodology.
 - * A consideration of the results of the field-work within the wider research context (ref. NERRF etc).
 - * Recommendations for further work on site, or further analysis of finds or environmental samples
 - * Copy of this specification
4. Three bound and collated copies of the report need to be submitted:
 - one for the commissioning client
 - one for the planning authority (North Tyneside Council)
 - one for deposition in the County HER at the address below. A digital copy of the report on CD is also required by the HER in a plastic case. Please do not attach this to the report.

The report and CD for the HER must be sent by the archaeological consultant or their client directly to the address below. If the report is sent via the planning department, every page of the report will be stamped with the planning application number which ruins the illustrations. The HER is also often sent a photocopy instead of a bound colour original which is unacceptable.

5. If significant archaeological features are found during the evaluation, the results may also warrant publication in a suitable archaeological journal. The tender should therefore include an estimated figure for the production of a short report of, for example 20 pages, in a journal such as *Archaeologia Aeliana*, the *Arbeia Journal*, *Industrial Archaeology Review* or *Durham Archaeological Journal*. This is merely to give the commissioning client an indication of potential costs.

Before preparing a paper for publication, the archaeological contractor must discuss the scope, length and suitable journal with the County Archaeologist.

Site Archive

The archive should be a record of every aspect of an archaeological project – the aims and methods, information and objects collected, results of analysis, research, interpretation and publication. It must be as complete as possible, including all relevant documents, records, data and objects {Brown, 2007, 1}.

The site archive (records and materials recovered) should be prepared in accordance with *Managing Archaeological Projects*, Second Edition, 5.4 and appendix 3 (HBMC 1991), "Archaeological documentary archives" IFA Paper No. 1, "Archaeological Archives – creation, preparation, transfer and curation" Archaeological Archives Forum etc., *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990) and "Archaeological Archives – A guide to best practice in creation, compilation, transfer and curation" by Duncan H. Brown, Archaeological Archives Forum, July 2007.

Documentary Archive

The documentary archive comprises all records made during the archaeological project, including those in hard copy and digital form.

This should include written records, indexing, ordering, quantification and checking for consistency of all original context sheets, object records, bulk find records, sample records, skeleton records, photographic records (including negatives, prints, transparencies and x-radiographs), drawing records, drawings, level books, site notebooks, spot-dating records and conservation records, publication drafts, published work, publication drawings and photographs etc.

A summary account of the context record, prepared by the supervising archaeologist, should be included.

All paper-based material must at all times be stored in conditions that minimise the risk of damage, deterioration, loss or theft.

Do not fold documents

Do not use self-adhesive labels or adhesive or tape of any kind

High quality paper (low-acid) and permanent writing materials must be used.

Original drawings on film must be made with a hard pencil, at least 4H.

Do not ink over original pencil drawings.

Use polyester based film for drawings (lasts longer than plastic).

Store documents in acid-free, dust-proof cardboard boxes

Store documents flat

All documents must be marked with the project identifier (e.g. site code) and/or the museum accession number.

All types of record must use a consistent terminology and format.

Use non-metal fastenings, and packaging and binding materials that ensure the longevity of documents.

Copies of reports and appropriate drafts, with associated illustrative material, must be submitted for inclusion with the archive.

Material Archive

The material archive comprises all objects (artefacts, building materials or environmental remains) and associated samples of contextual materials or objects.

All artefacts and ecofacts retained from the site must be packed in appropriate materials.

All finds must be cleaned as appropriate to ensure their long-term survival

All metal objects retained with the archive must be recorded by x-radiograph (except gold or lead alloys or lead alloys with a high lead content and objects too thick to be x-rayed effectively e.t.c.)

All finds must be marked or labelled with the project and context identifiers and where relevant the small-finds number

Use tie-on rot-proof labels where necessary

Bulk finds of the same material type, from the same context, may be packed together in stable paper or polythene bags

Mark all bags on the outside with site and context identifiers and the material type and include a polyethylene label marked with the same information

Use permanent ink on bags and labels

Sensitive finds must be supported, where appropriate, on inert plastic foam or acid-free tissue paper. It is not advisable to wrap objects in tissue as the unwrapping could cause damage.

The archive will be placed in a suitable form in the appropriate museum (typically Museum of Antiquities for Newcastle and Tyne and Wear Museums for the rest of Tyne and Wear (check with these institutions) with the landowner's permission.

A letter will be sent to the County Archaeology Officer within six months of the report having been submitted, confirming where the archive has been deposited.

OASIS

The Tyne and Wear County Archaeologist supports the Online Access to the Index of Archaeological Investigations (OASIS) project. This project aims to provide an online index/access to the large and growing body of archaeological grey literature, created as a result of developer-funded fieldwork.

The archaeological contractor is therefore required to register with OASIS and to complete the online OASIS form for their evaluation at <http://ads.ahds.ac.uk/project/oasis/>. Please ensure that tenders for this work takes into account the time needed to complete the form.

Once the OASIS record has been completed and signed off by the HER and NMR the information will be incorporated into the English Heritage Excavation Index, hosted online by the Archaeology Data Service.

The ultimate aim of OASIS is for an online virtual library of grey literature to be built up, linked to the index. The unit therefore has the option of uploading their grey literature report as part of their OASIS record, as a Microsoft Word document, rich text format,

pdf or html format. The grey literature report will only be mounted by the ADS if both the unit and the HER give their agreement. The grey literature report will be made available through a library catalogue facility.

Please ensure that you and your client understand this procedure. If you choose to upload your grey literature report please ensure that your client agrees to this in writing to the HER at the address below.

For general enquiries about the OASIS project aims and the use of the form please contact: Mark Barratt at the National Monuments Record (tel. 01793 414600 or oasis@english-heritage.org.uk). For enquiries of a technical nature please contact: Catherine Hardman at the Archaeology Data Service (tel. 01904 433954 or oasis@ads.ahds.ac.uk). Or contact the Tyne and Wear Archaeology Officer at the address below.

The tender

Tenders for the work should contain the following:-

1. Brief details of the staff employed and their relevant experience
2. Details of any sub-contractors employed
3. A quotation of cost, broken down into the following categories:-
 - * Costs for the excavation, incl. sub-headings of staff costs on a person-day basis, transport, materials, and plant etc.
 - * Post-excavation costs, incl. storage materials
 - * Cost of Environmental analysis and scientific dating per sample
 - * Estimated cost for full publication of results in an archaeological journal
 - * Overheads
4. An indication of the required notification period (from agreement to start date) for the field-work; the duration of fieldwork and the expected date for completion of the post-excavation work (a maximum of 6 months after completion of the fieldwork)

Monitoring

The Archaeological Contractor will inform the County Archaeologist of the start and end dates of the excavation to enable the CA to monitor the work in progress.

Should important archaeological deposits be encountered, the County Archaeologist must be informed. If further archaeological evaluation is required on this site, then the archaeological contractor must submit a written scheme of investigation for approval by the CA before extending the size of the trenches.

Jennifer Morrison

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Jesmond Old Cemetery
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Newcastle upon Tyne
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Ref: Black Bull
20th June 2008
Planning Application: pre-application