Written Scheme of Investigation:

Archaeological Monitoring
& Evaluation

Lochore Castle
(Conservation works)
Lochore Meadows Country Park, Fife

Prepared for:

Stephen Newsom Architect Ltd. /
Living Lomonds Landscape Partnership

2015

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1.0 Summary

1.1 This WSI describes methodologies and procedures for proposed archaeological monitoring and evaluation excavation at Lochore Castle. The monitoring and evaluation will provide archaeological mitigation for exploratory conservation works to underpin the castle tower and stabilise a section of barmkin wall. The conservation works are managed by Graeme Brown Stonemason Ltd and Stephen Newsom Architect Ltd.

1.2 This document should be used as a reference guide during planning and delivery of the archaeological works. The WSI has been issued at the request of Stephen Newsom Architect on behalf of the Living Lomonds Landscape Partnership.

2.0 Background

2.1 Context

The archaeological works will form part of a building conservation project instigated at Lochore Castle by the Living Lomonds Landscape Partnership (LLLP) as part of the Lochore Castle Revealed Project (2013-16). Stephen Newsom Architect Ltd is commissioned to manager the conservation project on behalf of the LLLP and Graeme Brown Stonemason Ltd is contracted to undertake conservation works on the castle buildings.

2.2 Lochore Castle

2.2.1 The site is located in Fife at NT 17532 95883 on a low mound near the main entrance to Lochore Meadows Country Park at 98m OD. The castle was formerly positioned on a small island at the east end of Loch Ore, drained in the late 18th century. The parts of the ruin that will be affected by the works include four corners of a late-14th century tower surviving to second floor-level, and a section of 15th-16th-century barmkin wall and artillery fortification that enclosed the tower (Fig. 1). The castle is designated a Scheduled Monument (Index No. 858).

Figure 1. Lochore Castle from the north-east.

2.2.2 The fortification was the caput of the lordship of Lochore, first associated with Robert the Burgundian in c.1128 and later passing to the de Valloniis (c.1296) and Wardlaws of Torrie (15th century). In 1547 Lochore was included in a list of the strongest fortifications in Fife during the period known as the 'rough wooing'. The site's medieval name was Inchgall, a Gaelic place-name which means 'Island of the Strangers' and may refer to incoming continental lords who settled the site in the 12th century.

2.3 Terms of Reference

2.3.1 A meeting was held at Lochore Castle on the 26 October 2015 between Dr Oliver O'Grady (t/a OJT Heritage) and Stephen Newsom (Stephen Newsom Architect Ltd) to discuss requirements for archaeological monitoring. Four specific locations where identified at the ground level of the exterior walls where new brickwork is planned to be inserted to support overhanging masonry. This will involve removal of ground deposits in order to locate a suitable foundation from which to build. Archaeological monitoring of all ground works is a requirement of Scheduled Monument Consent. Subsequently proposals for exploratory test pits to be located adjacent the leaning north barmkin wall were also advised, requiring archaeological evaluation.

2.3.2 The monitoring and evaluation is intended to mitigate potential damage to archaeological deposits and structures that could result from the proposed ground works. In the event that archaeological remains are encountered sufficient access and time will be allowed for a professional archaeologist to record the remains. The LAA and HES will be contacted regarding discovery of sensitive archaeological remains for advice regarding further mitigation.

2.4 Potential Archaeological Features

The following types of archaeological artifacts, features and deposits may be encountered during ground works at the wall bases:

- Medieval building remains (mortared stone foundations, surfaces, carved stone masonry fragments, stone-lined features, ceramic tiles, roofing slates/stone shingles, iron nails, wall plaster, lime mortar, shell fragments, charcoal, lead sheet, lead cames, window glass, metal locks/hinges).
- Medieval occupation deposits (midden material, floor surfaces, animal bone, ceramics, glass, stray domestic finds, simple dress fittings, hearths deposits, oven structures, ferrous and/or metal alloy objects, metal-working debris).
- Medieval high status finds (dress fittings, ceramics, coinage).
- Medieval military finds (hand weapons, arrow heads, musket shot).
- Early medieval remains (occupation deposits, domestic finds, ceramics, glass, metal working debris, hearth deposits).
- Prehistoric stray finds (ceramics, flint tools/debris, stone tools and animal bone).
- Post-medieval stray finds.

2.13 The aims, objectives and methodology for the proposed monitoring and evaluation are described in the following sections. These have been devised based on the description of proposed works, the assessment of potential archaeological remains and to mitigate the site specific environmental constraints.

