An Archaeological Watching Brief at Little Haven, Harbour Drive, South Shields

ARS Ltd Report No. 2013-88
October 2013

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Contents

	Executive summary……...	4
1.	Introduction……..	5
	1.1. Location and scope of work…….....	5
	1.2. Geology and soils……...	6
2.	Methodology…….	6
3.	Historical background……...	6
4.	Results……..	9
5.	Conclusion……	19
6.	Publicity, confidentiality and copyright…….	19
7.	Statement of indemnity…….	19
8.	Acknowledgements……...	20
9.	References……	20

Appendix I: Figures
Appendix II: Specification

List of Figures

1. Location of site…… 5
2. Overall site plan……... 8
3. North facing view of seaplane ramp…… 9
4. Seaplane ramp heading east……. 10
5. Eastern view of seaplane ramp, showing inset concrete surface……... 10
6. South-east view of seaplane ramp, showing close up view of overlain concrete…... 11
7. Northern view of seaplane ramp…….. 11
8. Plan and section of seaplane ramp…….. 12
9. Seaplane ramp section, protruding from sand ……. 13
10. Possible tank trap/barrage balloon tether ……... 14
11. Barrage balloon tethering block……... 14
12. Barrage balloon tethering block……... 15
13. Tethering points of barrage balloon block……... 16
14. Probable barrage balloon block……... 16
15. View of site, showing old sea wall and new sea wall…… 17
16 Composition of old sea wall…….. 17
17 View of site, showing old sea wall removed and new sea wall……... 18

EXECUTIVE SUMMARY

In April 2013 Archaeological Research Services Ltd were commissioned by Galliford Try to undertake an archaeological watching brief at Little Haven, Harbour Drive, South Shields. An intermittent watching brief was carried out in order to monitor the most pertinent of groundworks, related to the realignment and reconstruction of the Little Haven sea wall and the construction of a new promenade, new car park and landscaping.

World War 2 era anti-aircraft and anti-invasion defences were previously identified, so the potential of locating and identifying such features was relatively high.

The watching brief encountered the remains of the known World War 1seaplane ramp, which was part of a Royal Navy seaplane base. A large percentage of the ramp was buried under sand, however in places it was still in evidence at over 1 metre high.

Also identified were four possible barrage balloon tethering blocks. These blocks were made of solid concrete and the full depth was unknown, suggesting that they were of a substantial size. South Shields was heavily bombed during World War 2 and the barrage balloons would have formed an intricate and essential part of the town's anti-aircraft defence system.

1. INTRODUCTION

1.1. Location and Scope of Work

1.1.1 In April 2013 Archaeological Research Services Ltd were commissioned by Galliford Try to undertake an intermittent archaeological watching brief at Little Haven, Harbour Drive, South Shields. The watching brief was carried out in order to monitor the groundworks that were considered to be the most pertinent in relation to the realignment and reconstruction of the Little Haven sea wall and the construction of a new promenade, new car park and landscaping.

