

GUARD ARCHAEOLOGY



**David Livingstone Centre, South Lanarkshire
Archaeological Watching Brief
Data Structure Report
Project 3933**

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David Livingstone Centre, South Lanarkshire
Archaeological Watching Brief
Data Structure Report

On behalf of: The National Trust for Scotland


NGR: NS 69502 58517


Project Number: 3933

Report by: Kevin Mooney

Illustrations: Fiona Jackson and Gillian McSwan

Project Manager: Bob Will

Approved by: 

Date: 

*This document has been prepared in accordance
with GUARD Archaeology Limited standard operating procedures.*

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Contents

Executive Summary	5
Introduction	5
Site Location	5
Archaeological Background	5
Aims and Objectives	5
Methodology	6
Results	6
Discussion	6
Recommendations	6
Acknowledgements	6
Appendices	8
Appendix A: List of Photographs	8
Appendix B: Discovery and Excavation in Scotland	8
Appendix C: Written Scheme of Investigation	9

List of Figures

Figure 1: Site location	4
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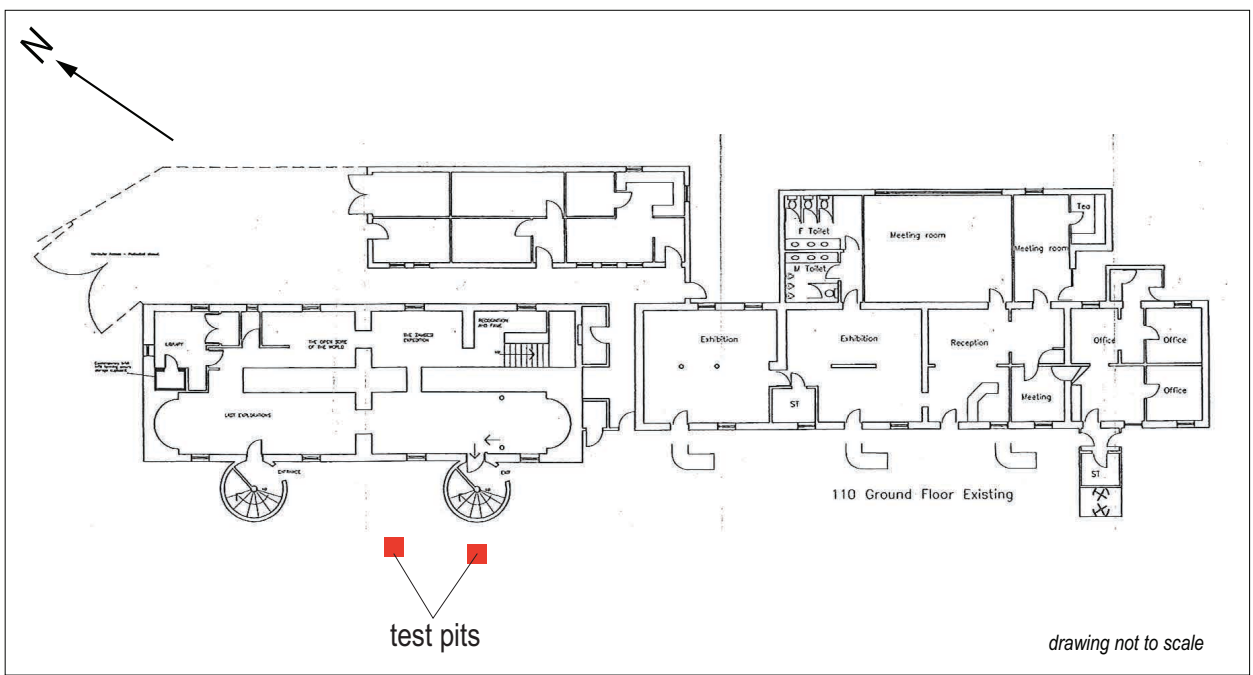


Figure 1: Site location.

Executive Summary

- 1.1 GUARD Archaeology Limited were commissioned by the National Trust for Scotland to undertake an archaeological watching brief during the assessment and repair work of subsidence in the tarmac at the forefront of the tenement at Shuttle Row, David Livingstone Centre. This work was undertaken on 14 July 2014, and encountered no sub-surface archaeological remains.

