UNIVERSITY of STIRLING

Scottish Medieval Castles & Chapels C-14 Project

Preliminary mortar & masonry survey of Duffus Castle, Moray



SC14-DCM-PRE-01

MARK THACKER

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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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Contents

1 – Site Survey 1

2 – Previous Evidence & Significance 2

3 – Further Work 3

4 – Bibliography 4

5 – Figures 4

Part One: Site Survey

A preliminary non-intrusive survey of Duffus Castle (see figures 1-2) was undertaken in a single day from ground level only. The initial purpose of the survey was to make preliminary characterisations of in-situ masonry materials, and to assess the archaeological potential of further analysis at the site.

Part 1.1: WEST KEEP

Previous interpretations of Duffus castle through both survey and excavation have suggested the two-storey keep at the west of the enclosure is the earliest masonry building on the site (see pages 3-4 and figures 3 and 4 below). The masonry of this west keep exhibits a series of repair and consolidation mortars, but various episodes of collapse and ongoing erosion allow the masonry walls to be examined in full cross-section and deep into the wall faces in a number of contexts. Preliminary examination of these contexts suggests the stonework is largely single phase and apparently primary constructional mortar can be recognised in a number of extensive and contiguous bed and core contexts. In interim and in-situ, this mortar is labelled Mortar A and may be characterised as:

General description: Mortar A is fine lime mortar with a distinctive brown colouration.

Carbonate kiln-relicts: Mortar A is a limestone-lime which displays a high concentration of limestone/lime kiln-relicts.

Added-temper: Mortar A is lithic-tempered and contains a bimodally-graded temper dominated by fine sub-mm material but including a low concentration of coarse rounded and quartz-rich clasts to 20mm.

Fuel kiln-relicts: Mortar A was wood-fired and contains a medium-high concentration of pyrolised wood-charcoal fragments.

The main visible constructional contexts include:

Context 1 – Detached north-west corner.

This is the large piece of masonry which has settled away from the main building, and has been subsequently consolidated in its new location. Some exposed constructional core mortar remains visible where external quoins are missing (see figures 5 and 6).

Context 2 – Full cross-section at north end of west wall.

The movement of the north-west corner of the building (context 1) has also left a complete cross-section of the west wall visible (at its north end). This wall cross-section stands almost vertically to surviving wall-head level and is largely composed of lime-bonded core rubble, although the

south jamb of a first-floor window opening is also extant. This context displays large areas of visible core mortar (see figures 5, 6 and 7).

Context 3 – Internal face of south wall

Internally, the south wall displays constructional mortars in core contexts behind missing (ground-floor, east jamb, west window) quoins, and in masonry beds surviving almost full to the face of the wall (see figures 5 and 8).

Context 4 – Full cross-section at east end of north wall.

The movement of the north-west corner of the building (context 1) has also made a complete cross-section of the north wall visible at its east end. This cross-section is mostly comprised of core rubble and contains volumes of constructional mortar (see figures 5, 6 and 9).

Context 5 – Ground floor intramural cells of east wall.

Primary mortar visible in multiple bed and core contexts within the intramural spaces of the east wall (see figure 5).

Part 1.2: CURTAIN WALL & LATER RANGES

Although generally regarded as broadly contemporary with the west keep, it is clear the wall enclosing the bailey abuts the keep at both SE and NE corners. This curtain wall has been re-consolidated in recent periods, however, and this appears to completely preclude non-intrusive in-situ mortar characterisation. No accessible potential constructional mortar samples were noted during this rapid survey within either phase of the curtain wall or in the later ranges, but this will require further survey subject to approval of a wider programme of further work.

Part Two: Previous Evidence & Significance

Duffus Castle is of considerable importance to Scottish medieval archaeology in displaying the development of various castle building forms from a probable 12th-century motte-and-bailey structure. Of particular concern here, however, are the upstanding masonry remains of the west keep and curtain wall, which overbuild the earthworks of that earlier castle and are generally considered to be the earliest lime-bonded structures surviving on the site. Similarities between the window design exhibited by this west keep at Duffus and at the nearby castle at Rait have been highlighted by many commentators and, in spite of earlier documentary references associated with the site, the Duffus building was initially ascribed by antiquarians to the mid-15th-century (MacGibbon and Ross 1887, 279). Despite a lack of explicit reasoning, this interpretation was widely accepted until architectural comparison with earlier buildings surviving in the north of England suggested to Simpson (1961) that both the Duffus and Rait structures are likely to have been constructed at a much earlier date. A 1305 royal grant of 200 oaks from the forests of Darnaway and Longmorn to Duffus was also highlighted by Simpson in support of a

more architecturally and historically-informed early 14th-century interpretation of the west keep (ibid), although Cruden had already previously suggested that this same documentary reference argues for a timber building at the site which may (or may not) have been contemporary with the surviving masonry structure (1960, 126). Indeed, Cruden describes the west keep as 'difficult to date' and suggests that 'the date of Duffus cannot be exactly determined' (1960, 126), whilst excavation could not refine these late medieval chronologies any further and resulted in an even wider 14th-16th-century possible constructional period (Cannel and Tabraham 1994, 385).