1.1.2 The site is centred at NZ 3697 6797.

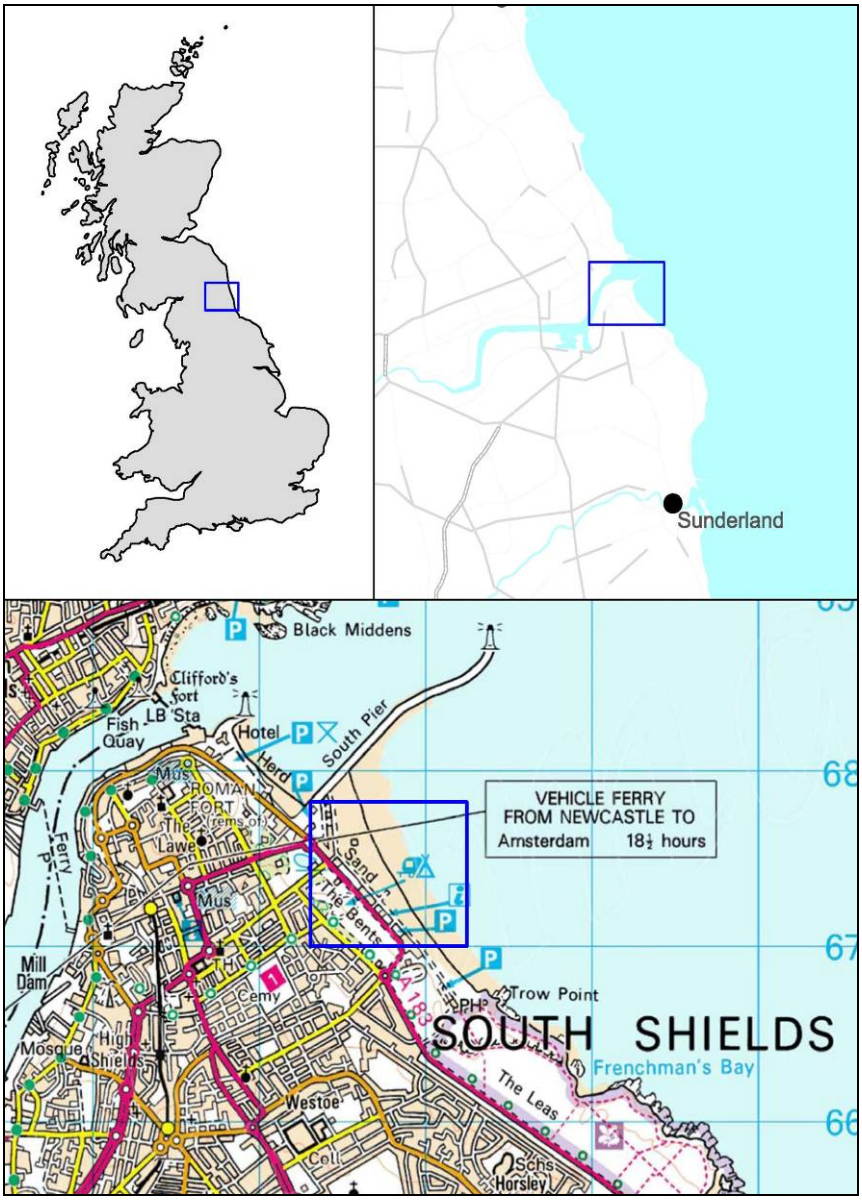

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Figure 1. General location of site.

1.2. Geology and soils

1.2.1. The geology of the site comprises superficial beach deposits consisting of sand and gravel (British Geological Survey 2013).

2. METHODOLOGY

2.1. An archaeological watching brief was undertaken during groundworks associated with the realignment and reconstruction of the Little Haven sea wall and the construction of a new promenade, car park and landscaping.

2.2. All archaeological fieldwork, recording of archaeological features and deposits and post-excavation analysis was carried out to acceptable standards as set out in the Institute for Archaeologists' *Code of Practice* (2000) and *Standard and Guidance for Archaeological Evaluation* (2008).

2.3. The deposits were recorded according to the normal principles of stratigraphic excavation. Each context was recorded on pro-forma records which included the following: character and contextual relationships; detailed description (dimensions and shape; soil components, colour, texture and consistency); interpretation and phasing as well as cross-references to the drawn, photographic and finds registers.

2.4. A photographic record was maintained including photographs of all significant features and overall photographs as appropriate. All images were taken in digital format, and contained a graduated photographic scale. The main photographic archive will comprise of digital SLR (minimum 12 megapixels).

3. HISTORICAL BACKGROUND

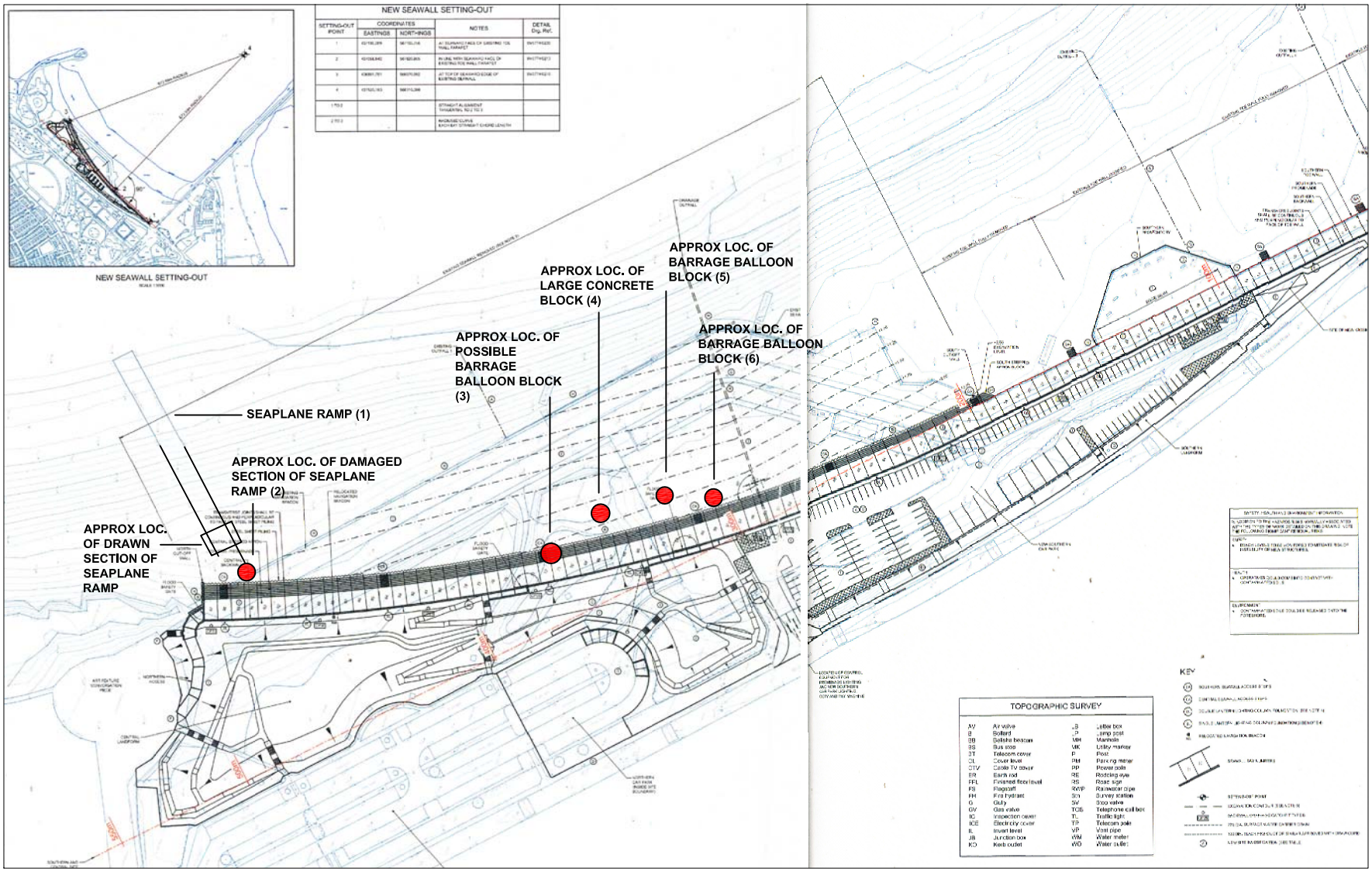
3.1. There is a possible Roman shipwreck (HER 4672) off the Herd Sand. Although the location of the wreck is unknown, the high frequency of Roman finds that have occasionally been found on the beach in the last 150 years suggest that it may be in close proximity to the investigation area. These include over 60 coins (HER 907, 908, 6840) as well as 2 pateras (HER 912, 913) and a skillet. Military finds have also been recovered, in the form of a cheek-piece from a helmet (HER 927) and a shield boss (HER 928).

