

Doune Castle
Doune, Stirlingshire

Archaeological evaluation of the evidence for pre-existing structures

March 2018

for Historic Environment Scotland



View of the north front of Doune Castle, c1840 by Robert Billings (NMRS)

Addyman Archaeology

Archaeology Heritage Consultancy Architecture

Doune Castle

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Acknowledgements

Addyman Archaeology greatly appreciates the continuing support of Historic Environment Scotland and its predecessor Historic Scotland, as referred to throughout the report, without which the project would not have been able to proceed; thanks particularly to Richard Strachan and Kirsty Owen, also to Peter Yeoman, Michael Burgoyne, John Malcolm, Alan Rutherford and Stefan Sagrott.

Assistance was provided throughout by Historic Scotland's staff both at Longmore House and at Doone Castle. At Doune, we are particularly grateful to Davie Robertson and Catherine Mason in particular, the Custodian, for her unfailing willingness to help and the continued interest she expressed in the project works, going as far as to help with the archaeological excavation.

The excavation team comprised Tom Addyman, Kenneth Macfadyen, Ross Cameron, Tanja Romankiewicz, Jenni Morrison and Ben Blakeman – all of Addyman Archaeology. Further assistance was provided by Derek Alexander, Catherine Mason, Oscar Addyman and Oliver Addyman.

Oliver O'Grady undertook the geophysical survey that was important for our understanding of the below-ground evidence and in the layout of the evaluation trenches. Survey markers were placed in and around the castle during the evaluation work and we would like to thank Neil Macfarlane for his cooperation during the monitoring of this survey-related work.

Doune Castle

Doune, Stirlingshire

An assessment of the evidence for pre-existing structures

Executive Summary

An analytical assessment of the standing remains of Doune Castle concluded that the existing later 14th century complex incorporates substantial remains of a masonry predecessor of 13th century date (Addyman & Oram 2010). In the light of this study and guided by the results of a geophysical survey (O'Grady 2010) preliminary trial trenching was undertaken to investigate whether below-ground evidence survived for the extent of the earlier castle. Six evaluation trenches were excavated at points around the castle.

Trenches 1 and 2 were sited on the west side of the existing entrance in order to determine if a second drum tower had existed, and whether therefore the early gatehouse had been of classic twin-towered plan. The probable remains of such a tower were tentatively identified.

Trench 3 was located within the easternmost vaulted chamber within the hall range at its north-east angle, its purpose to attempt to locate the line of an early north curtain wall and to examine the junction at that point of the hall and gatehouse tower.

Trench 4 was excavated at the south-east angle of the kitchen tower in an attempt to determine whether a range had existed along the southern part of the western enclosure wall, extending southwards from the tower. Following removal of topsoil a well-preserved cobbled surface was revealed across all parts of the trench; it was determined that this should not be disturbed.

Trench 5 was positioned to examine the footing structure of the existing eastern curtain on its exterior side to determine whether this corresponded to the line of the 13th century enclosure wall. A complex footing structure was revealed it could not be determined whether it incorporated or was sited upon a predecessor, whether on a similar or diverging alignment. The outcome of this investigation was thus inconclusive.

Trench 6 was positioned against the west end of the existing hall range, its purpose to demonstrate the former existence of an earlier tower at the NW angle of the castle enclosure. Some indication of an westwards-running footing was revealed though this was much truncated.

I. Introduction

i. General

Doone Castle is primarily a well preserved castle of *enciente* of later 14th century date, erected by the Duke of Albany. It is dominated by the residential gatehouse tower at the NE angle of the enclosure; adjacent to this on its west side is the hall range and beyond this, to the SW, exists the kitchen tower.

The enclosure wall to the W, S and E survives to its parapets. The castle closes off the spur of land at the junction of the River Teith and the Ardoch Water. The castle clearly occupies an ancient site. The existing superstructure incorporates the substantial remains of a 13th century predecessor.

The extent of the 13th century fabric remains were only recently recognised and concluded for the first time to represent the principal fortress in that century of the Earldom of Menteith, held successively by the Comyn and Stewart Earls of Menteith. The earlier remains may be the work of both families. The present study seeks to better understand this earlier history of the castle.

Following the standing building analysis (Addyman & Oram 2010) and a geophysical survey (O'Grady 2010) preliminary trial trenching was undertaken to investigate whether below-ground evidence survives for the extent of the earlier castle. This is designed as the first season of invasive excavation; it is anticipated that a second season will follow.

The academic objectives for the investigations into understanding the earlier history of Doone Castle are very specific, designed to identify in a number of areas possible masonry remains that demonstrably relate to the former extent of the early castle. The objectives can be summarised as follows:

- to locate a possible second drum tower on the west side of the existing entrance in order to demonstrate that the early gatehouse had been of classic twin-towered plan
- to locate the line of the north enclosure wall
- to demonstrate the former existence of a possible tower at the NW angle of the enclosure
- to examine the structure of the existing eastern curtain to determine whether this was the line of the 13th century enclosure wall
- to determine whether a range had existed along the southern part of the western enclosure wall

It was hoped that the identification of early remains below ground would contribute to the fuller understanding of the pre-existing castle and the general reinterpretation of the site.

ii. Background to the present project

Previous archaeological investigation at Doone Castle has been limited in extent and related to Historic Scotland's call-out contract in response to the on-going repair works at the site, *figure 1*. This included excavations by John Cannell in 1986 at the car park, the NE corner of the castle courtyard and within the basement of the round tower flanking the principal entrance, and evaluation trenching by Kirkdale Archaeology on the site of a range against the interior side of the eastern curtain wall.

In spring 2010, using Historic Scotland's existing 1:50 photogrammetry-based survey drawings of the castle, Addyman Archaeology undertook a mapping exercise of the evidence or possible evidence for earlier masonry elements incorporated within the late 14th century upstanding masonry of Doone Castle. Extensive remains were plotted within the entrance tower (Lord's Tower) and within the Kitchen Tower; less substantial remains or possible evidence was plotted at the west end of the hall range. This mapping exercise was accompanied by an analytical report outlining in detail the apparent evidence and suggested interpretation (Addyman & Oram 2010).

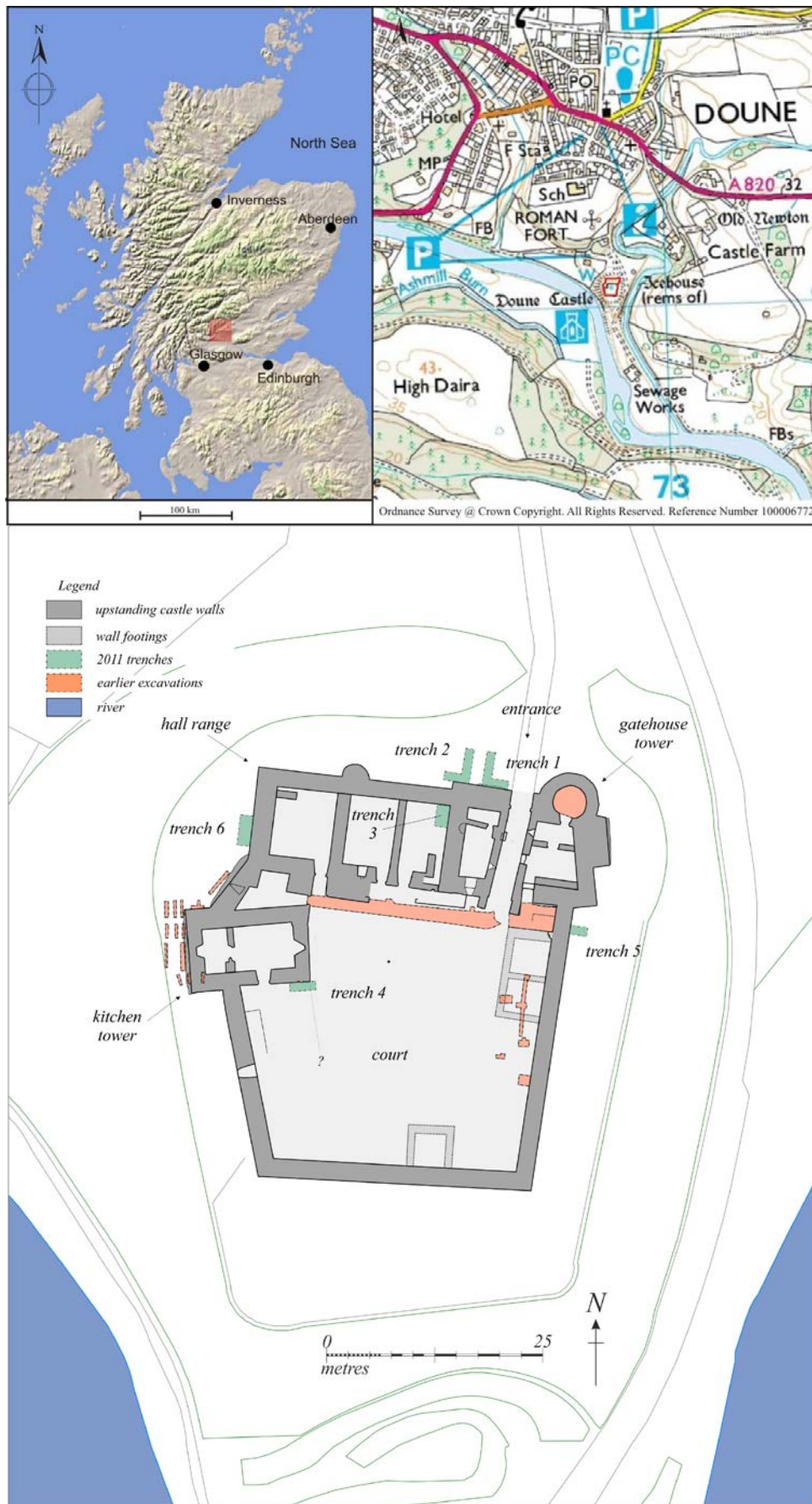


Figure 1 General location and trench location plans

In late 2010 Oliver O’Grady conducted a geophysical survey within and around selected areas of the castle, this specifically to investigate the likely areas where buried masonry remains of the pre-existing castle might be encountered (O’Grady 2010). In a number of areas significant sub-surface anomalies were indeed identified, and often at no great depth. This suggested invasive evaluation might well successfully identify significant archaeological remains.

iii. Methodology

a. Evaluation

The evaluation was designed to test the results and interpretation of the analytical assessment and geophysical work undertaken at Doune in 2010. Evaluation trenches were targeted at areas where the principal anomalies in the masonry fabric had been identified and where potential structural remains were expected below ground. A total of six trenches were opened – see *figure 1*.

Trenches 1 and 2 were placed against the north exterior wall of the gatehouse tower on the west side of the principal entrance, sited to test for the former presence of a western drum tower. These were L-shaped in plan, designed so to expose a minimum area but with maximum coverage in order to trace the projected line of a possible curving wall base. Trench 3 was opened within the easternmost cellar within the hall range at its NE corner, this to examine the relationship of standing to possible buried masonry remains at that point – a key junction. Trench 4 consisted of a small evaluation against the south wall of the kitchen tower at its SE angle; it was hoped that this might reveal footings of a major wall extending southwards from that point, representing the courtyard-facing side of a possible range built along the southern part of the western enclosure wall. Trench 5 was perpendicular to the exterior face of the later 14th century curtain wall on the east side of its circuit; this was intended to test for underlying remains of an earlier curtain wall, perhaps built on a different alignment. A ‘trench 7’ was initially planned for, located on the interior of the east curtain so as to correspond with trench 5 on the exterior, but was abandoned as the results of trench 5 became clear. Trench 6 was located at the NW corner of the castle, excavated against the west gable wall of the existing hall range in order to determine whether this overlay remains of an earlier tower and/or a postern gate (parts of the latter visible within this area of the existing castle wall).

b. Compilation of survey records

A survey to correctly record the positions of the evaluation trenches took place during excavation, this combined with a basic re-survey of the external footprint of Doune Castle to confirm the accuracy of previous surveys. An attempt was also made to accurately record the location of previous archaeological interventions at the castle by geo-referencing existing plans. Historic plans were compiled and digitised and recent topographic surveys consulted. A preliminary assessment of the accuracy of these various plans and surveys has been undertaken and is further discussed later on in this report – see *section 4* below.

The basic survey at Doune Castle was completed using a Leica TCR805 total station. This was done prior to the insertion of permanent survey markers by Historic Scotland on the 2nd of March 2011. The evaluation trenches were duly recorded as was the outline of the exterior wall of the castle and the former lodge (the existing office and visitor facility at the entrance to the castle’s grounds) which was necessary to georeference the survey. Digitised trench plans of recorded archaeological features were then overlaid onto the processed survey data in AutoCad.

2. Evaluation trenches

i. Trench 1

a. Strategy

In 2010 a baulk of un-faced masonry projecting at the foot of the external wall face of the entrance tower just to the west of the entrance pend had been identified as possible remains of pre-existing fabric. That this represented the truncated remains of a tower, perhaps a second drum tower partnering that on the east side of the entrance was suggested. Most telling seemed to be apparent truncated facings running out from the wall foot close to the western jamb of the entrance.

Trenches 1 and 2 were both sited over the projected footprint of the possible tower, with Trench 1 on its east side. Trench 1 was an L-shaped trench whose southern arm ran along the wall foot, starting at 0.50m to the west of the west jamb of the existing entrance and extending for 3m before returning north for a further 3m. Each arm of the trench was 1.0m in width.

In the area of the trench the existing ground surface sloped steeply downwards to the east and, at a gentler gradient, to the north. A modern gravel footpath following the perimeter of the castle lay just beyond the northern extent of the trench, in this area running upslope to the west.



Plate 1: Pre excavation of the area of trench 1 and 2.

b. Description

Topsoil comprised fairly soft, dark brown and slightly gritty sandy silt (101), approximately 0.20m deep to the south and increasing to up to 0.50m to the north, where the ground sloped downwards.

This matrix is likely to have seen some relatively modern disturbance as it contained some finds of later 20th century plastic. The finds recovered principally comprised animal bone, corroded iron fragments and pottery. The latter mainly included assorted 19th century wares, but mixed with some earlier fabric types.

Below the topsoil was a similar deposit of dark brown silt with higher concentrations of lime mortar flecks and small gritty fragments of stone (102); the deposit became lighter with depth and the interface with topsoil was diffuse, especially at the north end of the trench. Finds included a mixture of comparatively recent and earlier pottery (the latter including redware shards of c14th-c15th century date); also recovered was a notable quantity of small clay pipe bowls datable to the later 17th century, and a *turner* of Charles I [second edition] dating to 1632 to 1639 (*find No. 6*, see *plate 2* and finds report). These finds support a general 17th century date for the deposit though clearly its upper parts had seen some intermixing.



Plate 2: Coin from (102) as excavated: Charles I *turner* (2nd edition, 1632-9)

Discrete patches of dirty sands (106) were noted partly underlying (102) at the south end of the trench. This sand directly overlay masonry footings (104). No artefacts were recovered from this sand.

Below (102) was a deposit of dirty mid-brown orangey sand (103), similar in character to (106). To the south this abutted the (104) footings and thereafter sloped gently downwards to the east and north. The deposit varied in depth between 0.15m - 0.25m. It is possible that this deposit is the same date as (106), representing accumulation over the top of the (104) walling, the corner of which had latterly been exposed due to erosion or other means. Within deposit (103) numerous finds were recovered, these mostly animal bone, but also a small number of sherds of redware of possible 14th century date.

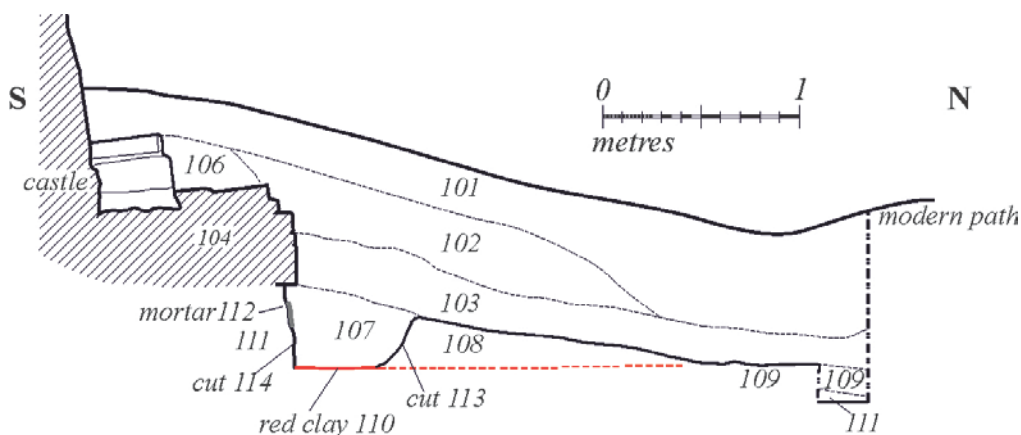


Figure 2: Trench 1, west facing section.

The (104) masonry had been incorporated as part of the footing structure of the base of the north wall of the existing entrance tower, but it evidently related to a pre-existing feature. The feature was built of mortar-bonded rubblework that generally survived to 2-3 courses in height and extended across the width of the southern arm of the trench (*plates 3 and 7*). It had been formed to a face on its north side, this mostly visible within the trench area. The alignment of this face did not correspond to that of the tower above, rather it diverged as it ran to the west, projecting between 0.7m to 1.1m further west. Some of the facings along the north side had evidently been robbed, leaving sockets and mortar impressions. Excavation revealed this masonry to be founded on natural sands.

Below deposit (103) and at the base/north side of wall footing (104) was a deposit of soft, dark sand containing concentrations of dark ash and cinders (107). A considerable quantity of early pottery, mostly smaller shards of redware jugs possibly of 15th century date, was recovered. The deposit was filling a steep-sided cut or depression [113] (*figures 2 and 3*). Initially interpreted as the cut for a foundation trench for (104), excavation demonstrated its uneven character and it was subsequently interpreted as a robber trench.

Robber trench [113] was cut through mottled light to mid brown sand (108), which was 0.20m in depth and extended for approximately 1m. The only diagnostic find from (108) was a green glazed rod handle and rim from a small jug, perhaps of 14th century date.

Below (103) in the northeast corner of the N/S arm of Trench 1 was a setting of loose packed stones (105). This deposit was a mix of rounded cobble stones and broken sandstone fragments generally similarly sized, between 0.10m and 0.20m in diameter (a single larger block lay at the feature's western angle). With reasonably defined edges to the NE and SW the feature was thought to perhaps to represent the remnant of a structural footing. These remains were unexcavated and left *in situ*. These stones lay to the north of deposit (108) and the stones at the western angle, particularly the larger stone forming the angle itself (possibly displaced?), appeared to be sunken into the northern tail-end of the (108) deposit. However as the stones were unexcavated the exact relationship of [105] to (108) was unclear; it does seem likely that the structural deposit (105) is contemporary with the other early structure in the trench (see below).

A 0.5m wide sondage was excavated through deposit (108), revealing a compact red clay surface (110). This clay surface was also revealed at the base of cut [113]. The (110) clay layer was found to have been laid level and appeared to be *in situ*, suggesting a deliberately formed surface – possibly a sealant layer and/or construction surface. It was found to extend across most of the central part of the northern arm of the trench. It was a thin spread, generally only 0.01m in depth, but formed a solid, compacted surface. It abutted the vertical edge of cut [114] (see below).

The laying of the red clay had evidently followed the cutting of a level platform or terrace. This was formed by a vertical cut [114] through the natural sand (111), which extended in a horizontal platform to the north. Cut [114] appeared to be on a similar alignment as the foundations of (104) but was found to undercut them by 0.05-0.10m (compare *Figures 2 and 3*). The cut had a vertical southern side for an early foundation wall. This interpretation was supported by residual lime mortar traces (112) that were found to remain *in situ* against the face of the cut [114]. These evidently indicate that lime-bonded masonry construction abutted the cut. Indeed the vertical cut into sand could not have stood up without some form of facing masonry or revetment. This lost walling had clearly been built upon the red clay surface (110) as the evidence of further mortar residues found upon it demonstrated.

At the north end of the trench deposit (110) directly overlay mottled mid to light brown sand (109); this deposit also appeared to be beneath the stone setting (105) on its west side; the relationship between the two features was not determined as (105) was unexcavated. A small 0.15m deep sondage was excavated through (109) at this location, which demonstrated it directly overlay the same homogenous cream-grey (111) sand deposit, interpreted as natural. In this area the overlying (109) deposit was similarly mottled, with considerable evidence for the activities of burrowing animals. It is

possible that (109) represents the vestiges of a subsoil overlying the undisturbed (111) sands. No cultural material was recovered from within (109).



