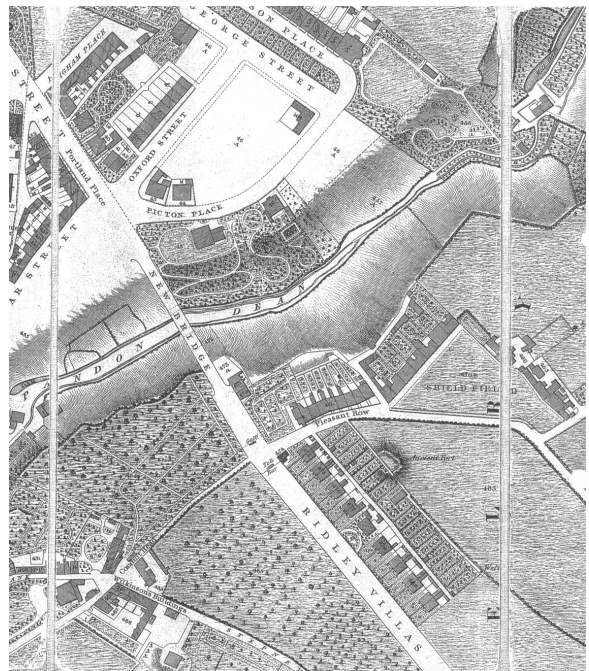


**BACK NEW BRIDGE STREET,  
(EAST OF NO.1 FALCONAR STREET),  
SHIELDFIELD,  
NEWCASTLE UPON TYNE,  
TYNE AND WEAR**



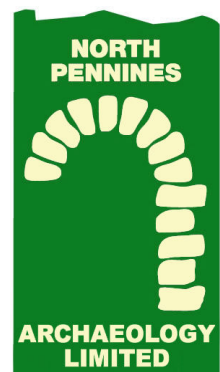
**ARCHAEOLOGICAL  
EVALUATION REPORT**

**CP. No: 1034/10**

**23/03/2010**

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**DOCUMENT TITLE:** Back New Bridge Street, (east of No.1 Falconar Street)  
Shieldfield, Newcastle upon Tyne, Tyne and Wear

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## *Quality Assurance*

This report covers works as outlined in the brief for the above-named project as issued by the relevant authority, and as outlined in the agreed programme of works. Any deviation to the programme of works has been agreed by all parties. The works have been carried out according to the guidelines set out in the Institute for Archaeologists (IfA) Standards, Policy Statements and Codes of Conduct. The report has been prepared in keeping with the guidance set out by North Pennines Archaeology Ltd on the preparation of reports.

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## SUMMARY

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North Pennines Archaeology Ltd were commissioned by RM Accommodation, to undertake an archaeological evaluation on land between Back New Bridge Street and Albert Street, Shieldfield, Newcastle upon Tyne, Tyne and Wear (NGR NZ 2550 6454). This work follows a planning application (Planning Application No. 2008/0745/01/DET) for the construction of a five-story building for student accommodation with a basement car park. The Tyne and Wear Specialist Conservation Team granted planning consent for the development, on the condition that an archaeological evaluation be undertaken in advance of the proposed work. The evaluation is required as the site lies within the immediate vicinity of Shieldfield Civil War Fort (HER 285), which identified the site to be of potential archaeological significance.

The archaeological evaluation was undertaken over two days between the 3<sup>rd</sup> and 4<sup>th</sup> March 2010. The evaluation involved the excavation of three trenches, totalling 43m<sup>2</sup> of the proposed 564m<sup>2</sup> development area. All three trenches revealed a series of different deposits and structural remains, although all of the structural remains are likely to post-date 1831.

Based upon the results obtained, it is highly probable that a buried medieval soil was identified during the evaluation. Furthermore, the results of the environmental analysis suggest that material was included within this deposit which may have resulted from high temperature industrial processes. This deposit was noted within all three trial trenches, suggesting that it may be preserved throughout the proposed development area

No evidence of Shieldfield Civil War fort or associated features or finds was observed during the evaluation. The results obtained during the present investigation, and from previous archaeological investigations suggest that any such evidence for the fort within the proposed development area is likely to have been destroyed by previous development sometime after the later 19<sup>th</sup> century.

This archaeological evaluation was conducted as part of a condition in association with the development of a new five-story building with a basement car park. Although the evaluation failed to identify any remains associated with Shieldfield fort, it did succeed in identifying a possible buried medieval deposit. It is therefore possible that other early deposits or features survive across the site.

## ACKNOWLEDGEMENTS

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North Pennines Archaeology Ltd would like to thank RM Accommodation, for commissioning the project, and for all assistance throughout the work. NPA Ltd would also like to thank Jennifer Morrison, Tyne and Wear Archaeology Officer for all her assistance throughout the project.

North Pennines Archaeology Ltd would also like to extend their thanks to Fred Brown of Northumbrian Plant Hire, for his help during this project.

The archaeological evaluation was undertaken by David Jackson and Angus Clark. The report was written by David Jackson and the drawings were produced by David Jackson and Angus Clark. The finds were assessed by Jenny Vaughan of Northern Counties Archaeological Services, and the environmental samples were analysed by Don 'O Meara, Environmental Specialist for NPA Ltd. The project was managed by Martin Railton, Project Manager for NPA Ltd, who also edited the report.

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# 1 INTRODUCTION

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## 1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 In March 2010 North Pennines Archaeology were invited by RM Accommodation, to undertake an archaeological evaluation on land between Back New Bridge Street and Albert Street, Shieldfield, Newcastle upon Tyne (NGR NZ 2550 6454; Figure 1), prior to the development of a five-story building with a basement car park. The proposed works lie within the immediate vicinity of the Shieldfield Civil War Fort (HER 285). As a result, Jennifer Morrison of the Tyne and Wear Specialist Conservation Team requested that the site be subject to a programme of archaeological investigation. This is in line with government advice as set out in the DoE Planning Policy Guidance on Archaeology and Planning (PPG 16).
- 1.1.2 All stages of the archaeological work were undertaken following approved statutory guidelines (IfA 2008), and were consistent with the specification provided by the Tyne and Wear Specialist Conservation Team (Morrison 2009) and generally accepted best practice.
- 1.1.3 This report outlines the evaluation work undertaken on-site, the subsequent programme of post-fieldwork analysis, and the results of this scheme of archaeological works.

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## 2 METHODOLOGY

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### 2.1 PROJECT INITIATION

2.1.1 Following a planning application (Planning Application No. 2008/ 0745/ 01/ DET) for the construction of a five-story building for student accommodation with a basement car park, the Tyne and Wear Specialist Conservation Team requested an archaeological evaluation of the study area. A detailed specification for the archaeological works was provided by the Tyne and Wear Specialist Conservation Team (Morrison 2009). The specification was adhered to in full, and the work was consistent with the relevant standards and procedures of the Institute for Archaeologists (IfA), and generally accepted best practice.

### 2.2 THE FIELD EVALUATION

2.2.1 The evaluation consisted of the excavation of three trenches covering approximately 43m<sup>2</sup> of the proposed 564m<sup>2</sup> development area (Figure 2). The purpose of the evaluation was to establish the nature and extent of below ground archaeological remains within the vicinity. All work was conducted according to the recommendations of the Institute for Archaeologists (2008).

2.2.2 In summary, the main objectives of the field evaluation were:

- to establish the presence/absence, nature, extent and state of preservation of archaeological remains and to record these where they were observed;
- to establish the character of those features in terms of cuts, soil matrices and interfaces;
- to recover artefactual material, especially that useful for dating purposes;
- to recover palaeoenvironmental material where it survives in order to understand site and landscape formation processes.

2.2.3 The evaluation trenches were excavated by mechanical excavator under close archaeological supervision. The trenches were subsequently cleaned by hand and all features were investigated and recorded according to the North Pennines Archaeology Ltd standard procedure as set out in the Excavation Manual (Giecco 2003).

2.2.4 All three evaluation trenches were backfilled following excavation and recording.

2.2.5 The fieldwork programme was followed by an assessment of the data as set out in the *Management of Archaeological Projects* (2<sup>nd</sup> Edition, 1991).

### 2.3 THE ARCHIVE

2.3.1 A full professional archive has been compiled in accordance with the specification, and in line with current UKIC (1990) and English Heritage Guidelines (1991) and according to the Archaeological Archives Forum recommendations (Brown 2007). The archive will be deposited within The Great North Museum, Newcastle upon Tyne, with copies of the report sent to the County Historic Environment Record at Newcastle upon Tyne, available to view upon request. The archive can be accessed under the unique project identifier **NPA10, FSN-A, CP/1034/10**.