3.2. Medieval objects have also been found. These include a bronze key (HER 929) and a number of coins (HER 936, 6839) dating to the reigns of the English kings of Henry III, Edward I, Edward II, Edward III and Edward IV, and of the Scottish kings Alexander II, David II, Robert II and James I. Several post-medieval coins have also been recovered.

3.3. At least one shipwreck (HER 6804) lies on the beach and is still visible at low tide. It is likely that this vessel dates to the 18th century.

3.4. There is a World War I seaplane ramp on the beach (HER 6811), which was a Royal Navy Seaplane Station. By 1915 a police station had been constructed at the southeast end of the Littlehaven Sea Wall, however these buildings were cleared by 1941 by which time the present sea wall was in place.

3.5. During World War II, the area of the River Tyne became a major target for German bombing, and there was also the fear of an invasion from German-occupied Norway. To counter these threats barrage balloons (HER 5555), pillboxes (HER 5383, 1845), antitank traps (HER 11713) and a road block were constructed within the investigation area. There is therefore the potential for the groundworks within the investigation area to encounter remains of these World War II features.


NEW SEAWALL SETTING-OUT
NEW SEAWALL SETTING-OUT
SETTING-OUT POINT
COORDINATES
EASTINGS
NORTHINGS
NOTES
DETAIL Dg. Ref.
APPROX LOC. OF BARRAGE BALLOON BLOCK (5)
APPROX LOC. OF LARGE CONCRETE BLOCK (4)
APPROX LOC. OF BARRAGE BALLOON BLOCK (6)
APPROX LOC. OF POSSIBLE BARRAGE BALLOON BLOCK (3)
SEAPLANE RAMP (1)
APPROX LOC. OF DAMAGED SECTION OF SEAPLANE RAMP (2)
APPROX LOC. OF DRAWN SECTION OF SEAPLANE RAMP
TOPOGRAPHIC SURVEY
KEY

4. RESULTS

4.1. Approximately 35m of a seaplane ramp (1) was known to exist on the beach at Littlehaven. However, with the removal of sand, the ramp was found to be very well preserved and actually extended further west towards the road than previously thought (Figures 3 and 4).

4.2. The seaplane ramp was constructed of vertical wooden beams, overlain with horizontal wooden beams, held in place with metal bolts (Figures 3 and 4).

4.3. The most westerly section of the ramp had concrete overlain to provide a solid and stable surface for the ramp (Figures 5 and 6). The concrete had been partially removed or destroyed and only a very localised portion remained. It is probable that the full length of the original seaplane ramp would have been overlain with concrete.

Figure 3. North facing view of seaplane ramp

4.3. A presumed section (2) of the seaplane ramp was observed to be protruding from an artificial sand dune, approximately 8m due east from the northern extent of the new sea defences (Figure 9).