Plate 3: Footings (104) projecting from the existing north wall



Plate 4: Stone spread (105) at northeast corner of western trench arm (west at top).

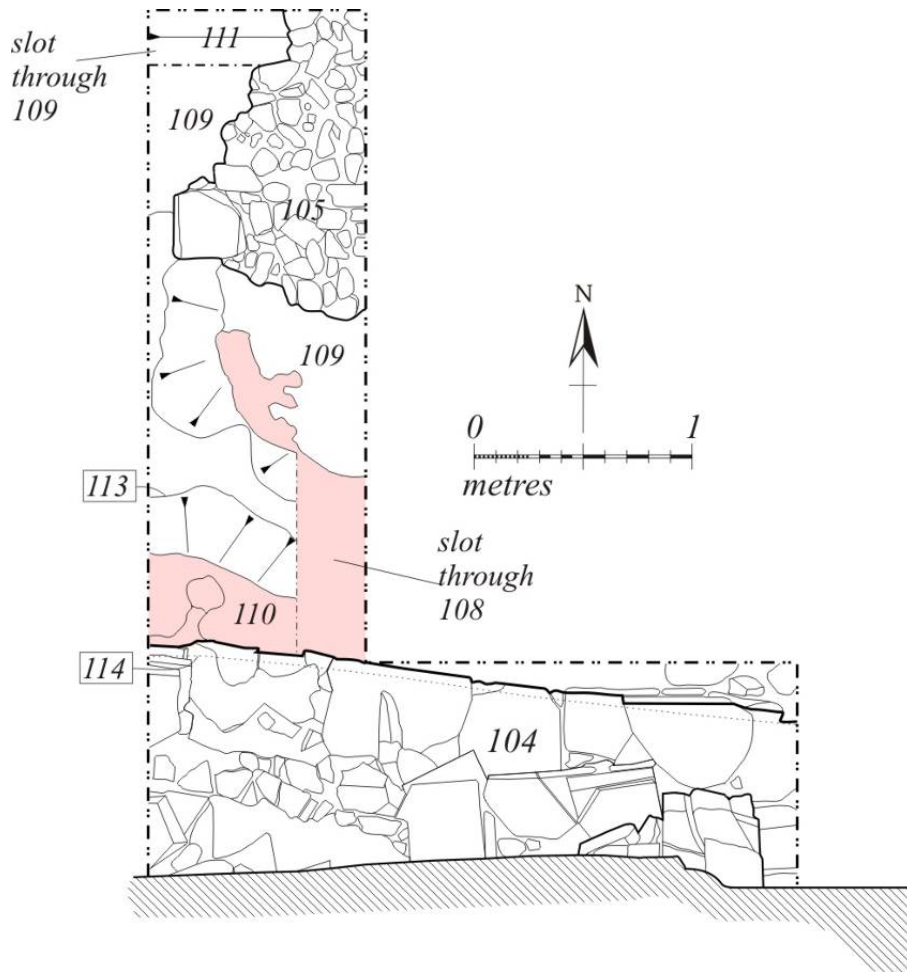


Figure 3: Trench 1 at LOE.



Plate 5: cut [114] below (104) with (110) exposed in slot through (108).

c. Summary and Discussion

Natural

Evidence from trench 1 demonstrated the presence of deposits probably identifiable as undisturbed natural : compact clean cream-grey fine sand (111) overlain at the north end of the trench by mottled deposit (109), possibly a truncated lower subsoil. The interface between the two certainly suggested their general inclination up to the south and to the west (this more dramatically demonstrated to have been the case in Trench 2).

Early structural remains

The earliest features and deposits exposed within Trench 1 appear to relate to a major episode of building activity. Context [114] comprises a well-defined cut into the underlying natural compacted sands. It seems to have been a construction cut, with a very carefully levelled base (i.e. a construction platform) that terminated to the south at a sharply defined vertical face; in this face a number of pick or shovel cuts could be seen, *plate 6*. The levelled base of the cut had then been deliberately surfaced with a thin spread of reddish clay [110] that extended to the southern extent of the cut and even lipped up slightly onto the vertical face of the cut to the south.



Plate 6: Cut [114] through natural [111] below wall footing [104], with red clay surface [110] in foreground and showing tool marks in the sand

Lime mortar residues overlying the vertical face of the cut, and over the clay surfacing immediately below, provide evidence for the setting of stonework, very likely large regular, possibly squared blocks. This now-robbled masonry may have formed a projecting base course for the masonry footing whose remains survive immediately above – [104]. The formation of the [104] footing seems to have formed part of the same construction programme; it had evidently been built off a higher base level – i.e. the foundation cut had been formed of a series of up-stepping platforms; the evidence of Trench 2, in addition to that of Trench 1, demonstrates that the underlying compacted sands rise sharply to the south and west.

At the time of excavation the robbed lower course of stonework was considered to represent evidence for an earlier phase of the castle, possibly part of the projected drum tower, that had subsequently been removed (robber trench [113]); and that after the robber trench [113] had been in-filled with (107) the present footings [104] were constructed on top of this sequence. However it was subsequently concluded that the correspondence of the top of the (107) infill to the base of the [104] footings was incidental and that the masonry robbed from within the [113] cut was actually a lower stage of the [104] footing itself, and that both represented remains of an earlier masonry structure. This is perhaps supported by the alignment of the face of (104), which lies at a notably different angle to the face of the existing gatehouse tower immediately above.

The clay platform-surface extended northwards but appeared to peter out a little short of the [105] stone setting that occupies much of the NE part of the northern arm of the trench, apparently respecting it. Without a firm stratigraphic relationship demonstrated it is not possible to unequivocally associate the platform and construction activity further south with the [105] stone setting. However the interim interpretation proposed here – pending a proposed extension of trench 1 – is that they are likely to have formed parts of the same building programme. If this is correct the limited area of the stone setting as revealed within the trench would not be inconsistent with a curving footing of a drum tower. That the stone setting terminates at a defined edge to the WNW is perhaps explained as the

point that the footing (if that is what it is) began to step up into the slope of the rising ground to the west.



Plate 7: Post-excitation overview of Trench 1 looking N

Dismantling the early structural remains

Deposit (108) was assumed to have been material accumulated against the early foundation course represented by cut [114] and mortar (112). Whether (108) represented construction back-fill / make-up or a post-constructional episode was not determined.

The early foundation walling was subsequently robbed out, work that resulted in the formation of the [113] cut, this apparently partly dug into the accumulated (108) material. This cut was then backfilled with deposit (107), upto the base of the (104) walling. That the robbing and deposition was of comparatively early date is suggested by the finds from (107) that apparently (as far as preliminary examination suggests) contained no 17th or 18th century material, but primarily bone and ceramics of medieval character.

Contexts (102) and (103) could be interpreted as containing material from the slow collapse or gradual decomposition of (104) as seen in the localised deposit of lime rich soils within these layers. The deep build-up of (101) soils and the considerably raised ground surface compared to the (108) or even (110) level would be best explained as part of late 19th century landscaping. (102) could also represent consolidation debris from late 19th century repair and conservation works.

ii. Trench 2

a. Strategy

Trench 2 was a 1m wide L-shaped trench laid out to correspond with Trench 1 to the west in order to locate any evidence for early masonry and in particular remains of the projected western drum tower. The southern arm of the trench ran along the extant wall footing of the north wall, starting at 1.50 m from the west edge of Trench 1 and continuing for 3m before returning north for a further 3m at the east end.

b. Description

The uppermost deposit across the trench was (201) a turf and topsoil layer approximately 0.15 m deep. It followed the general slope of the ground. Underlying (201) was (202), moderately compact mid to dark orange brown sandy loam with frequent small to medium angular stones 0.15 -0.40m deep, deepest at the wall footing. It contained bone, pottery and iron objects representing a fair mix of dates; including one find of note, a coin (*find no 022*) minted in 1723.

A metal rod was encountered running through the ground at the southwest corner of the trench, apparently part of the lightning conductor system.

The next context in sequence seems to be a very shallow cut [207], cutting into the deposits below towards the wall foot and filled by the overlying deposit (202). . The maximum depth of the fill (202) was 0.4m in total within the [207] cut or depression. Some small deposits of lime mortar were noticed on the surface of (202). It overlay (203), a mottled /mixed orange to mid brown silty sand, possibly representing an earlier ground surface. This was 0.20 – 0.40m deep and also contained a mix of pottery, bone and metal objects.

Stratigraphically below (203) lay (206), a mottled mid brown and orange silty sand with some flecks of charcoal; possibly a localised dumping towards the wall foot. It was only partially exposed within the trench, but it was seen to overlie (204) natural sands, as did (203), in a small sondage at the north edge of the trench and within a deeper sondage to the south, against the northern edge of the west arm.

The structural remains within Trench 2 consisted of [205], a series of flat lain slabs, possibly forming a foundation for the castle or perhaps a revetment against the slope. These were mortared in places with lime mortar. The [205] masonry sat on a differing alignment than the upstanding castle masonry and continued to the west beyond the gatehouse tower and along the hall block.



Plate 8: Trench 2 masonry [205] and deep sondage into 204

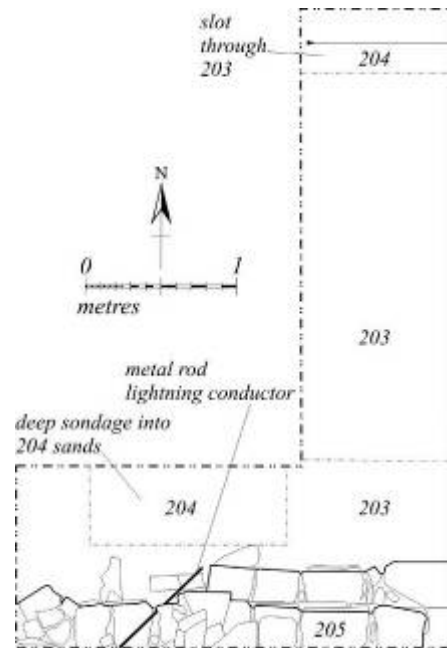


Figure 4: Trench 2 plan at LOE

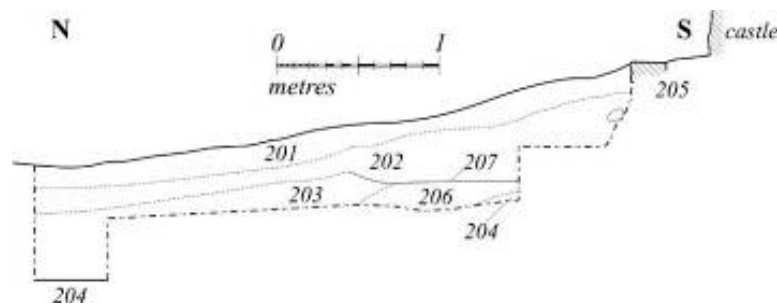


Figure 5: Trench 2, east facing section

c. *Summary and Discussion*

The earliest deposit noted within this trench was the (204) clean sands noted in the two sondages. This can be equated with (111) in Trench 1. Stratigraphically, this was overlain by the dumping of the dirty sand (206), which in turn underlay (203). (203) is interpreted as a former ground surface similar to (103) in trench 1. However, how these deposits related to the upstanding masonry of [205] is not clear as the cut [207] removed any possible deposits and their relationships at the wall foot. It seems, however, likely that (203) would have continued up to the masonry [205].

The cut [207] is likely to be related to works to the castle possibly from the late 19th century and likely to be connected with levelling the ground for scaffolding or maybe as part of an investigation of the foundations. The few mortar droppings noted on the cut suggest building works were undertaken when the cut was still open. Following the possible works associated with [207] mixed stony sand (202) was presumably used to level the scaffolding trench.

The [205] masonry is not yet understood but might form part of the extant wall foundations. In all likelihood they could represent additional buttressing for the present upstanding wall or the remains of an earlier structure or perhaps a revetment against the slope at the wall foot. Because of its height in

the sequence, close to the present ground surface, and direct relationship to the upstanding wall, masonry [205] cannot be regarded as the continuation of the earlier wall robbed out by [113] in Trench 1; it is likely to be the same date as masonry [104].

Both Trenches 1 and 2 lacked any direct evidence for a possible western drum tower as initially postulated. However, the evidence for robbing of foundations in Trench 1 [113] and the remodelling of the ground as seen by [207] may have removed such evidence. As the foundations of the present wall structures have shown to be relatively shallow, any shallow remains of footing for a possible drum tower could, in all likelihood, have been removed by later truncations and disturbances. The limited area of the trenches as opened for this elevation has also hindered more conclusive results. It would be desirable to open a larger area, connecting Trench 1 and 2 areas to understand this complex sequence of structural and layered deposits in a wider context.

iii. Trench 3

a. Strategy

Trench 3 was opened within the eastern cellar of the hall block and measured 2.40m north to south by 1.50m west to east. The results of this trench were intended to be viewed in conjunction with those from Trench 1 and Trench 2 – located outside to the north on the other side of the exterior wall of the hall block. As already discussed, Trenches 1 and 2 were placed in order to determine the existence of a further possible round tower to the west of the entrance. If such a tower existed, it was hoped that its projected western side would also be partly traceable within the building itself. For Trench 3, this hypothesis was possibly supported by the existence of a large crack running down the face of the eastern wall of the cellar room. One explanation for this structural weakness was the existence of a large, earlier foundation beneath the wall at this point.

Due to its location within the cellar of the hall block, Trench 3 was excavated under artificial light.

b. Description

Removal of the upper surface of gravel and stones (301) revealed a firmly compacted, grey to orange brown gritty gravel – (302). However, visible along the north and east sides of the trench, against the upstanding walls, was an irregular cut [304] of 0.10-0.60m width, filled by a very loose mixed deposit sand (306).

This cut was emptied out allowing the sequence of deposition to be quickly seen in the sides of the cut. The base of this was 0.60m down from the current ground surface, forming a very flat base. The room side of the cut was relatively vertical if somewhat irregular, cutting through upper layers into a solid clean sand deposit below (305). The masonry side of the cut exposed the extant masonry footings of the hall block to the north, and of the entrance tower to the east. These foundations terminated abruptly at a depth of 0.60m, and lay directly upon the sand deposit (305). Two small sondages were excavated below the base of the foundations, these confirming that the footings indeed sat upon (305).



Plate 9: Working shot of Trench 3



Plate 10: Mid-excavation shot of Trench 3 showing [304] after removal of (306)

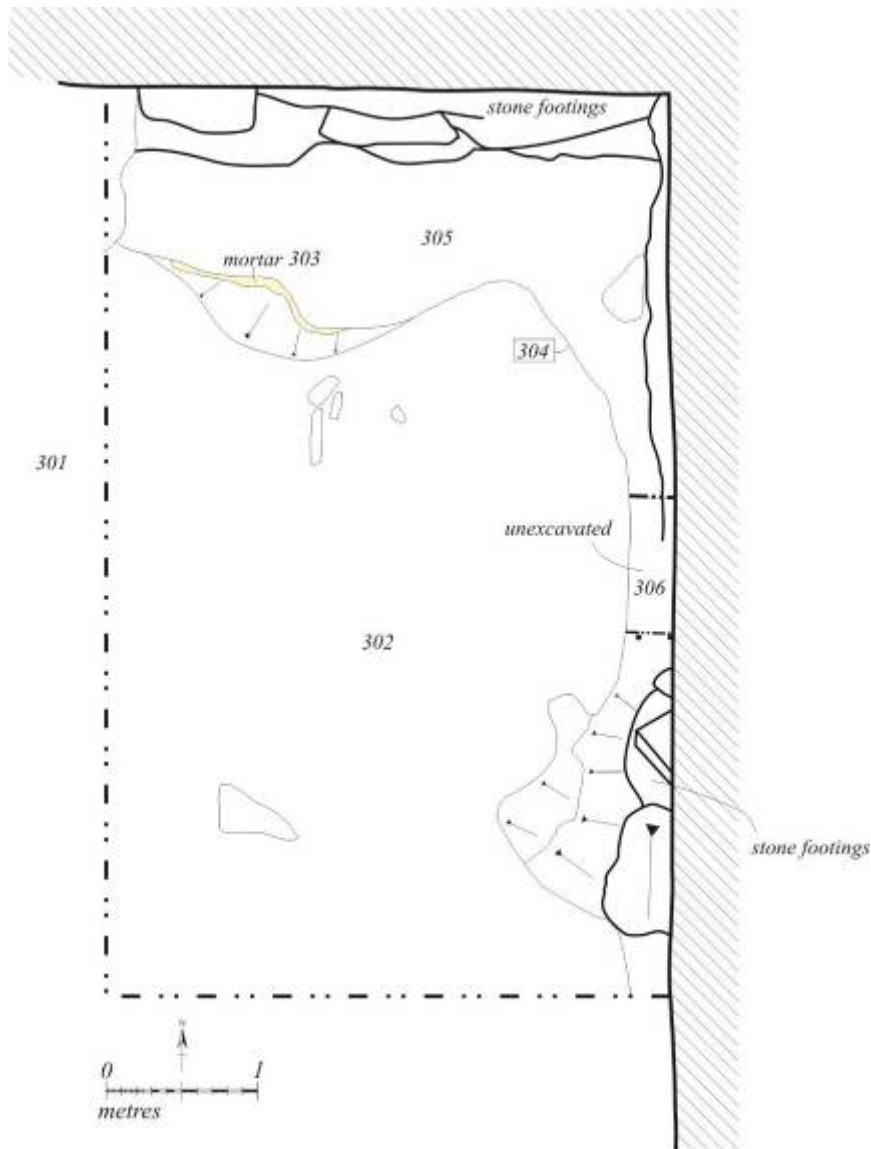


Figure 6: Trench 3 plan

The deposits within the trench below the (302) compacted gravel layer, showed to consist of (303), a spread of white lime mortar c0.03m deep and sloping northwards by c0.20m over a distance of 1.50m. This, too, sat on top of the undisturbed natural (305).

c. *Summary and Discussion*

Trench 3 provided little of archaeological merit during excavation. No evidence was uncovered for the assumed earlier castle and the hypothesis regarding the existence of earlier foundations causing the crack in the upstanding masonry proved to be incorrect.

The cut [304] through the deposits is relatively modern in date, assumed to be part of engineering works undertaken in the 1980s to assess the condition of the foundations of the castle. Context (306) is interpreted as re-deposited material used to fill the exploratory trench of the engineer.

Of the deposits only the mortar spread (303) were of any note, perhaps indicating bedding for a floor surface. However, there were no imprints of stones or flags and the date of this deposit could not be ascertained as the layer contained no artefactual finds.

The absence of complex and/or substantial foundation structures is very notable considering the mass of masonry supported above.

The clean sand deposit is similarly notable, whether imported or undisturbed natural as it appears to be. Certainly the deposit appears to have been truncated down to form a level surface, this apparently coeval with the construction of the present hall range. The possibility that earlier masonry existed in this area but was removed during a general down-cutting exercise cannot be discounted.

iv. Trench 4

a. Strategy

Trench 4 was excavated within the internal courtyard of Doune Castle, adjacent to the wall of the kitchen tower. Measuring 3m west to east by 1m north to south, it was hoped that Trench 4 would reveal evidence of earlier walling extending southwards from the southeast corner of the Kitchen Tower. That walling was intended is indicated by the presence of a number of stone 'tusks' protruding from the upstanding walling of the angle of the kitchen tower; there has long been debate as to whether the intended range had ever been constructed.



Plate 11: Trench 4 – Post-excavation

b. Description

The uppermost deposit in Trench 4 comprised loosely compact grey brown sandy silt with 10% small to medium angular stone inclusions. This deposit was recorded as (401) and had a depth of 0.25m, including the turf removed prior to excavation. Modern detritus was discovered within the deposit indicating a fairly recent disturbance.

Removal of (401) revealed (402) a firm, uneven cobbled surface (see *Plate 11* and *Figure 7*). The cobbles varied in both size and type of stone with some comprising rounded river pebbles and other

flatter in shape. The cobbles average 0.15m² in shape. This surface was recorded *in situ* and, following consultation with Historic Scotland, left unexcavated.

