An Archaeological Watching Brief at Croft Street, Newcastle upon Tyne

Plummer Tower

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EXECUTIVE SUMMARY

In February 2009 Archaeological Research Services Ltd were commissioned by North Midlands Construction to undertake a watching brief at Croft Street, Newcastle upon Tyne. The work was carried out during ducting works at Croft Street and Carliol Square on land Adjacent to Plummer Tower.

There were no surviving in-situ archaeological remains in the areas of the watching brief. The lack of archaeological remains (in particular evidence of the curtain wall) can probably be attributed to the disturbance caused by the construction of the modern roads and the laying of previous services.

1. INTRODUCTION

1.1. Location and scope of work

1.1.1. In February 2009 Archaeological Research Services Ltd were commissioned by North Midlands Construction to undertake a watching brief at Croft Street, Newcastle upon Tyne (Fig. 1). The work was carried out during ducting works at Croft Street and Carliol Square on land Adjacent to Plummer Tower.

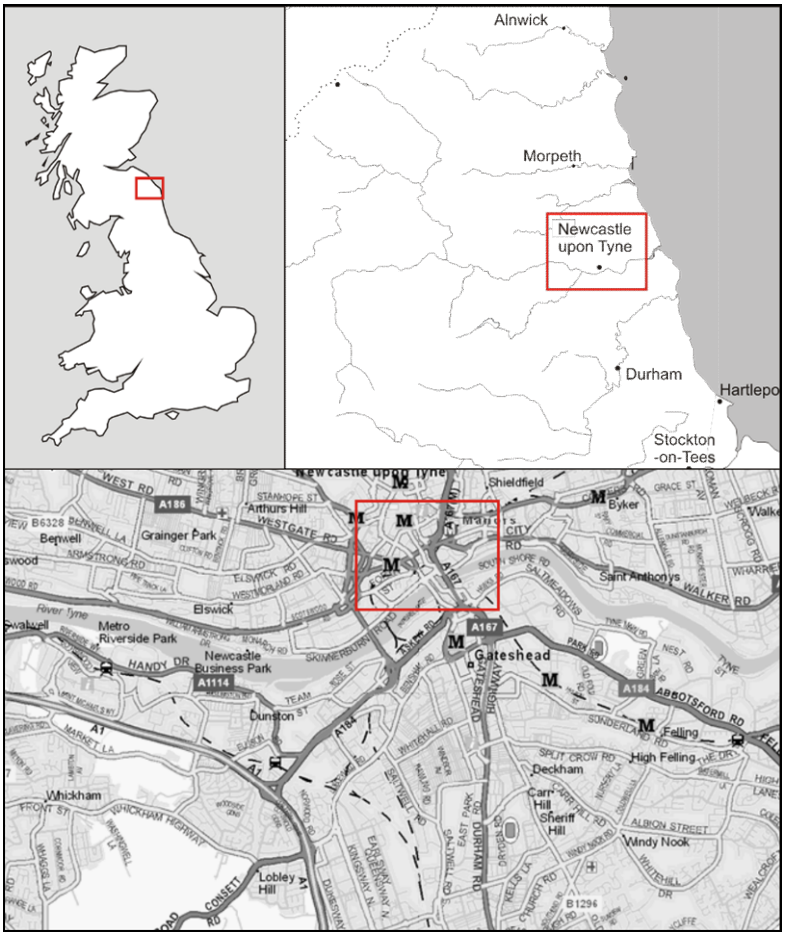

Fig. 1 Site location.
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1.1.2. The site is centred at NZ251644 on Croft Street, leading to Market Street to the north and Carliol Square to the south. The site crosses the line of the medieval town wall (leading from Plummers Tower) which is a scheduled ancient monument. The site is approximately 0.5 kilometres north of the River Tyne.

1.2. Geology and preservation

1.2.1. The solid geology of the area consists of Westphalian coal measures and the drift geology is made up of glacial till and alluvial clay, silt and sand (British Geological Survey 2007).

2. METHODOLOGY

2.1. The ground work involved excavating a narrow ducting trench which was consistently 0.30m in width, and 0.30m to 0.40m in deep. The stone flags covering the site were first removed by hand. The trench was then cleaned using a spade prior to the placing of the ducting pipes. A service box trench was also excavated using a toothless ditching bucket to a depth of 0.5m with a width of 1m and a length of 2m.