Introduction

- 2.1 This report sets out the results of an archaeological watching brief undertaken by GUARD Archaeology, on behalf of the National Trust for Scotland on a small area of subsidence in the tarmac surface at the forefront of the tenements at Shuttle Row, on 14 July 2014.

Site Location

- 3.1 The David Livingstone Centre is located to the north-east of Blantyre on the southern bank of a bend of the river Clyde (NGR: NS 69502 58517). The two test pits were located to the immediate south-west exterior of the forefront of the tenements at shuttle row and sit between 80 m and 90 m AOD.

Archaeological Background

- 4.1 The centre is operated by the National Trust for Scotland and is housed in a category A listed building (LB5162). It is located in the former mill buildings which once housed 24 families including Livingstone's, and where he was born on 19 March 1813. The centre depicts Livingstone's life from his early childhood working in the mill, to his African adventures. These are illustrated with the aid of various pieces of his navigational and medical equipment, interspersed with African artefacts.
- 4.2 The Property under NTS management includes the parkland on the edge of Blantyre, surrounding Shuttle Row, the 18th century tenement where Livingstone was born. In 1929, Shuttle Row was converted to house the museum, which holds a large collection related to the missionary explorer and his expeditions.
- 4.3 The David Livingstone Centre is of international significance because of its links with the man and as such is a nationally important memorial and educational resource. However, the David Livingstone Centre is also of national significance to the understanding of the industrial revolution in Scotland as it forms part of the Blantyre Cotton Works and Village, which was founded by David Dale in 1785. As such it is an example of a "model" industrial community, later exemplified by Dale's work at New Lanark. Although many elements of the mill complex have been demolished there are excellent records of its original form and in some cases archaeological deposits associated with these structures may survive below ground level.

Aims and Objectives

- 5.1 The general aim of the watching brief was to identify and record any possible subsurface remains that may be uncovered during the repair of an area of subsidence in the ground level between Shuttle Row and the location of the former Wash House. The specific objectives were to :
- Establish the presence or absence of any archaeological remains within the excavation area;
 - Determine the character, extent and significance of any archaeological deposits encountered;
 - Fully excavate and salvage any information possible from any significant features encountered.

Methodology

- 6.1 The methodology for the archaeological watching brief adhered to that specified in the NTS Written Scheme of Investigation (See Appendix C).
- 6.2 The methodology for the ground-breaking works itself comprised the cutting of tarmac with a still saw of an area 0.5 m by 0.5 m square around the area of subsidence, which was then broken up and removed by hand. The compact rubble fill below this was again removed by hand to reveal the pipe/duct at the base of the area of excavation. Once it was ascertained that no breakages existed within the section of pipe/duct underneath the subsidence area, the hole was backfilled again with a mix of dry cement then rubble. This was topped by a layer of tarmac.

Results

- 7.1 The results summarised below are set out in Appendix A and Figure 1. Two test pits were excavated at the front of the building at points where the tarmac had subsided. These both measured 0.5 m by 0.5 m (0.25 m²). The resultant excavations revealed in both test pits a layer of compacted gravel of 0.15 m in depth topped by a thin layer of tarmac 0.05 m in thickness. Below these two layers, a mixed fill of sand and rubble existed covering a duct/pipe with 0.20 m thickness above. The total cover above the pipe/duct being 0.40 m deep.
- 7.2 Once the duct/pipe had been revealed and no damage or leakage was visible, the test-pits were backfilled again with the addition of cement powder, compacted and capped with a layer of tar.
- 7.3 All excavations took place within an existing service trench that had been previously cut through the tarmac, so the chance of archaeological survival was very scarce. Two small fragments of white glazed ceramic were recovered from the mixed re-deposited rubble fill of the service trench. No other evidence of structural archaeology was noted.

Discussion

- 8.1 The watching brief encountered no remains of archaeological significance.

Recommendations

- 9.1 The watching brief work encountered no archaeologically sensitive deposits or features within the areas of excavation, due solely to the previously excavated service trench across this specific part of the site. In consequence, it is recommended that no further archaeological work is required.
- 9.2 A summary of the project results will be submitted to Discovery and Excavation in Scotland. A copy of this is included in Appendix B. The archive for the project, including a copy of the report, will be submitted to the National Monuments Records for Scotland within six months.
- 9.3 The online OASIS form at <http://ads.ahds.ac.uk/project/oasis/> (OASIS Reference: guardarc1-186611) will be completed within 3 months. Once the Data Structure Report has become a public document by submission to or incorporation into the SMR, the West of Scotland Archaeology Service will validate the OASIS form thus placing the information into the public domain on the OASIS website.

