

Scottish Medieval Castles & Chapels C-14 Project

Preliminary mortar & masonry survey of Lochmaben Castle,
Dumfries-shire



SC14-LCD-PRE-01

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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

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Part One: SITE SURVEY

A rapid survey of Lochmaben Castle was undertaken to establish the potential of further survey and material analysis at the site. Access was from ground level only, non-intrusive and close examination was only possible out-with the security fencing which currently surrounds the south and west of the upstanding building remains.

The visible upstanding remains of the site are largely comprised of the core-rubble of very broad masonry walls, from which almost all the wall-facing is now missing. Where small sections of wall-facing do survive then these are composed of dressed sandstone, although too little of this material survives to suggest the former masonry style. The core rubble, however, is generally composed of rounded sandstone and whinstone which has been laid horizontally in level sub-courses, within which more distinct course levels are occasionally visible. It is very probable that the upstanding building was fully lime-bonded, although almost no constructional mortars are visible within the building fabric examined for this survey as this has been consolidated with a series of conservation mortars.

In contrast to this well-consolidated fabric in the accessible north-east of the site are two large fragments of masonry ‘tumble’ which are likely to have fallen from the upstanding ruin at some time in the past. These now lie in secondary positions to the east of the castle walls at the north end of the site, and for the purposes of this report are labelled contexts 1 and 2 (see figures below). Contexts 1 and 2 are largely composed of lime-bonded core rubble (the courses of which are no longer oriented horizontally), although context 2 also contains a section of dressed facing stone which appears to form an internal angle. Importantly, both of these sections of masonry tumble also display volumes of a distinctively buff/red-coloured fine-textured lime mortar. In interim, the composition of this mortar material appears similar in both contexts, and fragments of a similar material were also noted in a pile of ex-situ loose rubble at the west end of the site. With regard to contexts 1 and 2 this mortar is very likely to be primary constructional material and (again in interim) may be characterised as:

General description: Yellow to red coloured lime mortar.

Carbonate kiln-relicts: Limestone-lime with a high concentration of yellow angular to amorphous probable limestone kiln-relicts, generally grading to 4mm.

Added temper: Lithic tempered with a very high concentration of sub-mm material, but also including rounded lithic clasts which generally grade up to 15mm and occasionally to 25mm+.

Fuel kiln-relicts: Wood-fired; the mortar appears to contain a very high concentration of wood charcoal inclusions. These are generally blocky/cubic and fibrous with a distinct grain but do not appear to be Quercus.

It is important to note that in some areas of contexts 1 and 2 this constructional mortar material is highly degraded, and this is of particular concern in context 1 where three further features of the are apparent: 1, there is an additional small section of masonry lying to the east of context 1 (here labelled context 1b- see figures) which has probably become recently detached from the larger masonry fragment; 2, there are varying volumes of very degraded dissolute mortar ‘spoil’ lying in the ground around the larger masonry fragment, which appears to have recently fallen from the masonry above; and 3, there are some areas of very degraded and/or crazed mortar still lying in-situ, but which are largely dissolute and contain very loose compositional inclusions. Much of this (in-situ) degraded mortar will join the loose (ex-situ) spoil on the adjacent ground surface in the very near future.

Part Two: PREVIOUS EVIDENCE & SIGNIFICANCE

Lochmaben Castle is of international significance as the site of a series of Scottish medieval castle buildings within which substantial masonry ruins survive. This site has previously been investigated by various scholars through examination of architectural, documentary and archaeological sources.

Early documentary sources associated with a castle in the area include a series of 13th and 14th-century references to a series of timber and masonry buildings. These include: the appointment of carpenters and sawyers ‘to erect a pele at Lochmaben’ in 1298; ‘the keeping of Lochmaben Castle (viz. the stonework there)’ in 1364; the importation of stonemasons and carpenters for the ‘repair and emendation’ of defects in 1367; and further work by carpenters, masons and other craftsmen in 1375 (Reid 1954, 61, 68, 70, 71).

Drawing attention to the nearby motte at Castlehill, however, the RCAHMS suggest the early references may not be applied with any certainty to the site at the south of the loch surveyed above (RCAHMS 1920, 151). Indeed, they interpret the upstanding masonry remains at Lochmaben as a largely single phase ‘barbican and courtyard wall’ of early 14th-century date, with a later stone castle founded in the 15th-century (RCAHMS 1920, 151), although the architectural basis of these chronological interpretations is not clear.