2.2. All work was done under archaeological supervision.

3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1. Prehistoric

There is no evidence for Prehistoric settlement in the immediate vicinity of the site. Excavations in 1987 at Orchard Street (0.5 kilometers) to the south - west recovered two small flint blades from disturbed subsoil although it is not clear whether these are indicative of Prehistoric activity (Askew 1997, 13). A number of Bronze Age finds have been recovered from the River Tyne including a spearhead, a dagger and a rapier (SMR 1380, 1379 and 1378). Given the evidence for Mesolithic and Bronze Age activity it is unlikely that the area was uninhabited during the Neolithic and Bronze Age periods.

3.2. Romano-British Period

3.2.1. With the construction of the Wall under Hadrian *c.*122 AD, the station of Pons Aelius (Aelian Bridge) was constructed along with a bridge crossing the River Tyne. The bridge was originally thought to have been located where the current Swing Bridge lies today, 200m due east of the site. However, a later appraisal suggested that the bridgework was Medieval and not Roman (Bidwell and Holbrook 1989, 100). Pons Aelius is thought to have been the original 'castle' and that during the Roman occupation a *vicus* or civil settlement grew up outside the walls, forming a community of free-men living under a system which was part Roman and part British (Mackenzie 1827). It is likely that when the Romans left in the fifth century that this community may have remained. There is little occupational evidence from the area and most of the evidence in the vicinity of the site comes from stray finds, discovered in the Mid-Nineteenth century. The excavations at Orchard Street in 1987 recovered 5 sherds of Roman pottery and a fragment of roof tile (Askew 1997, 14).

3.3. Medieval

3.3.1. William the Conqueror's eldest son, Robert Curthose, after an unsuccessful encounter with the Scot's, erected a wooden fortress called the 'New Castle upon Tyne' in 1080. The castle was scarcely complete when it was secured to protect against the rebellion of Earl Mowbray towards William Rufus, William's successor in England. In 1095 the king marched against it and took it by storm. He then built new walls around the city and constructed a castle of stone using old stone from the Roman ruins (Charlton 1885).

3.3.2. In the latter half of the Thirteenth Century construction of the City wall began and a complete circuit of the wall reached completion in the middle of the Fourteenth Century. Three sections of the wall still survive, a length south of Forth Street (15.24m), a section between Hanover Square almost as far south as the position of White Friar Tower (131.20m) and a section running from the south side of Hanover Street to the Close (Askew 1997, 15). Excavations on the wall north of Close Gate in 1968 revealed that the construction began in, or soon after, 1311 (Askew 1997, 15).

3.3.3. Plummer Tower (Grade I listed, scheduled monument) was constructed as part of the town wall defences in the 13th century. Not much is known about the tower until the 17th century when it served as an artillery position during the civil war. The tower was let to a company of Masons in 1789 who held the property until the 20th century. During this time heavy modifications and alterations took place.

3.4. Post-Medieval

3.4.1. The curtain wall south of Plummer Tower was demolished around 1811 (Holmes 1896). Between 1850 and 1901 the area developed commercially with businesses emerging to the east of the tower and a public house to the east. These buildings have since been replaced by late 20th century office buildings but the commercial aspect remains.

4. RESULTS

4.1. A trench measuring approximately 51m in length was excavated to the west of Plummer Tower. The trench ran north – south on Croft Street and ended at a service box trench on Carliol Square. The trench (Fig. 3) was excavated to a depth of 0.40m, with a width of 0.30m. The stratigraphy of the trench consisted of stone slabs (001) above underlying made ground (002). The made ground had a depth beyond that of the excavation.

4.2. The service box trench (Fig. 4) was excavated to a depth of 0.5m. It had a width of 1m and a length of 2m. The stratigraphy of the service box trench consisted of a layer of tarmac (003) which had underlying made ground (002). Below the made ground was a layer of orange/ grey natural clay (004).

5. CONCLUSION

5.1. There were no surviving *in-situ* archaeological remains in the areas of the watching brief. The lack of archaeological remains (in particular evidence of the curtain wall) can probably be attributed to the disturbance caused by the construction of the modern roads and the laying of previous services.