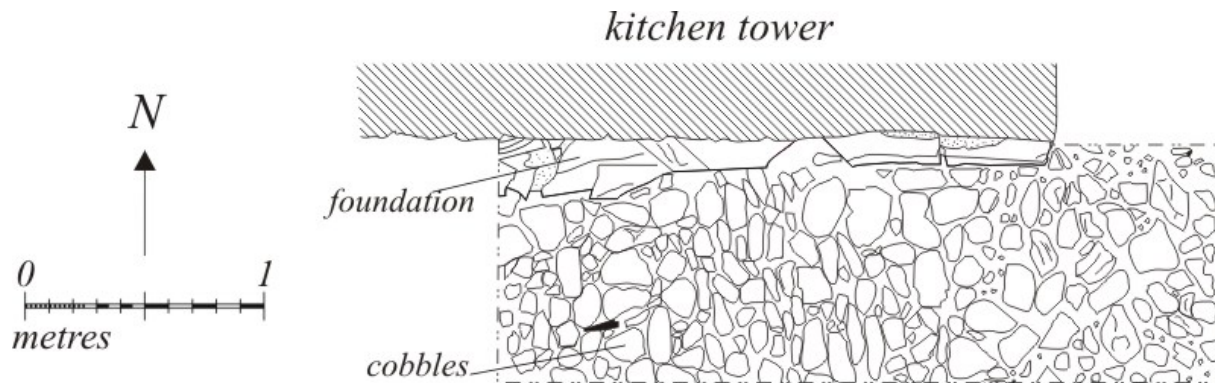


Figure 7 Post-excavation plan of Trench 4

c. Summary and Discussion

Little of archaeological interest was encountered in Trench 4. The cobbles are likely to extend across much of the interior courtyard and it can be assumed that (401) has either built up during the period in which the castle was ruinous, or indeed was put in place by for safety reasons due to the irregular nature of the surface. It is thus likely that (401) comprises imported material and the modern detritus therein confirms its limited archaeological potential.

Trench 4 was unable to answer the question regarding the existence of earlier walling on site and still holds potential for further exploration. It could not be determined from the details of the projecting footing stones at the base of the kitchen tower wall whether these formed part of an intended continuation or were simply the intended founds of tower.

v. Trench 5

a. Strategy

Trench 5 was laid out to examine the structure of the existing eastern curtain wall. The objective was to determine whether the existing wall overlay or incorporated the line of an earlier, 13th century enclosure wall, and whether their relative alignments differed.

The trench was placed outside the castle on its east side, perpendicular to the east face of the existing late 14th century curtain wall, i.e. E/W aligned. The northern trench edge was placed at about 2m south from the re-entrant junction of the entrance tower and the curtain wall. As originally laid out the trench measured 1m by 2m; by agreement with Historic Scotland it was subsequently extended eastwards during the course of the excavation by a further 0.5m, this to more easily record the lower parts of the wall footing exposed within the trench. The trench was cut perpendicular to the localised topography, where deposits bank up against the foot of the existing curtain wall.

Excavation was terminated at a maximum depth of 1.10m, at which point an apparently natural sand deposit was encountered. Plan and sections were recorded and an elevation of the foundations was drawn.

b. Description

The stripping of the turf and the dark brown topsoil (501) immediately revealed the upper parts of a substantial, well-built foundation (508). While the topsoil was very thin at the western end of the

trench towards the curtain wall, the overburden proved to be increasingly substantial from about 1m eastwards, extending to more than 0.3m in places. At about 1m out from the curtain wall a mid-brown rubbly deposit was encountered (502), similar to the evidence in Trenches 1 and 2. The upper parts of this level contained a higher quantity of mortar and stone rubble than lower down. From (502) was recovered a small fragment of a medieval floor tile, this with traces of white slip under a lead glaze possibly suggesting a 14th century date (George Haggarty, pers comm)

The context below, (503), was more of an orange-brown hue and incorporated fewer stones and mortar than (502). However in their make-up both contexts were comparable, containing a large quantity of animal bone, some deer antler and shell, primarily oyster. These were interpreted as midden deposits, built up against the foundation structures. The only datable objects from these contexts were clay pipe bowls, all of similar style, and similar to the ones recovered from trench 1 and 2, dating to the mid-late 17th century.

The removal of the substantial thickness of (502) and (503), 0.3m and 0.4m respectively, revealed the extent of the stone foundations. These extended up to 1.6m eastwards from the foot curtain wall, the trench was extended to expose their full extent. The foundations (508) were well-built, in carefully formed stages or steps. For the most part the masonry employed undressed angular sandstone blocks that were secured by smaller pinnings to ensure levelled courses. Some of the stones were of considerable size - 0.3 by 0.5, 0.2 thickness; others up to 0.28m in thickness, particularly in the upper stages. The lower stages were built of thinner slabs, less well dressed and of apparently rougher quality. The foundations were neatly stepped out with a total of five steps overall. The steps closer to the curtain wall were relatively small, 0.2m in height, then gradually increasing to 0.4m to the second-lowest step, encountered at about 1m below the present base of the curtain wall. Both the difference in stone sizes and the difference in stepping may suggest a construction break within the makeup of these substantial foundations. The height of the lowest exposed step was not established, as it seems to have continued beyond the limit of excavation (LOE).



Plates 12 and 13: Trench 5 foundations, mid-ex view after removal of (502) (left); mid-ex view showing foundations exposed to 5th step (right).

Towards the base of the foundation, localised spreads of mortar were encountered (504), perhaps residue or dumps from the construction of the foundations or the walling above. However these residues were of a much deeper yellow hue than the white-cream of the mortar used within the foundations (505). Both mortar types were sampled for comparative analysis (as were mortar fragments recovered from (502) and (503)).

The infill (503) was associated with flat, medium-sized stones, often accumulating in patches, but which were simply floating within the overall (503) built-up. Context (503) eventually terminated above a layer of light-brown to creamy grey sand (510), which was interpreted as similar to the sand deposits encountered at the lowest levels of trenches 1, 2, 3 and 6 – apparently natural sub-soil. This sand was cut by a narrow relatively steep-sided cut [506], running against the lowest exposed foundation course and thus interpreted as the cut of a foundation trench. At the top it was filled by a dark humic soil (507), which proved to be only 0.06m thick. The main fill was (509), a mid-brown to orange sand, that lay directly against the stones of the foundations. The cut [506] for this foundation trench was, however, not parallel with the extant late 14th century curtain wall. Overall the alignment of the foundations did not precisely parallel the line of the upstanding wall, but were slightly off-set, aligned NNW/SSE. This was most apparent at the exposed lowest part of the foundations and the cut line, below the assumed break in construction discussed above.

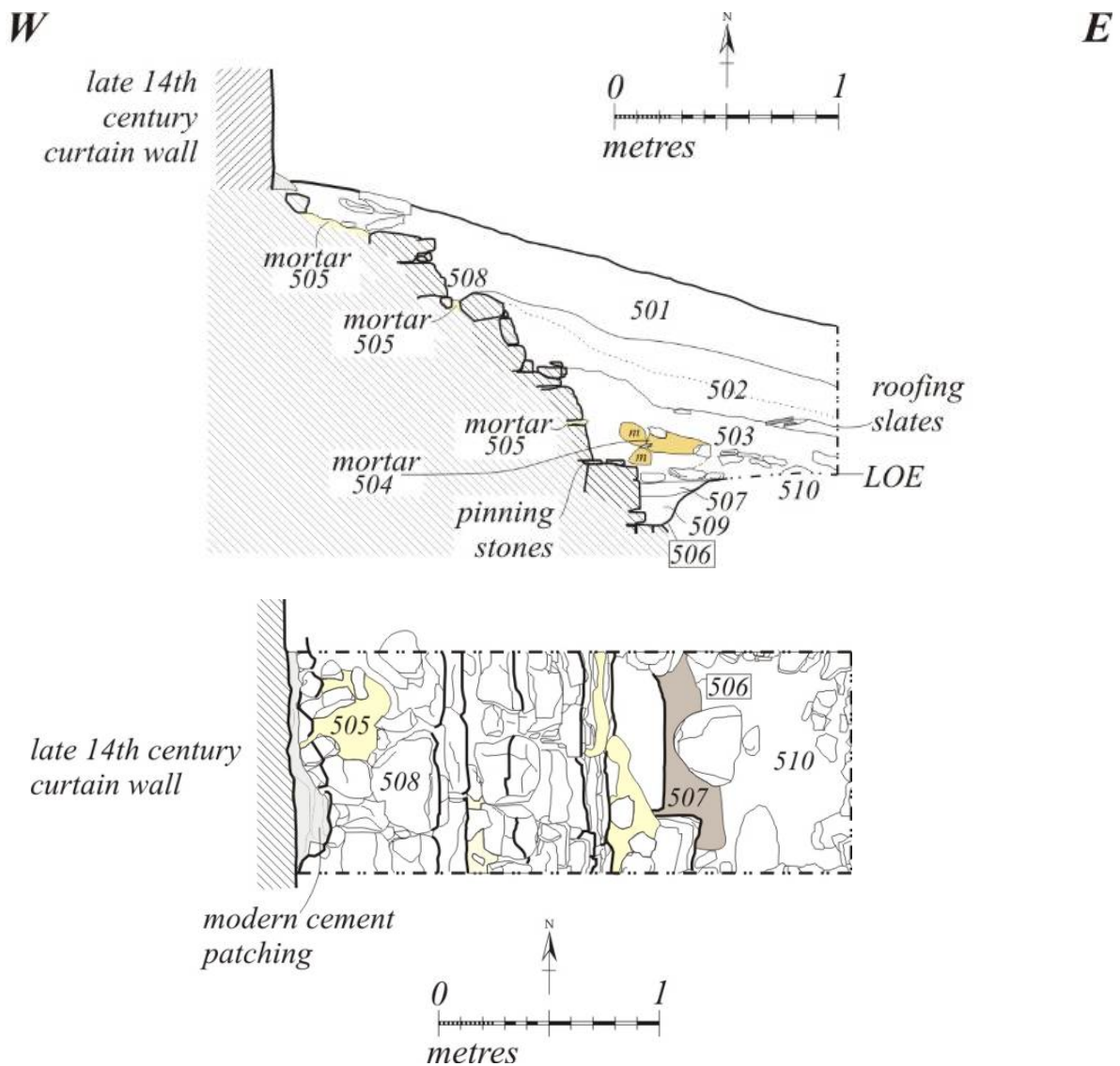


Figure 8: plan and south-facing section, Trench 5



Plate 14: Mid-ex view showing foundations cut [506] running NNW/SSE (north is to the left of the picture)

c. Summary and Discussion:

The foundation revealed in Trench 5, extending 1.6m eastwards from the existing curtain wall, was surprisingly substantial. This is particularly so when considering the general absence of major foundation structures seen in the other evaluation trenches – Trenches, 1, 2, 3 and 6. It is possible that the pre-existing topography on the east perimeter of the site, which begins to slope down notably, necessitated such substantial construction, perhaps as part of an effort to provide a level courtyard platform.

The off-set alignment between the upstanding late 14th century and the lower part of the foundations is slight but notable, and surprising if curtain wall and foundations are coeval and part of a single construction phase. The area opened up within the trial trench 5 was too small to establish any detailed orientations or correlations, but the angle of the lower part of the foundations and in particular the cut line suggest the footing might not relate to the upstanding curtain wall – thus possibly that the footing may be that of a predecessor on a slightly different alignment cannot be excluded.

The lower parts of the existing curtain have been re-faced, apparently following the removal of the lower facing stones – a feature apparent around much of the exterior perimeter of the castle, on its east, south and west sides. At the re-entrant angle of the curtain wall and the entrance tower there is possible evidence on the face of the latter for a diagonal patching that may indicate the former profile of the battered base of the curtain – whether the existing or a predecessor - above the existing ground surface.

An unusual feature of the stratigraphy revealed within Trench 5 is that the lower 2/3 or so of the foundations were overlain by midden-like material that contains diagnostic finds of the 17th century (contexts (202) and (203)), not material of earlier date as might have been expected. This material directly overlies what appears to be sterile natural (to the east) and the primary construction cut of the footing – there was no intervening stratigraphy. One possibility is that some landscaping may have occurred around the castle in the 17th century. There may be some correlation with similar apparent episodes of deposition at this date encountered in Trenches 1 and 2.

An apparently natural sand deposit was encountered that appeared similar to the sandy built-up natural in Trenches 1 and 2 (III), and similar material in Trenches 3 and 6.

vi. Trench 6

a. Strategy

An assessment of the fabric and structure of the east facing external elevation of the hall block presented a number of anomalies that merited further exploration. It was clear from the stonework visible on the west wall of the hall block directly adjacent to the Kitchen Tower that parts of an early entrance, a possible postern, existed within the fabric of this walling. Up to five pale brown sandstone blocks survived of its north jamb, while two further blocks remained of its south jamb; all display a broad chamfer. It was also noted that the wall facing on the north side of the postern was very rough and heavily patched, in marked contrast to surrounding areas; analysis in 2010 suggested the possibility that masonry had formerly run out from this point.



Plate 15: The early postern (right – to the left of the lightning rod) with the rough facing stones (centre)

These structural anomalies were interpreted as the remains of an original postern gate relating to the earlier castle, of suggested 13th century date, incorporated within the present structure. The vertical band of faced-up walling on the north side of the postern appeared to suggest the former presence of a feature that had extended from here onto what is now the broad, level-turfed area that exists between the castle and the ditch at this point. It was thought this area could have accommodated an earlier tower at the northwest angle of the predecessor castle. Trench 6 was sited in this area to attempt to identify below-ground evidence that might throw light upon these possibilities. A possible structural anomaly was revealed by the 2010 geophysical survey, roughly corresponding with the position of the blocked postern, running diagonally from SE to NW just to its north side.

Trench 6 was located against the western wall foot of the hall block, aligned north-south, and measured 3.20m by 1.50m. Initially it had been intended to open a trench 3.50m by 1.50m, but the presence of the support stanchion for the lightning rod running from the castle precluded this; the

trench was thus shortened at its southern end. In the area opened within the trench the ground surface slopes gently down westwards from the base of the castle wall, and all deposits encountered in Trench 6 followed this general inclination.

b. Description

The initial deposit removed from Trench 6 consisted of soft to moderately compact dark to mid brown silty loam (601) with rare pebble inclusions and flecks of stone. This had a depth of 0.20-0.15m and on the whole was removed whilst de-turfing. The finds from this deposit were mixed and mainly of modern date, but one object requires further discussion. A gold finger ring (SF052) was recovered from this deposit in the base of a block of turf. The ring is exceptionally fine, displaying as it does decoration on the sides, and a square bezel or setting for a *cabochon* stone, now lost. The sides of the bezel appear to be slightly recessed; the panels within retaining white and pale greenish residues, perhaps the remains of enamelling. These characteristics suggest a tentative dating of mid-late 16th century – early 17th century (Stuart Campbell, Treasure Trove unit, pers comm).



Plates 16-17: Gold finger ring recovered from level (601) (SF052)

Below the topsoil, the underlying level (602) comprised a loose to moderately compact mid-orange brown gritty sandy silt abundant in small pebbles and stones with rare flecks of mortar and charcoal. The deposit extended across the whole of area of Trench 6 to a depth of between 0.30m - 0.18m; there was clear evidence for bioturbation in the southeast part of the trench. This deposit produced a considerable quantity of animal bone. An individual find of note was a shoe buckle (SF038), likely of late 17th to 18th century date and possibly made of silver.

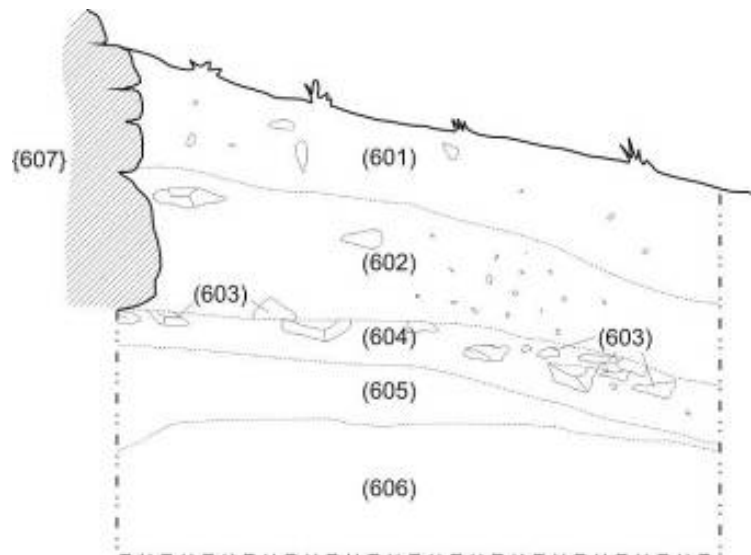


Figure 9: N facing section of Trench 6

Context (602) lay directly atop a loose layer of demolition material recorded as (603). This consisted predominantly of fractured and broken small stone slabs contained within a loose mid brown sandy silt abundant in areas of degraded lime mortar. The spread covered the majority of the Trench 6 area, measuring 3.10m north to south by 1.25m west to east and had a depth of <0.10m.

Located directly beneath (603) was (604), comprising of a loose to moderately compacted mid brown gritty silty sand and gravel abundant in small rounded pebbles and flecks of stone. The depth of this context varied from c.0.10m in the south east end of the trench to 0.24m in the centre. This deposit was rich in animal bone and occasional flecks of charcoal.

(604) was the last archaeological deposit recorded in Trench 6, with subsequent (605) and (606) in all likelihood being deposits of undisturbed natural subsoil. The latter were very similar in character to (111) in Trench 1 and (204) in Trench 2. (605) consisted of an archaeologically sterile loose to moderately compact layer of mid orange brown gritty sand and gravel abundant in small rounded stones; it measured <0.22m in depth. An investigative sondage was excavated through (605) at the southern end of Trench 6; this revealing the underlying (606) deposit to a depth of 0.34m. The full extent of (606) was not determined; it consisted of soft white-brown fine grained sand with no notable inclusions of either archaeological or geological nature.

Upon completion of Trench 6, the upstanding wall and foundations of the hall block were revealed and recorded. It was clear that two very different construction phases existed within the foundations uncovered, but their relationship remains uncertain. Both are obviously aligned north to south and comprise irregular sandstone blocks bonded by lime mortar, but in [607] to the south, the sandstone is more cubical in character and the use of mortar less pronounced. [607] is constructed of roughly rectangular slabs with areas between filled by cubed stones and small slabs. [608], whilst very similar, utilises more varied stones with a mixture of large, roughly worked slabs and medium cubed stones. The most obvious difference, however, lies in the fact that [607] lies on the same plane as the north jamb of the blocked entrance and surrounding walling, whilst [608] is set forward from the upstanding wall, with a void left between the two. This void was filled with (602). The footings of both areas were very insubstantial for such a substantial superstructure, directly overlying deposit (604) at a maximum depth off 0.60m beneath the turf line.



Plate 18: West facing elevation of Trench 6 showing foundations [608] (left) and [607] (right)

c. Summary and Discussion

The stratigraphy of Trench 6 was uncomplicated and while two significant artefacts were recovered (*SF038* and *SF052*), it is uncertain how useful these are for dating the respective deposits. The gold ring was found in the topsoil and may have found its way there through landscaping or burrowing – there is a concentration of rabbit and mole activity near to Trench 6. The built-up of the topsoil (*601*) is certainly not contemporary with the late 16th / early 17th century date of the ring *SF052*.

The shoe buckle lay within (*602*). This is an accumulation of landscaped or dumped material, but can be dated more accurately if discussion is given to underlying (*603*). (*603*) is a collection of damaged and fragmentary sandstone roofing tiles likely due to their location to have originated from the roof of the hall range. It is known that this structure was re-roofed from 1883, and the roof debris seems likely to date from any point during the time when the castle became ruinous in the late 18th century until this reconstruction. It should be noted, however, that James VI organised repairs to Doune Castle in 1518 when it is recorded that slates were put on the main roofs by an individual named Makquarren (Grove 2007); it is possible that (*603*) could be associated with this episode. If this were the case then *SF038* may indeed be contemporary with context (*602*) and date it securely to the 17th or 18th century.

Stratigraphically the next contexts requiring discussion are [*607*] and [*608*]. These wall foundations are problematic and their relationship unclear. From initial assessment of the foundations it seems that [*607*] overlies [*608*] due to the fact that [*608*] remains wholly unconnected to the upstanding wall and stepped forward, whilst [*607*] is contiguous with the wall and postern entrance above. This would obviously make [*608*] earlier than [*607*].