3.0 Aims

3.1 The archaeological monitoring will aim to mitigate potential damage to the historic environment as a result of exploratory ground-breaking works for underpinning the castle walls.

3.2 The excavations are devised to achieve the following other aims:

1) To improve the long-term care of the monument by providing professional archaeological support to the building conservation works;
2) To mitigate potential damage to the archaeological resource and the historic building's foundations;
3) To identify the location, nature and extent of any features or objects of archaeological importance that could be damaged or destroyed by the conservation works;
4) To ensure any archaeological remains encountered are preserved *in situ* or adequately preserved by record;
5) To if possible characterise the foundations or subsoil deposits underpinning the castle walls;
6) To characterise the character of deposits adjacent the northern section of barmkin wall;
7) To make sure that the needs for archaeological conservation and recording are met without causing any unnecessary delay or disturbance to the building conservation works.

4.0 Objectives

4.1 The archaeological monitoring will have the following objectives:

1) To ensure that a sufficiently qualified and experienced professional archaeologist is present to supervise all ground-breaking works.

2) To undertake archaeological monitoring of ground works at four locations around the base of the castle walls.

3) To excavate two evaluation trenches against the base of the northern section of barmkin wall that will be 1.5m x 1m, with the long edge at right angles to the wall face.

4) To excavate two evaluation pits, 1m x 1m at the site of proposed boreholes and at sufficient depth (approximately 1.2m) to ensure that the boring does not foul on solid obstacles. The south edge of these pits will be 3m from the wall face, and aligned directly opposite the wall base trial trenches (see (3) above).

5) To remove surface rubble from the area of ground works in order to expose the first *in situ* archaeological horizon and/or foundations;

6) To provide archaeological advice to the project conservation architect and building contractor regarding underpinning works at the tower.

7) To ensure in the event archaeologically sensitive remains are encountered that if necessary the ground breaking works are halted.

8) To ensure that if sensitive archaeological remains are encountered sufficient time is allowed for inspection by HES and LAA, and if required that the archaeological remains be preserved *in situ*.

9) To propose arrangements for the safeguarding where possible, and further recording where necessary of any archaeological features or finds identified during the archaeological monitoring, which will be at the expense of the client based on an agreed written estimate of costs. Any further arrangements will need to be agreed with HES and LAA.

5.0 Location of works

5.1 Four locations have been identified for ground works at the sites of stone loss around the castle wall bases and four trial pits north of a leaning section of the north barmkin wall (Fig. 2). The size of the ground works at the tower will be defined by the area required for underpinning as advised by the conservation contractor and architect. The evaluation trenches will be 1.5m x 1m and 1m x 1m in area.