4.4. The remaining section of the ramp included a vertical wooden beam, which was 0.48m in height and 0.22m in width.

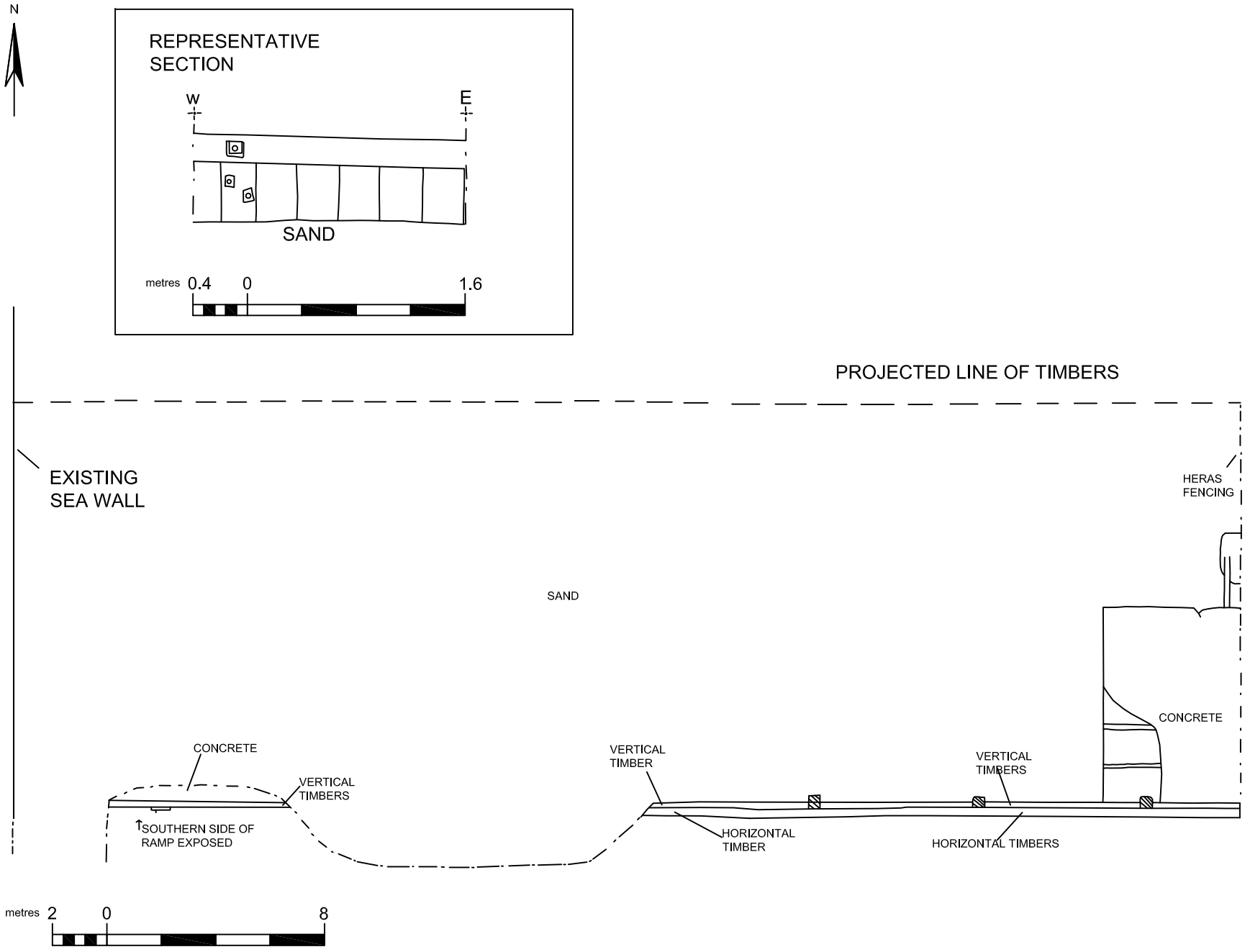
4.5. The wooden upright was set against a concrete facing, which was 1.9m in width and was approximately 0.45m in thickness (Figure 9).

Figure 4**.** Seaplane ramp heading east.

Figure 5. Eastern view of seaplane ramp, showing inset concrete surface.

Figure 6. South-east view of seaplane ramp, showing close up view of overlain concrete

Figure 7. Northern view of seaplane ramp, highlighting vertical wooden beams overlain with horizontal beams. Scale = 1m.



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Site Code: LH'13
Drawing Ref:
Date: 10-10-2012
Drawn: GE
Scale: 1:200 @ A4

Figure 8

Key:

Notes:

Figure 9. Seaplane ramp section, protruding from sand.

4.6. The planned development works necessitated the removal of approximately 25m of the seaplane ramp. Prior to its removal, a drawn section and plan were produced, (Figure 8).

4.7. A possible barrage balloon tethering block (3) was discovered approximately 120m south-east from the northern extent of the new sea defences (Figure 14).

4.8. The barrage balloon block was a 2m x 2m rectangular concrete block, which was 0.56m thick and was 'stepped out' by 0.3m. This 'step' was 0.3m thick.

4.9. A large concrete block of an uncertain function (4) (possibly an anti-tank obstacle or the remains of another barrage balloon tether) was discovered approximately 45m east of (3), (Figure 10).

4.10. (4) was highly degraded/destroyed at its northern extent. The length of the block was 3.25m; the width was unknown due to it being partially obscured by sand.

4.11. It was possible to observe that the block was actually comprised of concrete layering 'slabs', each block being 0.20m in thickness, with five blocks evident.

4.12 The lower 0.1m of the lower slab was partially obscured by sand, giving the block a visible height of 0.9m.

Figure 10. Possible tank trap/barrage balloon tether (4)

4.13. Approximately 2m to the south-east of (4), there was a concrete barrage balloon block (5), which was 4.1m x 4.1m in size (Figure 11).

4.14. In the centre of (5) was a small rectangular feature, which was 0.78m in width and 1.08m in length (Figure 11).

4.15. Inset in the small rectangular feature were four metal tethering points/pins in a rectangular layout, with a spacing of 0.4m x 0.85m (Figure 11).

4.16. Approximately 25m to the south-east of (5) was another barrage balloon tethering block (6), which measured 1.5m x 1.5m, (Figure 12).

4.17. In the centre of (6) there was a small rectangular feature, which was 0.71m in width and 0.98m in length (Figure 13).

4.18. This rectangular feature contained four metal tethering points/pins, with an attached metal object of an uncertain function (Figure 13).