2.3.2 North Pennines Archaeology, and the Tyne and Wear Specialist Conservation Team Council, support the **Online AccesS to the Index of Archaeological InvestigationS (OASIS)** project. This project aims to provide an on-line index and access to the extensive and expanding body of grey literature, created as a result of developer-funded archaeological work. As a result, details of the results of this project will be made available by North Pennines Archaeology, as a part of this national project.

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## 3 BACKGROUND

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### 3.1 LOCATION AND GEOLOGICAL CONTEXT

- 3.1.1 The present study area is situated immediately east of the centre of Newcastle upon Tyne, within the suburb of shieldfield, at a height of approximately 50m OD (Figure 1). The site lies within a small parcel of formerly developed land, immediately north of New Bridge Street. It is bound to the north by Albert Street, to the west by Falconar Street, and to the south and east by an area presently under development, which was formerly Back New Bridge Street and its associated properties (Figure 2).
- 3.1.2 The geology of the region is underlain almost entirely by Coal Measures of Upper Carboniferous age. The underlying rocks in the area are overlain by glacial clay or till (Countryside Commission 1998). Accumulations of fine silt and clay also occur locally, the result of temporary lakes which formed during the final stages of the last glacial period (*ibid*).

### 3.2 HISTORICAL CONTEXT

- 3.2.1 *Introduction:* this historical background is compiled mostly from secondary sources, and is intended only as a brief summary of historical developments specific to the study area.
- 3.2.2 There does not appear to be any evidence of prehistoric or Roman activity within the immediate vicinity of the present study area, although there is evidence of prehistoric activity to the north at Jesmond, and archaeological remains dating to the Romano-British period have been discovered at Byker to the east<sup>1</sup>.
- 3.2.3 During the medieval period, the area of Shieldfield lay outside the boundaries of Newcastle itself and formed part of the manor and township of Byker. During 1354, Shieldfield is recorded as possessing a windmill and a limekiln. A mill is also recorded there in 1428-29. Shieldfield was eventually transferred to Newcastle in 1549<sup>1</sup>.
- 3.2.4 A large detached artillery fort was erected at Shieldfield during the early 1640's as part of Mayor Sir John Marley's attempts to refortify the town during the Civil War<sup>2</sup>. The fort is described as being square in shape, 67 yards by 67 yards with a bastion at each corner. The fort was built of earth and wattle with a wooden drawbridge at the entrance (Morrison 2009). In

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<sup>1</sup> [http://www.newcastle.gov.uk/core.nsf/a/msl\\_local\\_histories?opendocument&ID=msl101](http://www.newcastle.gov.uk/core.nsf/a/msl_local_histories?opendocument&ID=msl101)

<sup>2</sup> Tyne and Wear Historic Environment Record (HER No.285)

February 1644, the fort fell to the Scots and was reportedly in ruins by 1646<sup>3</sup>. The fort was apparently repaired in 1648<sup>2</sup>. Visible remains of the 'great fort' are reported in 1827, and Oliver's plan of 1831 shows what appears to be the northeast bastion of the fort<sup>2</sup>, partly in a field prior to the construction of Christ Church and partly within the gardens behind Ridley Villas<sup>3</sup>, immediately adjacent to the present study area (Figure 2). Part of the fort was still visible between Christ Church and Ridley Villas in the later 19<sup>th</sup> century (Morrison 2009).

3.2.5 The industrialisation of the region encroached upon the area of Shieldfield during the late 18<sup>th</sup> and 19<sup>th</sup> centuries, with a brickworks (HER 4143) and ropery (HER 5767) amongst the known industries. However, the Shieldfield area served mainly as a residential suburb for the city of Newcastle and the adjacent industrial zone of Byker<sup>1</sup>.

### 3.3 PREVIOUS WORK

3.3.1 In 2008, John Nolan of NCAS used Oliver's 1831 plan of the area as evidence for plotting the location of Shieldfield Fort. This work suggests that the northeast bastion of the fort was immediately to the northeast of the present study area (Figure 2).

3.3.2 Three archaeological investigations are known to have taken place within the immediate vicinity of the present study area. These include:

- an archaeological desk-based assessment undertaken by Tyne and Wear Museums in 2004,
- an assessment undertaken by RPS in 2008 of the adjacent site to the east,
- and an archaeological evaluation undertaken by The Archaeological Practice in 2009 of the site to the east.

3.3.3 No remains relating to the Civil War fort were identified during these previous investigations.

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<sup>3</sup>[http://www.pastscape.org/hob.aspx?hob\\_id=24945&sort=4&search=all&criteria=shieldfield%20fort&rational=q&recordsperpage=10 - aRt](http://www.pastscape.org/hob.aspx?hob_id=24945&sort=4&search=all&criteria=shieldfield%20fort&rational=q&recordsperpage=10 - aRt)

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## 4 ARCHAEOLOGICAL EVALUATION RESULTS

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### 4.1 INTRODUCTION

- 4.1.1 The trial trench evaluation was undertaken over two consecutive days, between the 3<sup>rd</sup> and the 4<sup>th</sup> March 2010, and comprised the excavation of three trial trenches within a small parcel of formerly developed land between Albert Street and the former Back New Bridge Street (Figure 2).
- 4.1.2 The evaluation trenches covered approximately 43m<sup>2</sup> of the proposed 564m<sup>2</sup> development area. The locations of the trenches were informed by historical mapping which suggests that the proposed development site is situated within the northeast corner of Shieldfield Fort.
- 4.1.3 All three trenches were excavated to the level of the natural substrate with a Case 580 super R, using a 1.6m wide ditching bucket. The trenches were subsequently cleaned by hand, and investigated and recorded fully. The results of the evaluation are outlined below.

### 4.2 RESULTS

- 4.2.1 *Trench 1:* Trench 1 was aligned north to south, and was excavated parallel with the eastern boundary of the proposed development site (Figure 2). The trench measured 15m in length, 1.6m in width, and was excavated to a maximum depth of 2m revealing a natural deposit of brown/yellow coarse gravel and sand (**101**). The natural gravel (**101**) was sealed below a 0.32m deposit of dark brown sandy silt (**105**). Both the natural gravel (**101**) and the sandy silt (**105**) were observed throughout most of Trench 1 (Plate 1, Figure 3).
- 4.2.2 Within the southern section of Trench 1, the dark brown sandy silt (**105**) was sealed by a 0.22m demolition layer (**104**) which was largely comprised of squared sandstone blocks and sandstone rubble. The demolition layer (**104**) was in turn sealed by a 0.13m thick deposit of concrete (**103**), which probably once formed part of a floor surface. This was below a further demolition layer (**102**), which was largely comprised of redbrick rubble and measured 0.56m in depth. The demolition layer (**102**) was sealed by a 0.25m thick deposit of tarmac and asphalt surface (**100**). This sequence of deposits remained consistent within the southernmost 5.4m of the trench (Plate 2, Figure 3).
- 4.2.3 At approximately 5.4m north along Trench 1, an east to west aligned wall was revealed directly above the deposit of dark brown sandy silt (**105**), and below the tarmac and asphalt surface (**100**). The wall (**106**) measured over



1.6m in length, 0.5m in width and 0.9m in height, and was comprised of nine courses of redbrick bonded with what appeared to be lime mortar (Plate 3). To the north of the redbrick wall (106), the sandstone rubble (104), the concrete (103), and the brick rubble (102) were replaced by a 0.85m deposit of mid-brown silty clay subsoil (108) which retained frequent sandstone and redbrick inclusions. The silty clay subsoil (108) was above the deposit of dark brown sandy silt (105) and below the tarmac and asphalt surface (100). The silty clay subsoil (108) remained largely consistent throughout the northern half of Trench 1 (Plate 1, Figure 3).

- 4.2.4 At approximately 0.4m north of the redbrick wall (106), the silty clay subsoil (108), the dark brown sandy silt (105), and the natural gravel (101) were cut by a further feature. The U-shaped cut [109] measured over 1.8m in depth and c.1.9m in width, and was filled by a dark brown silty sand (110). It is probable that this feature represented the cut for a brick-lined well as the remains of a circular redbrick structure (107) were noted within the cut [109], at the base of the trench (Plate 2, Figure 3). Unfortunately, the feature could not be investigated thoroughly due to health and safety reasons.