6. PUBLICITY, CONFIDENTIALITY AND COPYRIGHT

6.1. Any publicity will be handled by the client.

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

7. STATEMENT OF INDEMNITY

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

8. ACKNOWLEDGEMENTS

8.1 Archaeological Research Services Ltd would like to thank all those involved in this project, in particular the Tyne and Wear archaeological officer Jennifer Morrison and Derek Lowery & Terry Jones of North Midlands Construction.

9. SOURCES

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Websites

The British Geological Survey (BGS) website "www.bgs.ac.uk"

Fig II

Fig. 3 Ducting trench on Croft Street looking south

Fig. 4 Service box trench

APPENDIX II: CONTEXT REGISTER

Context no.	Finds	Description
001	-	Stone Slabs
002	-	Made ground
003	-	Tarmac
004	-	Natural clay

APPENDIX III: SPECIFICATION

TYNE AND WEAR SPECIALIST CONSERVATION TEAM

Specification for an Archaeological Watching Brief at Croft Street and Carliol Square, Newcastle upon Tyne

Introduction

North Midland Construction are installing a telecoms route on behalf of Geo Networks to the BT Exchange on Market Street. The cable route runs from Market Street into Carliol Square. The duct will be 114mm in diameter and will be dug to a depth of 500mm. The work will take around three days.

The duct route crosses the line of the medieval town wall, ditch and intramural lane at the junction of Market Street and Croft Street. Down Croft Street itself the duct is just inside the line of the town wall.

The work must keep outside the Scheduled area of Plummer Tower (SAM 32750) otherwise Scheduled Monument Consent will be required.

HER 1507 Town wall
Newcastle was enclosed by defences in piecemeal fashion between perhaps 1265 (first grant of murage) and the early C15 (evidence from excavations). At their greatest extent the defences occupied a strip of ground c. 100 feet wide, and consisted of an intra-mural road, a wall (2-3+ m thick), a ditch (11 m wide x 5 m deep) and some open ground. The wall was defended by 6 large gates and one small one, 17 towers and some turrets, and was pierced by several posterns and watergates. Demolition began in c. 1762, and continued into the C20. Remains: the curtain (with some gaps) between the Close and Forth Street; the curtain with towers (3 gaps) between Westgate Road and Newgate Street; Plummer Tower; Corner Tower and curtain to the east; Walknoll Tower.

HER 1567 Town wall ditch
A ditch existed outside and presumably parallel to the town wall. While it seems clear that it was finished earlier than the wall, probably by 1316, it is not certain that it was started later, and in some places at least they were probably contemporary in construction. The dimensions of the ditch have only been tested archaeologically once, and outside the wall on the west it was found to lie 9.50 m in front of the wall, and to be 11.30 m wide x 4.50 m deep. In the medieval period it was presumably crossed by bridges at the main gates in the wall, and perhaps at other places, e.g. the Black Friars' turning bridge. Though the ditch was largely filled up by the latter part of the 18th century, it shows on several of the pre OS maps as a narrow strip along the outside of the wall, and appears in documentary sources as "The King's Dykes". In 2005 Northern Archaeological Associates (report forthcoming) excavated across the ditch at Gallowgate. The lower sections of the 12m wide ditch would have been waterlogged even during the driest weather, because the ditch was fed by a small stream. This was uncovered 60m to the east of the ditch where it had been culverted to the rear of the burgage plots before re-appearing in the town ditch to provide a water source for the moat surrounding the New Gate.

HER 1568 Town wall, intra mural lane

A space or road existed along the inside of the wall, presumably originally right round the circuit, and some still survives, notably Pink Lane and West Walls. The pre OS maps show other stretches, e.g. from New Gate to Pilgrim Street Gate, along the east side of Austin Friars, and from Walknoll to Sand Gate. One of the few documentary references is dated 1330, and relates particularly to the lane "between the dwelling place of the Austin Friars and the wall of the town" where sufficient space was to be left "for the mayor and commonalty to ride for custody and defence of the town as elsewhere within the wall". There is only one record of the make-up of the road, - outside Ever Tower. It there consists of cobbles (in level just below the threshold of the tower doorway), on 2 layers of bricks, on at least 5 courses of roughly dressed sandstone blocks.