Acknowledgements

- 10.1 GUARD Archaeology would like to thank Daniel Rhodes and Lynsey Paterson of the National Trust for Scotland for their assistance. Labour and ground staff were supplied by GDN Contracts. Technical support was from Aileen Maule. The illustration was prepared by Fiona Jackson and Gillian McSwan. The project was managed for GUARD Archaeology Limited by Bob Will.

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Section 2: Appendices



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Appendices

Appendix A: List of Photographs

Frame	Area	Context	Subject	Taken from
1	-	-	ID Shot	-
2	-	-	General pre ex of subsidence hole in tarmac (easterly)	SE
3	-	-	General pre ex of subsidence hole in tarmac (easterly)	SE
4	-	-	General pre ex of subsidence hole in tarmac (easterly)	NW
5	-	-	General shot of tarmac removal (easterly)	SE
6	-	-	Excavation of rubble infill from trench (easterly)	SE
7	-	-	Shot of plastic pipe exposed at base of excavation	SE
8	-	-	Shot of plastic pipe exposed at base of excavation	SE
9	-	-	Shot of plastic pipe exposed at base of excavation	SE
10	-	-	Hole backfilled with rubble fill	SE
11	-	-	General shot of secondary subsidence hole excavated	NW
12	-	-	General shot of secondary subsidence hole excavated	NW
13	-	-	General location shot of subsidence holes	NW
14	-	-	General location shot of subsidence holes	NW
15	-	-	Subsidence holes backfilled and topped with tarmac	SW
16	-	-	Subsidence holes backfilled and topped with tarmac	NW
17	-	-	Subsidence holes backfilled and topped with tarmac	SE

Appendix B: Discovery and Excavation in Scotland

LOCAL AUTHORITY:	South Lanarkshire Council
PROJECT TITLE/SITE NAME:	David Livingstone Centre
PROJECT CODE:	3933
PARISH:	Blantyre (Hamilton)
NAME OF CONTRIBUTOR(S):	Kevin Mooney
NAME OF ORGANISATION:	GUARD Archaeology Ltd
TYPE(S) OF PROJECT:	Watching Brief
NMRS NO(S):	NS65NE 59
SITE/MONUMENT TYPE(S):	Mill, Commemorative Monument, Museum
SIGNIFICANT FINDS:	None
NGR (2 letters, 6 figures)	NS 69502 58517
START DATE (this season)	14 July 2014
END DATE (this season)	14 July 2014
PREVIOUS WORK (incl. DES ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	GUARD Archaeology Limited were commissioned to undertake an archaeological watching brief during the assessment and repair work of subsidence in the tarmac to the immediate south-west of the forefront of the tenement at Shuttle Row, David Livingstone Centre. This work encountered no sub-surface archaeological remains.
PROPOSED FUTURE WORK:	None
SPONSOR OR FUNDING BODY:	National Trust for Scotland
CAPTION(S) FOR ILLUSTRS:	--
ADDRESS OF MAIN CONTRIBUTOR:	52 Elderpark Workspace, 100 Elderpark Street, Glasgow G51 3TR
EMAIL ADDRESS:	bob.will@guard-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	Archive to be deposited in NMRS

Appendix C: Written Scheme of Investigation



the National Trust
for Scotland
a place for everyone

David Livingstone Centre, South Lanarkshire Project Outline for Watching Brief July 2014



1 Introduction

The **David Livingstone Centre** is a biographical museum in Blantyre, South Lanarkshire, Scotland, dedicated to the life and work of the explorer and missionary David Livingstone. The centre is operated by the National Trust for Scotland and is housed in a category A listed building.

It is located in the former mill buildings which once housed 24 families including Livingstone's, and where he was born on 19 March 1813. The centre depicts Livingstone's life from his early childhood working in the mill, to his African adventures. These are illustrated with the aid of various pieces of his navigational and medical equipment, interspersed with African artefacts.

The Property under NTS management includes the parkland on the edge of Blantyre, surrounding Shuttle Row, the 18th century tenement where Livingstone was born. In 1929, Shuttle Row was converted to house the museum, which holds a large collection related to the missionary explorer and his expeditions.