*Plate 1: View north of Trench 1*





*Plate 2: East facing section of Trench 1 showing rubble deposits and cut [109]*



*Plate 3: South facing elevation of wall (106)*



4.2.5 **Trench 2:** Trench 2 was located within the centre of the proposed development site, c.1m west of Trench 1 (Figure 2). The east to west aligned trench measured 6m in length, 1.6m in width, and was excavated to a maximum depth of 1.7m revealing over 0.58m of the natural brown/yellow gravel and sand (**101**) below a 0.1m deposit of mid-brown/orange silty sand (**118**). The silty sand (**118**) was then sealed by a 0.4m deposit of the dark brown sandy silt (**105**). This was further sealed by 0.7m of the mid-brown silty clay subsoil (**108**) and a 0.1m thick concrete surface (**100**) (Plate 4, Figure 4).



*Plate 4: View west of Trench 2*

4.2.6 Within the north facing section of Trench 2, the remains of an east to west aligned wall were noted directly below the concrete surface (**100**). The wall (**111**), which measured over 3.2m in length and 0.5m in height, had been built into the silty clay subsoil (**108**), although no visible foundation cut was noted. The wall was comprised of dressed sandstone blocks and sandstone rubble fill. No mortar bonding was noted. It is probable that two north to south aligned return walls once adjoined the sandstone wall (**111**) at its eastern extremity and 0.7m east of its western extremity, although the only evidence for this was rubble infill within the east to west aligned wall (**111**) itself (Plate 5, Figure 4).



*Plate 5: North facing section of Trench 2 showing wall (111)*

- 4.2.7 **Trench 3:** Trench 3 was located within the northwest corner of the proposed development area, c.8m north of Trench 2 (Figure 2). Trench 3 was aligned east to west and measured 6m in length, 1.6m in width and was excavated to a maximum depth of 1.26m. The central c.4m of the trench revealed the natural brown/yellow course gravel and sand (101) which measured over 0.3m in depth. This was below a 0.26m deposit of the dark brown sandy silt (105), which was further sealed by 0.6m of the mid-brown silty clay subsoil (108) and 0.13m of concrete surface (100) (Figure 5).
- 4.2.8 The western end of Trench 3 revealed two brick walls directly below the concrete surface (100). Both walls measured over 1.6m in length and over 1.25m in height, although the western most wall (112) only measured 0.12m in thickness, whilst the wall (114) further east measured 0.26m in thickness. The two brick walls were separated by a 0.9m wide void, which had been filled by modern rubbish including crushed brick, scrap metal and asbestos (113) (Plate 6, Figure 5). The eastern most 0.55m of Trench 3 revealed a modern rubbish dump below the concrete surface (100). The rubbish dump (117) measured over 1.25m in depth and was comprised of a mid-grey silt which was heavily mixed with modern waste, including metal objects, crushed brick, plastic and asbestos (Plate 7, Figure 5).





*Plate 6: North facing section of Trench 3 showing walls (112) and (114)*

4.2.9 Two sandstone walls were also noted within the south facing section of Trench 3, directly below the concrete surface (100). The western most wall (115) was located approximately 1m east of the brick wall (114) and had been extensively damaged. The wall (115) measured c.0.6m in width and c.0.45m in height, and was comprised of squared sandstone blocks. The eastern most wall (116) was located approximately 1.2m east of the wall (115) and was in a relatively good condition. The eastern most wall (116) measured over 1.8m in length and over 1.5m in height, and was comprised of dressed sandstone blocks which had been rendered with lime mortar (Plate 8, Figure 5). It is unclear whether the sandstone walls within Trench 3 were associated due to the difference in height between the two, although this height difference could suggest a cellar or lower level of some description. However, there was also some indication that the eastern most wall (116) turned southward before it reached as far west as the western most sandstone wall (115). Furthermore, it is probable that the sandstone walls noted in Trench 3 are associated with the sandstone wall observed in Trench 2.





*Plate 7: View east of Trench 3 showing rubbish dump (117)*



*Plate 8: South facing section of Trench 3 showing wall (116)*

### 4.3 DISCUSSION

- 4.3.1 All three trenches excavated during the archaeological evaluation revealed a series of different deposits and structural remains. Although the exact date of the structural remains is uncertain, it is unlikely that they are any earlier than 1831, as the proposed development area appears to be associated with garden plots to the rear of Ridley Villas at this time. It is possible that the mixed subsoil deposit **(108)** may be associated with these garden plots. However, the presence of frequent amounts of sandstone and brick fragments suggests that the mixed subsoil deposit **(108)** has been heavily disturbed in the past, making a secure date difficult to maintain.
- 4.3.2 The dark brown sandy silt deposit **(105)** is potentially the most significant deposit identified during the evaluation. Several sherds of pottery retrieved from this thin deposit have been dated to the 13<sup>th</sup>/early 14<sup>th</sup> century. However, several further sherds of pottery retrieved from the same deposit have been tentatively dated to the early post-medieval period, although this latter date is in no way conclusive (see Section 5, below). Furthermore, the results of the environmental analysis (see Section 6, below) suggest that material was included within the deposit which may have resulted from a high temperature industrial process. Significantly, the sandy silt deposit **(105)** was noted within every evaluation trench, suggesting that it may be preserved throughout the proposed development area.
- 4.3.3 No evidence of the Civil War fort or associated features or finds was observed during the evaluation. Assuming that the historic mapping evidence is accurate, this suggests that any such evidence for the fort within the proposed development area is likely to have been destroyed by previous development sometime after the later 19<sup>th</sup> century.

## 5 FINDS

### 5.1 INTRODUCTION

5.1.1 A total of eight finds from two different contexts were recovered during the watching brief. These included six sherds of pottery from a dark brown sandy silt deposit (**105**), and two sherds of pottery from from a mixed subsoil deposit (**108**). All of the finds were retrieved from Trench 2.

5.1.2 The finds were cleaned and packaged according to standard guidelines, and recorded under the supervision of F.Giecco (NPA Ltd Technical Director).

### 5.2 RESULTS

5.2.1 A small group of eight sherds of pottery weighing 121 grams were recovered during the excavation. These are listed in Table 1 below.

Context	Material	Type	Quantity	Weight	Period	Description
105	Pottery	Buff White Ware	3	55g	13 <sup>th</sup> /14 <sup>th</sup> century	
105	Pottery	Scarborough Type	1	6g	13 <sup>th</sup> /14 <sup>th</sup> century	Light orange fabric with some yellow and green glaze
105	Pottery	Buff	1	20g	Early post-medieval?	Bowl rim in pale off-white fabric with some trace of glaze
105	Pottery	?	1	4g	Early post-medieval?	Thin external green glaze. Thicker inside. Possible post-medieval 'whiteware'
108	Pottery	Redware	1	23g	17 <sup>th</sup> century?	Brown glaze
108	Pottery	Weser	1	13g	17 <sup>th</sup> century	Dish rim, brown stripes

*Table 1: Finds recovered during trial-trench evaluation.*

5.2.2 The buff white ware and Scarborough type ware are 13<sup>th</sup> to early 14<sup>th</sup> century. The bowl rim is uncertain as is the small sherd with internal green glaze, although these could well be early post-medieval material. The Weser slipware rim from (**108**) dates to the first half of the 17<sup>th</sup> century. This German import has been found widely on Tyneside though many sites have only produced a small number of sherds. The associated sherd of brown glazed redware could date to this period but could also be later. This type of plain glazed redware is not closely dateable.



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## 6 ENVIRONMENTAL ANALYSES

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### 6.1 INTRODUCTION

- 6.1.1 During the course of the archaeological evaluation 2 soil samples were taken. Samples were taken to extract material which may be pertinent to understanding the development of these contexts. This could include evidence of human activity which may have left preserved archaeological material during the prehistoric or historic periods. In particular, due to the artefactual assemblage collected from this area, evidence of activity during the medieval period to post-medieval was possible in the soil samples processed.
- 6.1.2 The methodology employed in the processing of these samples required that the whole earth samples be broken down and split into their various different components. All samples were fully processed by being manually floated and sieved through a 'Siraf' style flotation tank. The residue from each sample was retained, described and scanned using a magnet for ferrous fragments. The flot was dried slowly and scanned at x40 magnification for charred and uncharred botanical remains. Identification of these was undertaken by comparison with modern reference material held in the Environmental Laboratory at North Pennines Archaeology. Plant taxonomic nomenclature follows Stace (1997).
- 6.1.3 The retent, like the residue from wet sieving, will contain any larger items of bone, heavy (eg waterlogged) ecofacts or artefacts. The flot or floating fraction will generally contain organic material such as plant matter, fine bones, cloth, leather and insect remains. A rapid scan at this stage was done to allow further recommendations to be made as to the potential for further study by entomologists or palaeobotanists, with a view to retrieving vital economic information from the samples. The retent samples were also scanned with a hand magnet to retrieve forms of magnetic material, as well as any artefactual material, such as pottery or metal objects which may be present.
- 6.1.4 Favourable preservation conditions can lead to the retrieval of organic remains that may produce a valuable suite of information, in respect of the depositional environment of the material, thus enabling assessment of anthropogenic activity, seasonality and climate and elements of the economy associated with the features from which the samples are removed. In this case the sandy, well drained, base rich nature of the soil would be suitable for the preservation of charred plant remains and bone (should mineral

replacement occur to offset the leeching of calcium from deposited bones material).