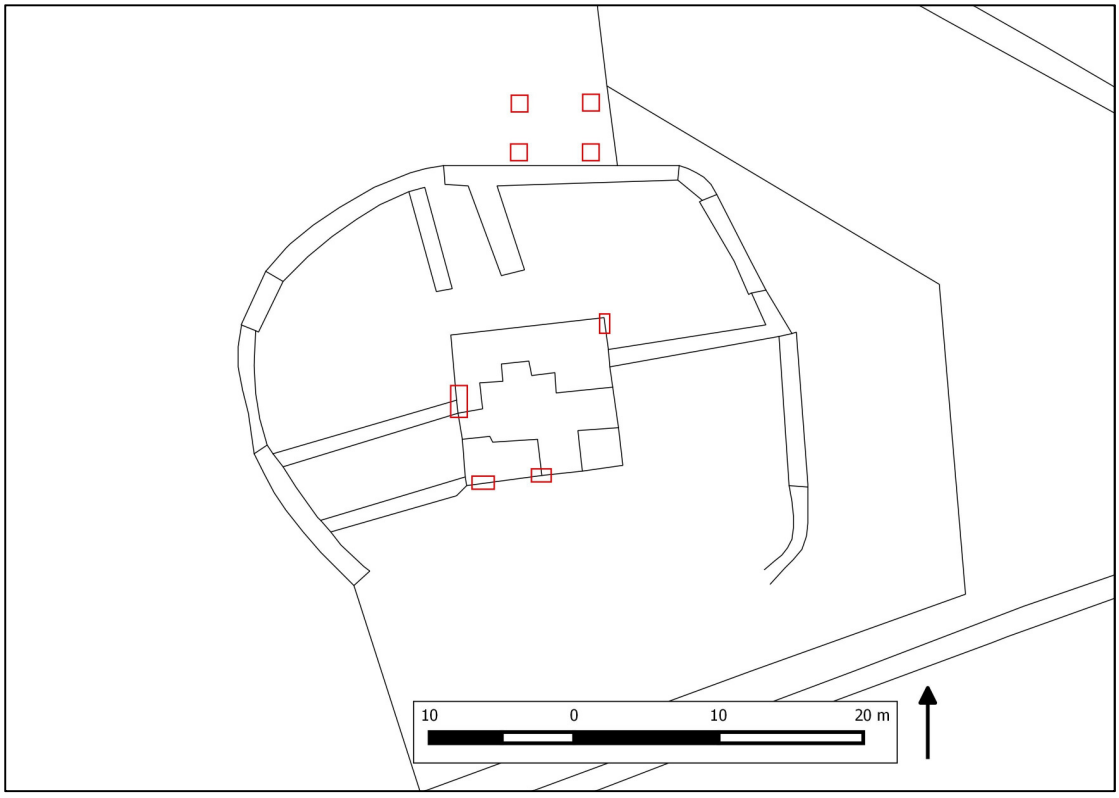

Figure 2. Proposed locations requiring archaeological monitoring at the tower and evaluation trenches north of the barmkin wall (Background mapping © Crown copyright and database rights 2015 Ordnance Survey).

6.0 Methodology

6.1 Spoil management and ground reinstatement:

- All excavation will be undertaken using archaeological hand tools.
- All excavation will be undertaken by a professional archaeologist.

- Removal of surface vegetation and turf will be by secateurs and hand digging tools in regular sized pieces.
- Turf and vegetation will be removed and stacked nearby outside the Schedule Monument area at a location agreed with the land manager. In the case of turf if required it will be regularly watered to allow for replacement at the end of the excavation and the maintenance of the site's historic character, or sustainable removal of vegetation from the site outside the scheduled area will be the responsibility of the land manager and/or client.
- Spoil will be placed on water permeable ground sheets at least two metres from the trench edge.
- Based on advice from the conservation contractor, architect and HES spoil will be either be removed from the site outside the scheduled area and then sustainably disposed of or backfilled with hand tools to the location in which they were found. This will be the responsibility of the land manager and/or client.
- Any backfilled soil will be re-compacted in stages to ensure stability.
- Rubble will be separated out from spoil and temporarily placed on water permeable ground sheets.
- The archaeologist and conservation contractor and architect will liaise regarding reuse of rubble derived from the ground works, in consultation with HES. With prior agreement from HES sustainable removal of rubble from the site outside the scheduled area will be the responsibility of the land manager and/or client.

6.2 Excavation at depth

- It is not anticipated that excavation will extend below a depth of 1.5m.
- In the event that excavation below a depth of 1.5m is required, excavations will be stepped within the area to mitigate potential for collapse.

- This will be made necessary for health and safety compliance and insurance purposes.

6.3 Sampling

- The preference will be for preservation of archaeological remains *in situ* throughout the excavation and it is not intended that all features and deposits that are encountered should be fully excavated during the investigation.
- A single context excavation method will be utilised.
- The first archaeological sensitive layers encountered will be exposed to the extent of the works area, cleaned and recorded *in situ*.
- Only where it is deemed necessary to answer specific aims of the WSI and conservation work will features be sampled and excavated into, and only with the prior written agreement of HES.
- Soil or charcoal samples may be taken based on advice from HES and in consultation with the conservation contractor and architect for the purposes of dating and chemical analysis of the building remains.
- In such cases no more than 25% of the exposed extent of deposits/features will be excavated and sampled for analysis unless full excavation is required to meet the evaluation aims or in the case of small features (<500mm diameter) – if sensitive remains are encountered advice will be taken from HES prior to the application of this methodology.

6.4 Archaeological Recording

- The excavation results will be recorded on *pro forma* context sheets, with photography and a mixture of single and multi-context scale drawings. A reflective 'daybook' will also be kept and any samples given individual record sheets. Photographs, drawings, levels, samples and contexts will be listed on separate registers.