4.19. The final phase of works was concerned the demolition of the old sea wall. The old sea wall was no longer fit for purpose and was removed to facilitate the widening of the beach; a new sea wall was constructed approximately 20 metres to the west of the old sea wall (Figures 15, 16 and 17).

Figure 11. Barrage balloon tethering block (5), with metal tethering points.

Figure 12. Barrage balloon tethering block (6).

Figure 13. Tethering points of barrage balloon block (6)

Figure 14. Probable barrage balloon block (3)

Figure 15. Southern view of site, showing old sea wall on the left and construction of new sea wall in centre of shot.

Figure 16. Image showing composition of old sea wall.

Figure 17. Southern view of site, showing old sea wall removed (on left) and new sea wall (on right).

5. CONCLUSION

5.1. This watching brief has identified the remains of a World War 1 seaplane ramp, which at some stage during World War 1 was part of a larger Royal Navy seaplane base. The seaplane ramp was in a much better state of preservation, and indeed much more of it remained, than was originally thought. In places, the ramp was over 1 metre high.

5.2. The watching brief highlighted the composition of the seaplane ramp. The seaplane ramp had upright wooden foundations, which were bolted together. The space in between the wooden uprights was overlain with concrete , which probably continued for the full length of the ramp; however only a very localised section of the concrete was evident.

5.3. There were 3 possible barrage balloon tethering blocks discovered during the watching brief; of which two had four metal pins/tethering points at the centre.

5.4. A fourth concrete block was also discovered during the watching brief. This block was made up of several 'layers' of concrete, laid one on top of each other. Due to the highly degraded state of the block, it was difficult to ascertain its true nature. However, it is possible (given the nature of the other concrete blocks) that it was part of the World War 2 defences of South Shields; either as a large barrage balloon tethering block, or as part of the anti tank defensive works known to exist in this area.

5.5 No other features of an archaeological nature were identified during this watching brief.

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 Jennifer Morrison, Tyne and Wear Archaeology officer at Newcastle City Council. .

9. REFERENCES

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Tyne and Wear Historic Environment Record. Available online at: http://www.heritagegateway.org.uk/gateway/chr/herdetail.aspx?crit=&ctid=91&id=4727 [Accessed 3rd May 2013].

Tyne and Wear Specialist Conservation Team

Specification for Metal Detector Survey and Archaeological Watching Brief at Littlehaven Sea Wall, Harbour Drive, South Shields

Planning Application: ST/1028/12/LAA

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County Archaeologist's Reference Number: MON10168

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

Newcastle City Council

Introduction

Site grid reference: NZ 3697 6797

Planning permission has been granted for the realignment and reconstruction of Littlehave Sea Wall, for the construction of a new promenade, new car park and landscaping.

A new drainage outfall will be built across the beach from a new interceptor and new deep chamber on the promenade out to sea. The 600mm iron pipe will be held in place by timber piles driven into the sand, then covered over by the new beach profile.

At the southern end of the South Pier a new concrete slab will be built, the existing upper wall will be replaced, and there will be new access steps and a ramp onto the beach.

At the southern promontory, there will be a new concrete slab and two new steps of access steps onto the beach

An archaeological desk based assessment was undertaken by Archaeological Services Durham University in 2009. This report must be read by the appointed archaeologist before works commence.

The appointed archaeologist must also read Royal Haskoning Enhancing Society's Environmental Statement Non Technical Summary July 2012.

The report concludes that the sea wall is 20th century in date.

The South Groyne (HER 2428 and 2431) and the Life Brigade Watch House on the South Pier (HER 2430) are listed grade 2.

Roman, medieval and post medieval objects are frequently found on Herd Sand. These are likely to derive from either shipwrecks or are the result of river action and the dumping of dredged material combined with tidal activity. There is therefore the potential for unstratified archaeological artefacts to be found within the beach area.

There is a possible Roman shipwreck (HER 4672) off the Herd Sand. The reason for believing that there is a shipwreck in this location is the number of Roman finds that have occasionally been found on the beach in the last 150 years. These include over 60 coins HER 907, 908, 6840) as well as 2 pateras (broad shallow dish used for drinking, HER 912, 913) and a skillet (flat-bottomed pan used for frying). Military finds have also been recovered, in the form of a cheek-piece from a helmet (HER 927) and a shield boss (HER 928). It is argued that these finds have been washed down the coast from the shipwreck site. An alternative interpretation is that these reflect the dumping of material dredged from the Tyne, or even derive from ship's ballast. The proximity of these finds to the proposed development area and the nature of their deposition (the result of river action and the dumping of dredged material combined with tidal activity) indicates that there is the potential for further Roman artefacts to be recovered during groundworks along the Herd Sands sea front.

Medieval objects have also been found. These are a bronze key (HER 929) and a number of coins (HER 936, 6839) dating to the reigns of the English kings of Henry III,

Edwards I, II, III and IV, and of the Scottish kings Alexander II, David II, Robert II and James I. Several post-medieval coins have also been recovered.

At least one shipwreck (HER 6804, post medieval in date, possibly a wherry) lies on the beach (only visible at low tide and I am not sure of its exact location), and there is there therefore the potential for further unknown wrecks to be present. If possible the location of the known wreck should be identified by the appointed archaeologist at low tide **before** work begins and photographed (with scale) and marked on a modern OS map, so it can be ensured that the proposed outfall drain isn't going to damage it.