6.1.5 Sample numbers appear in brackets thus < >, whilst context numbers appear in brackets thus ( ) for all analysis and discussion below. Results will be presented by Plot number numerically. Reference to seeds in the text is made using the richness scale of 1 = present, 2 = frequent and 3 = abundant, as seen in the tabular results attached.

6.1.4 The contents of the samples are listed below in Table 2.

Sample	1	2
Context	105	111
Volume processed (litres)	10	30
Volume of retent(ml)	2000	2700
Volume of flot (ml)	50	40
Samples suitable for radiocarbon dating		
<b><i>Residue contents (relative abundance)</i></b>		
Bone/teeth, burnt bone	1	-
Charcoal	2	-
Magnetic Residue	1	1
Pottery	1	-
Stones/gravel	2	3
<b><i>Flot matrix (relative abundance)</i></b>		
Charcoal	1	1
<b><i>Charred plant remains (total counts)</i></b>		
(c) <i>Avena</i> sp grain (Oats)	-	-
(c) <i>Hordeum</i> sp grain (Indet. barley)	1	-
(c) <i>Triticum</i> sp grain (Wheat)	1	1
(c) Cerealia indeterminate	-	-
<b><i>Other plant remains (relative abundance)</i></b>		
(x) <i>Chenopodium</i> sp (Goosefoot)	2	1
(x) <i>Rubus</i> sp.	-	1
(x) <i>Lamium species</i>	-	1
(x) Unidentified sp.	-	-

(c: cereal types, x: wide niche) Relative abundance is based on a scale from 1 (lowest) to 3 (highest) where 0 is not present.

Table 2: Details of samples and contexts

## 6.2 ASSESSMENT RESULTS

6.2.1 Sample (105) <1> came from a dark brown sandy silt deposit. It contained low amounts of burnt bone and pottery fragments (the various fragments of both having dimensions less than 2cm). The bulk of the heavy residue consisted of stones, charcoal and coal, suggesting it derived from burning waste. The flot matrix consisted solely of charcoal. One charred barley grain and one charred wheat grain were recovered. As well as this, low numbers of a *Chenopodium* species (fat-hen), a *Rubus* species (bramble berries) and *Lamium* were recovered.

6.2.2 Sample (111) <2> came from a mid-brown/orange silty sand. No artefactual material was recovered from the heavy residue. The heavy residue consisted of sub-rounded stones. The flot matrix consisted solely of charcoal. One charred wheat grain was recovered. As well as this, low numbers of a *Chenopodium* species (fat-hen) were recovered.

### 6.3 DISCUSSION

6.3.1 Cereal grains were found in both but the low numbers recorded does not permit statistical conclusions to be drawn from these samples.

6.3.2 The other plant remains recovered suggest an open (i.e. non-wooded) environment, but detailed conclusions cannot be reasonably drawn based on the small numbers of seeds recovered.

6.3.3 Magnetic residues were examined from both contexts. This material consisted mainly of naturally occurring haematites. In sample (105) <1> small (>2mm) fragments of metal (possibly iron/steel) was recovered but this was not seen as diagnostic of a specific industrial activity, as is the case when hammer slag and spheroidal hammer slag is recovered.

6.3.4 The burnt bone recovered from (105) <1> was too small to be identified to either an anatomical or species level.

### 6.4 CONCLUSIONS AND RECOMMENDATIONS

6.4.1 The material recovered from (105) <1> suggests material is being dumped from a high temperature process. The high percentage of coal and charcoal in the sample may indicate this is not from a basic domestic fire, where such material would presumably be re-burnt, but may be from an industrial process, where it may not be practical to re-burn such material.

6.4.2 Due to the low number of seeds and other plant remains recovered it is not recommended that further work be undertaken on the samples from this evaluation.

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## 7 CONCLUSIONS AND RECOMMENDATIONS

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### 7.1 CONCLUSIONS

- 7.1.1 During the archaeological field evaluation three trial trenches were excavated, covering 43m<sup>2</sup> of the proposed 564m<sup>2</sup> development area. The purpose of the evaluation was to establish the nature and extent of below ground archaeological remains within the vicinity in order to provide a representative sample of the development area. All trenches were excavated down to the top of the natural substrate.
- 7.1.2 All three trenches revealed a series of different deposits and structural remains. Although the exact date of the structural remains is uncertain, it is unlikely that they are any earlier than 1831, as the proposed development area appears to be associated with garden plots to the rear of Ridley Villas at this time.
- 7.1.3 A buried medieval soil was identified during the evaluation. Furthermore, the results of the environmental analysis suggest that material was included within the deposit which may have resulted from a high temperature industrial process. This deposit was noted within all three trial trenches, suggesting that it may be preserved throughout the proposed development area.
- 7.1.4 No evidence of Shieldfield Civil War fort or associated features or finds was observed during the evaluation. The results obtained during the present evaluation, and from previous archaeological investigations suggest that any such evidence for the fort within the proposed development area is likely to have been destroyed by previous development sometime after the later 19<sup>th</sup> century.

### 7.2 RECOMMENDATIONS

- 7.2.1 The purpose of this archaeological field evaluation was to establish the nature and extent of below ground remains within the proposed extraction area according to the condition as specified by the Tyne and Wear Specialist Conservation Team. Although the evaluation failed to identify any remains associated with Shieldfield fort, it did succeed in identifying a possible buried medieval deposit. Given the potential significance of this deposit, it is recommended that any future invasive work be subject to an archaeological mitigation strategy.

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## APPENDIX 1: CONTEXT TABLE

Context Number	Trench	Context Type	Description
100	All	Deposit	Asphalt/Tarmac/Concrete Surface
101	All	Deposit	Natural Substrate
102	1	Deposit	Redbrick Rubble
103	1	Deposit	Concrete Floor Surface
104	1	Deposit	Sandstone Rubble
105	All	Deposit	Dark Brown Sandy Silt
106	1	Structure	Redbrick Wall
107	1	Structure	Brick Lined Well
108	All	Deposit	Mixed Subsoil
109	1	Cut	Cut of Well
110	1	Fill	Fill of [109]
111	2	Structure	Sandstone Wall
112	3	Structure	Western Brick Wall
113	3	Deposit	Rubble Backfill
114	3	Structure	Eastern Brick Wall
115	3	Structure	Western Sandstone Wall
116	3	Structure	Eastern Sandstone Wall
117	3	Deposit	Modern Rubbish Dump
118	2	Deposit	Silty Sand

