UNIVERSITY of STIRLING

Scottish Medieval Castles & Chapels C-14 Project

Proposed materials sampling & analysis strategy at

Lochindorb Castle, Badenoch

SC14-LCB-PRE-02

MARK THACKER

Introduction to SMCCCP

The Scottish Medieval Castles & Chapels C-14 Project (SMCCCP) is an archaeological research project investigating the palaeoenvironmental potential of Scottish medieval building materials. The project is joint-funded by Historic Environment Scotland and the University of Stirling, directed by Mark Thacker (Research Fellow, University of Stirling), and is scheduled for completion in 2019.

Document & Site Details

Site	Lochindorb Castle, Badenoch
NGR	NH 9745 3632
Document reference	SC14/LCB/PRE/02
Subject	Proposed Sampling Strategy
Previous reports	SC14-LCB-PRE-01 (Preliminary Survey)
Fao	Historic Environment Scotland, [redacted]
Compiled/last revision	M Thacker 23/11/2016

Contents

1 -INTRODUCTION

During the project's recent non-intrusive rapid survey of Lochindorb Castle, it was noted that the mortar of both main phases of the surviving building was visible and accessible in a number of contexts, and initial characterisation suggested this material had high archaeological potential (see report SC14-LCB-PRE-01). A programme of further survey, sampling and materials analysis was therefore proposed and this document has been drafted to inform the subsequent Scheduled Monument Consent application.

2 – STATUTORY PROTECTION

Lochindorb Castle is a Scheduled Ancient Monument, but the site is not subject to any environmental statutory area protections (see figures for SNH protected areas information map). No European Protected Species are known to inhabit the site, but it is possible that the island supports rare breeding birds and/or otters in the summer months, and so the advice of SNH is not to disturb the site between March and August inclusive ([redacted], SNH, pers. comm.). It is therefore proposed that site visits will only take place outside this summer period. As the site is regularly monitored by birdwatchers, the local Police Scotland Wildlife Crime Officer [redacted] will be also informed of any site visits to avoid any unnecessary police investigation.

3 - ACCESS TO FABRIC

It is possible to complete the proposed survey and sampling programme from ground levels with occasional use of a stepladder.

4 - SAMPLE CONTEXTS

All samples will be removed from contexts visible on the surface of the monument, and most will be from core rubble contexts made visible by historic masonry collapses (see figures).

The coordinates (x, y and z) of fixed samples will be recorded by hand measurement from fixed building features and current ground levels.

Sample contexts will be annotated onto a plan drawing for the final report, for which the project also hopes to use the recent RCAHMS measured survey data.

Sample contexts will also be recorded by photograph.

5 - SAMPLE QUANTITIES

3-6 small mortar samples, each of approximately 50 x 50 x 50mm, will initially be sought and this is likely to include a core sample from each main phase and at least one from the upstanding south-east range. Loose ex-situ mortar fragments may also be collected where available.

5-20 very small fixed mortar samples with relict-fuel, generally up to approximately 0.5g or $1cm^3$, will also be sought for removal.

The sandstone dressings in the surviving structure will be the subject of further examination, and a small (up to approx 50 x 50 x50mm), loose (ex-situ), un-moulded representative sample of each type may be collected if these are available.

6 - SAMPLE REMOVAL

Samples will be removed and collected by Mark Thacker. Fixed samples will be removed using a masonry hammer and chisel, dremel, and/or a strong knife. No samples will be removed where the masonry is considered fragile or where sample removal is considered likely to spall face stones or accelerate the deterioration of the monument in any way.

7 - SAMPLE STORAGE

Samples will be stored immediately in well-labelled sealed bags, away from light or heat sources. Within 48 hours, all samples will be air-dried at room temperature and re-sealed in sample bags. Isolated fuel-relict samples will be refrigerated at University of Stirling Dept. of Biological and Environmental Sciences.

8 - SAMPLE ANALYSIS

Mortar samples, and any collected sandstone samples, will be thin sectioned and analysed with a polarising microscope by Mark Thacker. Fuel-relict samples will be analysed microscopically in reflected light and characterised to genus level by Mark Thacker. Radiocarbon analysis will be undertaken at SUERC (East Kilbride).