However, if the initial hypothesis for Trench 6 is considered and the foundations themselves closely analysed, the situation becomes less clear. It had been postulated that the wall facings above were rougher and noticeably different from the surrounding elevation as they represented patching of what had originally been a section of walling running westwards out from this point. If this hypothesis is accepted it could be argued that [*608*] represents a later underpinning after removal and robbing of this walling. Although this remains a possibility, it must be stressed that the archaeological evidence in

Trench 6 does not directly support the former existence of earlier walling here; as suggested by the absence of any footprint, footings, robber-trench or significant mortar fragments. The removal of the projecting masonry may have caused some structural instability and [608] presents an attempt at underpinning the area of wall patching.

Close assessment of the two foundations themselves further complicates matters. As stated [607] seems to overlie [608], but the scanty evidence that is available at the junction between the two, conversely points to the opposite conclusion. As seen in *Plate 20*, a small fragment of mortar from [608] appears to lip over [607] to the south. The vertically-set stone projecting from the junction between the two is unusual and could arguably belong to either, or indeed neither phase – perhaps being placed in the gap at a later date.



Plate 19: [608] (left) and [607] (right) showing the relationship between the two

Regardless of whether [607] or [608] are the earliest deposits, (604) seems to predate these foundations, running underneath them as visible in *Plates 18* and *19*. A sample was taken from this deposit and if indeed (604) does predate the castle foundation, this would present possibilities for scientifically dating earlier occupation on the site.

Deposits (605) and (606) are in all likelihood, undisturbed natural subsoils. It was initially considered they may represent the imported sands of former a motte mound, but the lack of any archaeological or geological inclusions within the deposits makes this unlikely. This does, however, not mean that a motte did not exist on site, but perhaps points more towards that if such a site existed, it would have been a re-modelled and scarped natural mound.

The results of Trench 6 remain inconclusive and provide more questions than answers. The foundations [607] / [608] are confusing and problematic. Further excavation following these foundations to the north would be required to better understand their structural relationship and purpose.

3. *Finds assessments*

i. *Ceramics*

a. *Vessels and architectural fragments (George Haggarty, Research Associate, National Museums Scotland)*

A brief assessment of the pottery and architectural ceramic fragments recovered from the Doone Castle evaluation were undertaken as part of the present report. Because of the small-scale nature of the evaluation only a limited amount of pottery was recovered representing a comparably small assemblage.

In general, Doone was almost certainly outwith the area dominated in the high medieval period by the Scottish White Gritty Ware industry, and sat in the sphere of the Scottish redware industries.

The present overview ignores the 19th century shards which contaminate about half of the context groups. Notably there are no obvious Scottish Post Medieval Oxidised or Reduced Wares, thus no ceramic evidence for the late 16th, 17th or early 18th centuries.

The vast majority of the pottery from uncontaminated contexts, (bags 33 from (108); 32 from (107); 17 from (202) and 31 from (103) is most likely of 14th century date. By far the most interesting group of pottery is the one from bag 021 from context (203), which contains two conjoining shards of white gritty ware and the rim of a small redware cooking pot. This may tentatively date to the late 13th century.

A small fragment possibly representing a medieval glazed floor tile was noted within bag 8 from context (502). The shard has traces of white slip under a lead glaze which might suggest a Low Countries product, possibly of 14th century date.

b. *Clay tobacco pipes (by Ben Blakeman, Addyman Archaeology)*

A total of 66 clay pipe fragments comprising 15 bowls, 2 mouthpieces and 49 stems were recovered during excavations from 8 different contexts (with 1 from surface collection and 4 were unstratified as they were recovered from mole hills). The majority of the clay tobacco pipe fragments from the site are of 17th century date. The main pipe form is one of a medium sized bulbous bowl with a flat base. Of the 6 intact bowls 5 were of this type (c.1660-1680) with the other smaller and possibly of earlier date (c.1640-1660). Several bowls displayed a rouletted ring just below the rim of the bowl which in each case was poorly executed.



Figure 10: Example of a typical clay pipe bowl from the Doone assemblage (c.1640-1660)

In general the stem diameter ranges from 7-9mm with a bore diameter of 2.5-3mm. The fabric of the pipes is restricted to the usual white clay. Only 3 mouth pieces were recovered but their sparsity isn't uncommon in archaeological contexts due to being the narrowest part of the stem and thus very fragile. Only one fragment of stem showed any sign of glazing.

Several bowl fragments appear to be of later date due to their projected size, bowl diameter and straighter sides. There are also a few stem fragments which are much thinner in section than the 17th century assemblage and which have smaller bore diameters, typical of much later clay pipes. Three

stem fragments exhibit maker's names. One fragment has ".....& Co" engraved. The name 'W.RICHMON[D]....' is moulded on another stem with '.....EITH' on the reverse, possibly relating to Leith. No information relating to this maker could be found. The final stem has '...CHRISTI...' visible with '...LASGOW' on the opposite side, both with a dotted surround. The maker of this pipe is probably William Christie of Glasgow whose factory was active between 1857 and 1962. A mould-imparted hand motif with a lattice structure was present on one bowl fragment but was incomplete.

The majority of the 66 clay pipe fragments were recovered from trenches 1 and 5, 29 and 16 respectively. In trench 1 context (102) alone contained 25 fragments. This is probably misleading however as (102) was located across the largest trench (along with trench 2) and was also a particularly deep deposit.

ii. Metalwork and glass

a. Gold finger ring (by Stuart Campbell, Treasure Trove)

The gold ring (SF52) from the topsoil in trench 6 is quite an interesting find, and the style of enamelling as well as the square setting for a table cut gemstone is fairly typical of the late 16th to mid 17th century, possibly more precisely dating to the latter end of this period ca. 1575 - 1650. It is a slightly less elaborate example of this type; enamelling on the rear of the bezel usually took the form of lettering (initials of a spouse) or a religious symbol. To be solid colour is rather unusual, but it raises the possibility that the ring was not made to be worn on the finger – many were sewn to clothing or worn on a chain around the neck where the enamel would be visible.

The stone is likely to have been an emerald or amethyst or –less likely – a diamond.

Conservation and careful cleaning would be desirable and indeed useful to assess the condition of the enamel and also to clean out the bezel to see if any fragments of stone remain. Analytical analysis by XRF could also determine the gold standard; this has been used successfully in the past to determine whether a ring was made in Scotland as it adhered to the 20 carat standard of the time. XRF analysis would also be desirable regarding the enamel; it is currently unclear whether the enamel was originally if a green hue which has subsequently lost its colour or was original a white, which has been tainted by corrosion. Under the microscope the enamel on the shoulders appears white. Green and white was a typical enamel palette of the Jacobean goldsmith and it could be paralleled for example, on the Cheapside Hoard.

A number of 13th century finds from the vicinity of Doone Castle have been submitted to Treasure Trove as part of a metal detected assemblage. The most significant find from this assemblage is a medieval dagger pommel, presumably of 13th century date; the other objects are – when taken together – a high status secular assemblage which mainly comprises harness fittings and a mace fragment. There is also a small hoard of coins and jewellery, dating c.1300. All these finds are in various stages in the Treasure Trove process and further information, in particular regarding the exact findspot and values may still be confidential.

b. Coins (by Nick Holmes, Research Associate, Numismatics, National Museums Scotland)

SF 6 (102): Charles I turner, 2nd issue (1632-9)

SF 22 (202): George I Irish halfpenny (1723)

c. Ferrous and non-ferrous objects and glass (Julie Franklin, Headland Archaeology)

The assemblage consists of 55 iron finds, seven finds of non-ferrous metal and 32 sherds of glass. These were largely of modern date. A handful of finds can be dated to around the mid 18th century. A

few finds are potentially earlier, though only one coin can be definitively shown to predate the mid 18th century.

Non-ferrous metalwork

A decorative shoe buckle (SF38) and button (SF3) belong to the Georgian period, the buckle dating to between c.1720 and c.1770. A small tube (SF12), probably used to bind the end of a rope is a relatively unusual find. A shotgun cartridge (SF1) and fragment of light bulb are of 20th century date, and other finds, including a pen nib are likely to be of recent origin. The most notable of the finds is the gold finger ring (SF52), described above.

Ironwork

The iron assemblage is mostly made up of nails, most of which are modern machine made examples. Two nails (SF9, SF36) are clearly wrought and thus most likely predate the mid 19th century. There are also some other structural fittings among the assemblage including a large loop-ended rod (SF47). A complete whittle-tanged knife (SF18) is of potentially early date, though as it was associated with modern nails, a recent date is quite possible. A large lump (SF11) may be a hammer head, though conservation work would be needed to confirm this.

Glass

The two oldest bottle sherds are both of the mallet wine bottle type, dating to around the middle of the 18th century (SF11, SF35). Other sherds are of 19th and 20th century date, including bottles, a jar and a goblet stem. Window glass fragments are of modern appearance.

Discussion

The assemblage largely fits between the mid-18th and 20th centuries. Several finds (eg. SF3, SF11, SF38,) may date to the period of military action at the castle during the Jacobite rising of 1745. Later finds may relate to the use of the ruined castle for picnicking and to conservation building works. Earlier finds are generally mixed with more recent finds. The early coin is associated with modern glass. In Trench 6 there appear to be potentially uncontaminated 18th century deposits, with context (602) containing no later metalwork or glass finds.

Post-excavation recommendations

Potential

The Charles I coin (SF6) is of early to mid-17th century date and provides evidence for activity at the castle in the late medieval period. Further analysis of some of the other finds, the knife (SF18) in particular may provide more evidence for medieval activity. However, if early, these finds appear to be residual.

A few of the 18th century finds are potentially *in situ*, though this would have to be confirmed by pottery dating. The possible association with the Jacobite rising of 1745 gives these finds some interest.

The 19th and 20th century finds are of less interest, though can still illustrate the use of the area after the Castle falls into ruin.

Conservation

Four finds are recommended for cleaning and stabilisation: the two coins, the finger ring and the shoe buckle (SF6, SF2, SF38, SF52). Two finds are recommended for x-ray: the knife and the possible

hammer head (SF11, SF18). Other finds are either clearly modern and/or well enough preserved to make x-rays unnecessary.

Analysis and reporting

The assemblage is of some interest and a short report on the metalwork and glass should be included in any publication of the excavations. This should include more detailed typological dating of the finger ring; further dating and analysis of the glass assemblage; and a general analysis of the finds assemblage in relation to the stratigraphy and history of the castle. It should concentrate on the finds of 18th century and earlier date, with only a brief note about the more modern assemblage.

Illustration

Four finds are recommended for illustration (finger ring, SF52; buckle, SF38, knife, SF18; bottle, SF11), with potentially a further three based on the results of conservation and further analysis (hammer?, SF11, button, SF3, tube, SF12). Some of these could be effectively illustrated by photography or by a combination of photography and line drawing.

iii. Faunal assemblage

a. Introduction

Animal bones were recovered from 11 separate contexts on site (counting (102/202) and (103/203) as representing the same deposition events recorded in adjacent trenches 1 and 2 on the north side of the castle). No faunal remains were recovered from trial trenches 3 or 4. Most of the material assessed here derives from layers (*02) and (*03) in trenches 1, 2, 5 and 6; which appears to represent levelling/landscaping deposits against the wall foundations outside the castle. Some contamination of these deposits is possible. No complete soil-samples have been processed, so the assemblage comprises a hand-recovered sample, possibly biasing against the recovery of smaller bones, for example those from fish or rodents. A note on the presence of shellfish is also appended.

b. Assessment of material

The general character of the material recovered from the most productive contexts (102, 103, 202, 203, 502, 503, 602 and 604) is large fragments of bone deriving mostly from the common domesticated species, cattle, sheep/goat and to a lesser extent, pig. Some bones from small horse and/or donkey were also identified. This material is mixed with a lesser quantity of smaller chips of bone and with remains of smaller domestic creatures such as chicken, dog and cat. Wild species were indicated by possible remains of waterfowl, game birds and two fragments of antler of red deer (from contexts (502) and (102)).

A large number of the bones displayed clear marks of butchery (saw-marks, chop-marks and finer knife-cuts) and the parts of the skeleton represented were more from the low-meat yielding parts of the carcass. This finding may indicate that the assemblage represents the waste from butchery (dividing the animal into "joints of meat") rather than from the remains of meals, with such kitchen waste being disposed of elsewhere on site. The very low numbers of foot and hoof bones may indicate that the main food species were brought to site as carcasses. Some gnawing marks (rodent and canine) on some of the bones suggests that the material lay exposed for a time before it was incorporated into the deposits from whence it was recovered.

The sawn antler fragments referred to above are indicative of craft-working. The larger piece of antler from (502) is still attached to the skull, i.e. from a dead deer, rather than a shed antler collected from the ground. A complete analysis of the material will identify any other deer bones in the assemblage.

Although no bones were measured for this assessment, the general size of the animals represented is consistent, in the author's experience, with domestic animals of the post-mediaeval period, but before the improved stock of the late-18th and 19th centuries.

c. Further work

A full catalogue of material should be created, as far as possible identifying the species and skeletal part of each item of the assemblage. The catalogue would include descriptions of any butchery marks and indicators of the age of the animal at slaughter. The latter may throw light on the nature of the husbandry practices used on the stock from which the assemblage derives; for example, whether the cattle were primarily excess stock from a dairy herd, or if the sheep were kept to provide wool rather than for lamb. An excess of younger sheep may suggest that the animals were slaughtered for higher status consumption.

The presence of game animals and birds may also throw light on this question.

Analysis of the pattern of the frequency with which various parts of the skeleton were deposited in different trenches may indicate spatial patterns in the use of the site.

d. Shellfish

A total of 32 oyster shells were recovered, half from trenches 1 and 2, half from trench 5 on the east side of the castle. These marine shells must have been imported to the site, possibly from the beds in the tidal part of the River Forth, approximately 25km away. One mussel shell was recovered from context (102). Further investigation is required to identify it as the marine or the freshwater species.

v. Notes on environmental samples

A total of seven samples were retrieved from the evaluation, three from trench 1, two from trench 5 and one each from trench 2 and trench 6.

In trench 1, sampling concentrated on the infills (107) (2 samples) and (108), as these might represent a short-lived dumping episode of potentially contemporary midden material in order to level the ground for the construction of the [104] foundations. Any material recovered from these two contexts should pre-date the construction of [104].

The sample in trench 2 was taken from (206), a discreet and localised dump against the wall footings [205] exposed in trench 2. This may represent a single dumping episode and datable material from the context should post-date the construction of [205].

From trench 5 the lower infill against the foundations were sampled. This horizon coincides with what appears to be a construction break in the foundations, and may this indicate a possible date for the construction of the upper parts of the foundations in this area, likely to be of late 14th century date. However, clay pipes of 17th century date recovered from this context suggests that it post-dates the foundations of curtain wall by several centuries and it seems more likely to be associated with post-medieval landscaping. The yield from processing this sample might not provide conclusive dating results.

The other sample taken from trench 5 is a small bag from the deposit (507), the top fill of the possible foundation cut for the earliest foundations within trench 5. This was a dark matrix, potentially rich in carbonated material and should date the infilling of the foundation trench and thus possibly the construction of the lowest footings. It was securely sealed by (503), however, some contamination of material pressed into the upper part of (507) may have contaminated the context slightly. It is recommendable to date at least three different entities recovered from this context, to eliminate any possible contamination errors.

The sample from trench 6 was taken from (604), a bone and charcoal rich deposit seemingly beneath the debated foundations [607] and [608]. It is likely that (604) predates the construction of the present castle foundations, and thus offers a good possibility for dating the earlier occupation on the site, as it appeared to be securely sealed by the foundations.

4. Survey

i. Amalgamation of survey records

Prior to evaluation work various forms of data were consulted in an attempt to amalgamate plans and surveys relating to previous studies of Doune Castle. It was hoped that by assessing the relevance and accuracy of these sources a comprehensive ‘master’ plan could be created. Whilst this has been achieved to some degree, further work, both on and off-site, is required to check and address existing accuracies issues.

Initially historic plans of the castle were digitised, most notably MacGibbon and Ross’ 1887 plan which shows two internal structures in the courtyard of Doune castle. A ground floor plan, drawn in 1990 and received from Historic Scotland, was also digitised and was used as the base plan for the evaluation recording. Historic Scotland also provided a digital copy of a topographic survey, undertaken in 1997, which covers a large area to the North of the River Teith including Doune Castle and its surrounding landscape. Unfortunately this survey was not georeferenced so an attempt was made to accurately place it in line with Ordnance Survey data. This was successfully achieved based upon field boundaries, road layouts and building plots.

The OS outline for Doune Castle appears to have several inaccuracies when compared to the results from this basic survey and to previous plans, in particular the 1990 plan. However the topographic survey of the castle matches well with the 1990 plan and with this survey. As the 1990 plan shows the most detail it was georeferenced onto the accurately placed topographic survey and then used as the basis for site illustrations in this report.

A total of 8 permanent survey markers have been placed around Doune Castle and will significantly aid in future excavation and survey work. Whilst these survey markers will allow for consistency in any future work it is recommended that an attempt be made to accurately place these points onto the Ordnance Survey grid so that plans of the castle can be spatially referenced to a decent standard. It is also recommended that a more thorough survey of the ground floor be undertaken to assess the accuracy of the 1990 plan more fully.

ii. Monitoring of survey markers installation

a. Strategy

On Wednesday the 2nd of March 2011 excavations took place in six locations around the perimeter of the castle prior to the insertion of survey markers. An archaeologist monitored the excavations, in order to record any archaeological remains exposed by the excavation and collect any artefacts which were uncovered. The turf was reinstated following the positioning of the survey markers. A further two survey markers were located on the cobbled surface within the courtyard. These were brass dome headed survey markers which were positioned without the need for any ground disturbance, therefore no monitoring was required. The survey markers were positioned by a member of staff from Historic Scotland. The archaeological monitoring was undertaken by an archaeologist from Addyman Archaeology.

b. Description and Results

The six pits excavated for the survey markers were all 0.25m square and 0.25m deep. The turf was removed by hand then any additional soil was removed by trowel. A photograph was taken of each pit and their location has subsequently been recorded by surveyors from Historic Scotland.

The excavations did not penetrate below the topsoil. No archaeological deposits or artefacts were disturbed.



Plate 20: Survey marker 1



Plate 21: Pit for survey marker 6

5. Overview

i. General

Direct below-ground archaeological evidence for a 13th century castle, as suggested by the fish-tailed and crosslet arrow-slits within the upstanding fabric, has proven to be more elusive than anticipated. The limited information gathered in this evaluation has, however, been tantalising enough to warrant further investigation of the possible early remains. Because of the nature of the evaluation the trench areas were very restricted. Larger trenches in targeted areas will help to connect evidence from the individual trenches and improve the understanding and interpretation of the probable early structural remains that have already been encountered. The evaluation has been successful in recovering datable evidence in the form of animal bone and artefacts, and the samples recovered may contain further dateable material to enhance our understanding of the structural sequence at Doune.

ii. Sand mound – a natural feature?

Within a number of the evaluation trenches deposits of clean fine-grained and compacted sands were encountered, e.g. (111), (510), (305). These appear possibly to be undisturbed natural subsoil. It is particularly notable that this was encountered close to the surface in each area of Trenches 1, 2, 3, and 6; and at a lower level within Trench 5. Two possibilities were considered. It could represent undisturbed underlying natural and would therefore be of considerable interest in relation to the pre-existing topography of the site. This may answer why the site offered a particularly good defensible location to its early occupiers. The other possibility is that this represents imported material, perhaps deposited in order to form a motte mound or other earthwork fortification of a much earlier defended site. In this respect, if a motte mound, this may have occupied the north-west of the wider platform upon which the later castle is sited. The pronounced sloped profile of these sand deposits as seen running through Trenches 1 and 2 may indicate the eastern side of the mound in that area. However, evidence of lamination within the make-up of (305) in Trench 3, suggest that this is indeed a naturally formed layer, gradually accumulated, perhaps as a result of riverine or alluvial activity. The lack of any culturally-derived inclusions within the deposits may support this interpretation. However within the areas where this deposit was revealed too little was exposed for a certain conclusion. It is clear that if the sand is a natural feature that it was modified for the purpose of fortification – this may have included the formation of a motte mound.

It was interesting to note that it was encountered so close to the surface within the evaluation trenches (Nos.1, 2, 3 and 6) and no buried natural topsoil deposits were found upon it. This appears to imply that the sand level, whether natural or redeposited, had itself been truncated at a very early stage, which removed any contemporary topsoil, suggesting a re-modelled and scarped natural mound. If this had been a motte mound, this suggests the possibility that the mound itself may have been considerably higher.