The David Livingstone Centre is of international significance because of its links with the man and as such is a nationally important memorial and educational resource. However, the David Livingstone Centre is also of national significance to our understanding of the industrial revolution in Scotland as it forms part of the Blantyre Cotton Works and Village, which was founded by David Dale in 1785. As such it is an example of a "model" industrial community, later exemplified by Dale's work at New Lanark. The complex of mill buildings was located along the southern bank of the Clyde at a notable bend in the river. Although many elements of the mill complex have been demolished there are excellent records of its original form and in some cases archaeological deposits associated with these structures may survive below ground level.

The aim of this watching brief is to identify and record any possible subsurface remains that may be uncovered during the repair of an area of subsidence in the ground level between Shuttle Row and the location of the former Wash House.

2 Previous Research

Links to the bibliographic data and previous research can be found on CANMORE. The 1st Edition OS map of the mill complex can also be found on the National Library of Scotland website; <http://maps.nls.uk/view/74950956>

3 Definition and Objectives of a Watching Brief

An Archaeological Watching Brief is defined by the Institute for Archaeologists (IfA) (formerly the Institute for Field Archaeologists) as:

"...a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, intertidal zone or underwater, where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive." (IfA 1998 rev 2008)

The purpose of a Watching Brief is also defined by the IfA as:

"To allow, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of development or other potentially disruptive works."

"To provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the Watching Brief itself are not sufficient to support treatment to a satisfactory and proper standard." (IfA 1998, rev 2008)

The results of a watching brief are used to:

- produce a record of the location, nature and date of any archaeological remains encountered on the site;
- add to the knowledge about the previous history of activity on the current site and its surroundings; and
- provide information to influence planning decisions in the area.

4 Methodology

All archaeological work will be carried out in accordance with the Standards and Guidance for an Archaeological Watching Brief issued by the Institute for Archaeologists (IfA) (1994, rev 2008).

The fieldwork methodology is summarised below.

Following the examination of the associated links on CANMORE, a qualified archaeologist will be on site to monitor all groundworks associated with the subsidence repair for the purpose of identifying and recording any archaeological remains, features and deposits present.

Excavation will be undertaken by National Trust for Scotland contractors, under the supervision of archaeological staff.

Should any building remains or historic ground surfaces be identified, the archaeologist will be responsible for halting works until such time as these remains have been fully recorded.

Should archaeological or palaeoenvironmental remains be exposed, the archaeological contractor will suspend excavation in that area to allow for the investigation, recording and sampling of the deposits.

Should archaeological features be identified, manual excavation will commence. The excavation of each feature will, wherever possible, be carried out in such a way as to produce at least one representative cross-section. As a minimum:

- Small discrete features will be fully excavated;
- Larger discrete features will be half-sectioned (50% excavated); and
- Long linear features will be sample excavated along their length – with investigative excavations distributed along the exposed length of any such feature.

Should the above % excavation not yield sufficient information to allow the form and function of archaeological features/deposits to be determined, full excavation of such features/deposits will be required. Additional excavation may also be required for the taking of palaeoenvironmental samples, and the recovery of artefacts.

All archaeological features exposed during the works will be investigated and fully recorded using standard pro-forma context recording sheets. All archaeological features will be recorded in plan and section on dimensionally stable media, at a scale appropriate to their complexity (1:10, 1:20 or 1:50) and to allow accurate depiction and interpretation.

The full depth of archaeological deposits will be assessed. This may not require excavation to natural stratigraphy, if it is clear that complex and deep stratigraphy will be encountered.

All spoil will be examined for the recovery of any archaeological artefacts.

Any burials that are encountered will be left in situ, recording obvious detail such as position of grave cut, alignment, burial position and stratigraphic relationships. If human remains are encountered all work will be suspended and the National Trust for Scotland Area Archaeologist Dr Daniel Rhodes will be notified.

If human remains are not to be removed, their physical security will be ensured, preferably by backfilling as soon as possible after recording.

If human remains are to be removed, this will be done with due reverence and in accordance with current best-practice and legal requirements.

Skeletal study on any human remains will be carried out. This will include the metrical (age, sex and height) and pathological (disease, injury or deprivation) evidence. This will be achieved at the excavation and or post excavation stages.

If items that may be subject to the Law of Treasure Trove are recovered, the appropriate authorities will be notified.