HER 6804
Wreck of wooden hulled ship visible on Herd Sand at low tide. Driven onto the beach during a storm. Possibly C18 as it has brass fixings (medieval vessels had wooden dowels, mid to late C19 vessels had bronze and then iron fixings). But could have been lost around 1825 or later. A ship of this date would have been powered by sail and was most likely involved in the coal trade from Newcastle or South Shields, or the timber trade from the Baltic.

There is a World War One seaplane ramp on the beach (HER 6811), which is on the Local List. This will remain in-situ. This was a Royal Navy Seaplane Station. It occupied 21 acres and included five Type F seaplane sheds each 200 x 100 feet. The station was active from April 1916 until 1919. It was probably attached to the No. 10 Kite Balloon Base (there was a barrage balloon mooring point within the development site, HER 5555).

By 1915 a series of buildings had been built within the development site. These included a police station which had been constructed on the location of the southeast end of the Littlehaven Sea Wall. The police station is shown on the submitted 'General Arrangement' plan.

These buildings were cleared by 1941 by which time the present sea wall was in place. An open air swimming pool had also been constructed.

During World War Two the area of the River Tyne became a major target for German bombing, and there was also the fear of an invasion from German-occupied Norway. To counter these threats barrage balloons (HER 5555, pillboxes (HER 5383, 1845), anti-tank traps (HER 11713) and a road block were constructed. Remains of these structures could survive buried.

The desk based assessment recommended an archaeological watching brief and metal detector survey.

In April 2010 TWM Archaeology monitored the excavation of geotechnical test pits for this scheme. In four of the test pits a layer of white concrete was recorded, which could be the floor of an aircraft hangar for the sea planes. No earlier remains were revealed.

Before development commences, the appointed archaeologist will locate the existing post medieval wreck on the beach at low tide, photograph it with scale and mark its location/extent on a plan – so development work can avoid it

A metal detector survey will be undertaken on the beach on the line of the new outfall and drain, the new access steps and the new access ramp next to the South Pier,

before development works begin, and any metal artefacts of interest recovered by the appointed archaeologist. It is noted that the existing outfall 2, which crosses the line of the proposed new outfall, may affect the results of the survey.

Ground disturbing work (including topsoil stripping, site investigation works, all excavation of ground on both sides of the sea wall and on the beach including those for the new outfall, drain and chamber – the excavation on the beach is potentially the most archaeologically sensitive as the artefacts have been found in the sand) must be monitored by an archaeologist as a **Watching Brief**, in order that any archaeological remains can be recorded.

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.

PROJECT DESIGN

Because this is a detailed specification, the County Archaeologist does **not** require a Project Design from the appointed archaeologist. The appointed archaeologist is expected comply with the requirements of this specification.

The tasks

1 Location of existing wreck on the beach at low tide, photographed and marked on a plan. The plan will be given to the client straight away so the wreck can be avoided by development work. It will also be included in the finished report.

2 Metal detector survey on the beach on the line of the new outfall and drain, new steps and the new access ramp next to the South Pier and the recovery of any historic metal artefacts by the appointed archaeologist. It is noted that the existing outfall 2, which crosses the line of the proposed new outfall, may affect the results of the survey.

3 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.

4 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.

Because the work will take many weeks to complete, the archaeologist is not expected to be on site permanently as this would be extremely expensive, and unless significant archaeological remains are found, it would be unnecessary. Any excavation on the beach must certainly be subject to a permanent archaeological presence, but the works on the landward side of the sea wall can be subject to an intermittent archaeological presence so long as the first couple of visits have not indicated anything of great significance. The archaeologist and contractor will need to closely liaise to ensure that this system works. There will be element of trust on the part of the construction contractor, that if anything of possible historic interest is found whilst the archaeologist is not on site, then those remains will not be removed until the archaeologist has been to inspect them and record them where necessary. For this reason the archaeologist needs to be available at short notice to come to site. Concrete structures should not be ruled out as being of no interest because they could be part of the WW1 seaplane station or barrage balloon base.

If the watching brief proves at an early stage that the landward side of the sea wall has no archaeological potential, then this part of the watching brief may be called off at that point with the County Archaeologist's agreement.

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.

The Client may wish to see copies of the Archaeological Contractor's Health and Safety Policies.

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 (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
- location plan and photographs of post medieval wreck
- results of metal detector survey, with location plan and photographs of any finds
- plans and sections of stratigraphy recorded in the watching brief (if practical)
- report on the finds (if any)
- environmental report (if relevant)
- colour photographs of the watching brief in progress, 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.

One bound and collated paper copy of the report needs to be submitted:

- for deposition in the County HER

Three pdf copies on CD are needed:

- one for the commissioning client

- one for the planning authority (South Tyneside Council) – to be submitted formally by the developer with the appropriate fee

- and one for deposition in the County HER at the address on the first page. Please do not attach this to the paper 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.

APPENDICES

1 Environmental Sampling, Scientific Analysis and Scientific Dating

This is a compulsory part of the watching brief exercise where suitable archaeological features are found.

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

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, 2004.