Another notable observation is that all footing structures encountered, whether from the 13th century or later castle, had extremely shallow or almost no foundations. This is particularly noteworthy for the entrance tower and hall range. The only exception from the evaluation was the massive footing encountered underneath the east curtain wall – in this area it is possible that the natural / early topography already slopes down markedly and the foundations had thus to be built up.

iii. Possible below-ground evidence for the 13th century castle

Early deposits and evidence for a robbed-out wall were encountered within Trench 1 in particular, underlying the present foundations, which also seem to predate the present north wall of the hall block, assumingly of 14th century date. Evidence suggests a sequence of an early working surface, possibly associated with an early revetment wall. It is currently unclear whether this revetment formed part of a pre-castle episode of occupation or represents the part of the 13th century construction. This underlay later foundations, which because of their off-set alignment with the upstanding wall have

also been interpreted as pre-14th century. A similar off-set alignment has been noted for the foundations underlying the late 14th century curtain wall to the east. However, these two off-sets alignments do not directly correspond. In the case of the east foundations, it is the lower half of the foundations in particular that appears to align with the angle of the NE tower (compare plan in context for Trench 5). The trench was placed relatively close to the joining of the alignment of earlier and later foundations. It would be useful to follow the extent of these foundations further to the south and test whether the lower part and the upper part are indeed splaying outwards as the evidence in Trench 5 would suggest.

Trench 6 contained further tantalising evidence for early structural remains, but the sequence at the blocked postern at the northwest corner is not fully understood yet. Dating evidence from material underlying the foundation sequence underneath the blocked postern may help to identify the chronology of the structural evidence. Further excavation northwards, following the protruding foundations would help to clarify its purpose and placing within the structural sequence.

The tentative 13th century pottery recovered from Trench 1, although not *in situ*, together with contemporary finds from the metal detecting in the vicinity make a strong case for a 13th century occupation of the castle.

iv. Late 14th century rebuilding

The evaluation has yielded a significant number of 14th century ceramics that can be connected with the occupation of Robert Stewart and the construction of the majority of upstanding fabric. The evaluation allowed us to see a bit more of the 14th century construction, in particular its foundations. It was surprising to uncover the shallow footings on the north and west side, in particular in contrast with the substantial foundations on the east, relating to the curtain wall.

v. Subsequent occupation

The evaluation trenches have shown evidence for significant modelling and landscaping of the castle mound from the 17th century onwards, as indicated by the 17th infill against the foundations and later cuts against the walls, containing 19th century material. The latter may be associated with early phase of repair, reroofing and possible consolidation work or represent landscaping, perhaps to increase and thus enhance the fortified character of the castle mound.

6. Recommendations

It was the intention of the present focussed evaluation exercise that it should be preliminary to possible further works if significant findings made or questions raised. As noted in *section 5* above, the six trenches excavated in February-March 2011 did raise a number of important questions. Further work at the castle would include recommendation for the following additional evaluation tasks:

i. Consolidation of Trenches 1 and 2

- expand the excavation area to square off Trench 1 (i.e. excavate the area to its NE)
- to remove the baulk between Trenches 1 and 2
- to extend Trench 2 westwards and to the south

This would examine the early foundation cut and associated red clay surface more fully, particularly as it was not found in Trench 2. In addition the stone spread at the north end of Trench 1 would be more fully understood and the possibility of the remains representing an early drum tower assessed more fully. The stone spread appeared to be constructed upon the natural sands, although the overlying deposits appear to lie within a shallow depression, suggesting that the stone spread itself may lie

within a shallow cut. This was not noted during excavation, however further excavation in this area would clarify this point.

ii. Trench 7 – N exterior of hall range

A trench extending perpendicularly out from the north wall foot of the hall range towards its western end across the level ground in that area to take in the edge of the scarp. This would reveal the wall footing of the range and permit examination of the surviving upper extent of the mound upon which the range is built – to elucidate whether it is natural or partly or wholly artificial.

iii. Trench 8 – castle ditch to N

It is proposed that a north-south aligned trench of some 15-20m in length excavated across the lower slope of the possible motte mound and castle ditch on the north side of the castle would provide additional information as to the construction of the motte and ditch and perhaps some dating evidence from the fill of the ditch.

iv. Trenches 9 and 10 – exterior of east curtain wall

The results from Trench 5 appeared to suggest that the foundations for the curtain wall were on a slightly different alignment to the upstanding wall, perhaps suggesting an earlier construction. Trenches to the south of Trench 5 would test this interpretation and allow the line of the foundations to be traced along a wider area.

v. Trench 11 – western cellar of hall range; exploration of apparent rectangular feature

To determine whether the feature might relate to the earlier history of the castle.

References

Addyman, T & Oram, R 2010 *Doune Castle: Assessment for the evidence for pre-existing structures*. Addyman Archaeology unpublished report for Historic Scotland.

Grove, D 2007 *Doune Castle: The Official Souvenir Guide*, Edinburgh

O'Grady, O J T 2010 *Doune Castle, Stirling: Geophysical Survey [Part II: Ground Penetrating Radar] Data Structure Report*. Unpublished report for Historic Scotland.

Appendix A Project documentation

i SMC form (February 2011)

SMC(I) - APPLICATION

APPLICATION FOR SCHEDULED MONUMENT CONSENT

ANCIENT MONUMENTS AND ARCHAEOLOGICAL AREAS ACT 1979

(To be completed by or on behalf of the applicant in **BLOCK CAPITALS** or typescript)
(Please **ENSURE** that you read the accompanying notes before completing this form)

NOTE THAT ANY PLANNING CONSENT NEEDED MUST BE SOUGHT SEPARATELY IN THE NORMAL WAY.

1. Applicant

Name . **Tom Addyman**
Address . **Addyman Archaeology, St Ninian's Manse, Quayside Street, Edinburgh**
Post code . **EH6 6EJ** Tel No . **0131 555 4678**

Applicant's legal interest in the monument (please tick)

Owner Joint Owner Occupier Other None

If OTHER, please specify . **Archaeological contractor to Historic Scotland**

2. Owner of monument (if not the applicant) Occupier (if not the applicant) **HISTORIC SCOTLAND**

Name . **Historic Scotland**
Address . **Longmore House, Salisbury Place, Edinburgh**
Post code . **EH9 1SH**
Tel No . **0131 668 8600**

3. Monument to which application relates: **DOUNE CASTLE**

Name (if any) of monument . **DOUNE CASTLE**
Local authority area . **STIRLING**
National Grid Reference (if known) . **NN 7284 0107**

4. Description of proposed works (including their purpose):

This application proposes a preliminary evaluation trenching exercise within and at the exterior walls of Doune Castle, a research-oriented project intended to identify and assess possible evidence for a 13th century predecessor to the present castle. An analytical assessment of the upstanding building fabric by Addyman Archaeology in 2010 plotted numerous indicators and actual standing remains of an earlier castle structure. In late 2010 Oliver O'Grady undertook geophysical survey of areas where below-ground remains relating to the earlier structure might be encountered (O'Grady, 2011). In a number of areas potentially significant anomalies were indeed identified, enough to provide strong justification for a targeted evaluation exercise.

For each proposed evaluation trench the intention is primarily to determine the presence or absence of earlier structural remains, these generally the projected possible wall lines of parts of the earlier castle. If encountered the intention is primarily to establish the limits, orientation and character of earlier structures. Each trench will be taken down to the upper surface of *in situ* masonry; it is not intended to undertake deep excavation through archaeologically significant stratigraphy or features.

Though no great quantity is anticipated, finds made during the works will be subject to established post-excavation procedures for processing, conservation and storage as necessary.

The following individual trenches are proposed, and the rationale for the location of each explained:

Trench 1 – exterior, west side of principal entrance

Trench 1 will be positioned on the site of a possible drum tower mirroring that on the east side of the principal entrance as suggested by building analysis and corresponding to an anomaly identified by geophysics. Trench 1 will be 'L'-shaped, measuring 3.0m by 4.0m overall. It will attempt to locate the eastern side of the tower and its external curvature as it runs around to the NW. The width of the trench will permit examination of part of the interior of the feature (if not of solid masonry) – the line of a possible internal wall face was tentatively suggested by geophysics. Enough ground will be taken in beyond the northwards-running section of the 'L' to permit excavation of a sondage to examine the exterior footing of the tower.

Trench 2 – exterior, west side of principal entrance.

Trench 2 will examine the western side of the site of the possible drum tower. Separated from Trench 1 by a N/S aligned baulk of 1.5m width, Trench 2 will also be 'L'-shaped and of similar dimensions though reversed in plan. The N/S aligned section, 4.0m long and 1.0m in width, is positioned to confirm the northern extent of possible masonry; a 1.0m wide westwards extension will attempt to define the western side of the possible tower and examine its relationship to the re-entrant area of the existing building – the junction of the gatehouse tower and the hall range.

Trench 3 – eastern cellar within the hall range

A N/S aligned trench of 1.5m by 2.5m at the NE angle of the eastern hall range cellar is intended to identify evidence for early walling that may be overlain by the existing north and east walls of the cellar – the possible junction of the early gatehouse and walling that may return to the west – a possible earlier curtain. A diagonally-aligned anomaly was identified by geophysics, running ENE to WSW within the northern part of the chamber; through Trench 3 it will hopefully be possible to examine the eastern end of this apparent alignment.

Trench 4 – castle courtyard, SE angle of the kitchen tower, east end of south side

Trench 4, measuring 1.0m by 3.0m, is sited to determine whether a major wall-line extended southwards from the SE angle of the kitchen tower. Above ground the angle of the tower displays prominent tussing long suggested as evidence for a range that was never erected. Trench 4 will attempt to determine whether the building had actually existed but had subsequently been reduced. E/W aligned, Trench 4 will cross the possible wall line and extend for a short distance beyond; the extensions may allow assessment of historic surfaces and relative internal and external levels.

Trench 5 – exterior of east curtain close to its junction with the entrance tower

Trench 5 (E/W aligned, 1.0m by 2.0m) is intended to examine the exterior footing of the eastern curtain wall to determine whether this lies on the line of (or incorporates) the hypothesised 13th century curtain wall which may or may not lie on the same line.

Trench 6 – exterior, west end of hall range

Trench 6 will examine possible evidence visible within the west wall face of the hall range that suggests masonry had formerly run out from the present wall-line, this adjacent to the remains

of a blocked early entrance, a possible postern. One possibility is that this area may have been occupied by a large tower at the NW angle of a predecessor castle, with a postern set at the re-entrant. Geophysics suggested the presence of an anomaly running in this area on a SE/NW alignment. Trench 6 will be N/S aligned, located along the west wall-foot of the hall and measuring 1.5m by 3.0m)

5. List of plans and drawings accompanying application

Figure 1 location plan proposed trenches 1-3
Figure 2 location plan proposed trench 4
Figure 3 location plan proposed trench 5
Figure 4 location plan proposed trench 6

6. Any other information relevant to application (including details of planning permissions obtained or to be sought)

N/A

I/We hereby apply for scheduled monument consent for the works described in this application and shown on the accompanying plans and drawings

Signature .

Date . 16 February 2010

Print Full Name . Thomas Oliver Addyman

on behalf of .Addyman Archaeology.....•.....

*Where the application is being dealt with by an agent to whom correspondence should be sent, state the:-

Name of Agent .

Address of Agent .

Post code . Tel No .

Return to (with all relevant plans, photographs and drawings):-

Ancient Monuments Administration Branch, Historic Scotland, Longmore House,
Salisbury Place, Edinburgh EH9 1SH

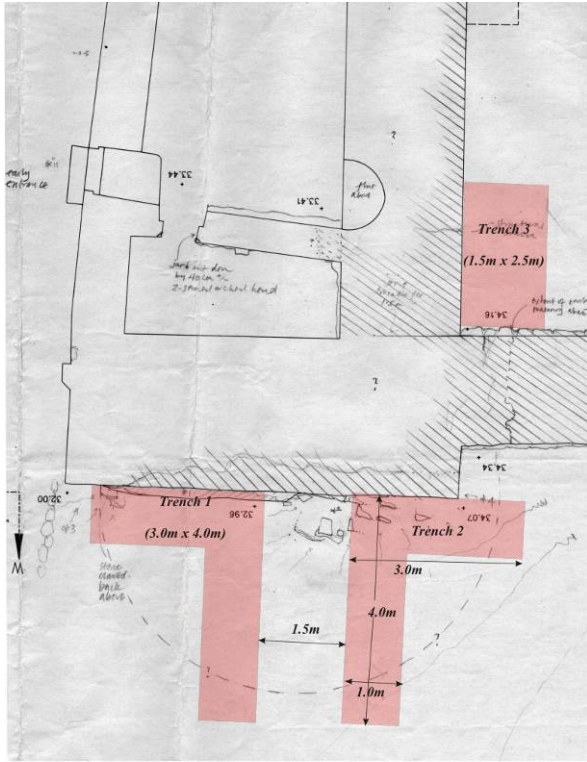


Figure 1 Proposed location of trenches 1,2 and 3

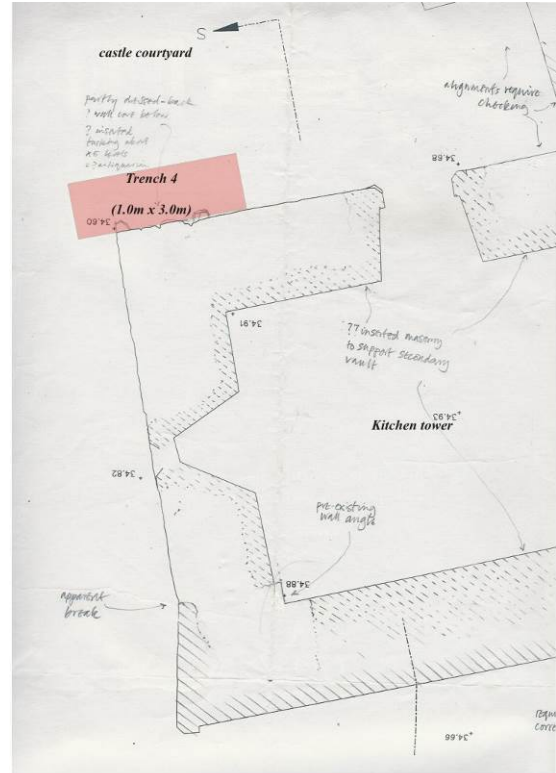


Figure 2 Proposed location of trench 4

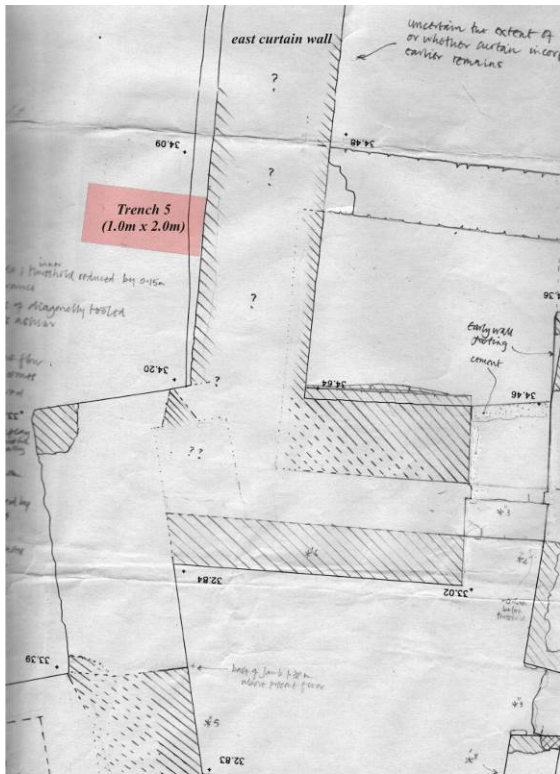


Figure 3 Proposed location of Trench 5

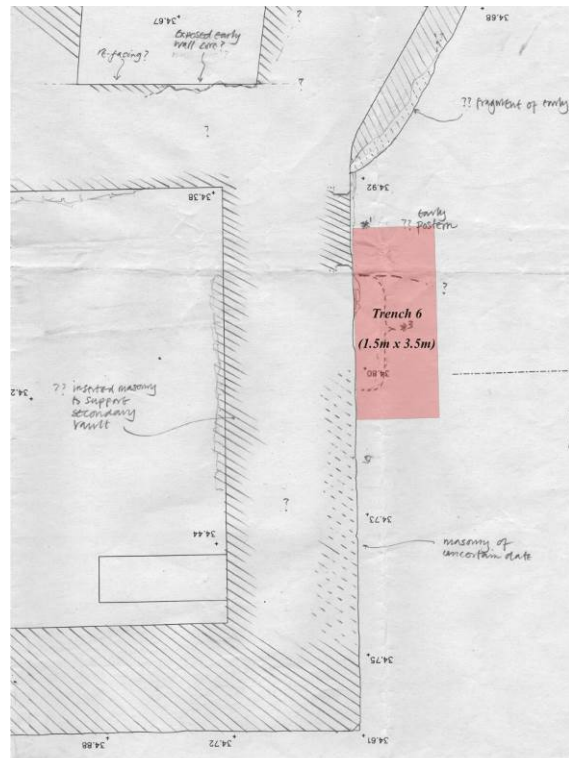


Figure 4 Proposed location of Trench 6

Figures 1-4 Proposed Trench locations

ii. *SMC – supplementary form for excavations (February 2011)*

SMC(4) - EXCAVATIONS

**SCHEDULED MONUMENT CONSENT APPLICATION
SUPPLEMENTARY FORM FOR EXCAVATIONS**

(To be completed by or on behalf of the applicant in BLOCK CAPITALS or typescript)
(Please ENSURE that you read the accompanying notes before you complete this form)

Please enclose with application a plan of the proposed excavation and surrounding area to a scale of at least 1:2,500 marking the position of the site and location of the area to be excavated. Previously excavated areas should be clearly differentiated. Please also provide a sketch plan of the site with the areas to be excavated this season and in any future seasons. If you have already prepared a research design as a free-standing document, attach a copy and complete form with summary details only.

1. Name of site (including Grid Reference). **Doone Castle** **NN 7284 0107**
2. Local authority area **Stirling**
3. (a) Have you directed excavation on this site before? Yes No
 (b) Have you previously received consent for excavation at this site? Yes No

4. Describe briefly the type and period of the site. (Explaining why this particular site was chosen.)

Doone Castle is primarily a well preserved castle of enicente of later 14th century date, erected by the Duke of Albany. It is dominated by the residential gatehouse tower at the NE angle of the enclosure; adjacent to this on its west side is the hall range beyond which, to the SW, exists the kitchen tower. The enclosure wall to the W, S and E survives to its parapets. The castle closes off the spur of land at the junction of the River Teith and the Ardoch Water. The castle clearly occupies an ancient site. The existing superstructure incorporates the substantial remains of a 13th century predecessor.

The extent of the 13th century remains were only recently recognised and concluded for the first time to represent the principal fortress in that century of the Earldom of Menteith, held successively by the Comyn and Stewart Earls of Menteith. The earlier remains may be the work of both families. The present study seeks to better understand this earlier history of the castle.

5. Period of proposed excavation (starting date and number of weeks).

6-7 days commencing Monday February 21.

6. Nature of excavation (eg trial, first season of multi-season project, complete one-season project).

Preliminary trial trenching following standing building analysis (Addyman Archaeology, March 2010) and geophysical survey (Oliver O'Grady, January 2011) to investigate whether below-ground evidence survives for the extent of the earlier castle. This will be the first season of invasive excavation; it is anticipated that a second season will follow (in 2011/12).

7. What are the academic objectives of the proposed excavation? (outline excavation strategy including sampling strategy).

The academic objective of the present excavation is very specific – to identify in a number of areas masonry remains that demonstrably relate to the former extent of the early castle. These include:

- **a possible second drum tower on the west side of the existing entrance, to demonstrate the at early gatehouse to have been of classic twin-towered plan**
- **to locate the line of the north enclosure wall**
- **to demonstrate the former existence of a possible tower at the NW angle of the enclosure**
- **to examine the structure of the existing eastern curtain to determine whether this was the line of the 13th century enclosure wall**
- **to determine whether a range had existed along the southern part of the western enclosure wall**

The identification of early remains below ground will contribute to fuller understanding of the pre-existing castle and a general reinterpretation of the site.