- The ground works areas will be excavated in plan using hand tools. Archaeological remains will be fully recorded by means of written context descriptions, scale drawings and photographs.
- All work will be conducted to industry standard, such as those in the Museum of London Archaeology Service *Archaeological Field Manual*, 3rd edn 1994 and with regard to the Certificated Institute of Field Archaeologists By-Laws and *Standard and Guidance for Archaeological Monitoring*. Recording of all elements will be conducted following established OJT Heritage methods.
- A sequential block of numbers will be allocated to each works area, with individual numbers from these assigned to each stratigraphic unit.
- A written record (both factual and interpretative) and a 'Harris' matrix of the stratigraphic units will be compiled on *pro forma* sheets and in site notebooks.
- Plans and sections will be drawn at an appropriate scale (usually 1:50, 1:20 and 1:10) according to the detail necessary to provide a full record, and logged on a register.
- Sections and spot heights will be related to the level of the Ordnance Datum. 3-D record will also be made of each excavation outline and main excavated features/structures using GPS.
- A full photographic record will be compiled using still digital and video media, and registered on a standard form. The photographs will illustrate details, principal features, generalized contexts and working shots of the fieldwork.
- All identified finds and artefacts will be recovered and recorded by stratigraphic unit and/or spit, quantified, identified and scanned for dating evidence, with the 3-D find-spot recorded for all significant finds using GPS. Some materials (such as modern pottery or post-medieval brick) may be discarded after recording as long as a representative sample is kept.
- Finds will be bagged and packed by artefact class and stratigraphic unit and/or spit in a manner that accords with the United Kingdom

Institute for Conservation (Archaeology Section)'s *First Aid for Finds*.

7.0 Finds and Conservation

7.1 Finds will be recorded by context as above.

7.2 In the event that fragile objects are uncovered, advice will be sought from conservation specialists at the Scottish Conservation Studio. Provision will be made to ensure such objects are packed appropriately on site and prepared for immediate dispatch to a conservation laboratory. This will include on site call-out, if required.

7.3 Waterlogged materials and deposits are not anticipated. In the event that such materials are uncovered the following course of action will be taken: artefactual materials will be packaged in a wet condition, maintained at a temperature of below 5 degrees C and delivered to an approved conservation laboratory as soon as possible; waterlogged anthropogenic deposits (i.e. containing preserved ecofactual materials) will generally be sampled as per dry deposits, although additional samples may be taken where particularly significant deposits are encountered. The recovered samples will be maintained at a temperature of below 5 degrees C and will be delivered to appropriate specialists for analysis.

8.0 Recovered Materials

8.1 Following post-excavation analysis (barring any intrusive analysis) all artefactual finds recovered will be declared under the Treasure Trove/*bona vacantia* system by reporting to the Treasure Trove Unit. The Crown can claim any find under these laws. Finds will be treated in accordance with Scottish Museums Council Guidelines.

9.0 Environmental sampling and dating

9.1 Should sampling be required by HES, this will be carried out, geared towards the recovery of data to investigate the composition and deposition of occupation deposits and/or building debris with four main aims:

- The recovery of environmental information e.g. macroplant and small faunal remains to help reconstruct past environmental.
- The recovery of material suitable for C14 dating.
- The recovery of small artefacts which might not be recovered by hand.
- The assessment of the deposits in order to inform site management and future sampling strategies.

9.2 Environmental sampling will involve recovery of bulk soil samples. Soil samples will be collected from archaeological contexts identified as potentially significant for improving the long-term management and understanding of the site. Additional samples will be collected in the case of deposits in interesting physical or stratigraphic locations.

9.6 An aim of the sampling programme would be to the recovery of material which will be suitable for C14 dating. In general terms it is intended that any dating programme uses single entity dates only, or articulated bone (if present). Samples for C14 dating will be selected by the project archaeologist and sent to a specialist for species identification and approval before onward transmission to an approved laboratory.

9.7 All post-excavation analysis and publication of results (in the case of exceptional findings) that are required by HES would be undertaken at the expense of the client based on an agreed written estimation of costs.

10.0 Treatment of human remains

10.1 The discovery of human remains is not anticipated. Any finds of human remains will initially be left *in situ*, covered and protected.

10.2 It is a legal requirement to inform the police of such a discovery. If it is necessary to remove the human remains, this will be done with police approval and in accordance with Historic Scotland's Operational Policy Paper 5 *The Treatment of Human Remains in Archaeology.* However, the removal of human remains is not anticipated and will only be attempted as part of the proposed excavations where remains can assist the project's objectives.