Although a broadly 14th-century constructional date for the west keep and curtain wall at Duffus, is reasonable and has now found general acceptance (e.g. Ross 1973, 79; Cannel and Tabraham 1994), the very brief literature review presented above highlights how previous architectural interpretations of the surviving buildings have varied. Moreover, although a range of different types of evidence pertains to the site, there is no independent data currently available which might further inform our understanding of possible constructional contexts.

As a building of 'upper hall' (or 'keep', 'hall-house', 'hall castle' etc.) form and proportions the international significance of the west keep at Duffus Castle is clear. Other examples of this putative medieval structural 'type' are being investigated by the Scottish Medieval Castles & Chapels C-14 Project, and the evidence above suggests the west keep at Duffus has the potential to form an important north-eastern study within this research. Furthermore, taking the same environmental approach to buildings archaeology which has been recently employed in studies elsewhere (Thacker 2016; forthcoming), the well-known documentary links between the Duffus Castle site and nearby woodlands (which also appear to have provided timber for other important medieval buildings in the region) may provide an interesting counterpoint to any physical evidence surviving within the surviving fabric and landscape. A more refined chronology for the construction of the west keep at Duffus Castle would increase our understanding of the historical, archaeological and environmental context within which this and other buildings were constructed, but any independent data would inform the emerging discourse and the mortar materials of the building may gain increased significance from such an interdisciplinary approach.

Part Three: Further Work

This preliminary survey of Duffus Castle suggests a programme of material sampling and analysis may have important archaeological potential, with minimal negative effect on the significance of the standing monument. A further programme of work is therefore proposed including:

1. Further examination and in-situ characterisation of the mortars of the west keep, curtain wall and later ranges with particular emphasis on stratigraphy.
2. Sampling and lab-based analysis of visible surface mortar materials from the west keep, curtain wall and later ranges.

Part four: Bibliography

Cannel, J. & Tabraham, C. (1994). Excavations at Duffus Castle, Moray. PSAS 124:379-390.

Cruden, S. (1960). The Scottish Castle. Nelson: Edinburgh.

MacGibbon, D. & Ross, T. (1887). The Castellated and domestic architecture of Scotland from the twelfth to the eighteenth century. Vol. 1. David Douglas: Edinburgh.

Ross, S. (1973). The Castles of Scotland. George Philip: London.

Simpson, D. (1961). The Castles of Duffus, Rait and Morton reconsidered. PSAS 92: 10-14.

Thacker, M. (2016). Constructing Lordship in North Atlantic Europe: the archaeology of masonry mortars in the medieval and later buildings of the Scottish North Atlantic. Unpublished PhD thesis, University of Edinburgh.

Thacker, M. forthcoming. MacGillechrist's Castle: an environmental study in medieval buildings archaeology from Argyll, Scotland. Proceedings from the 2015 Barra conference reconsidering Galley castles in Scotland. Islands Book Trust.

