

**NEWBURN BRIDGE ROAD,  
RYTON,  
GATESHEAD,  
TYNE AND WEAR**



**ARCHAEOLOGICAL  
EVALUATION REPORT  
CP. No: 10071/11  
15/11/2011**



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# NP ARCHAEOLOGY LTD

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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 NP Archaeology Ltd on the preparation of reports.

	01	02	03
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## SUMMARY

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NP Archaeology Ltd was commissioned by MGM Precision Engineering to undertake a trial trench archaeological evaluation at Newburn Bridge Rd, Ryton, Gateshead, Tyne and Wear (centred on NZ 1630 6484). This work is being undertaken in advance of construction of five starter units to the south of the existing factory. The new build will be 60m x 7.7m in plan.

Newcastle City Council's Tyne and Wear Specialist Conservation Team granted planning consent for the development, on the condition that an archaeological evaluation is undertaken at the site. The work is required as the site lies within the Battlefield of Newburn Ford 1640, which is on English Heritage's Register of Historic Battlefields (HER 1297). The site is also the location of former waggonways for the Crawcrook and Risemoor Collieries, called the Crawcrook and Risemoor Way (HER 3321).

The trial trench evaluation was undertaken over one day on the 18/10/2011. The trial trench evaluation involved the excavation of one trench, totalling 40m<sup>2</sup> of excavation. No archaeological remains were noted.

As this archaeological evaluation was conducted in advance of the construction of the new starter units, no further work is deemed necessary. However, given the high archaeological potential of the area, it is recommended that any future work be subject to a programme of archaeological investigation.

## ACKNOWLEDGEMENTS

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NP Archaeology Ltd would like to thank the staff at MGM Precision Engineering, for commissioning the project, and for all assistance throughout the work. NP Archaeology Ltd would also like to thank Jennifer Morrison, Tyne and Wear Archaeology Officer, Newcastle City Council, for all her assistance throughout the project, and Dave Hodgkinson and Claire Pattison of Wardell Armstrong LLP for commissioning the project.

The archaeological evaluation was undertaken by Miranda Haigh and Charles Rickaby. The report was written by Miranda Haigh and Matthew Town and the drawings were produced by Matthew Town. The project was managed by Matthew Town, Project Manager for NPA Ltd. The report was edited by Martin Railton, Project Manager for NPA Ltd.

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## 1 INTRODUCTION

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### 1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 In September 2011, Wardell Armstrong LLP was invited by Earle Hall on behalf of MGM Precision Engineering to undertake an archaeological evaluation at Newburn Bridge Rd, Ryton, Gateshead, Tyne and Wear (NGR NZ 1630 6484), in advance of a new build on the site. NP Archaeology Ltd provided the archaeological fieldwork services.
- 1.1.2 The site is located within the English Heritage registered Newburn Battlefield of 1640. In addition, the 17<sup>th</sup> century Crawcrook or Risemoor Way runs through the site. Archaeological research in the vicinity has recorded 17<sup>th</sup> century archaeological remains in the form of prominent earthworks (HER 624), located to the south of the site, off Haugh Lane. These could be the sconces mentioned in a letter from Lord Conway in 1640 (Morrison 2009) relating to the battlefield defences, but have also been interpreted as the remains of the battery which carried the waggonway associated with the colliery activity of the 17<sup>th</sup> century. Lead musket balls have been found in gardens close to the site.
- 1.1.3 The potential of finding 17<sup>th</sup> century archaeological remains was therefore high and there was also the possibility of finding 18<sup>th</sup> and 19<sup>th</sup> century archaeological deposits relating to the colliery activity in the area. As a result, The Tyne and Wear Conservation Team of Newcastle City Council requested a programme of archaeological investigation to be undertaken as a condition of planning consent prior to the construction, to assess the archaeological nature and potential of the site. This is in line with government advice as set out in the DoE Planning Policy Statement 5 (PPS5): Policy HE6 (DCLG 2010).
- 1.1.4 The application area comprised one small area of industrial waste ground to the south of the existing factory, measuring 462m<sup>2</sup> in total. This report outlines the trial trench 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 SPECIFICATION

2.1.1 A detailed project specification (Appendix 1), produced by Tyne and Wear Specialist Conservation Team, was provided to NP Archaeology Ltd by MGM Precision Engineering. The specification required an archaeological field evaluation of the application area. NP Archaeology Ltd was commissioned by the client to undertake the work, and the specification was adhered to in full. The work was consistent with the relevant standards and procedures of the Institute for Archaeologists (IfA), English Heritage guidelines and generally accepted best practice.