11.0 Staffing

11.1 All the proposed excavation areas will be staffed by a professional archaeologist with appropriate qualifications and experience. Technical excavation of archaeological deposits will only be undertaken by the on-site archaeologist.

11.2 Archaeologist Dr Oliver O'Grady (OJT Heritage) will undertake the monitoring. Dr O'Grady is an experienced professional archaeologist and heritage consultant. A CV is enclosed with this WSI.

11.3 No unsupervised removal or excavation of rubble by conservation contractors will be undertaken.

11.4 Before working on-site and beginning fieldwork all staff will be briefed on the aims of the project and the content of the WSI, will undergo a health and safety induction and be supplied with necessary PPE.

12.0 Products

12.1 The products of the proposed works will be:

- A Data Structure Report to be completed within 2 months of the completion of the fieldwork. If required this will include a costed post-excavation research design (PERD).
- The Data Structure Report will include details of the methods and results of the work undertaken and provide recommendations for the further treatment of any significant archaeological remains discovered. The report will detail the circumstances and objectives of the work, outline the monitoring and sampling methodologies, describe and analyse the project results drawing in comparanda as appropriate, and will contain an account of the project records generated (including a finds list). The report will be illustrated by plans and sections of all significant features identified, photographs and a location plan.
- A brief summary of the results for Discovery and Excavation in Scotland.
- A set of images characterising the main features of the site.
- A brief popular report for local dissemination via the LLLP website and social media.

12.2 Copies of each major product (including but not limited to DSR) will be deposited with HES, NMRS and Fife Archaeological Service.

12.3 The site archive will be deposited with NMRS at the completion of the project.

12.4 Finds disposal will be undertaken at the completion of the project.

13.0 Risk Assessment & Insurance

13.1 OJT Heritage carry appropriate specialist insurance with Towergate Risk Solutions. This is defined under Towergate's Archaeology

Combined policy and covers the project against public liability, employer's liability, general personal accident cover, 'all-risks' to equipment and professional liability. Copies of certificates of insurance can be supplied on request.

13.2 All OJT Heritage staff will work under the established site Health and Safety policy and the site manager/client will ensure that all staff are inducted accordingly.

13.3 Standard and appropriate Health and Safety procedures will be followed during the excavations, including preparation and dissemination of a bespoke Risk Assessment document. Special consideration will be given to staff around excavation areas and in proximity to unstable sections of historic buildings – these aspects will be risk assessed and will be discussed in detail with the land managers, site manager/client.

13.4 Site staff trained in First Aid will be clearly identified at the start of each day and the location of a site medical kit communicated to all staff. All H&S incidents are to be reported to the site works manager and LLLP.

13.5 The site conservation contractors and architect will be liaised with during planning to ensure safety of all staff around any on-going building conservation works and scaffolding. Potentially dangerous work areas and building remains will be identified and appropriate risk mitigation measures agreed in writing prior to work commencing.

14.0 Consents and Access

14.1 Access to Lochore Castle for the purposes of the proposed monitoring has been granted through the co-operation of FCCT (land manager)

and Fife Council (land owner), and the agreement of the site works manager and architect.

14.2 Scheduled Monument Consent from Historic Scotland has been granted for the project. The monitoring will be covered by a written amendment to SMC prior to works commencing. The HES contact is Senior Heritage Management Officer Rory McDonald (Ancient Monuments, East). The LAA is Fife Archaeology Service (Douglas Speirs). LLLP Programme Manager is Ed Heather-Hayes. The project architect and responsible site contact is Stephen Newsom. Graeme Brown Stonemasons Ltd is the site conservation contractor.

14.3 No excavation or other ground breaking works will commence prior to written confirmation of SMC amendment. The works will not deviate from the proposals laid out in this WSI or from conditions that may be advised by HES as part of SMC, without further written amendment to consent. Additional site visits may be arranged with HES staff and the LAA as appropriate.

14.4 The proposals do not affect any other form of designation such as a SSSI. SNH have been advised of the project.

14.5 No public access will be afforded to the excavations.

14.6 Further copies of this WSI can be made available on request.

15.0 Programming and Resources

15.1 The archaeological monitoring will take place prior the underpinning works. Any archaeological mitigation works will be programmed based on advice from the site works manager and architect and phased where necessary.

15.2 At this stage it is not possible to provide a firm programme for undertaking the archaeological works, but this will be scheduled for 2016.

15.4 HES and the LAA will be provided in writing of the commencement of each stage of fieldwork.

16.0 References

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