See also ‘Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post excavation’, English Heritage, second edition 2011.

http://www.english-heritage.org.uk/publications/environmental-archaeology-2nd/

English Heritage guidance documents on archaeological science can be downloaded as pdf files from www.helm.org.uk or www.English-Heritage.org.uk > Learning and Resources > Publications > Free Publications.

See also the Environmental Archaeology Bibliography (EAB):
http://ads.ahds.ac.uk/catalogue/specColl/eab_eh_2004/

and the NMR sciences thesaurus:

http://thesaurus.english-heritage.org.uk/thesaurus.asp?thes_no=560

There must be full specialist liaison throughout the project – this need not necessarily be face-to-face.

Sampling should be demonstrated to be both fit for purpose and in-line with the aims and objectives of the project.

The choice of material for assessment should be demonstrated as adequate to address the objectives.

Evaluations and assessment of scientific material should provide clear statements of their potential and significance in addition to descriptive records. These statements should relate to the original objectives but may also lead to new or modified objectives.

Post excavation analysis and interpretation requires sufficient information exchange and discussion to enable scientific specialists to interpret their material within the established intellectual framework.

Archaeological and scientific analyses should be integrated as fully as possible. It is not acceptable to leave the scientific analyses simply as appendices.
Archive reports should include full data from all specialist materials. All reports, including any publications, must present sufficient primary data to support the conclusions drawn.

{From ’10 principles of good practice in archaeological science’ by English Heritage 2010}.

Types of sample

Flotation samples are used to recover charred and mineral-replaced plant remains, small bones, industrial residues etc. Such samples should be whole earth, 40-60 litres or 100% of small features. The flot mesh size should be 0.25-0.3mm. The residue sieve size should be 0.5-1mm. The flot and <2mm residue should be sorted under the microscope. >2mm residues can be sorted by eye.

Coarse-sieved samples are used to recover small bones (such as bird and fish), bone fragments, molluscs and small finds (beads, pottery, coins etc). Such samples should be

100 or more litres, wet or dry sieved, minimum mesh 2mm. Specialist advice is recommended.

Other types of sample are monoliths, specialist, cores and small spot. These are taken for specific reasons and need specialists.

Aims and objectives

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?

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 sticky clay soils in this region make sieving difficult. Discuss the potential for sieving with Regional Advisor for Archaeological Science.

Environmental samples (bulk soil samples of 30-40 litres volume) will be collected by the excavator from suitable (i.e. uncontaminated) deposits. It is suggested that a large number of samples be collected during evaluation from which a selection of the most suitable (uncontaminated) can be processed. All tenders will give a price for the assessment, full analysis, report production and publication per sample.

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

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.

Scientific Dating

Deposits will be assessed for their potential for radiocarbon, archaeomagnetic and Optically Stimulated Luminescence dating.

See 'Archaeomagnetic Dating: Guidelines on producing and interpreting archaeomagnetic dates', English Heritage, 2006 and

'Luminescence Dating: guidelines on using luminescence dating in archaeology', English Heritage, 2008.

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.

For large excavations, particularly of prehistoric sites, a specialist scientific dating consultant must be part of the post-excavation assessment team. They will ensure that money set aside for dating is well spent, that the most appropriate soil samples are submitted for dating, that the right number of samples are submitted for dating. The expert will explain what to date and why. Don't send off samples for dating just for sake of it. The English Heritage Scientific Dating team (contact Pete Marshall) can provide contact details for scientific dating experts.

Once radiocarbon date results come back from the lab, avoid eyeballing your C14 dates. Modelling gives better date estimates.

AMS can now be used to date cremated bone.

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-slags (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.

See “Archaeomagnetic dating”, English Heritage, 2006

“Guidelines on the X-radiography of archaeological metalwork”, English Heritage, 2006.

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

Centre for Archaeology Guidelines on ‘Archaeometallurgy’ 2001.

‘Science for Historic Industries: Guidelines for the investigation of 17th to 19th century industries’, English Heritage, 2006.

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.

See also ‘Geoarchaeology. Using earth sciences to understand the archaeological record’, English Heritage, 2007.

Wood

Sampling strategies for wooden structures should follow the methodologies presented in “Waterlogged wood. Guidelines on the recording, sampling, conservation and curation of

waterlogged wood" R. Brunning, 1996. If timbers are likely to be present on your site, contact a wood specialist beforehand. Pre-excavation planning – determine questions to ask, agree on a sampling strategy, allocate reasonable time and budget. Soil samples should be taken of the sediments surrounding the timber. Keep the timbers wet! Record them asap on-site – plan, photograph, record the size and orientation of the wood (radial, tangential,transverse), any toolmarks, joints, presence of bark, insect damage, recent breaks, and if another piece of wood was on top of or below the piece sampled. Both vertical and horizontal positioning of 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 "Waterlogged Organic Artefacts – Guidelines on their Recovery, Analysis and Conservation", English Heritage, 2012 and "Guidelines for the care of waterlogged archaeological leather", English Heritage and Archaeological Leather Group 1995.

Glass

As glass-making furnaces are above ground structures, they rarely survive. However sample residues can produce glass fragments which define glass working even though no traces of furnaces survive.
Excavations at Whitby Abbey recovered glassworking waste from preliminary sampling. Targeted bulk sampling in subsequent years recovered more evidence for glass working. Raw glass, twisted rods of glass and a possible glass inlay for an illustrated book were found. Similar glass rods were found at St. Gregory's Minster at Kirkdale, North Yorkshire.