Two areas of the site were subsequently excavated in the late 1960s and 70s, however, and three clearly distinct constructional phases were recognised in the surviving masonry (MacDonald & Laing 1977). As a result of this investigation it was suggested that a curtain wall (with towers) had been the first masonry construction, before two subsequent phases extended the structure to the south – to ultimately cross the canal/moat in (masonry) phases II and III. This interpretation of the buildings development is in sharp contrast to that offered previously by the RCAHMS (see above), although on the basis of apparent relationships between the gravel foundations of these walls and the overlying superstructure, the excavators also suggested that ‘no great interval can have elapsed between the start of phase I and the start of phase III’ (MacDonald & Laing 1977, 138). MacDonald and Laing also then related these building episodes to the three late 14th-

century documentary references to masonry construction previously highlighted by Reid (see above). Two very early 14th-century Edward I pennies, in fine and fair condition were found within occupational contexts of the Area 2 ('bailey') excavation, and although here also 'the most striking feature of the [pottery] assemblage is its 'early' character', this too was dated according to the putative late 14th-early 15th-century phase from which it was recovered (ibid, 150). These phases themselves, however, are ascribed a late 14th-century lower terminus on the basis of underlying reused ashlar stonework, and so by extension these dates are ascribed on the same documentary references.

In summary, although interpretations have differed, there appears to be an extensive range of different types of evidence which might relate to the Lochmaben Castle site. This material requires further study, but presents a valuable corpus to which any independent dating evidence from the fabric itself might be compared. SMCCCP research in southern Scotland is only at a very preliminary stage, but the materials identified in the above survey suggest the fabric at Lochmaben Castle may have the potential to inform our understanding of this site and its wider environment, as well as forming an important investigation within the wider national study.

Part Three: FURTHER WORK

This preliminary survey of Lochmaben suggests a programme of further survey and material sampling and analysis may have important archaeological potential, with minimal negative effect on the significance of the resource. Given the degraded nature some of the immediately accessible materials it is suggested these materials should be sampled as soon as possible, whilst Historic Environment Scotland concerns for public safety in the south and west of the site, will require a different approach. A combined proposal would therefore include:

- the immediate collection of accessible loose and vulnerable mortar kiln-relicts (and associated loose mortar samples) from contexts 1 and 2, for further lab-based characterisation.
- further materials survey and possible sampling from the rest of the upstanding building to which access is currently restricted - subject to discussion with the HES conservation team, and HES and University of Stirling health and safety protocols (see accompanying sampling strategy document SC14-LCD-PRE-02).

Part four: BIBLIOGRAPHY & ACKNOWLEDGEMENTS

Macdonald, A. & Laing, L. (1977). Excavations at Lochmaben Castle, Dumfriesshire, PSAS 106: 124-57.

RCAHMS. (1920). The Royal Commission on the Ancient and Historical Monuments and Constructions of Scotland. Seventh report with inventory of monuments and constructions in the county of Dumfries. Edinburgh. Pp. 149-53.

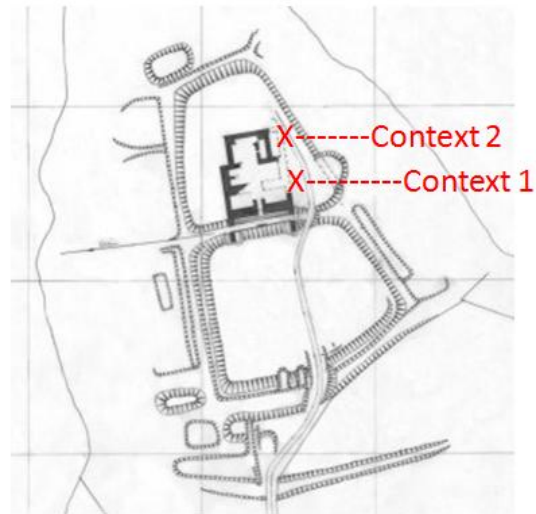


Figure 3 (above) – Locations of masonry contexts 1 and 2 (original image: SC1354829 © crown copyright HES).



Figure 4 (above) – Context 1 from the north; loose masonry fragment; note also much smaller masonry fragment (context 1b) to the west (between Context 1 and the upstanding wall). Scale 500mm; photograph M. Thacker.



Figure 5 (above) – Context 1 from the south. Note area of degrading mortar to the right of the ranging rod and on the ground below. Scale 500mm; photograph M. Thacker.



Figure 6 (above) – Context 2 from the south. Scale 500mm; photograph M. Thacker.



Figure 7 (above) – Degrading mortar in Context 1. Scale 10mm; photograph M. Thacker.



Figure 8 (above) – Degraded mortar at base of context 1. Scale 500mm; photograph M. Thacker.