8. Describe briefly any previous archaeological work other than by yourself on the site.

Previous work at Doone Castle has been limited in extent and related to HS' call-off contract in relation to on-going repair works:

- excavations by John Cannell in 1986 at the car park, the NE corner of the castle courtyard and the basement of the round tower
- evaluation trenching by Kirkdale Archaeology on the site of a range against the eastern curtain wall

9. Describe briefly any site reconnaissance and background research that has been carried out.

In spring 2010 Addyman Archaeology, using HS' existing 1:50 survey drawings of the castle, undertook a mapping exercise of the evidence and possible evidence of earlier masonry incorporated into the late 14th century upstanding masonry of Doone Castle. Extensive remains were plotted within the entrance tower (Lord's Tower) and within the Kitchen Tower; less substantial remains were plotted at the west end of the hall range. This mapping exercise was accompanied by an analytical report outlining in detail the apparent evidence and suggested interpretation (Addyman Archaeology, April 2010).

In late 2010 Oliver O'Grady conducted a geophysical survey within and around selected areas of the castle, this specifically to investigate the likely areas where masonry remains of the pre-existing castle might be encountered. In a number of areas significant sub-surface anomalies were indeed encountered, often at no great depth. This suggested invasive evaluation might well identify significant archaeological remains.

10. Name of proposed excavation director.

Tom Addyman

11. What briefly is his/her excavation, post excavation and research experience?

Very extensive fieldwork experience in Scotland and a number of other countries. CV if required.

12. What are his/her outstanding excavation and post excavation commitments?

Various. The latter subject to a structured programme of post-excavation work through Addyman Archaeology.

13. Details of supervisory staff and size of workforce.

Tom Addyman, Partner, Addyman Archaeology / Simpson and Brown Architects	project director
Kenneth Macfadyen	site supervision
Ross Cameron	site supervision
Tanja Romankiewicz, head of Archaeology Team	post-ex arrangements
Ben Blakeman	
Jenni Morrison	
Derek Alexander, acting Head of Archaeology, NTS	

14. How will the excavation be funded? «Indicate, when applicable, when results of pending grant application(s) will be known.)

Jointly by Historic Scotland and Addyman Archaeology

15. What are the arrangements for reinstating the site after excavation?

To be coordinated with Michael Burgoyne, HS Architect, and HS' site agent David Johnston.

16. Post excavation work:-

What financial and administrative arrangements are being made for:

- i. Deposition of site archive

With Historic Scotland or NMRS as appropriate. Archiving will be undertaken once all stages of the project, including that anticipated for 2011/2, have been completed.

- ii. Conservation of finds

A provision has been made for finds conservation within the budget of the 2010/11 season. However it is not anticipated that this will be significantly drawn upon.

- iii. Disposal of finds

By coordination with Historic Scotland / Treasure Trove process.

iv. Environmental work and C14 dating

Not anticipated

v. Preparation of the final report (please include timetable)

Data Structure Report to be completed early in the financial year 2011/12 (by April/May 2011).

17. Where is it hoped that the final report will be published?

It is hoped that the wider project will be reported in a suitable academic journal (eg *PSAS*), or as a stand-alone research paper, perhaps in Historic Scotland's *Archaeology report* series.

18. Any other information relevant to the application (attach further papers if desired).

N/A

Signed by applicant

Date **16 February 2011**

Return to (with all relevant plans, photographs and drawings):-
Ancient Monuments Administration Branch, Historic Scotland, Longmore House, Salisbury Place,
Edinburgh EH9 1SH
MFA00236

iii *HS grant application form (February 2011)*

PROJECT BID FORM

Project Name:- *Doune Castle*

Council Area: *Stirling* **NGR:** NN 7284 0107 **NMRS No:**
NN70SW 1

Enter 'Scotland' if the project is not area-specific

Sponsoring Inspector: *Alan Rutherford* **Date sent to HS:** *16 February 2011*

Discuss your bid with the Inspector whom you hope will sponsor it as early as possible.

Proposer: *Tom Addyman*

Proposer Unit *Addyman Archaeology*

Legal Status: *In Care*

Nature of Bid: *Bid for HS funding*

Have we paid a grant for this project in previous years? *Yes*

Nature of Project: *Field project - archaeological evaluation at Doune Castle examining evidence for newly-identified remains of 13th century castle*

Brief description of project (255 characters (about 30 words) only; see note overleaf):

This will be included in a list of bids to be considered by Inspectors at estimates meetings. The list will otherwise contain mostly money information; so use this field wisely. Read the grant booklet.

- *proposed 6 evaluation trenches at points around and within the castle*
- *preliminary post-excavation work*
- *preliminary report*

Environmental impact (Advice on how to fill out this table is provided at the end of this form. It will probably only apply where there is fieldwork and for other projects you may be able to put none in all cells)

Criterion	Impact of this project	Mitigation proposed
biodiversity, fauna and flora	None	
Population	None	
human health	None	
Soil	Limited – turf removal, excavation,	reinstatement upon completion
Water	None	
Air	None	
climatic factors	None	
material assets	None	
cultural heritage, including architectural and archaeological heritage	Excavation of evaluation trenches	It is not intended to disturb masonry or other significant archaeological remains once encountered
Landscape	None	
the inter-relationship between these issues	None	

In what follows, all money values must be expressed as net, excluding VAT. If VAT is chargeable, this should be stated.

Who will contribute what other resources each year? (give cash values of resources such as staff time, overheads, grants from others - see the draft Grants booklet sent to you by email, or ask HS for a copy).

Year	Source	Description of what the source is providing	Net Cash Value	%
2010/11	Addyman Archaeology	Additional evaluation staff and preliminary post-excavation work	£1,500	
2010/11	Addyman Archaeology	Preliminary report	£1,000	
TOTAL				

What are the total costs by year and what are you asking HS to give as grants?

Year	Any comments	Total Net Cost	Net HS grant	%
2010/11	Evaluation site works (grant request to Historic Scotland)	£6,000		
	Additional evaluation staff and preliminary post-excavation work (provided by Addyman Archaeology)	£1,500		
	Preliminary report (provided by Addyman Archaeology)	£1,000		
TOTALS	TOTALS	£8,500		

What are the proposed final products of the project and in what Year do you plan to produce them? (e.g. Published main report, archive, database, spin-off or stand-alone specialist reports, web site,)

Year	Description
2010/11	Preliminary report
2011/12	full Data Structure Report
2011/12	Entry for <i>Discovery and Excavation in Scotland</i>

Description of project (300 words maximum):

1. This description should be designed to present the bid economically to Inspectors are not familiar with the project.
2. The text should include a description of the subjects and nature of the project, its value to Scottish archaeology and its expected contribution to our knowledge, understanding and management of Scotland's archaeological heritage.
3. It should make clear why this project is being put forward, and why now. Areas of uncertainty in project aims or organisation must be mentioned.
4. It may often be best to submit a formal full Project Design (PD) only once your bid succeeds, because if your bid fails, work on the PD may be wasted. Also, HS may want to take forward something based on

similar ideas originating elsewhere. However, you should discuss this with the Inspector whom you hope will sponsor your bid because sometimes a PD will be required for us to consider the bid at all.

Blocks of work and Stage payments See below, and the Grant booklet, for advice on how to complete this table.

All money values must be expressed as net, excluding VAT. If VAT is chargeable, this should be stated.

Year	Blocks of work	Summary description	Date (e.g. 1 Apr 2009)	HS Stage payment
2010/11	Block 1	Fieldwork (February 2011) HS grant applied for	Start February 2011	£6,000
			Finish February 2011	
2010/11	Block 2	Fieldwork and preliminary post-excavation work (February 2011) non HS grant-funded	Start March 2011	£1,500
			Finish Mar 2011	
2010/11	Block 3	Preliminary report (March 2011) non HS grant-funded	Start March 2011	£1,000
			Finish March 2011	
	Block 4		Start Finish	
	Block 5		Start Finish	
	Block 6		Start Finish	£
	Block 7		Start Finish	£
	Block 8		Start Finish	£
	Block 9		Start Finish	£
	Block 10		Start Finish	£
	Block 11		Start Finish	£
	Block 12		Start Finish	£

1. The **blocks of work** table allows HS to plan its spending, and must be for the whole project, excluding only publisher's costs.
2. For a pilot project, do not include blocks for any envisaged subsequent project.
3. Stage payments will normally be paid only when you certify that, (or if so required by HS produce evidence that), the work has been done.
4. Each block of work can group together several tasks. The **Summary description of a block of work** must be no longer than needed to characterise it, e.g. 'Fieldwork and Data Structure Report', or 'Final editing'.
5. If in doubt the block's **Start** Date should be the start of a month and its **End** date the end of a month.
6. You may group blocks of work together for a **Stage payment**. Put each stage payment amount in the row describing the block of work that is the last to be completed before a stage payment is needed. Stage payments will not be made more frequently than once a month. Payments will normally be in arrears.
7. **All the blocks of work under one stage payment must fall entirely within one of our financial years (which change at 31 March/1 April).**

PRODUCTS IN THE FORTHCOMING YEAR

Please put a working title and a completion date beside each product which you plan to submit.

Planned Completion Date	Product type	Working Title
30 March 2011	Preliminary report	Doone Castle – Archaeological evaluation of the architectural and historical evidence for the earlier history of the site : Preliminary Report

- Project Design / Costed Assessment / Data Structure Report / D&ES report / Interim report for publication / Stage report for HS / First Full Draft of main report / Final draft of main report / Archive / Training materials / Public information
- Lecture text / Spin-off report / Synthesis /
- Other product

Environmental Assessment – notes for completing this form:

ASSESSMENT OF ENVIRONMENTAL IMPACTS

A1 The environmental issues against which impacts should be assessed include:

Environmental Parameter	Example criteria
biodiversity, fauna and flora	Will work be undertaken in or affect a designated site i.e. Special Protection Area; Special Area of Conservation; Ramsar site; Site of Special Scientific Interest; National Nature Reserve? Will the natural heritage features within a National Park be affected? Will work affect species and/or habitats protected at the European level and/or included in Biodiversity Action Plans (national and/or local)?
population	Will work affect the local community in terms of e.g. noise and vibration, dust, general disturbance? Will pedestrian/vehicular movements be affected e.g. severance?
human health	As “population” above.
soil	Will agricultural soil be affected and, if so, what class (prime land is Class 1, 2, and 3.1)? Will the work be undertaken in an area of peat/bog (see also biodiversity in this case)? Will the work exacerbate existing erosion problems? Will soil protection measures be required e.g. conservation of topsoil? Is the land contaminated?
water	Will the work directly or indirectly affect a watercourse e.g. working in the watercourse or adjacent to it? Are there issues re water quality e.g. potential for sediment runoff adversely affecting water quality; oil/diesel spills; etc?
air	Main issue will be dust.
climatic factors	Not applicable.
material assets	Will the work affect other land uses e.g. industrial, commercial, residential, agricultural, recreational (including access)?
cultural heritage, including architectural and archaeological heritage	Likely that there will be <u>positive</u> impacts as a result of knowledge generation. What negative impacts on the historic environment may ensue? Will the cultural heritage features within a National Park be affected?
landscape	Will there be effects on landscape characteristics?

	Will views be affected (visual impact) e.g. local residents; recreational users, etc? Will landscape features within a National Park be affected?
the inter-relationship between these issues	

A2 Impacts need to be considered in terms of their:

- (a) short, medium and long-term effects;
- (b) permanent and temporary effects;
- (c) positive and negative effects; and
- (d) secondary, cumulative and synergistic effects.

A3 If negative impacts are identified, measures for their mitigation must be identified (avoid; reduce; remedy; offset). In any case, project management should include procedures for dealing with environmental issues/emergencies on site (e.g. oil/diesel spills) and reference to these should be included.

A4 There is a requirement to assess alternatives. When it comes to negative impacts as a result of a particular method of investigation, the identification of alternatives and the reason(s) for their rejection is required.

A5 The bidder should consider whether monitoring is required and, if not, explain the reasons for not recommending monitoring of negative impacts.

Background note:

EU legislation requiring the environmental assessment of plans and programmes came into being in 2001 through Directive 2001/42/EC. The Directive was transposed into Scots Law on 20 July 2004 by The Environmental Assessment of Plans and Programmes (Scotland) Regulations 2004 (SSI 258). The regulations require that environmental assessment is undertaken on certain public sector plans and programmes. They therefore introduce a strategic level of assessment into the plan and programme formulation process (referred to as “strategic environmental assessment” or SEA).

As an authority with responsibility for the preparation of strategies, plans and programmes, Historic Scotland has a role in the SEA process as a Responsible Authority. HS is required to review its plans/programmes/strategies to ascertain whether they are likely to result in significant environmental effects and to undertake environmental assessment of those identified as having the potential to do so.

The Archaeology Programme has been identified as having potential environmental effects. In consequence, bid submissions should consider the environmental implications of the proposal, following the guidance set out in Annex A.

Publication Grant Form

Full citation: ..N/A.for this financial year

Expected print run..... Expected retail priceExpected publication date

In the tables below, we suggest that you present the costs for the whole publication and then divide the length of the HS-sponsored report by that of the total length of all reports to obtain the cost of the HS sponsored report. However, you must exclude any exceptional costs related to other reports in the publication.

Total page length of all reports in the publication

Page length of the report for which a grant is sought

Before printing	Volume Costs	
Substantive editing including layout, copy editing and proof reading and halftones of photos (if required)		
Indexing		
Any exceptional costs which do not relate to the HS report (please enter this as a negative figure).		Costs for the HS report
Any exceptional costs specific to the HS report.		
Totals before printing		
Printing and subsequent	Total volume costs	
Type setting or digital , printing and binding, printing cover		
Offprints		
Packing, delivery and related costs		
Any exceptional costs which do not relate to the HS report (please enter this as a negative figure).		Costs for the HS report
Any exceptional costs specific to the HS report such as colour inserts in paper publications; these must be agreed in advance in writing by HS.		
Totals Printing and subsequent		
Total costs (Pre-printing + Printing and subsequent)		

Grant requested from HS

I certify that the costs above are for publication of the journal or monograph referred to in the citation and that any exceptional costs related to non-HS reports in the publication have been excluded from the calculations of the cost of publishing this report. I request a grant of **£6,000** from Historic Scotland, being 100% of the cost of publication of the report cited above.

Signature

Date 16 February 2011

- Any HS offer of a proportion of the costs relates only to costs which are believed by HS not to be excessive. HS will normally grant-aid publication in proportion to its sponsorship of the earlier parts of the project up to a maximum of 75% of the costs listed in the table. Thus if it has provided 50% of the funding for a field project and its writing-up, it will sponsor the publication to a maximum of 50 x 75% = 37.5%. Please attach a note on any exceptional costs of publishing this report.
- Indexing should normally be charged at the standard minimum of the Society of Indexers.

Appendix B Context Register

context	trench	type	date	initial	description	comments
101	1	deposit	25/02/11	KM	Fairly soft to moderately compact dark brown black slightly gritty sandy silt and 1-5% small stone inclusions and >1% fragments of lime mortar. Depth: 0.15-0.50m W-E	
102	1	deposit	25/02/11	KM	Loose to moderately compact mid to dark brown slightly gritty sand with 10% lime mortar flecks.	Mixed deposit post-building works/levelling site. Mix of finds from 19 th century.
103	1	deposit	29/02/11	KM	Soft to moderately compact light to mid brown fine sand with slightly gritty patches and 5-10% of small angular rubble inclusions and occasional rounded stones. Depth: 0.15m	Former surface or uneven deposit relating to historic building works. Burrowing intrusion. Mostly medieval pottery.
104	1	structure	29/02/11	KM	W-E aligned sandstone blocks, often flat bonded with lime mortar.	Masonry wall foundation, possibly for and earlier tower or feature.
105	1	deposit	28/02/11	KM	Loose group of grey to red rounded cobbles and angular sandstone fragments.	
106	1	deposit	28/02/11	KM	Softly compact, moderate to light brown.	
107	1	deposit	29/02/11	KM	Soft to moderately compact mid to dark brown sand with occasional charcoal and ashes red to black brown in colour. Depth: 0.60-0.70m	S end of trench.
108	1	deposit	29/02/11	KM	Mottled light to mid brown sand.	Medieval pottery recovered.
109	1	deposit	01/03/11	KM	Soft to moderately compact mid to light brown sand. Depth: 0.05-0.10m	Possibly interface between (103) and (111).
110	1	deposit	01/03/11	KM	Moderately compact pink to deep red clay. Depth: 0.01m	S half of Trench.
111	1	deposit	01/03/11	KM	Moderately compact light green to yellow sand.	Natural subsoil.
112	1	deposit	01/03/11	KM	White lime mortar.	On the face of vertical cut below [104]
113	1	cut	01/03/11	KM	W-E aligned cut with flat base.	Filled by (107). Possible cut for foundations [104], alternately a natural slope.
114	1	cut	01/03/11	KM	W-E aligned cut beneath [104].	Base capped with a thin layer of red clay (110).

201	2	deposit	28/02/11	RC	Moderately compact mid to dark brown sandy loam with occasional pebbles and small flecks of stone. Depth: c.0.15m	Topsoil and turf line, contains modern detritus.
202	2	deposit	28/02/11	RC	Moderately compact mid to dark orange brown sandy loam with frequent small to medium angular stones. Depth: 0.40-0.15m SW-NE	Landscaping and debris build up. Abundant in bone ceramic and Fe.
203	2	deposit	28/02/11	RC	Soft to moderately compact mottled orange brown, mid brown and white brown silty sand with frequent small to medium angular and rounded stones. Depth: c.0.30m	Mixed deposit.
204	2	deposit	28/02/11	RC	Softly compact white brown fine grain sand. Depth: >0.75m	Natural subsoil.
205	2	structure	28/02/11	RC	W-E aligned red sandstone slabs (averaging 0.30m by 0.30m by <0.10m), predominantly drystone with occasional areas of lime mortar. Dimensions: >3m W-E by c.0.60m N-S Depth: c.0.45m	Insubstantial with little bonding. Later revetting?
206	2	deposit	02/03/11	RC	Moderately compact mottled mid brown silty sand with an orange hue and frequent small angular stones and flecks of charcoal.	Bone and ceramic inclusions.
207	2	cut	26/03/11	KM	Possible cut into (203) and (206)	
301	3	deposit	03/03/11	KM	Gravel surface of vault.	Modern flooring.
302	3	deposit	03/03/11	KM	Hard compacted grey orange brown gritty gravels. Depth: 0.10-0.30m	Gravelly layer forming base for floor.
303	3	deposit	03/03/11	KM	Hard compacted white lime mortar. Depth: 0.03m	Mortar spread on top of natural. Slopes to N.
304	3	cut	03/03/11	KM	Irregular cut running along N and E wall foundations. Dimensions: 0.10-0.60m wide	Modern cut for engineers.
401	4	deposit	02/03/11	JM	Loosely compact grey brown sandy silt with 10% small to medium angular stone inclusions. Depth: 0.25m	Topsoil and turf with modern inclusions.
402	4	deposit	02/03/11	JM	Firm cobbled surface of fairly large stones averaging 0.15m ² . Rounded river pebbles and flat slabs.	Unexcavated.
501	5	deposit	24/02/11	TR	Dark brown turf and topsoil.	Topsoil and turf.
502	5	deposit	24/02/11	TR	Moderately compact mid brown deposit with crushed mortar, small rubble stones, clay pipe and glass.	
503	5	deposit	25/02/11	TR	Moderately compact mid brown orange, more orange than (502), but browner towards base.	Numerous finds.
504	5	deposit	25/02/11	TA/ TR	Mortar residue at E end of trench. Depth: 0.05m	Construction residues.
505	5	structure	28/02/11	TR	Whitish mortar used for foundations.	
506	5	cut	02/03/11	TR	Cut for foundation trench	

507	5	fill	02/03/11	TR	Dark humic fill. Depth: 0.06m	Fill of [506].
508	5	structure	02/03/11	TR	Stonework for foundation	
509	5	deposit	02/03/11	TR	Mid brown orange, but more sandy and rubblely.	
510	5	deposit	02/03/11	TR	Light brown yellow orange to cream sand.	
601	6	deposit	28/02/11	RC	Soft to moderately compact dark to mid brown silty loam with rare pebbles and flecks of stone. Depth: 0.20-0.15m	Modern turf line and topsoil.
602	6	deposit	01/03/11	RC	Loose to moderately compact gritty sandy silt abundant in small pebbles and flecks of stone, rare flecks of mortar and charcoal. Depth: 0.30-0.18m S-N	Landscaping or accumulated dumped material. Evidence of burrowing in SE corner. Rich in bone debris.
603	6	deposit	02/03/11	RC	Loosely compact predominantly fractured and broken small stone slabs, contained within loose mid brown gritty sandy silt abundant in areas of degraded lime mortar. Dimensions: 3.10m N-S by c.1.25m W-E Depth: c.0.10m	Roofing slabs.
604	6	deposit	02/03/11	RC	Loose to moderately compact mid brown gritty silty sand and gravel abundant in small rounded pebbles and flecks of stone. Depth: c.0.25-c.0.10m	Rich in bone and occasional flecks of charcoal. Seemingly a deposit beneath [607] and [608].
605	6	deposit	03/03/11	RC	Loose to moderately compact mid orange brown gritty sand and gravel abundant in small rounded stones. Depth: <0.22m	Natural sands and gravels.
606	6	deposit	03/03/11	RC	Soft white brown fine grain sand. Depth: >0.32m	Natural subsoil.
607	6	structure	03/03/11	RC	N-S aligned foundation of irregular cubed sandstone blocks, varied in size but predominantly rectangular slabs with squares and small slabs filling gaps. Dimensions: >0.90m N-S Height: c.0.50m	Stone foundation for upstanding wall – homogenous with wall and early door jamb above. Relationship with [608] to N unclear.
608	6	structure	03/03/11	RC	N-S aligned foundation of irregular sandstone blocks, varied in size with a mixture of large, roughly worked slabs and medium cubed stones bonded with occasional lime mortar. Dimensions: 2.10m N-S Height: c.0.50m	Stone foundation to N of [607]. Relationship with [607] to S unclear.