9 - HEALTH AND SAFETY

Sampling is likely to be undertaken over 1-2 days. Mark Thacker, and any accompanying assistant, will wear standard construction site PPE including high-visibility vest, steel toe boots, hard-hat and (when sampling) impact-resistant glasses. Mark Thacker is a qualified stonemason licensed under the HSE's Construction Site Certification Scheme.

This island site is not accessible by the public without boat transport, and so further access restrictions or information (especially out-with the summer) is very unlikely to be necessary. Any unexpected visitors to the site, however, will be verbally restricted from approaching close to sampling contexts during the proposed works.

The proposed sampling and analysis programme, and boat access to the site, will be subject to University of Stirling BES risk assessment protocols.

10 – FIGURES

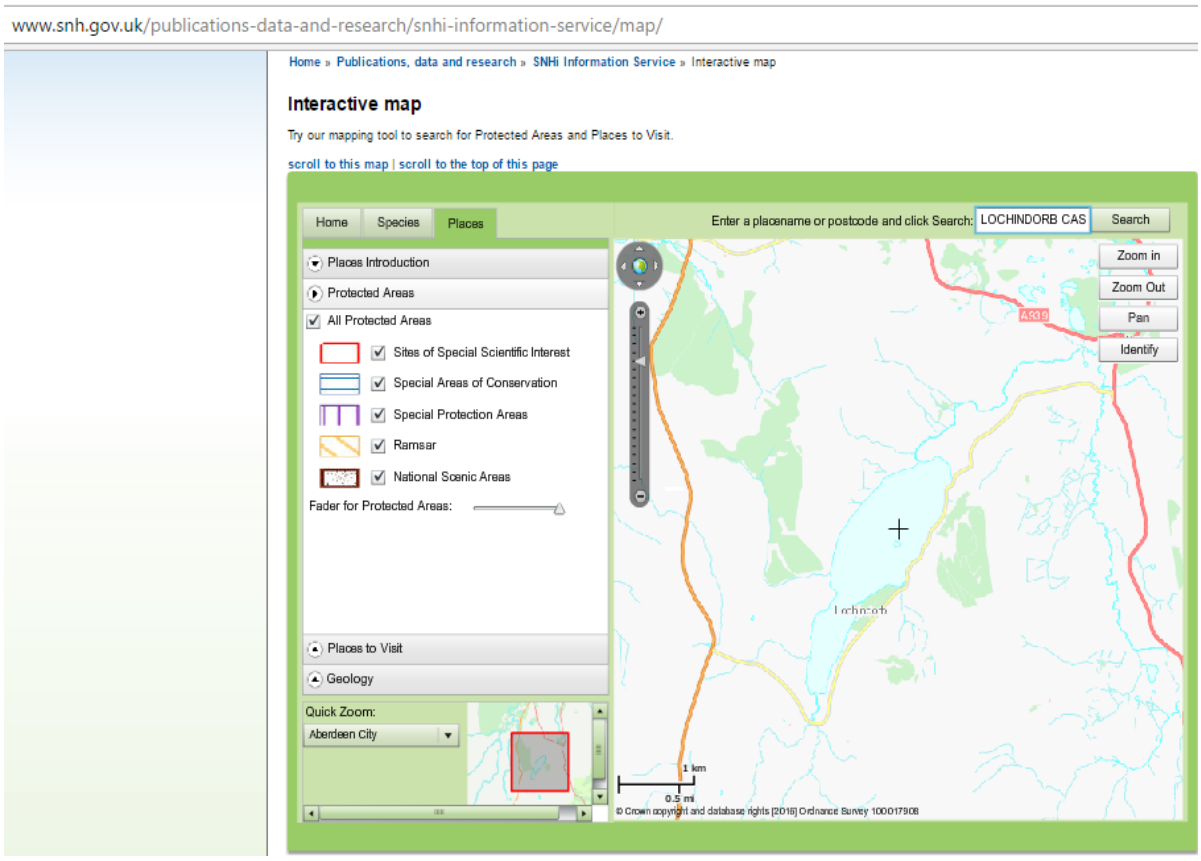

Figure 1 (above) – Screen shot of SNH protected areas; Lochindorb Castle is marked by the cross + and is not in an environmentally protected area. www.snh.gov.uk, information accessed October 2016.