### 2.2 ARCHAEOLOGICAL EVALUATION

2.2.1 The evaluation consisted of the excavation of one trench covering 40 m<sup>2</sup> of the proposed 462m<sup>2</sup> building area. The purpose of the evaluation was to establish the nature and extent of below ground archaeological remains within the vicinity, the evaluation trench being located to provide an appropriate sample of the area. 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 Tarmac and rubble was removed by mechanical excavator under close archaeological supervision. The trial trench was subsequently cleaned by hand and possible features were investigated and recorded according to the NP Archaeology Ltd standard procedure as set out in the Excavation Manual (Giecco 2003).

2.2.4 No finds were encountered.

2.2.5 All deposits encountered were deemed unsuitable for environmental sampling, and therefore no samples were retained.

- 2.2.6 The evaluation trench was scheduled to be backfilled at the discretion of the client, following excavation and recording.
- 2.2.7 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 with Tyne and Wear Museums, with copies of the report sent to the County Historic Environment Record at Newcastle upon Tyne, where viewing will be available upon request. The archive can be accessed under the unique project identifier NPA11, NBR-A, CP 10071/11.
- 2.3.2 NP Archaeology and Tyne and Wear Specialist Conservation Team 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 NP 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 site is located to the south of the river Tyne in the east extent of Ryton village near the Newburn Bridge and lies east of Newburn Bridge Road, and north of Haugh Lane. It is centred on NGR NZ 1630 6484. The site access is from Newburn Bridge Road. The site is on the flood plain of the Tyne.
- 3.1.2 The area rests on Middle Coal Measures of the Carboniferous period. Early in this stage advancing ice from south-west Scotland and the Lake District eroded channels into the rock head. The Carboniferous rocks are generally masked by Quaternary deposits of varying thickness and character. Exposure of bedrock is generally not good and the sections are discontinuous. Drift-free areas are usually restricted to higher ground, steeper slopes, stream sections and quarries.
- 3.1.3 The district was subjected to several periods of glaciation during the Pleistocene, but the glacial deposits preserved all belong to the last glaciation (Late Devensian). Sediments of earlier glaciations and interglacial periods have been removed or recycled. Generally the Quaternary deposits range up to 10m in thickness, but values of well in excess of 30 – 90m have been recorded in the buried valleys, particularly those associated with the river Tyne. Boulder clay is the most widespread of these Quaternary deposits and covers half the area of the district. It lies directly on the underlying Carboniferous rocks and in many places is the only drift deposit present. In general it comprises tough, over-consolidated silty and locally sandy clay (Mills and Holliday 1998; BGS 2001).

### 3.2 HISTORICAL CONTEXT

- 3.2.1 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 The earliest recorded activity, which may have extended within the area affected by groundworks, was in the 17<sup>th</sup> century. The site lies in the battlefield area of the Newburn Ford Battle. This event took place in 1640 and was sparked off by King Charles I's attempt to impose a new prayer book on the Scots, which resulted in military conflict between the King's army and the Scottish troops. This battle was the only battle of the Second Bishops' War and was of high political significance.
- 3.2.3 Later industrial activity in the area surrounding the site was thought to have started in 1663 with the construction of the Crawcrook or Risemoor Way,

which was a waggonway developed for use with the 17th century Crawcrook Colliery. This earlier colliery is presumed to be on the same site as 19<sup>th</sup> century colliery (Morrison 2009).

### **3.3 PREVIOUS WORK**

3.3.1 A watching brief was conducted on the construction of a double garage at Whinhaven, Peth Lane, Ryton, by NPA Ltd in July 2008 (Wood 2008) just west of the site.

3.3.2 No significant archaeological remains were revealed during this watching brief.

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## 4 EVALUATION RESULTS

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### 4.1 INTRODUCTION

- 4.1.1 The trial trench evaluation was undertaken on the 18<sup>th</sup> October 2011, and comprised the excavation of one trench in a small area adjacent to the existing factory.
- 4.1.2 The trench measured 17m by 2.35m. It was reduced in length due to a diesel pipeline being present and was thus widened accordingly.
- 4.1.3 The trench was excavated by a tracked mechanical excavator using a toothless ditching bucket down to the level of either the first encountered archaeological deposits or the natural substrate, whichever was observed first. The trench was subsequently cleaned by hand and recorded fully. The results are outlined below.

### 4.2 RESULTS

- 4.2.1 The trench was located immediately south of an access road, which runs east to west around the southern side of the main factory building. At the time of excavation the area to be trenched was covered in tarmac. The trench was aligned east-west, and was excavated to a maximum depth of 1.2m (maximum permissible depth).
- 4.2.2 The earliest deposit encountered comprised the natural drift geology **(103)**, a firm light yellowish brown silty sand, which was visible in the base of the trench. No features were noted cutting the natural. The natural drift geology was sealed by **(102)**, a subsoil deposit comprising mid greyish-brown sandy clay, which appeared to be an alluvial deposit relating to flooding by the Tyne. This deposit extended to 0.18m in depth.
- 4.2.3 The subsoil was sealed by **(101)**, a deliberately spread deposit of brick rubble, ash, brick dust and building debris, which was 0.65m in depth. The rubble had been spread as a foundation deposit for the tarmac **(100)** which formed the upper deposit, and extended to 0.10m in depth.