Appendix C Drawings Register

<i>dwg no.</i>	<i>sheet no.</i>	<i>type</i>	<i>scale</i>	<i>description</i>	<i>date</i>	<i>initial</i>
001	001	Section	1:20	NE facing section of (204)	28/02/11	RC
002	001	Plan	1:20	Trench 1 – Post-excavation plan	28/02/11	KM
003	001	Plan	1:20	Trench 4 – Post-excavation plan	28/02/11	JM
004	002	Section	1:20	N section of trench 5	01/03/11	TR
005	002	Plan	1:20	Trench 5 at limit of excavation	01/03/11	TR
006	002	Section	1:20	S facing section of Trench 6	03/03/11	RC
007	002	Section	1:20	N facing section of Trench 6	03/03/11	RC
008	002	Section	1:20	W facing section of Trench 6	03/03/11	RC
009	001	Elevation	1:20	Trench 5 – W elevation showing sloping foundations	01/03/11	KM
010	001	Plan	1:20	Trench 1 – Overlay Dr.002showing (108) and (105) post-removal of (103)	01/03/11	KM
011	001	Plan	1:20	Trench 1 – Slot through (108)	01/03/11	KM
012	001	Plan	1:20	Trench 3 – Post-removal of fill of [304]	01/03/11	KM
013	001	Plan	1:20	Trench 3 – Plan of section through (302) showing (303)	01/03/11	KM
014	001	Section	1:20	Trench 3 - Section through (302) showing (303)	01/03/11	KM
015	002	Section	1:20	Trench 2 – E extension	04/03/11	KM
016	002	Section	1:20	Trench 1 – W extension	04/03/11	KM
017	002	Section	1:20	Trench 1 and 2 - N section	04/03/11	KM
018	003	Plan	1:20	Trench 2 – Plan at limit of excavation	04/03/11	KM
019	003	Elevation	1:20	Trench 2 – W elevation	04/03/11	KM
020	003	Elevation	1:20	Trench 1 – W elevation – part 1	04/03/11	KM
021	003	Elevation	1:20	Trench 1 – W elevation – part 2	04/03/11	KM

Appendix D Photographic Register

Shot Num.	Taken from	Trench	Contexts	Description	Date	Initial
001	S	1, 2		Pre-excavation shot – Trench 1 and 2	21/02/11	RC
002	S	1, 2		Pre-excavation shot – Trench 1 and 2	21/02/11	RC
003	SE	1, 2		Pre-excavation shot – Trench 1 and 2	21/02/11	RC
004	SW	1, 2		Pre-excavation shot – Trench 1 and 2	21/02/11	RC
005	E	1, 2		Pre-excavation shot – Trench 1 and 2	21/02/11	RC
006	N	5		Pre-excavation shot – Trench 5	21/02/11	RC
007	NW	5		Pre-excavation shot – Trench 5	21/02/11	RC
008	W	5		Pre-excavation shot – Trench 5	21/02/11	RC
009	W	5		Pre-excavation shot – Trench 5	21/02/11	RC
010	NW	5		Pre-excavation shot – Trench 5	21/02/11	RC
011	WSW	1, 2		Working shot – Stripping Trenches 1 and 2	21/02/11	RC
012	V/N	1, 2		Mid-excavation shot – Trench 1 and 2	21/02/11	KM
013	V/N	1, 2		Mid-excavation shot – Trench 1 and 2	21/02/11	RC
014				Mid-excavation shot – Trench 1 and 2		
015	V/N	1		Mid-excavation shot – turf stripped and (101) removed	21/02/11	RC
016	W	1		Mid-excavation shot – turf stripped and (101) removed	21/02/11	RC
017	S	1	SF006	SF006 – Coin in situ	21/02/11	KM
018	V	1	SF006	SF006 – Coin in situ	21/02/11	KM
019	V	1	SF006	SF006 – Coin in situ	21/02/11	KM
020	-	1	SF006	SF006 – Coin in situ - Detail	21/02/11	KM
021	-	1	SF006	SF006 – Coin in situ - Detail	21/02/11	KM
022	-	1	SF006	SF006 – Coin in situ - Detail	21/02/11	KM
023	E	1, 2	[104], [205]	Trench 1 and 2 – Foundations [104] and [205]	21/02/11	BB
024	E	1, 2	[104], [205]	Trench 1 and 2 – Foundations [104] and [205]	21/02/11	BB
025	E	1, 2	[104], [205]	Trench 1 and 2 – Foundations [104] and [205]	21/02/11	BB
026	E	1, 2	[104], [205]	Trench 1 and 2 – Foundations [104] and [205]	21/02/11	BB
027	E	1, 2	[104], [205]	Trench 1 and 2 – Foundations [104] and [205]	21/02/11	BB
028	S	2		Trench 2 at end of 21/02/11	21/02/11	BB
029	S	2	[205]	Trench 2 at end of 21/02/11 – [205] detail	21/02/11	BB
030	S	2	[205]	Trench 2 at end of 21/02/11 – [205] detail	21/02/11	BB
031	S	1, 2	[104], [205]	Trench 1 and 2 – Foundations [104] and [205]	21/02/11	BB
032	S	1	[104]	Trench 1 – Foundation [104]	21/02/11	BB
033	-	1	SF006	Detail	21/02/11	KM
034	-	1	SF006	Detail	21/02/11	KM
035	-	1	SF006	Detail	21/02/11	KM
036	-	1	SF006	Detail	21/02/11	KM
037	-	1	SF006	Detail	21/02/11	KM
038	-	1	SF006	Detail	21/02/11	KM
039	-	1	SF006	Detail	21/02/11	KM
040	-	1	SF006	Detail	21/02/11	KM
041	E	1, 2		Working shot – Trench 1 and 2	24/02/11	RC
042	E	1, 2		Working shot – Trench 1 and 2	24/02/11	RC
043	WSW	1, 2		Working shot – Trench 1 and 2	24/02/11	RC
044		1		Working shot	24/02/11	
045		1		Working shot	24/02/11	
046	W	5	(502)	Mid-excavation shot of (502) – loose stones in front of foundations	24/02/11	TR

047	W	5	(502)	Mid-excavation shot of (502) – loose stones in front of foundations	24/02/11	TR
048	W	5	(502)	Mid-excavation shot of (502) – loose stones in front of foundations	24/02/11	TR
049	W	5		Mid-excavation shot Trench 5 – Upper end – Castle wall	24/02/11	TR
050	W	5		Mid-excavation shot Trench 5 – Upper end – Castle wall	24/02/11	TR
051	SE	5		Mid-excavation shot Trench 5 – whole Trench	24/02/11	TR
052	SE	5		Mid-excavation shot Trench 5 – whole Trench	24/02/11	TR
053	SSE	5		Mid-excavation shot – lower end: loose stones	24/02/11	TR
054	W	5	(502)	Mid-excavation shot (502) – Loose stones in foreground	24/02/11	TR
055	N	5	(502)	Mid-excavation shot (502) – Loose stones in foreground	24/02/11	TR
056	S	1	[104]	Trench 1 – S facing elevation	24/02/11	KM
057	S	1	[104]	Trench 1 – S facing elevation	24/02/11	KM
058	S	1	[104]	Trench 1 – S facing elevation	24/02/11	KM
059	E	1	[104]	Trench 1 – Post-excavation view of [104]	24/02/11	KM
060	E	1	[104]	Trench 1 – Post-excavation view of [104]	24/02/11	KM
061	W	1	[104]	Trench 1 – Post-excavation view of [104]	24/02/11	KM
062	W	1	[104]	Trench 1 – Post-excavation view of [104]	24/02/11	KM
063	S	1	[104]	Trench 1 – Post-excavation view of [104]	24/02/11	KM
064	S	1	[104]	Trench 1 – Post-excavation view of [104]	24/02/11	KM
065	S	1	[104]	Trench 1 – Post-excavation view of [104]	24/02/11	KM
066	SW	1	[104]	Trench 1 – Post-excavation view of [104]	24/02/11	KM
067	S	1	[104]	Trench 1 – S facing elevation of [104]	24/02/11	KM
068	S	1	[104]	Trench 1 – S facing elevation of [104]	24/02/11	KM
069	S	1	[104]	Trench 1 – Post-excavation view of [104]	24/02/11	KM
070	W	1	[104]	Trench 1 – Post-excavation view of [104]	24/02/11	KM
071	W	2	[205]	Trench 2 – Post-excavation view of [205]	24/02/11	RC
072	E	2	[205]	Trench 2 – Post-excavation view of [205]	24/02/11	RC
073	NE	2	[205]	Trench 2 – Post-excavation view of [205]	24/02/11	RC
074	S	2	[205]	Trench 2 – S facing elevation of [205]	24/02/11	RC
075	SW	2	[205]	Trench 2 – S facing elevation of [205]	24/02/11	RC
076	W	5		Working shot – Trench 5	24/02/11	RC
077	SSW	5		Working shot – Trench 5	24/02/11	RC
078	-	-		Working shot - Newt	25/02/11	KM
078	W	-		Working shot	25/02/11	TA
080	W	-		Working shot	25/02/11	TA
081	S	-		Working shot	25/02/11	TA
082	S	-		Working shot	25/02/11	TA
083	SE	-		Working shot	25/02/11	TA
084	S	-		Working shot	25/02/11	TA
085	E	-		Working shot – School visit	25/02/11	TA
086	E	-		Working shot – School visit	25/02/11	TA
087	E	-		Working shot – School visit	25/02/11	TA
088	E	-		Working shot – School visit	25/02/11	TA
089	E	-		Working shot – School visit	25/02/11	TA
090	E	-		Working shot – School visit	25/02/11	TA
091	E	-		Working shot – School visit	25/02/11	TA
092	E	-		VOID	25/02/11	TA
093	E	-		VOID	25/02/11	TA
094	E	-		VOID	25/02/11	TA

095	SE	-		VOID	25/02/11	TA
096	SW	-		Working shot – School visit	25/02/11	TA
097	SW	-		Working shot – School visit	25/02/11	TA
098	SW	-		Working shot – School visit	25/02/11	TA
099	SW	-		Working shot – School visit	25/02/11	TA
100	SW	-		Working shot – School visit	25/02/11	TA
101	SW	-		Working shot – School visit	25/02/11	TA
102	SW	-		Working shot – School visit	25/02/11	TA
103	W	2		Trench 2 – Sondage through sand	25/02/11	RC
104	W	2		Trench 2 – Sondage through sand	25/02/11	RC
105	E	2		Trench 2 – Sondage through sand	25/02/11	RC
106	E	2		Trench 2 – Sondage through sand	25/02/11	RC
107	E	2		Trench 2 – Sondage through sand	25/02/11	RC
108	S	2		Trench 2 – Sondage through sand – S section	25/02/11	RC
109	S	2		Trench 2 – Sondage through sand – S section	25/02/11	RC
110	N	2		Trench 2 – Sondage through sand – N section	25/02/11	RC
111	S	5		Trench 5 – General view on progress	25/02/11	RC
112	S	5		Trench 5 – General view on progress	25/02/11	RC
113	N	5		Trench 5 – General view on progress	25/02/11	RC
114	S	1		Working shot – Mysterious shovel-faced man	25/02/11	RC
115	W	1		Trench 1 – W section	25/02/11	KM
116	W	1		Trench 1 – W section – N half	25/02/11	KM
117	W	1		Trench 1 – W section S half	25/02/11	KM
118	W	1, 2		Working shot - Trench 1 W section and Trench 2 W section	25/02/11	KM
119	W	1, 2		Working shot - Trench 1 W section and Trench 2 W section	25/02/11	KM
120	W	1, 2		Working shot - Trench 1 W section and Trench 2 W section	25/02/11	KM
121	N	1	(105)	(102) removed and stone spread (105) exposed	25/02/11	KM
122	N	1	(105)	(102) removed and stone spread (105) exposed	25/02/11	KM
123	E	1	(105)	(102) removed, stone spread (105) exposed and E section	25/02/11	KM
124	E	1	(105)	(102) removed, stone spread (105) exposed and E section	25/02/11	KM
125	S	1	(105)	(102) removed, stone spread (105) exposed and E section	25/02/11	KM
126	S	1	(105)	(102) removed, stone spread (105) exposed and E section	25/02/11	KM
127	W	5	(503)	General view – Trench 5 at base of (503)	25/02/11	KM
128	W	5	(503)	General view – Trench 5 at base of (503) - Detail	25/02/11	KM
129	W	5	(503)	General view – Trench 5 at base of (503) - Detail	25/02/11	KM
130	N	5	(503)	E part of Trench 5 – base of (503)	25/02/11	KM
131	S	5	(503)	E part of Trench 5 – base of (503)	25/02/11	KM
132	W	4		Pre-excavation shot of Trench 4	28/02/11	JM
133	N	4		Pre-excavation shot of Trench 4	28/02/11	JM
134	V/N	1, 2		Mid-excavation shot – Trench 1 and 2	28/02/11	KM
135	V/N	1, 2		Mid-excavation shot – Trench 1 and 2 - Detail	28/02/11	KM
136	V/N	1, 2		Mid-excavation shot – Trench 1 and 2 - Detail	28/02/11	KM
137	V/N	1, 2		Mid-excavation shot – Trench 1 and 2 - Detail	28/02/11	KM
138	V/N	-		Possible features in front of castle	28/02/11	KM
139	V/N	1		Mid-excavation shot of Trench 1	28/02/11	KM
140	V/N	2		Mid-excavation shot of Trench 2	28/02/11	KM
141	V/N	1		Mid-excavation shot of Trench 1	28/02/11	KM

142	V/N	2		Mid-excavation shot of Trench 2	28/02/11	KM
143	V/N	1, 2		Mid-excavation shot of Trench 1 and 2 - General	28/02/11	KM
144	V/N	1, 2		Mid-excavation shot of Trench 1 and 2 - Detail	28/02/11	KM
145	V/N	1		Mid-excavation shot of Trench 1 - Detail	28/02/11	KM
146	V/N	1		Mid-excavation shot of Trench 1 - Detail	28/02/11	KM
147	V/N	1, 2		Mid-excavation shot of Trench 1 and 2 - Detail	28/02/11	KM
148	V/N	1, 2		Mid-excavation shot of Trench 1 and 2 - Detail	28/02/11	KM
149	V/N	1, 2		Mid-excavation shot of Trench 1 and 2 - Detail	28/02/11	KM
150	S	2	(203), (204)	Mid-excavation shot of Trench 2 showing (203) and (204)	28/02/11	RC
151	N	2	(203), (204)	Mid-excavation shot of Trench 2 showing (203) and (204)	28/02/11	RC
152	WNW	4		Working shot – Trench 4	28/02/11	RC
153	E	4		Working shot – Trench 4	28/02/11	RC
154	W	5	[508]	Trench 5 – General view [508]	28/02/11	TR
155	W	5	[508]	Trench 5 – General view [508]	28/02/11	TR
156	W	5	[508]	Trench 5 – [508] at E end - Detail	28/02/11	TR
157	W	5	[508]	Trench 5 – [508] at E end - Detail	28/02/11	TR
158	S	5	[508]	Trench 5 – [508] at E end - Detail	28/02/11	TR
159	S	5	[508]	Trench 5 – [508] at E end - Detail	28/02/11	TR
160	W	5	[508]	Trench 5 – [508] at E end - Detail	28/02/11	TR
161	W	5	[508]	Trench 5 – [508] at SE end - Detail	28/02/11	TR
162	S	5	[508]	Trench 5 – [508] at SE end - Detail	28/02/11	TR
163	S	5	[508]	Trench 5 – [508] at SE end - Detail	28/02/11	TR
164	NE	3		Pre-excavation shot – Trench 3	28/02/11	RC
165	E	3		Pre-excavation shot – Trench 3	28/02/11	RC
166	E	6		Pre-excavation shot of Trench 6	28/02/11	RC
167	SE	6		Pre-excavation shot of Trench 6	28/02/11	RC
168	S	6		Pre-excavation shot of Trench 6	28/02/11	RC
169	W	4	[402]	Post-excavation shot – Trench 4 showing [402]	28/02/11	JM
170	W	4	[402]	Post-excavation shot – Trench 4 showing [402]	28/02/11	JM
171	N	4		Detail of wall footings	28/02/11	JM
172	N	4	[402]	Post-excavation shot – Trench 4 showing [402]	28/02/11	JM
173	E	4	[402]	Post-excavation shot – Trench 4 showing [402]	28/02/11	JM
174	E	4	[402]	Post-excavation shot – Trench 4 showing [402]	28/02/11	JM
175	E	4	[402]	Post-excavation shot – Trench 4 showing [402]	28/02/11	JM
176	S	5		Trench 5 – S section	28/02/11	TR
177	S	5		Trench 5 – S section	28/02/11	TR
178	S	5		Trench 5 – S section and Trench at limit of excavation	28/02/11	TR
179	V	5		Trench 5 – base and Trench at limit of excavation	28/02/11	TR
180	V	5		Trench 5 – base and Trench at limit of excavation	28/02/11	TR
181	V	5		Trench 5 – base and Trench at limit of excavation	28/02/11	TR
182	V	5		Trench 5 – base and Trench at limit of excavation	28/02/11	TR
183	E	5		Trench 5 – E section and Trench at limit of excavation	28/02/11	TR
184	E	5		Trench 5 – E section and Trench at limit of excavation	28/02/11	TR
185	S	5		Trench 5 – S section and Trench at limit of excavation	28/02/11	TR
186	S	5		Trench 5 – S section and Trench at limit of excavation	28/02/11	TR
187	N	5		Trench 5 – N section and Trench at limit of excavation	28/02/11	TR