Analysis can find out where glass was imported from (a lot of Roman glass came from Alexandria).

Analysis of the composition of glass can show varying additives and salt composition. At Whitby Abbey the varying salt composition in glass throughout the Early Medieval period reflected climate change.

Is the glass made from recycled glass waste or raw materials?

Is there evidence of glass blowing?

English Heritage has guidance forthcoming in 2010.

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, 1991and "The Assessment of a collection of animal bones", S. Davis, n.d., Ancient Monuments Laboratory.

Fish bone

Because fish bones are so small, particularly freshwater and estuarine species, they are often only recovered in large bulk samples. Samples must always be sieved.

Rescue excavations carried out in the 1970s at the Iron Age hillfort of Broxmouth in East Lothian produced an assemblage of fish bone. Recent analysis of this material has proved the presence of large specimens of ling and other species which suggests that the Broxmouth population carried out deep-sea fishing. It has previously been suggested that Iron Age fishing would only have been undertaken by lines from the shore. It has also been suggested that fish was not consumed in Iron Age Britain due to religious or cosmological reasons {Hannah Russ, Ian Armit, Jo McKenzie, Andrew Jones, 2012, Deep-sea fishing in the Iron Age? New evidence from Broxmouth hillfort, South-east Scotland in Environmental Archaeology, Vol 17, Number 2, pp 177-184).

Roman agenda – did the Romans eat fish? Were they sourced locally or imported? Use of fish as a sauce (garum).
Excavations at Bridge Street, Chester showed that in the Roman period fish was eaten and was both locally sourced and imported (mullet and Spanish mackerel).
Medieval and post medieval agenda – evidence for the deep sea fishing 'revolution', size-biased collections, replacement or supplement of freshwater and estuarine fish in the diet by deep sea fish.

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

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.

The excavation area must be shielded from public view with screens.

The excavation of human remains is a delicate and time consuming operation. The process can take one or two days per skeleton. If the skeleton cannot be excavated all in one day cover it with plastic sheeting overnight to prevent it from drying out. The remains should be excavated as completely as possible to give the bioarchaeologist the maximum amount of data.

A bioarchaeologist should be employed for any burial excavation from the start of the project.

A basic diagram of a skeleton should be available on site for staff to consult (such as that in Abrahams et al, 2008, McMinn's the human skeleton).

Once the top of a skeleton is reached, excavation will be undertaken using delicate tools such as paintbrushes, teaspoons, dental equipment and plasterers' leaves.

Recover all teeth, hand and foot bones.

Excavate the pubic symphysis of the pelvis with care as it is needed for age estimation of adults.

The ends of the ribs that meet the sternum are useful for age estimation of adults.

There will be a possibility that gall, bladder and kidney stones may survive.
Sesamoid bones may be present in the hands and feet, calcified cartilages in the neck, on the ribs and on the hyoid bone in the neck.

Foetal bones may be present in the abdominal area of female skeletons.

The bones should be shaded from strong sunlight so they do not dry out and crack.

Bones should be drawn at 1:10 using a planning frame. Manual and digital photographs should be taken with a scale and a magnetic north arrow clearly visible. 3D recording using an EDM may be undertaken.

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.

There is a new (2013) English Heritage guideline for the destructive sampling of archaeological human remains for scientific analysis 'Science and the Dead'.

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).

Radiocarbon dating can be used to chronologically phase burial grounds and track developments in demographic change and variations in the health of the population.

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).

AMS can now be used to date cremated bone.

Carbon and nitrogen stable isotope analysis can be used to study diet, usually to address broad questions about a wider population, rather than to study an individual. Most studies use 30 or more skeletons. Studies have included how social position influenced diet and how diet varied with geographic location.

Strontium and oxygen stable isotope analysis can be used to determine where individuals originated from.

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

Health & Safety associated with human remains:

Micro-organisms that might cause harm to humans are extremely unlikely to survive beyond about 100 Years.

More recent remains could be more hazardous to health as they may be in sealed lead coffins. Lead coffins should not be opened. They should be reburied intact without archaeological examination.

There is a danger of lead poisoning arising from high levels of lead in the atmosphere generated by lead coffins (see H. Needleman, 2004, Lead poisoning in Annual Review of Medicine, 55, pp. 209-22).

The possible risks of contracting disease from excavated human remains are highly negligible but could include the virus smallpox, tetanus and anthrax spores, the bacterial infection leptospirosis and the fungal disease mycoses (a problem in dry dusty soils and in crypts).

Excavators should be up-to-date with tetanus inoculations.

Anthrax can come from materials derived from animals – coffin pads, pillows or coffin packing.

Working with human remains may cause psychological stress (see J. Thompson, 1998, Bodies, minds and human remains, in M. Cox (ed) 1998, Grave concerns: Death and Burial in England 1700-1850, pp 197-201).

Normal hygiene measures should be undertaken – washing hands, wearing masks and gloves. Heavily soiled clothing should be burned at an HSE approved site.

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

Charlotte A. Roberts, 2009, 'Human Remains in archaeology: a handbook', CBA Practical Handbooks in Archaeology No. 19
S Mays, 2010, The Archaeology of Human Bones, second edition

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

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) who can provide guidance on the Treasure Act procedures.

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