*Table 4: List of Contexts issued during the Archaeological Evaluation*

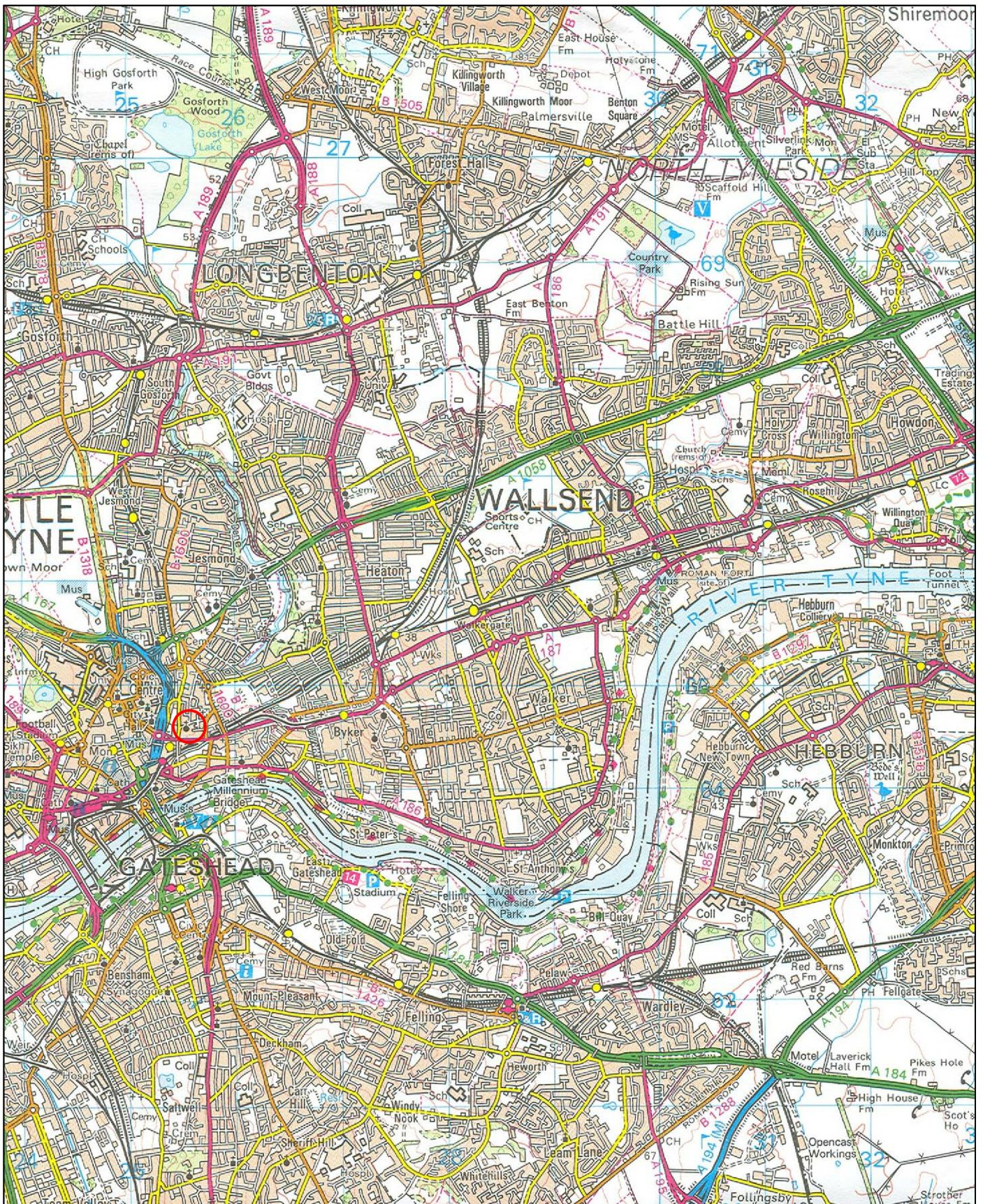
## APPENDIX 2: FIGURES

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## APPENDIX 3: PROJECT SPECIFICATION

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North Pennines Archaeology Ltd  
2010

PROJECT: Back New Bridge Street, Shieldfield, Newcastle upon Tyne  
 SCALE: 1:50 000 at A4  
 REPORT No: CP1034/10  
 CLIENT: RM Accommodation  
 DRAWN BY: DJ  
 DATE: March 2010  
 FIGURE: 1

KEY:

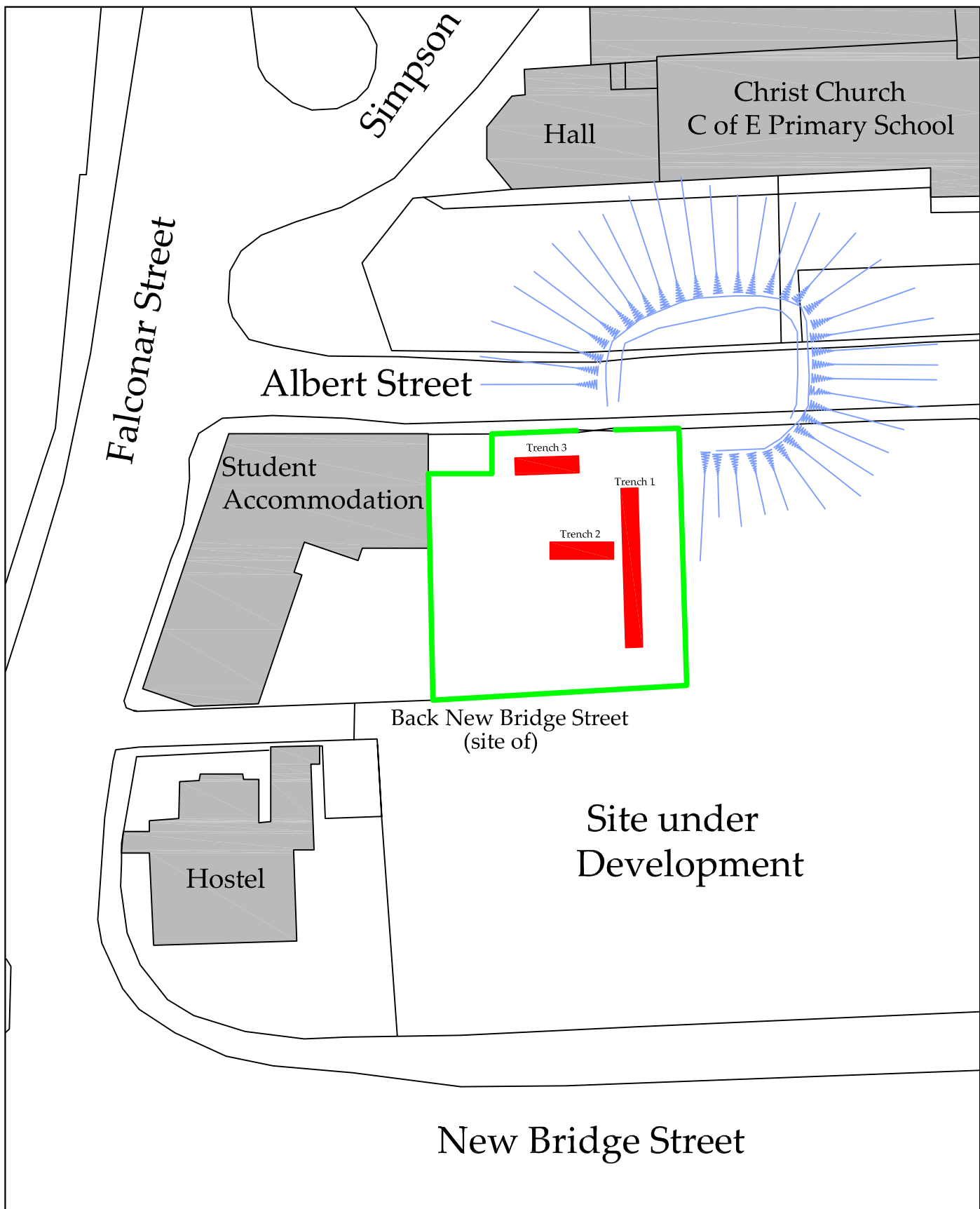
 Site Location



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Figure 1 : Site Location










 <p>North Pennines Archaeology Ltd 2010</p>	<p>PROJECT: Back New Bridge Street, Shieldfield, Newcastle upon Tyne</p> <p>SCALE: 1:500 at A4</p> <p>REPORT No: CP1034/10</p> <p>CLIENT: RM Accommodation</p> <p>DRAWN BY: DJ</p> <p>DATE: March 2010</p> <p>FIGURE: 2</p>	<p>KEY:</p> <ul style="list-style-type: none"> <li> Outline of Proposed Development Area</li> <li> Evaluation Trench</li> <li> Approximate Location of Shieldfield Fort (after Oliver 1831 and Nolan 2008)</li> </ul>	 <p>Reproduced by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright. All rights reserved. Licence number 100014732</p>
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Figure 2: Trench location plan





North Pennines Archaeology Ltd  
 2010  
 Back New Bridge Street,  
 Shieldfield,  
 Newcastle upon Tyne

CLIENT:  
 RM Accommodation

SCALE: 1:75 at A4

DRAWN BY: AC  
 DATE: March 2010

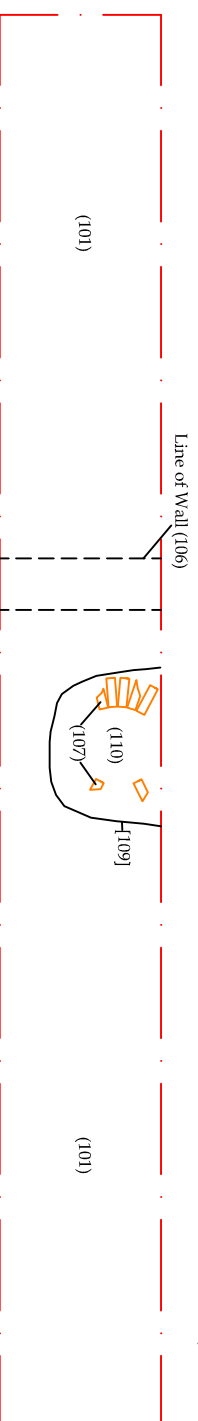
KEY:

-  Edge of Excavation
- (101) Context Number
-  Brick

REPORT No:  
 CP1034/10

FIGURE:  
 3

### Post Ex Plan of Trench 1



### East Facing Section of Trench 1

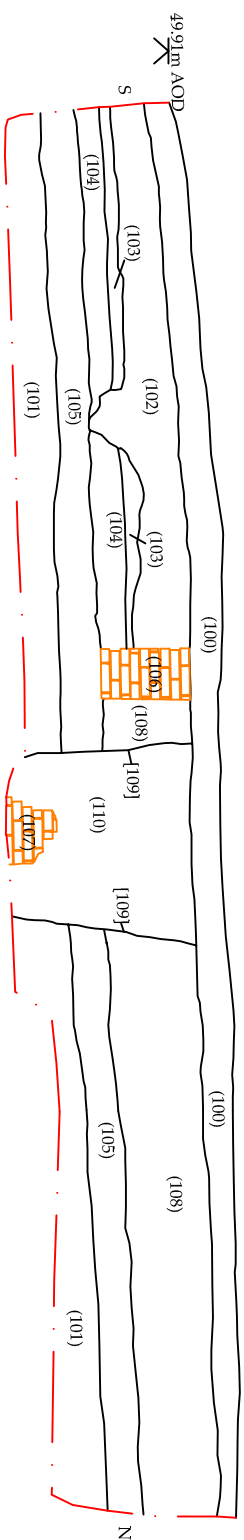
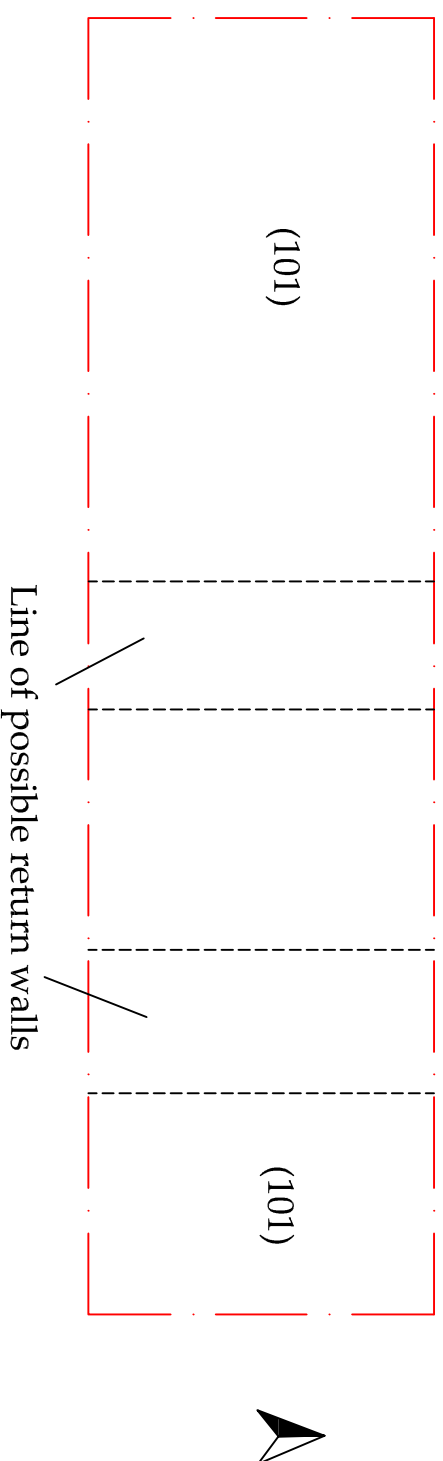
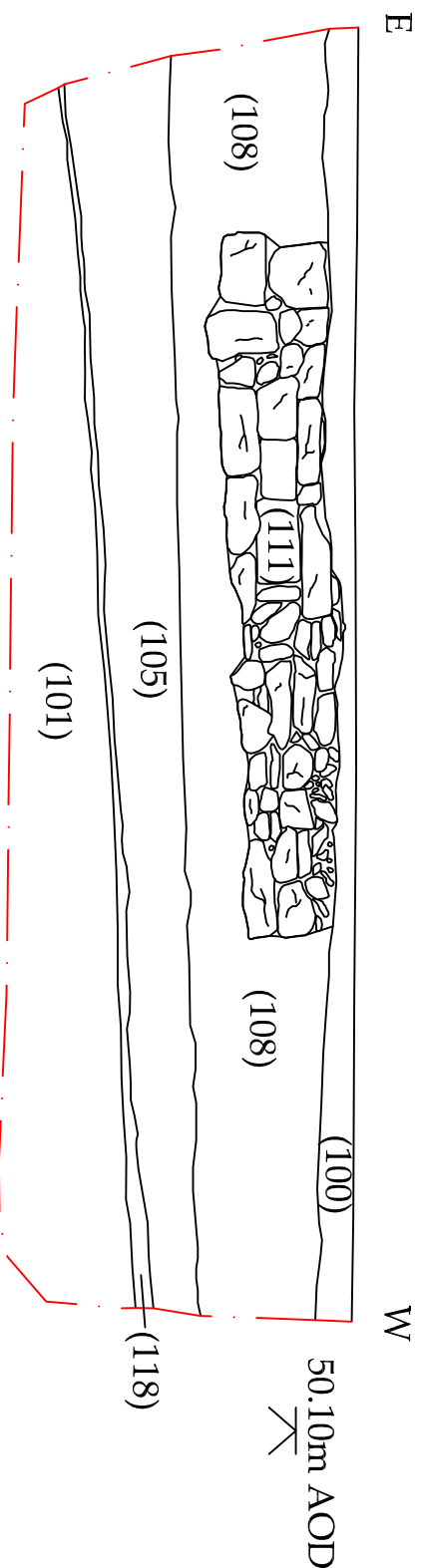


Figure 3: Plan and east facing section of Trench 1

# Post Ex Plan of Trench 2



# North Facing Section of Trench 2



North Pennines Archaeology Ltd  
 2010  
 Back New Bridge Street,  
 Shieldfield,  
 Newcastle upon Tyne

CLIENT:  
 RM Accommodation

SCALE: 1:35 at A4

DRAWN BY: AC  
 DATE: March 2010

KEY:

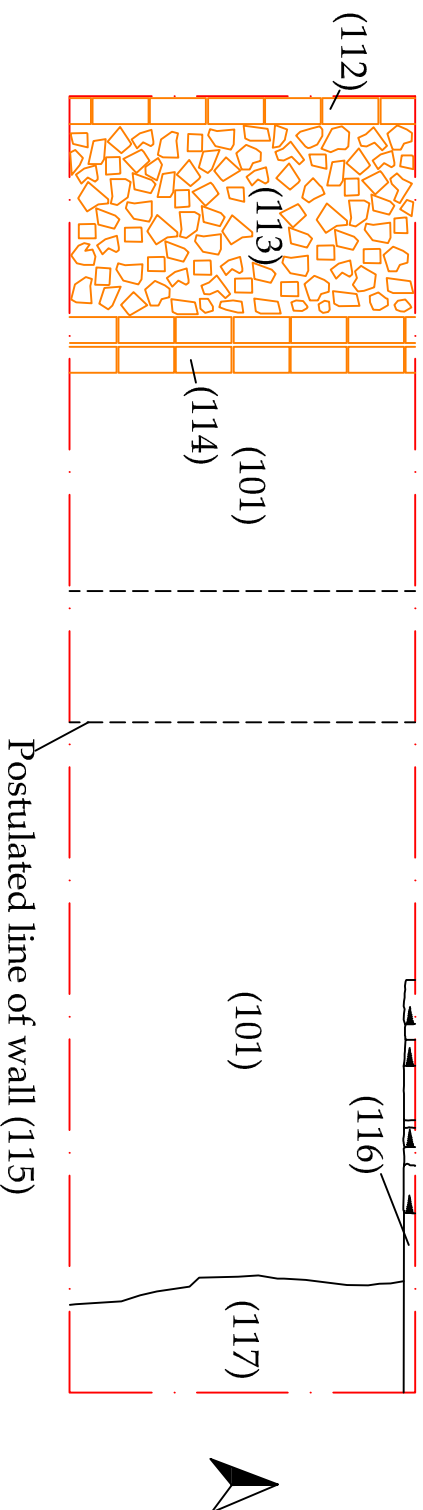
-  Edge of Excavation
-  Context Number

REPORT No:  
 CP1034/10

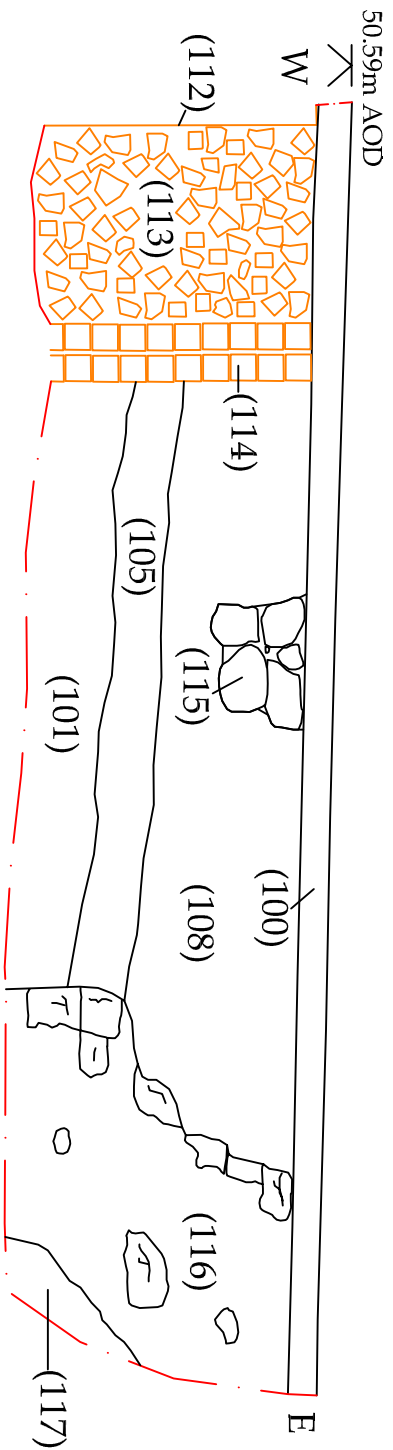
FIGURE:  
 4

Figure 4: Plan and north facing section of Trench 2

# Post Ex Plan of Trench 3



# South Facing Section Trench 3





North Pennines Archaeology Ltd  
 2010  
 Back New Bridge Street,  
 Shieldfield,  
 Newcastle upon Tyne

CLIENT:  
 RM Accommodation

SCALE: 1:35 at A4

DRAWN BY: AC  
 DATE: March 2010

KEY:

-  Edge of Excavation
- (101) Context Number
-  Brick

REPORT No:  
 CP1034/10

FIGURE:  
 5

Figure 5: Plan and south facing section of Trench 3

# Tyne and Wear Specialist Conservation Team

## Specification for Preliminary Archaeological Evaluation at Back New Bridge Street (east of No. 1 Falconar Street), Newcastle upon Tyne

Planning Application: 2008/0745/01/DET

Author:

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Date: 13 October 2009

County Archaeologist's Reference Number: MON6354

The Tyne and Wear Specialist Conservation Team is the curatorial service for archaeology, industrial archaeology and historic buildings throughout the Tyne and Wear districts. It helps and advises Newcastle, Gateshead, North Tyneside, South Tyneside and Sunderland Councils to carry out their statutory duties to care for the precious historic environment of Tyneside and Wearside. The Team can be found at the Strategic Housing, Planning and Transportation Division of the Environment & Regeneration Directorate of

## **Introduction**

Site grid reference: NZ 2550 6454

Planning permission has been granted for a 5 storey building for student accommodation with a basement car park.

The site lies on the site of Shieldfield Fort (HER 285), an artillery fort dating to around 1640. The fort was described as being square in shape, 67 yards by 67 yards with a bastion at each corner. It was built of earth and wattle with a wooden drawbridge. The fort fell to the Scots in 1644 but was repaired in 1648. It is clearly shown on Oliver's plan of 1831 before Christ Church had been built. Part of the fort was still visible in the later nineteenth century between Christ Church and Ridley Villas.

Shieldfield Fort played a crucial role in the siege of Newcastle in 1644 and in the Civil War as a whole. Although the earthwork itself was presumably levelled after it went out of use, the substantial defensive ditches of the fort may still survive. This is an extremely important archaeological site. It is the only example of a detached defensive outwork of Civil War period in Newcastle, and such features are actually rare across Britain. Archaeological excavations on the town wall, which was also utilised in the Civil War, have previously recovered a large assemblage of seventeenth century objects such as pottery, clay tobacco pipes, glass, coins, pistol, musket and cannon balls. Similar objects might be expected here.

An archaeological desk based assessment was undertaken by Tyne and Wear Museums in 2004 for a different developer. The adjacent site to the east is covered by an assessment by RPS (2008). Archaeological evaluation has been undertaken on the site to the east by The Archaeological Practice (2009, report forthcoming). No remains relating to the Civil War fort have been found thus far but further trenching is still to be undertaken.

The appointed archaeologist must familiarise themselves with the results of this previous archaeological work on the site before starting work. Copies of the reports are held by the HER

In accordance with PPG16 and saved UDP Policy C4.2

WHERE A PROPOSAL MAY AFFECT A SITE OR AREA OF ARCHAEOLOGICAL INTEREST, THE DEVELOPER WILL BE REQUIRED TO SUBMIT AN APPROPRIATE ASSESSMENT OF ITS POTENTIAL IMPACT UPON THE ARCHAEOLOGICAL REMAINS AND WHERE NECESSARY UNDERTAKE AN ARCHAEOLOGICAL FIELD EVALUATION {Newcastle upon Tyne Unitary Development Plan 1998}

a programme of archaeological evaluation trenching is required.

### ***Research Aims and Objectives***

The evaluation report should make reference to Regional and Thematic Research Frameworks.

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 resource assessment post-medieval, defences (pages 106-107)  
Research agenda and strategy post-medieval, defence (page 179)  
Key research priority PMvii (Civil War 1639-51)

See <http://www.algao.org.uk/Association/England/Regions/ResFwks.htm>

Ideally and where possible the evaluation should cross-reference its aims and objectives to national priorities, defined in SHAPE (Strategic Frameworks for Historic Environment Activities and Programmes in English Heritage), and the English Heritage Research Agenda 2005-2010.

Where appropriate note any similar nationwide projects using ADS, internet search engines, ALSF website, HEEP website, OASIS, NMR excavation index.

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

### ***Methods statement***

Three 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 archaeological work needed on this site.

**The commissioning client needs to be aware that the purpose of the preliminary evaluation is merely to ascertain if archaeological remains survive on this site and if they do, to determine their broad date, nature and function. Where archaeological remains are found in the preliminary trenches, and if these remains are at threat by the proposed development, further archaeological excavation and or a watching brief will be required before and during development work.**

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.

The work will be undertaken according to English Heritage Guidelines - Managing Archaeological Projects 2nd Edition ('MAP2') 1991 ([www.english.gov.uk/guidance/map2/index.htm](http://www.english.gov.uk/guidance/map2/index.htm)) and Management of Research Projects in the



Historic Environment (MoRPHE) – The MoRPHE Project Managers’ Guide, Project Planning Notes and Technical Guides 2006 ([www.english-heritage.org.uk/publications](http://www.english-heritage.org.uk/publications) ).

The work will be undertaken according to MoRPHE Project Planning Notes 2006 - PPN3 – Archaeological Excavation and PPN6 – Development of Procedural standards and guidelines for the historic environment.

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. [www.archaeologists.net](http://www.archaeologists.net)

### ***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.**

## **PROJECT INITIATION**

### ***PROJECT DESIGN***

Because this is a detailed specification, the County Archaeologist does **not** require a Project Design from the appointed archaeologist. However a health and safety statement and risk assessment, identifying potential risks in a risk log (see template in appendix 2 of The MoRPHE Project Manager’s Guide) and specifying suitable countermeasures and contingencies, is required to be submitted to the commissioning client.

The Management of Research Projects in the Historic Environment (MoRPHE) – The MoRPHE Project Managers’ Guide 2006 contains general guidance on Risk management (section 2.3.2, Appendix 2).