*Plate 1: Trench 1 looking west*

#### **4.3 ARCHAEOLOGICAL FINDS AND ENVIRONMENTAL SAMPLING**

4.3.1 No archaeological finds were recovered, and no environmental samples were retained during the evaluation.

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## 5 CONCLUSIONS AND RECOMMENDATIONS

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### 5.1 CONCLUSIONS

- 5.1.1 A trial trench evaluation comprising 40m<sup>2</sup> of excavation has been conducted within an industrial area to the south of MGM Precision Engineering works, covering the proposed location of the new development.
- 5.1.2 During the evaluation, one trench was excavated measuring 20m by 2m. The purpose of the evaluation was to establish the nature and extent of below ground archaeological remains within the vicinity, the trench being located to provide a representative sample of the development area. The trench was excavated down to the top of the natural substrate.
- 5.1.3 The trench was devoid of any archaeological features or deposits. No artefacts were recovered and no environmental samples were taken.
- 5.1.4 The results obtained during the present evaluation, and from previous archaeological investigations suggest that the study area has not been intensively used in the past or that any archaeological remains were destroyed during the construction of the car park.

### 5.2 RECOMMENDATIONS

- 5.2.1 As the purpose of this archaeological field evaluation was to establish the nature and extent of below ground remains within the proposed building expansion area, no further work is deemed necessary associated with the present consented scheme.

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## 6 BIBLIOGRAPHY

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### 6.1 SECONDARY SOURCES

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## APPENDIX 1: PROJECT BRIEF

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### TYNE AND WEAR SPECIALIST CONSERVATION TEAM

#### **SPECIFICATION FOR EVALUATION WORK TO RECORD SUSPECTED ARCHAEOLOGICAL DEPOSITS AT MGM PRECISION ENGINEERING, NEWBURN BRIDGE ROAD, RYTON, GATESHEAD**

##### **Introduction**

A planning application is due to be submitted for 5 starter units to the south of the existing factory. The new build will be 60m x 7.7m in plan.

The site lies within the Battlefield of Newburn Ford 1640, which is on English Heritage's Register of Historic Battlefields:

##### HER 1297 Newburn Ford Battlefield

King Charles I's attempt to impose a new prayer book on the Scots led to military conflict in the summer of 1640. To avoid assaulting the strong defences on the north side of Newcastle, a Scottish army of up to 20,000 men under the command of Alexander Leslie decided to cross the Tyne and attack from the weaker southern side. Lord Conway opposed the crossing from the south bank of the Tyne, constructing fortifications to defend both of the fords. The English were driven from one fortification by the weight of the Scots' artillery bombardment. The Scottish cavalry crossed the ford but were countered by English cavalry. The Scots forced the English to retreat to higher ground where they made a last stand but were beaten off by the Scots' advance, who afterwards occupied Newcastle. The Battle of Newburn Ford was the only battle of the Second Bishops' War. Politically it was of the greatest importance. The cost to King Charles of raising the army and the need to buy off the Scots after their occupation of Newcastle forced the King to install the Long Parliament which sat through the Civil Wars until the Restoration. The landscape of 1640 was profoundly different from that of today. The river has been straightened and the floodplain largely developed. Even so, the topography allows an understanding of the course of events during the battle which took place over pastureland with woods on the steep river cliffs. In 1640 a Scottish invasion was expected, and "two sconces, or breastworks, were raised by the English against the two fords where the Scots might pass at low water, and into each sconce were put 400 musketeers and four pieces of ordnance". The Scots gathered in the village of Newburn, the English assembled on Newburn/Stella Haugh. The English started the battle on 28 August 1640 by shooting at and wounding a Scots officer, and the two sides began firing at each other across the river. The greater of the English sconces was breached, and the Scots crossed the river. They were also firing from a new sconce to the east, and the English withdrew. Speak (1997) provides a number of likely troop positions within the battlefield site.

On the south side of Haugh Lane there are two earthworks, which were thought to be remains of sconces, but are now thought to be part of a colliery waggonway battery:

##### HER 624 Supposed Civil War earthworks

In a letter from Lord Conway in 1640, there is reference to an order having been given to cast up works against the fords at Newburn, and a further reference to "two sconces or breastworks" being raised by the English, into each being put 400 musketeers and 4 pieces of ordnance. On 28 August the greater sconce was breached by the Scottish cannon, and the English withdrew. Tradition has it that the

two prominent, high but shapeless earthworks at the first grid reference, and a third (longer and straight, but now ploughed out) at the second, were the "royalist breastworks" thrown up before this battle. There has never been universal acceptance of this idea,- some of the antiquarians visiting the site in the 1880s were convinced the "old crescent- shaped embankment was part of a wagonway...the top...was covered with pieces of coal". Indeed a desk based survey in 2004 of the early wagonways of Gateshead, does in fact show that the Crawcrook and Risemoor Way (HER 3321) built in 1663, runs directly through these embankments. Nevertheless, the land owner in 1987 produced lead musket balls which he had dug up in his garden close by (Whinhaven). The waggonway runs diagonally south-west to north-east through the site.