A photographic record of the watching brief will be prepared, and will involve the sole use of digital images. This will include images illustrating in both detail, and general context, the principal features and finds discovered. The photographic record will also include working shots to illustrate more generally the nature of the archaeological operation mounted.

All archaeological remains will be levelled to Ordnance Datum, either directly or by means of a temporary bench mark, using an Ordnance Survey bench mark.

Provision and agreement will be made for the time-limited retention of all the finds and their full analysis and recording, by appropriate specialists.

Environmental Sampling Strategy (if appropriate)

Should deposits be exposed that contain palaeoenvironmental or dateable elements appropriate sampling and post-excavation analysis strategies will be initiated. Sampling may be carried out by members of the excavation team or by relevant specialists as appropriate. When samples are to be collected, the exact sampling strategy will reflect the complexity of the site and its spatial and chronological extent. This strategy will be selected from either a random, judgement, or systematic method; or a combination of these methods (as defined in *English Heritage: Environmental Archaeology Guidelines 2002*).

- Bulk samples of 40 litres in volume will be taken, where possible, from individual contexts within larger linear or discrete features such as pits and ditches (or palaeochannels if present); or 100% of smaller features. These can be used for plant macrofossil, preserved by charring/anoxic conditions/mineral replacement; and mollusc (if seen to be present) analyses and also for insect analysis if there is waterlogged organic survival. Animal bones will be collected by hand and retrieved from the residues of bulk samples.
- Pollen analysis could be worthwhile from basal silts, organic layers, silts that have remained waterlogged, or any other deposits where conducive preservation conditions may exist.
- If a platform or other occupation surface is located and does not comprise re-deposited makeup layers, bulk samples of at least 40 litres in volume, where possible, will be taken from it. These are for extraction of plant macrofossils, bones and molluscs (if they are seen to be present) arranged spatially to take account of possible variation within the layer. The precise sampling strategy will have to be determined in the light of access, area available etc.
- As a minimum, samples for the retrieval of carbonised remains will comprise bulk samples of 20-30 litres in volume, where possible, of excavated material.

Provision will be made for a geoarchaeologist with relevant experience to make a site visit if possible buried soil / stabilisation horizons or palaeochannels are encountered and access to view cleaned sections is possible.

All types of samples will be assessed by relevant specialists and processed by the specialists or according to their instructions. For bulk samples for analysis of plant macrofossils and small bones or molluscs, mesh sizes of 250 microns for floats and 500 microns for residues are recommended.

In the event of particularly significant discoveries being made, the Area Archaeologists Dr Daniel Rhodes will be informed and a meeting will be set up on site between the Archaeological Contractor the Trust, and British Telecom/their designated contractor, to discuss further appropriate mitigation.

Any variation of the above will be undertaken in agreement with the National Trust for Scotland Area Archaeologist Dr Daniel Rhodes.

Post-excavation processing of finds

All finds recovered from the watching brief excluding metalwork, will be washed and bagged with a code identifying the site and context.

All finds from the site will be retained. They will be removed from the site for processing and conservation where necessary, in preparation for further analysis and archiving. Provision will be made for specialist treatment of finds by a conservator, where necessary.

5 Products

The contractor will produce, as a minimum, the following:

- a) A digital photographic record of all archaeological deposits.
- b) Written descriptions and where possible, interpretations of all archaeological deposits
- c) Scaled plans and section drawings of all archaeological deposits.
- d) Analytical report. This report will be prepared in line with the appropriate Institute for Archaeologists Standards. Following the introductory sections (including a narrative summary in layman's terms of the main findings, an indication of the constraints and limitations of the report, and an indication of how the report has been set out), the report will provide an analysis of all archaeological deposits, focusing on information gleaned during the project. This will be followed by a discursive section containing the interpretation of the previously described archaeological deposits and any other information of archaeological interest germane to the objectives of the project outlined above.

If it is possible to provide an interpretation of the archaeological deposits and their relationship to surrounding landscape features, this and any other appropriate interpretation should follow the descriptive section. The report will be fully referenced.

Copies of this Project Outline (excluding enclosures), the successful Tender Document (excluding financial details) and any written variations will be reproduced within an appendix.

The report will be illustrated by plans, sections, elevations, details, sketches and photographs as appropriate.

- e) Summary report for submission to Discovery and Excavation in Scotland and enter the project data into OASIS: Online AccesS to the Index of archaeological investigationS (<http://www.oasis.ac.uk/scotland/>).