Part five: FIGURES

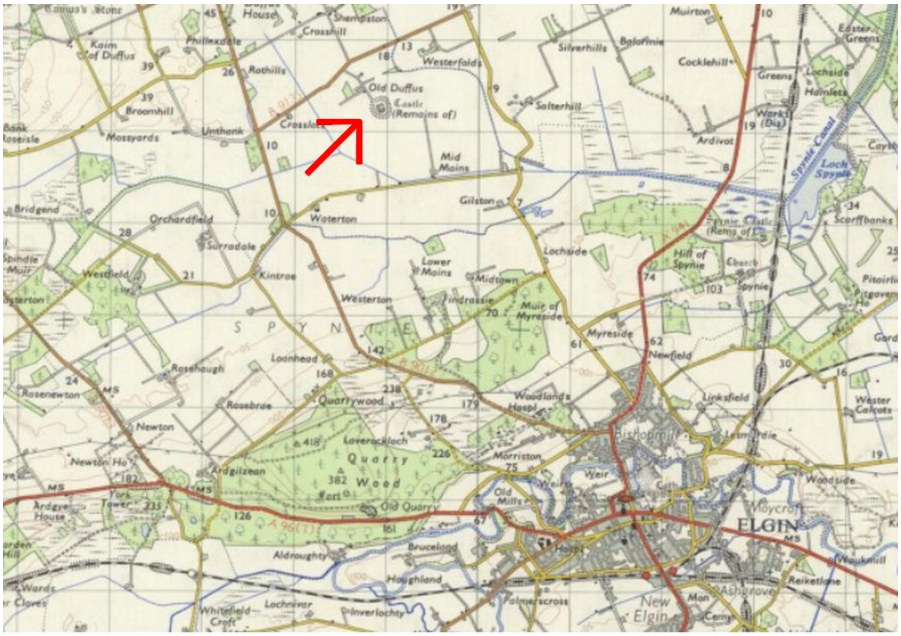


Figure 1 – Site of Duffus Castle (marked here with a red arrow) is located approximately 3 miles north-west of Elgin, in Moray, north-east Scotland. (Original image: Ordnance Survey (1959), One inch 7th Series, 1952-61; Sheet 29 Elgin. Can be viewed at http://maps.nls.uk/view/74426681 http://maps.nls.uk/view/91549102).

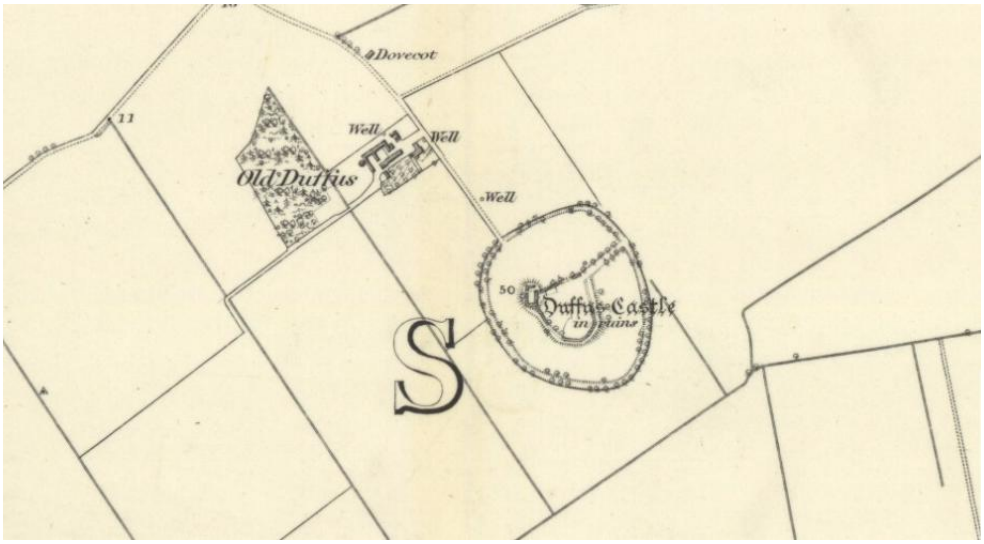


Figure 2 – The site of Duffus Castle. (original image: Ordnance Survey (1873) Six inch 1st edition 1843-82; Elgin, Sheet VII; Survey date 1868-70; can be viewed at http://maps.nls.uk/view/74426734 (Map image © Ordnance Survey 1873, used with kind permission of National Library of Scotland).



Figure 3 - Castle Duffus from the north showing the upstanding remains of the west keep, earlier motte and some sections of later ranges to the east. No scale; photograph M. Thacker.