#### HER 3321 Crawcrook and Risemoor Way

It is possible that Crawcrook, lying much closer to the River Tyne, had a waggonway before Chopwell. Under the ownership of Robert Anderson there may have been a waggonway here before 1640, although no positive evidence has been found to prove this. By the early 18th century, the way is not shown on the 1728 plan, although there is evidence it was open at this time; it is possible it was subsumed under another waggonway. The site of the 17th century Crawcrook Colliery was probably the same as that of the 19th century one, still visible south of South View as an area of spoil heaps. The waggonway took a north-easterly course through the later Emma Colliery at Bar Moor. From there to the Holburn Dene it course is followed by the Corbridge road. It reached Ryton Haughs along the east side of the dene where the remains of an embankment still stand. This embankment has, in the past, been erroneously regarded as a defensive measure built to protect English soldiers at the Battle of Newburn. The original staiths were on the Tyne, nearly opposite Newburn Church, above Crummel Ford.

Rise Moor Colliery was opened around 1685. It was worked by wains and any serious development depended on Chopwell's waggonway. By 1710 it had gone out of production but was leased in 1736 by John Humble of Ryton and in 1737 he built a waggonway. He used the old Crawcrook waggonway by extending it to the valley of the Stanley Burn and intended to work coal from this low point. The old waggonway had already been extended as far as the Bradley Burn, past the Rising Sun Inn. Humble's extension from the Bradley Burn over the Stanley Burn is clear on the ground. It appears on an early 19th century map crossing the Stanley Burn under the name "Mill Moss Waggonway", despite it having been lifted in 1781, and the relaying of 1787 is thought to have ended at Crawcrook. It had a wayleave to use the old waggonway to Boggle Hole as well as new staiths on the Hassocks at Stella, with a mount (an embankment built to allow the coal still to be shot into keels from above where the river banks were low). Another crossing, across the Red Burn in Guards Wood, entailed a battery and culvert and it remains today. The waggonway ended just beyond the lane bounding Dukes Hagg Wood. In 1743 another extension was built from the Red Burn deep into Prudhoe. It closed 20 years later when two copyholders each built a wall across it. In 1763 another colliery was opened at Rise Moor and the waggonway was extended from Dukes Hagg Wood, where it can be seen overlying the old way, for nearly 1½ miles to the west, removing the newly built blocking walls. At the head of the incline at Dukes Hagg Wood the way split, one branch heading south to Leadgate and the other westward to Airey Hill. A plan of 1767 shows a diversion at Stella Boggle Hole with a new timber bridge on gears over the stream. This latest Rise Moor Colliery lasted until 1781, when it was worked out, and the copyholders rebuilt their walls across the waggonway and it was lifted. In 1787 its Hassock staiths was an empty site. By 1789 the way was lifted in three places either side of Whitewell Lane. By 1820 the wooden waggonway was no longer in use and it was not relaid.

## **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 <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**

One evaluation trench is 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 before development destroys any archaeological remains. 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.englishh.gov.uk/guidance/map2/index.htm](http://www.englishh.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.englishheritage.org.uk/publications](http://www.englishheritage.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.

[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 approximate location of the trench is shown on the accompanying plan. The dimensions of the trench are 20m x 2m in plan **at base**.

Trench locations can be adjusted to avoid services or for practical or safety

purposes.

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 maximum depth of disturbance which will be caused by the construction of the starter units (the commissioning client will advise on foundation depth) or to the depth of natural subsoil – whichever is reached first.

### **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 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.

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 plus plans and sections through excavated archaeological features.

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.

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.

## **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 fieldwork**.

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. Four bound and collated copies of the report need to be submitted:

one for the commissioning client

one for the planning authority (Gateshead 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.**

one for Kate Wilson, English Heritage, (Bessie Surtees House, 41-44 Sandhill, Newcastle upon Tyne NE1 3JF

## 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 etc. )

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.

*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 subsample.

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***

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. Preexcavation 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 wattling 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.

Jennifer Morrison  
Tyne and Wear Archaeology Officer  
West Chapel  
Jesmond Old Cemetery  
Jesmond Road  
Newcastle upon Tyne  
NE2 1NL  
Tel (0191) 2816117  
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Ref: MGM Precision Engineering  
11 February 2009  
Planning Application: pre-application

## APPENDIX 2: FIGURES

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