6 Logistics

The watching brief will be managed by the NTS Archaeologist, Dr Daniel Rhodes, to whom all queries of a technical nature should be addressed.

The contractor will inform the Local Authority Archaeological Service of his or her activities **before** site work commences.

Access

Access to the property and site is available to the contractor upon request. The dates of which will be arranged with the NTS Archaeologist.

Personnel and standards

Contractors will provide the name of a single person who will be the archaeological Project Manager. The work will be undertaken under the close supervision of either a suitably qualified and experienced archaeologist with a proven track record in the systematic recording and analysis of archaeological sites, and in the production of analytical reports. It is expected that the successful contractor will work in compliance with the relevant Institute for Archaeologists Standard and Guidance.

Short CVs should be included in the Tender Document for the principal participants in the project.

Volunteers or trainee students may be used on the project, provided that they receive adequate supervision and training, and that volunteers gain no financial remuneration other than the repayment of bona fide expenses. The use of volunteers and students must be approved in advance by the NTS.

Health and safety

The contractor will be responsible for implementing all appropriate health and safety requirements and any other current legislation which is applicable, and for ensuring that all sub-contractors appointed by him or her also implement all appropriate health and safety requirements and any other current legislation which is applicable

The contractor will be expected to carry suitable insurance (the minimum requirement is professional indemnity insurance cover of £1 million) and will carry out and supply the NTS Archaeologist with a Risk Assessment and Health and Safety Method Statement prior to the commencement of works. A Health and Safety Policy Document must also be submitted and approved by the NTS. The Tender Document should include details of proposed health and safety provision.

Publicity

The project and its results may be publicised through the local or national media. Any publicity must be handled by or through the NTS; **this includes publicity or information shared via online media.**

Finances

The Tender Document will contain an estimate of the cost of the project as described in this Project Outline, and should set out the following details:

- 1* Wages (stating number and level of staff, daily rate per member of staff per day, and which staff will be used for each element of the work);
- 2* Specialist costs;
- 3* Travel and accommodation expenses;
- 4* Hire costs;
- 5* Equipment and consumables;
- 6* Post-fieldwork costs;
- 7* Report and archive production costs;
- 8* Overheads and other costs;
- 9* Any costs in-kind, not to be charged for.

A contingency sum may be included as a percentage of the overall costs. The contingency sum will only be applicable where unforeseen circumstances prevail, and its use will have to be justified. Written notification should be given as soon as practicable of any proposed variation over and above the basic estimate. Variations in expenditure, including the use of the contingency, will require prior written approval from the NTS. The detailed costings should be shown excluding VAT, but the overall costings should also be shown including VAT.

The NTS operates a system of staged payments, with the first instalment tendered on completion of fieldwork and the final instalment on receipt of the approved final report. Contractors should note that if significant delays occur at one or more stages of the project, excepting those reasonably outwith the contractor's control, the percentage of the total fee held back until payment as the final instalment is likely to increase.

7 Reporting Procedures

Reporting timetable

One electronic copy a draft report (which should include all illustrative material) should be provided within **four weeks** of completion of the field element. The NTS will attempt to provide comments on this first draft within four weeks; at that stage, a timetable for the submission of a revised draft (two copies) will be agreed, dependent upon the level of revision required. The final report will be submitted within **four weeks** of comments upon and approval of the revised draft by the NTS.

Report production and distribution

The NTS will require **four bound copies** of the final report each accompanied by a disk containing a digital version of the final report, all images produced during the project, any information databases which may have been compiled as well as digital survey information as AutoCAD LT 2004 and DXF/DWG files suitable for use on a PC running Windows XP. In addition, **the contractor should submit one bound copy to the local authority SMR and one to the NMRS.** Copyright of the reports and all other information (including electronic information) will rest with the NTS, but the contractor will have the right to use the reports and the survey results free of charge in relation to non-commercial activities or to promote the work of the contractor.

8 The archive

The primary archive will be deposited with the NMRS, and will include all original field records (both hard copy and digital) and notebooks, alongside a full set of catalogued photographs. The archive will be prepared to standards agreed with the NMRS and will be deposited with them within **six months** of submission of the final report.

9 Further Guidance

The contractor should liaise with the NTS Archaeologist, Dr Daniel Rhodes (0844 493 2421; 077 0694 5525; drhodes@nts.org.uk).

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