HER 1552 Town wall, south of Carliol Tower
The curtain between Carliol and Plummer Towers measured 176 yards. The only known view is that in Brand, from the outside, where it is shown with three turrets, some remaining crenellations and possibly some damage at its south end. This stretch was demolished in 1811, as part of the preparation for the Shields Road turnpike (New Bridge Street and bridge over Pandon Dene), and removed so thoroughly that no traces were found in excavation. Croft Street was subsequently built over the top.

HER 1554 Town wall, south of Plummer Tower
A stretch of curtain of 187 yards connected Plummer Tower to Austin Tower. The view from the east in Brand shows it standing more or less to full height, with 3 turrets and crenellations. Attached to the south side of Plummer Tower is the only surviving fragment, 7.60 m long, 4.21 m high at its junction with the tower, and with a parapet 1.15 m high. Nolan concluded that the curtain south of the tower was built first, and a gap left for the tower's insertion. Once this was done the curtain was raised to its full height in the remaining space of 2.10 m. In subsequent alterations, probably after 1749 by the Masons, this fragment of curtain was partly hacked out to create a small chamber, and an external stair constructed to reach the wall walk. The remainder of this stretch of curtain was demolished in 1811 so that the material could be reused in the building of the New Bridge across Pandon Dene. Its course follows the east side of Carliol Square.

HER 1553 (SAM 32750) Plummer Tower
A semi-circular, much restored tower, which earlier writers have suggested was originally of two storeys, cf. Carliol Tower. In his recent description, however, Nolan points out that medieval masonry survives only to the height of the adjoining curtain wall, and in view of the 18th century date of alterations Richardson cannot ever have seen 2 storeys. No other original features survive, i.e. no loops, stairs or parapet. Once called the Carliol Croft Tower, it served as an artillery position at the time of the Civil War. Part of a Civil War bastion was uncovered during excavations at the tower in 1993. It was probably of arrowhead form. When, in the C17, it was the Cutlers' meeting hall it was named Cutlers' Tower, and it was possibly this company which inserted the large, later blocked, windows. In 1749 it was let to the Company of Masons with permission to build a meeting house there - this leading to a new Palladian west front etc. They continued to hold it into the C20, after which it was intermittently used as a dwelling house and subjected to a number of restorations.

HER 6034 Civil War Bastion
By the seventeenth century, the medieval town wall defences had become neglected and the onset of the Civil War made their repair a matter of urgency. Work was carried out between 1638 and 1644, when Newcastle was beseiged by the Scottish Army, with

bastions and forts constructed outside the town walls. There is evidence of re-cutting of the medieval ditch at several points on the defensive circuit. During excavations at Plummer Tower in 1989, evidence for a stone-built bastion or bulwark was found. Plummer Tower became an artillery position at the time of the Civil War, and the bastion was built as an outwork to strengthen the defensive capability of the tower. It may have been the result of Sir Jacob Astley's visit to Newcastle in 1639, to advise on improving the town's defences in the light of the threat from Scotland. One of Astley's plans shows an artillery piece described as "a small cannon" beside Plummer Tower. The excavation demonstrated that the bastion had been cut into the boulder clay subsoil. It had an outer face of well-coursed mortared ashlar, retaining a rubble core. The outer face rested on wooden planks. Part of the bastion ditch, which was separated from the stonework by a berm 1m wide, was excavated on the south side. There were stake holes half way up the inner slope, possibly marking the positions of swinefeathers. The outer edge of the ditch appeared to have an almost vertical side. Three musket balls came from the lower ditch deposits, along with a small wooden object which may have had a military connection. Post Civil War infilling of the ditch was limited, and produced pottery and objects of the late seventeenth century. The bastion stonework became a stone "quarry". The bastion was probably of "arrowhead" form, the point opposite the centre of the medieval tower.

Medieval or post medieval remains might survive. The work must therefore be monitored by an archaeologist as a Watching Brief, in order that any archaeological remains can be recorded. If the town wall footings are found they ***must be left in-situ.***

The watching brief must be carried out by a suitably qualified and experienced archaeological organisation.

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 Watching Briefs (revised 2001).