Risk assessments must be produced in line with legislative requirements (for example the Health and Safety at Work Act 1974, the Management of Health and Safety at Work Regulations 1999, the Control of Substances Hazardous to Health (COSHH) Regulations 2002 and the Personal Protective Equipment at Work Regulations 2002) and best practice e.g. as set out in the SCAUM (Standing Conference on Archaeological Unit Managers) Health and Safety Manual <http://www.scaum.org/uk>

Detailed information on hazards and how to carry out a risk assessment can be obtained from the Health and Safety Executive ([www.hse.gov.uk](http://www.hse.gov.uk)) and the local authority health and safety department.

Specific guidance for land contamination and archaeology can be obtained from the Institute for Archaeologists ([www.archaeologists.net](http://www.archaeologists.net)), the Construction Industry Research and Information Association ([www.contaminated-land.org](http://www.contaminated-land.org)) and the Association of Geotechnical and Geoenvironmental Specialists ([www.ags.org.uk](http://www.ags.org.uk)).

See also Environment Agency, 2005 "Guidance on Assessing the Risk Posed by Land Contamination and its Remediation on Archaeological Resource Management".

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

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 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.

## **PROJECT EXECUTION**

### **1) Archaeological evaluation**

The appointed archaeological contractor will decide where best to place the trenches to avoid services etc. A trench location plan will be agreed with the County Archaeology Officer before the evaluation begins.

The existing building on the site will be demolished to ground level (but no foundations grubbed up as this may damage archaeological remains) before the evaluation takes place.

The dimensions of the trenches are

- 1      2m x 15m
- 2      2m x 6m
- 3      2m x 6m 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 required.

Trenches must avoid known services.

Trenches must stay a safe distance away from pylons and overhead power lines.

The commissioning client will advise of any ecological or biodiversity issues which need to be taken into consideration.

The commissioning client will advise of any protected trees which must be avoided by the evaluation. Damage to trees covered by a Tree Protection Order carries a substantial fine.

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.

### **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.

All faces of the trench that require examination or recording will be cleaned.

Excavation is to be carried out with a view to avoid damage to any archaeological features which appear to worthy of preservation in-situ.

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.

Environmental sampling (and where relevant scientific dating) are compulsory parts of the evaluation exercise. All tenders will give a price for the assessment, full analysis, report production and publication per environmental and scientific dating sample as a contingency.

Samples will be taken of bricks from any brick-built structures. The dimensions of the bricks and the type of bonding must be recorded.

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. 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 ([jacqui.huntley@english-heritage.org.uk](mailto:jacqui.huntley@english-heritage.org.uk) or 07713 400387) **before** the evaluation begins. See Appendix 1 for more information.

See Appendix 2 for guidance on procedures relating to human remains.

See Appendix 4 for guidance on Treasure Act procedures.

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

### **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.

The finished report must include a plan and section of each trench (even where no archaeological remains are recorded) plus plans and sections through excavated archaeological features.

The plans will include at least two site grid points and will show section line end points.

The plans will depict building material (i.e. brick and stone) where a complex of structures has been found.

Where there is a complex of interlocking multi-phased structures, a phasing plan will also be included.

There will be elevation drawings of any standing structures such as walls.

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.

## **2) Post-excavation and report production**

### ***Finds Processing and Storage***

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.

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

Finds will be assessed by an experienced finds specialist.

Human and animal bone assemblages should be assessed by a recognised specialist (see Appendices 2 and 3 for more information).

Industrial slag and metal working debris will be assessed by a specialist.

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.

Brick dimensions will be measured and a note made of the bonding material.

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 (07713 400387) where necessary.

## PRODUCTS

### 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 ('MAP2') 1991 and Management of Research Projects in the Historic Environment (MoRPHE) 2006.
3. A full archive report or post-excavation assessment, 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).
- \* 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 (Newcastle City Council) – this must be formally submitted by the developer to the planning department with the appropriate fee.
- 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.**

### **Publication**

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.**

### ***Archive Preparation and Dissemination***

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), MoRPHE Project Planning Notes 2006 PPN3 – Archaeological Excavation, “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 note-books, 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 the Museum of Antiquities for Newcastle (stores in Bedson Building and at Team Valley) and Tyne and Wear Museums for the rest of Tyne and Wear (check with these institutions) with the landowner's permission. Contact Andrew Parkin at the Museum of Antiquities (0191 2228996) and Alex Croom at Tyne and Wear Museums (0191 4544093).

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.

### *Digital Archive*

See MoRPHE Technical Guide 1 – Digital Archiving & Digital Dissemination 2006.

## **SIGNPOSTING**



## 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://www.oasis.ac.uk/>. 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](mailto: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](mailto: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.*

## **APPENDICES**

### **1 Environmental Sampling, Scientific Analysis 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 (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 30-40 litres volume) 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 assessment, full analysis, report production and publication per sample.

The full 30-40 litre sample must be assessed by the laboratory, not just a small sub-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. Ac ceramic 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***

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.

### ***Forams and diatoms***

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***

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).

### ***Industrial Activity***

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 should be sought from the English Heritage Regional Science Adviser on the sampling strategy for metalworking features and advice on cleaning and packaging. Specialist on-site advice must be sought on identification of metalworking features. Slag and metal working debris must be assessed by a specialist. Scientific analysis (such as x-ray fluorescence, chemical analysis, metallography or scanning electron microscope) of slag can provide information on the melting temperature, chemical composition (is it iron, zinc, copper etc), microstructure (the type and shape of the crystals), physical properties (the hardness or viscosity), isotopic composition (strontium\_87 or strontium\_88 etc) and mineralogical composition. Guidance is available in the English Heritage “Archaeometallurgy” guidelines, 2001; “Archaeomagnetic dating”, 2006 and “Guidelines on the X-radiography of archaeological metalwork”, 2006.

See also Historical Metallurgy Society, 2008, “Metals and metalworking: a research framework for archaeometallurgy”.

### ***Buried soils and sediments***

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.

### ***Wood***

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 wood 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.

Suitable samples should be submitted for dendrochronological dating. See English Heritage guidelines, 2004, “Dendrochronology”.

### ***Leather and organic materials***

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.

## **2     *Animal Bone***

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

Domestic animal bone was used in prehistoric and Roman cremation rituals.

Post medieval cattle bones – small cow bones invariably represent animals which produced high quality buttermilk for cheese. Big ‘improved’ cattle with large bones were produced for large quantities of meat and poorer quality milk. Large and small cattle bones are often found together on post medieval sites, usually with less of the small bones.

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.

Fish bone – there was some herring exploitation in the early medieval period. Christian fasting from around 970 allowed fish to be eaten on Fridays which led to a huge demand for fish. There was an increase in marine fishing, fish trade and fish consumption (cod, haddock, ling, herring etc) around 1000 AD. Middens provide evidence of commercial fishing. There was a decline in freshwater fish (cyprinid or carp, salmon, smelt, eel, pike) from the eleventh century.

Smoking fish is a recent practice. They were previously air dried and salted.

Newcastle was a major port. Samples should be sieved to retrieve fish and bird bones along with small parts of other animal skeletons and young infused bones.

A crane bone was recovered from excavations at Tuthill Stairs, Newcastle – a rare find.

Herring bones are so small that they can only be retrieved by 2mm sieving.

Clay soils are difficult to sieve, hot water can help.

Acidic soils mean poor preservation of bone.

See English Heritage 2002, “Environmental Archaeology – a guide to the theory and practice of methods from sampling and recovery to post excavation”, Centre of Archaeology Guideline 1.

Isotope analysis can determine where the fish were coming from – North Sea, Scandinavia, Newfoundland, Iceland etc.

There is an excellent reference collection of fish bone at York.

Fish bones should be archived to museums for future dating and isotope analysis where this is not undertaken as part of the post-excavation process.

[www.fishlab.org](http://www.fishlab.org)

### **3 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, local Environmental Health department and the 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.

Diseases which yield ancient DNA – leprosy, syphilis, tuberculosis, mycobacterium bovis (animal form of TB passed to humans when they shared a living space from Neolithic period onwards).

Cremation destroys the crown of the tooth so it cannot be dated (the closure of the cranium vault can be used in adults for dating instead). Cremation also fragments bone, distorts it due to lack of water, shrinks the bone, causes microstructural alteration and destroys organic components (so DNA analysis not possible).

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](http://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](mailto:simon.mays@english-heritage.org.uk)

#### **4 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](mailto:Robert.Collins@newcastle.ac.uk)) who can provide guidance on the Treasure Act procedures.

**If you need this information in another format or language, please contact Jennifer Morrison, Archaeology Officer.**