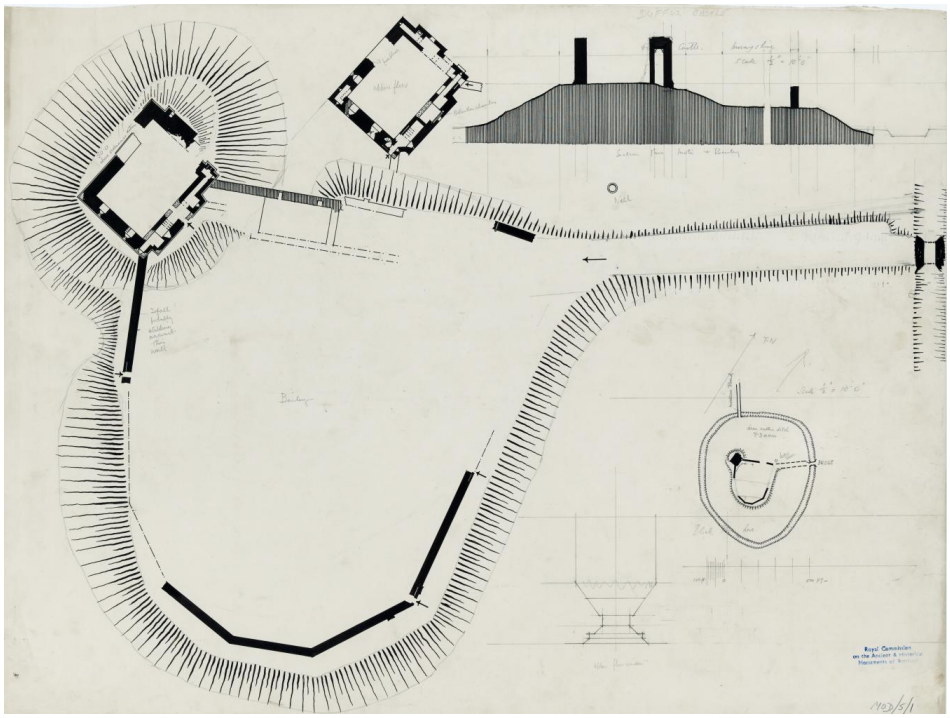


Figure 4 (above) – plan of the Castle Duffus. The west keep is top left of this image. (DP230296 © Crown Copyright: Historic Environment Scotland. Licensor: canmore.org.uk).

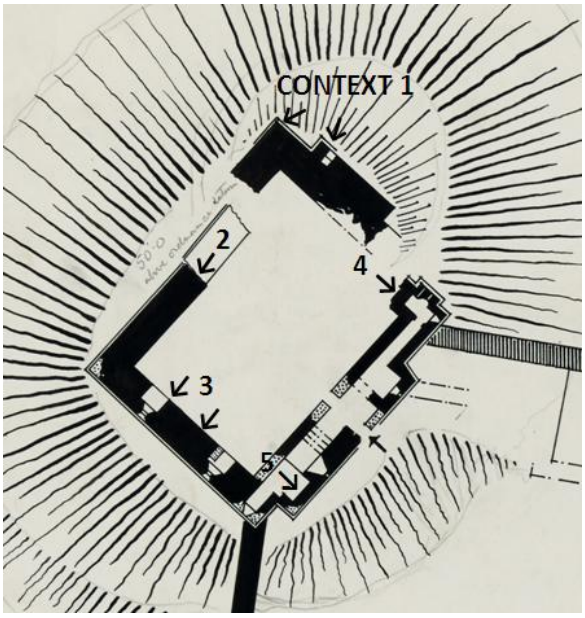


Figure 5 (above) – plan of west keep showing main primary mortar contexts identified during preliminary survey. (Annotated detail from original image DP230296 © Crown Copyright: Historic Environment Scotland. Licensor: canmore.org.uk).

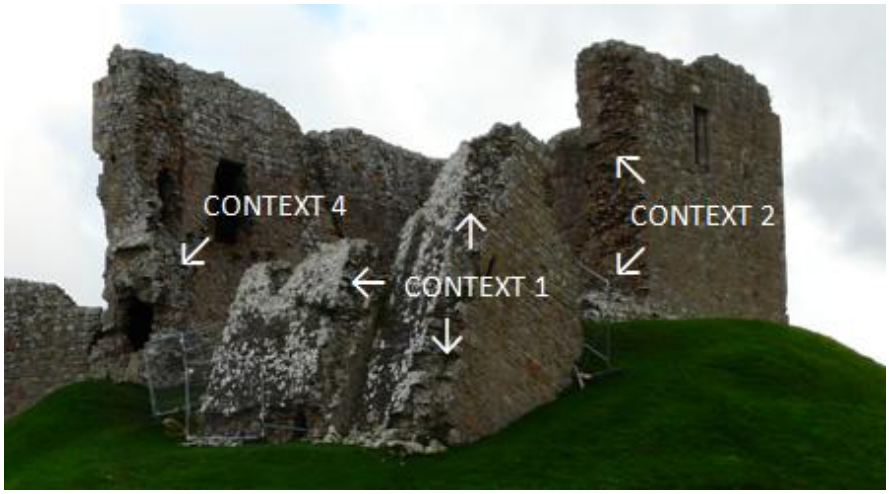


Figure 6 (above) – Duffus Castle from the north, with three visible primary mortar contexts highlighted. No scale; photograph M. Thacker.



Figure 7 (above) – Context 2 – Full cross-section of west wall exposing primary core mortars. Scale 500mm; photograph M. Thacker.



Figure 8 (above) – Context 3 internal face of south wall. Note the core rubble exposed by missing quoins of west ground floor window. Scale 500mm; photograph M. Thacker.



Figure 9 (above) – Context 4, full cross-section at east end of ground floor north wall. Note also the upstanding masonry from a later range in background to left of this image. Scale 500mm; photograph M. Thacker.