The work will record, excavate and environmentally sample (if necessary) 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.

A toothless bucket will be used on the plant employed on site to reduce damage to archaeological remains.

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.

The commissioning client will provide plans indicating the location of the proposed work.

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 Watching Brief. 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. The Client will give the County Archaeologist reasonable access to the development to undertake monitoring.

The tasks

1 A construction timetable has yet to be agreed. Tenders for the Watching Brief should therefore be a cost per day including overheads such as travel costs and equipment. Contingency costs will be provided for environmental sampling and scientific dating per sample and for finds analysis. Any variation on the agreed timetable will be notified by the client, who will give a minimum of 48 hours notice of a change on the days of site attendance. Close liaison between the parties involved will be needed to co-ordinate this element of the work.

2 The work involves undertaking a structured watching brief to observe and record any archaeological deposits and finds from this locality. The absence of deposits and finds must be recorded as negative evidence. **The Watching Brief will not aim to hinder the construction programme, however should archaeological remains be found, the appointed archaeologist must be allowed sufficient time to fully record (by photograph and scale plan and section), excavate and environmentally sample (if necessary) the archaeological deposits.** Within the course of the Watching Brief, it may be possible to record sections through the stratigraphy exposed during the construction work.

If remains of the town wall are found, they must be left in-situ and avoided by the work.

General Conditions

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 Archaeological Contractor must maintain a Site Diary for the benefit of the Client, with full details of Site Staff present, duration of time on site, etc. and contact with third parties.

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

Environmental Sampling and Scientific Dating

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Sampling strategies for wooden structures should follow the methodologies presented in "Waterlogged wood. Guidelines on the recording, sampling, conservation and curation of waterlogged wood" R. Brunning, 1996. If timbers are likely to be present on your site, contact a wood specialist beforehand. Pre-excavation planning – determine questions to ask, agree on a sampling strategy, allocate reasonable time and budget. Soil samples should be taken of the sediments surrounding the timber. Keep the timbers wet! Record them asap on-site – plan, photograph, record the size and orientation of the wood (radial, tangential,transverse), any toolmarks, joints, presence of bark, insect damage, recent breaks, and if another piece of wood was on top of or below the piece sampled. Both vertical and horizontal positioning of 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.

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

Animal Bone

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

Animal bone assemblages should be assessed by a recognised specialist.

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

Human Remains

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

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

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

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

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

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

Further guidance is available in:

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

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

Treasure

Defined as:

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

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

Robert.Collins@newcastle.ac.uk) who can provide guidance on the Treasure Act procedures.

Finds Processing and Storage

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

Finds will be assessed by an experienced finds specialist.

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

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

If necessary, pottery sherds and bricks should be recommended for Thermo-luminescence dating.

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

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

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

The report

The production of Site Archives and Finds Analysis will be undertaken according to English Heritage Guidelines (Managing Archaeological Projects 2nd Edition).

The archaeological contractor will provide a report of archaeological operations, including:

- a site location plan and grid reference
- brief description of recording procedures
- plans and sections of stratigraphy recorded (if practical)
- report on the finds (if any)
- environmental report (if relevant)
- colour photographs of the site and any significant archaeological features/finds
- a summary of the results of the work
- copy of this specification

The report will form an addition to the *Short Reports* files in the Tyne and Wear Historic Environment Record.

7 Two bound and collated paper copies of the report need to be submitted:

- one for the commissioning client
- and 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 and not attached 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.

Site Archive

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

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

Documentary Archive

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

This should include written records, indexing, ordering, quantification and checking for consistency of all original context sheets, object records, bulk find records, sample records, skeleton records, photographic records (including negatives, prints, transparencies and x-radiographs), drawing records, drawings, level books, site 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 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.

Monitoring

The Archaeological Contractor will inform the County Archaeologist of the start and end dates of the Watching Brief to enable the County Archaeologist to monitor the work in progress. The Client will give the County Archaeologist reasonable access to the development to undertake monitoring.

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 watching brief 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). For enquiries of a technical nature please contact: Catherine Hardman at the Archaeology Data Service (tel. 01904 433954 or oasis@ads.ahds.ac.uk). Or contact the Tyne and Wear Archaeology Officer at the address below.

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