188	N	5		Trench 5 – N section and Trench at limit of excavation	28/02/11	TR
189	N	5		Trench 5 – N section at limit of excavation	28/02/11	TR
190	N	5		Trench 5 – N section at limit of excavation	28/02/11	TR
191	V	1		Working shot - Newt	29/02/11	KM
192	V	1		Working shot - Newt	29/02/11	KM
193	S	1		(105) post-removal of (103) – No scale	29/02/11	KM
194	S	1		(105) post-removal of (103) – No scale	29/02/11	KM
195	V	1		Stony deposit (105)	29/02/11	KM
196	W	1		Stony deposit (105) and W section	29/02/11	KM
197	E	1		Stony deposit (105) and E section	29/02/11	KM
198	V	1, 2		Trench 1 and 2 from above	29/02/11	KM
199	V	1, 2		Trench 1 showing (105)	29/02/11	KM
200	V	1, 2		Trench 1 showing (105)	29/02/11	KM
201	V	1		[104] and (105) post-removal of (103)	29/02/11	KM
202	V	1		[104] and (105) post-removal of (103)	29/02/11	KM
203	V	1		[104] and (105) post-removal of (103)	29/02/11	KM
204	V	1		[104] and (105) post-removal of (103)	29/02/11	KM
205	V	1		[104] and (105)	29/02/11	KM
206	V	1		(105) – General shot	29/02/11	KM
207	W	1, 2		General location shot	29/02/11	KM
208	W	1, 2		General location shot	29/02/11	KM
209	S	1		N facing elevation of [104] showing (110)	29/02/11	KM
210	E	1		Pre-excavation shot of (110)	29/02/11	KM
211	S	1		Post-excavation shot – Trench 1	29/02/11	KM
212	S	1		Post-excavation shot – Trench 1	29/02/11	KM
213	S	1		Post-excavation shot – Trench 1	29/02/11	KM
214	S	1		Post-excavation shot – Trench 1	29/02/11	KM
215	E	1		Post-excavation shot – Trench 1	29/02/11	KM
216	E	1		Post-excavation shot – Trench 1	29/02/11	KM
217	E	1	(105)	Post-excavation shot – (105)	29/02/11	KM
218	E	1	(105)	Post-excavation shot – (105)	29/02/11	KM
219	S	1	[104], [114]	[114] underlying [104]	29/02/11	KM
220	S	1	[104], [114]	Detail of [104] and [114]	29/02/11	KM
221	S	1		Post-excavation shot – Trench 1	29/02/11	KM
222	S	6		Working shot	29/02/11	KM
223	S	1		Post-excavation shot – Trench 1	29/02/11	KM
224	S	6	(603)	Mid-excavation shot of Trench 6 showing (603)	01/03/11	RC
225	N	6	(603)	Mid-excavation shot of Trench 6 showing (603)	01/03/11	RC
226	E	6	(603)	Mid-excavation shot of Trench 6 showing (603)	01/03/11	RC
227	V/E	6	(603)	Detail of (603) W end	01/03/11	RC
228	V/E	6	(603)	Detail of (603) central	01/03/11	RC
229	V/E	6	(603)	Detail of (603) E end	01/03/11	RC
230	S	6	(603)	Mid-excavation shot of Trench 6 showing (603)	01/03/11	RC
231	N	1, 2		Post-excavation shot of Trench 1	01/03/11	KM
232	N	1		Post-excavation shot of Trench 1	01/03/11	KM
233	N	1		Post-excavation shot of Trench 1	01/03/11	KM
234	N	1		Post-excavation shot of Trench 1	01/03/11	KM
235	N	1		Post-excavation shot of Trench 1	01/03/11	KM
236	N	1		Post-excavation shot of Trench 1	01/03/11	KM
237	N	1		Post-excavation shot of Trench 1	01/03/11	KM
238	N	1		Post-excavation shot of Trench 1	01/03/11	KM
239	N	1		Post-excavation shot of Trench 1	01/03/11	KM

240	N	-		<i>TBM at SE corner of square tower , E side</i>	02/03/11	TR
241	N	-		<i>TBM – Top of staff pointing at height</i>	02/03/11	TR
242	NNE	-		<i>TBM – Top of staff pointing at height</i>	02/03/11	TR
243	W	-		<i>TBM – Top of staff pointing at height</i>	02/03/11	TR
244	N	-		<i>JM monitoring marker posts</i>	02/03/11	TR
245	S	6		<i>Post-excavation shot of Trench 6</i>	02/03/11	RC
246	N	6		<i>Post-excavation shot of Trench 6</i>	02/03/11	RC
247	S	6		<i>Post-excavation shot of Trench 6</i>	02/03/11	RC
248	E	6	[607], [608]	<i>W facing elevation of [607] and [608]</i>	02/03/11	RC
249	E	6	[607], [608]	<i>W facing elevation of [607] and [608]</i>	02/03/11	RC
250	N	6		<i>S facing section of Trench 6</i>	02/03/11	RC
251	S	6		<i>N facing section of Trench 6</i>	02/03/11	RC
252	S	6		<i>N facing section of Trench 6</i>	02/03/11	RC
253	W	6		<i>E facing section of Trench 6 – S end</i>	02/03/11	RC
254	W	6		<i>E facing section of Trench 6 – Central</i>	02/03/11	RC
255	W	6		<i>E facing section of Trench 6 – N end</i>	02/03/11	RC
256	E	6	[607], [608]	<i>Detail of foundation [607] and [608]</i>	02/03/11	RC
257	E	6	[607], [608]	<i>Detail of foundation [607] and [608]</i>	02/03/11	RC
258	NNE	3		<i>Working shot – Trench 3</i>	02/03/11	RC
259	NNE	3		<i>Working shot – Trench 3</i>	02/03/11	RC
260	S	1		<i>Post-excavation shot of Trench 1</i>	02/03/11	KM
261	S	1		<i>Post-excavation shot of Trench 1</i>	02/03/11	KM
262	S	1		<i>Post-excavation shot of Trench 1</i>	02/03/11	KM
263	W	1		<i>Post-excavation shot of Trench 1</i>	02/03/11	KM
264	W	1		<i>Post-excavation shot of Trench 1</i>	02/03/11	KM
265	N	1		<i>Post-excavation shot of Trench 1</i>	02/03/11	KM
266	E	5		<i>W facing section of Trench 5</i>	02/03/11	KM
267	E	5		<i>W facing section of Trench 5</i>	02/03/11	KM
268	V/N	5		<i>Post-excavation – Trench 5</i>	02/03/11	KM
269	V/N	5		<i>Post-excavation – Trench 5</i>	02/03/11	KM
270	W	5		<i>Post-excavation – Trench 5</i>	02/03/11	KM
271	W	5		<i>Post-excavation – Trench 5</i>	02/03/11	KM
272	W	5	[508]	<i>E facing elevation of Trench 5</i>	02/03/11	KM
273	W	5	[508]	<i>E facing elevation of Trench 5</i>	02/03/11	KM
274	W	5	[508]	<i>E facing elevation of Trench 5</i>	03/03/11	KM
275	W	5	[508]	<i>E facing elevation of Trench 5</i>	03/03/11	KM
276	V/E	5	[508]	<i>Post-excavation plan of Trench 5</i>	03/03/11	KM
277	N	1		<i>S facing section of Trench 1</i>	03/03/11	KM
278	S	2		<i>Post-excavation of slot at N end of Trench 2</i>	03/03/11	KM
279	N	3		<i>Post-excavation shot of trench 3</i>	03/03/11	KM
280	N	3		<i>Post-excavation shot of trench 3</i>	03/03/11	KM
281	N	3		<i>Post-excavation shot of trench 3</i>	03/03/11	KM
282	N	3		<i>Post-excavation shot of trench 3</i>	03/03/11	KM
283	E	3	[304]	<i>Post-excavation shot of [304] – W facing elevation</i>	03/03/11	KM
284	W	3	[304]	<i>Post-excavation shot of [304] – E facing elevation</i>	03/03/11	KM
285	N	3	[304]	<i>Post-excavation shot of [304]</i>	03/03/11	KM
286	N	3	[304]	<i>Post-excavation shot of [304]</i>	03/03/11	KM
287	N	3	(303)	<i>Trench 3 showing (303)</i>	03/03/11	KM
288	N	3	(303)	<i>Trench 3 showing (303)</i>	03/03/11	KM
289	N	3	(303)	<i>Trench 3 showing (303)</i>	03/03/11	KM
290	NNE	3		<i>Working shot</i>	03/03/11	RC
291	E	3	[304]	<i>Post-excavation shot of [304]</i>	03/03/11	KM

292	E	3	[304]	Post-excavation shot of [304]	03/03/11	KM
293	N	3	[304]	Post-excavation shot of [304]	03/03/11	KM
294	N	3	[304]	Post-excavation shot of [304]	03/03/11	KM
295	W	4		Trench 4 after back-filling	03/03/11	RC
296	NNE	3		Trench 3 after backfilling	03/03/11	RC
297	N	1		S facing section of Trench 1	03/03/11	KM
298	N	1		S facing section of Trench 1	03/03/11	KM
299	N	2		S facing section of Trench 2	03/03/11	KM
300	N	2		S facing section of Trench 2	03/03/11	KM
301	W	2		Trench 2	03/03/11	KM
302	W	2		E facing section	03/03/11	KM
303	W	2		E facing section	03/03/11	KM
304	S	2		N facing elevation – [205]	03/03/11	KM
305	W	1		E facing section – S part	03/03/11	KM
306	W	1		E facing section – Central part	03/03/11	KM
307	W	1		E facing section – N part	03/03/11	KM
308	W	1		E facing section – N part	03/03/11	KM
309	W	5		Trench 5 after backfilling	04/03/11	RC
310	SE	6		Trench 6 after backfilling	04/03/11	RC
311	SE	6		Trench 6 after backfilling	04/03/11	RC
312	S	1		Trench 1 – mid backfilling	04/03/11	RC
313	SW	1, 2		Trench 1 and 2 – mid back-filling	04/03/11	RC
314	SW	1, 2		Trench 1 and 2 – mid back-filling	04/03/11	RC
315	S	WB		Survey peg 1	02/03/11	JM
316	E	WB		Pit for survey peg 2	02/03/11	JM
317	N	WB		Survey peg 2	02/03/11	JM
318	N	WB		Close up of above	02/03/11	JM
319	V	WB		Survey peg 3	02/03/11	JM
320	V	WB		Survey peg 4	02/03/11	JM
321	V	WB		Survey peg 5	02/03/11	JM
322	V	WB		Pit for survey peg 6	02/03/11	JM

Appendix E Finds Register; Doone Castle – Archaeological Evaluation

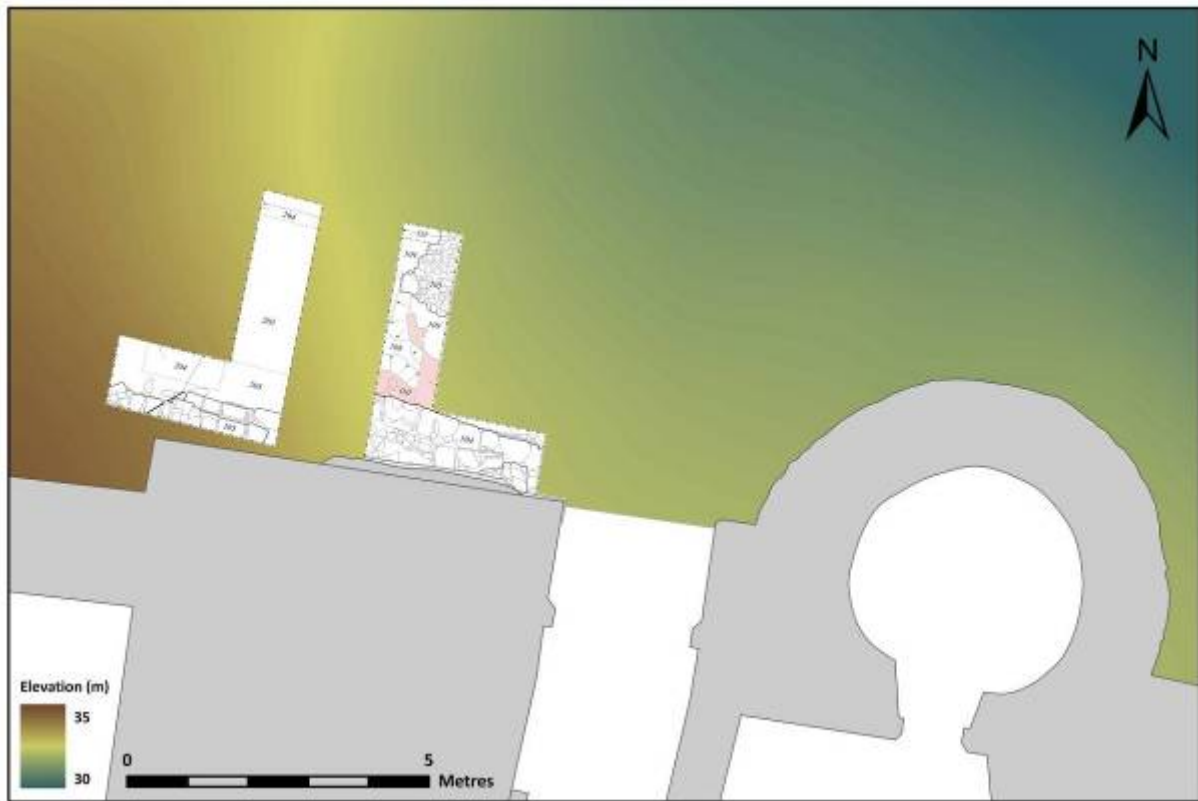
number	context	trench	quantity	material	description	Comments	Date	Initials
001	101	1		mix	pottery, bone and nails		21/02/11	KM
002	102	1		mix	mix	Trench 1 – N half	21/02/11	KM
003	102	1		mix	mix	Trench 1 – S half	21/02/11	KM
004	201	2	1	stone	whetstone		21/02/11	BB
005	202	2		mix	mix		21/02/11	RC/BB
006	102	1	1	coin	small coin	Charles I 1632-39	21/02/11	KM
007	501	5		mix	glass and slates		24/02/11	TR
008	502	5		mix	glass, clay pipe, bones		24/02/11	TR
009	503	5		mix	bone and mortar	Primarily bone	24/02/11	TR
010	502	5	2	mortar	mortar samples		24/02/11	TR
011	102	1		mix	mix		24/02/11	KM
012	102	1		mix	mix		24/02/11	KM
013	102	1		mix	mix	N end at base	25/02/11	KM
014	102	1	1	mix	brick/floor tile		25/02/11	KM
015	202	2		bone	numerous bone fragments		25/02/11	RC/BB
016	202	2	7	shell	oyster shells		25/02/11	RC/BB
017	202	2		ceramic	green-glazed ceramic fragments		25/02/11	RC/BB
018	202	2		fe	fe fragments		25/02/11	RC/BB
019	203	2		shell	oyster shells		25/02/11	RC/BB
020	203	2		clay	clay – ?possibly daub		25/02/11	RC/BB
021	203	2		ceramic	green-glazed ceramic fragments		25/02/11	RC/BB
022	202	2	1	coin	small coin	George I 1723	25/02/11	BB
023	203	2		bone	assorted animal bone fragments		25/02/11	RC/BB
024	504	5		mortar	mortar sample		28/02/11	TR
025	203	2		fe	fe		28/02/11	RC
026	505	1		mortar	mortar sample	From foundation	28/02/11	TR
027	503	5		mix	primarily bone	From E extension	28/02/11	TR
028	502	5		mix	primarily bone	From E extension	28/02/11	TR
029	504	5		mix	shell and bone	Mostly near foundations	28/02/11	TR
030	502	5		slate/ stone	slate and stone	From E extension	28/02/11	TR
031	103	1		mix	medieval pottery and bone	Sandy deposit	28/02/11	KM
032	107	1		mix	medieval pottery and bone		28/02/11	KM
033	108	1	1	ceramic	green-glazed 'jug' handle		28/02/11	KM
034	602	6		bone	animal bone		01/03/11	RC
035	601	6		mix	mix	Topsoil finds	28/02/11	RC
036	602	6	1	fe	fe nail		01/03/11	RC
037	602	6	2	ceramic	ceramic pipe stems		01/03/11	RC
038	602	6	1	metal	shoe buckle – possibly silver	Late 17 th to early 18 th century	28/02/11	RC

039	Unstrat	-		ceramic	pottery and pipe stem	Surface finds – molehills and burrows	01/03/11	RC
040	604	6		bone	animal bone		02/03/11	RC
041	603	6	4	stone/ mortar	mortar and stone roof slabs	Nail holes visible	02/03/11	RC
042	Unstrat	5	6	ceramic	ceramic	In backfill	04/03/11	RC
043	504	5		mix	mix	Pipe bowl and bone	02/03/11	TR
044	509	5		mix	mix		02/03/11	TR
045	401	4		mix	mix		02/03/11	JM
046	108	1		mix	mix		01/03/11	KM
047	101	1	1	metal	metal object		01/03/11	KM
048	202	2		mix	mix		01/03/11	RC
049	302	3	1	tile	tile		01/03/11	JM
050	302	3	1	tile	tile		01/03/11	JM
051	101	1		mix	mix		01/03/11	KM
052	601	6	1	gold	medieval gold ring – missing stone	16 th – 17 th century	04/03/11	RC/KM

Appendix F Samples

<i>sample number</i>	<i>context</i>	<i>size</i>	<i>description</i>	<i>comments</i>	<i>date</i>	<i>initial</i>
001	503	1 bag	orange, bone rich and shells	Trench 5	28/02/11	TR
002	206	1 bag	mixed silty sand – bone and charcoal inclusions	Trench 2	28/02/11	RC
003	107	1 bag	black sands – charcoal	Trench 1 - S end	01/03/11	KM
004	107	1 bag	black sands – charcoal	Trench 1 - S end	01/03/11	KM
005	507	1 bag	fill of possible foundation trench cut		02/03/11	TR
006	604	1 bag	bone and charcoal rich deposit seemingly beneath foundation [607] and [608]		02/03/11	RC
007	108	1 bag	sandy deposit in tip of clay	Trench 1	01/03/11	KM

Appendix G Trenches 1, 2 and 5 in structural context



Trench 1 and 2 against the N wall of Doone Castle



Trench 5 against the E wall of Doone Castle

Appendix H Finds assessments – archival records

i. Ceramics

George Haggarty

a. Summary

The small pottery assemblage from Doone Castle is important for a number of reasons. In terms of medieval ceramic production the area is a bit of a black hole. To date there is no published evidence exemplifying the area's dominant medieval fabrics and forms. The evidence from this excavation shows clearly it was in the production area for Scottish redwares. The Scottish white gritty ware (2003) /021\ suggests a date no later than the late 13th early 14th century when it generally ceases to travel into areas producing redwares. The tiny tile shard decorated with white slip (5002) /28\ might suggest Dutch imports. The decorated early gritty redware shard, also from (2003) /021\, is likely to have been an import from one of the towns north of the Tay.

It is suggested that a small statistically valid group of redwares from the site be sent for ICP analysis, along with the shard of white gritty ware, the shard of gritty redware and two small glazed tile shards. As well as filling a gap in knowledge of Scottish redware distribution, pertinent questions include:

- Can we identify a source for the white gritty ware and gritty red ware?
- Is the white slipped tile Dutch or were tiles also produced from the local clays?

b. Catalogue

(101) /1\ Shards 14: Modern

14 shards most badly frost damaged from a number of vessels in a number of fabrics: No archaeological value

(102) /2\ Shards 2: Date 19th century.

One basal angle shard from a redware crock with an internal black glaze
One standard white earthenware body shard

(102) /3\ Shards 9: Date 19th century. (Mixed)

Seven shards of redware: various dates
Two small whiteware shards: one from a banded pearlware bowl and one, undecorated porcelain

(102) /11\ Shards 10: Date 19th century. (Mixed)

Four medieval and late medieval redware shards
Three late medieval reduced shards
One late 18th century salt glaze rim shard from a bowl

Two pearlware shards from a bowl 19th century

(102) /13\ Shards 11: Date 16th century?

Eleven redware body shards some partly reduced and nine glazed

(102) /51\ Shards 4: Date 19th century. (Mixed)

Three shards of 19th century; standard white earthenware
One shard of Scottish post medieval oxidised ware 16th century

(102) /12\ Shards 5: Date 17th century?

Five body shards: three glazed from as many vessels in a redware fabric with some reduction

(102) /31\ Shards 11: Date 14/15th century?

Eleven redware body shards most glazed

(103) /31\ Shards 4: Date 14th century?

One unglazed rim shard from a redware jug in a red sandy fabric
One green glazed strap handle shard in a red sandy fabric
One green glazed body shard in a red sandy fabric and almost certainly from a jug
One small body shard with traces of a lead glaze

(107) /32\ Shards 30: Date 15th century?

Thirty redware shards; twenty eight body one rim and one base and probably all from jugs: Nineteen are little more than crumbs and one has traces of white slipped pattern

(108) /33\ Shards 1: Date 14th century?

One multi grooved green glazed rod handle and rim from a small jug in a red sandy fabric. Where the handle joins just below the rim it has a row of small vertical finger nail impressions.

(201) /5\ Shards 21: Date 19th century (Mixed)

Two body shards Scottish Post medieval reduced ware 17th century jug
Three redware body shards
One small redware shard almost certainly from a lead glazed tile (no slip)
One shard from a whiteware cup with handle scar
One tiny body shard from a polychrome decorated tin glazed earthenware vessel

(202) /017\ Shards 21: Date 14th century?

One multi grooved green glazed rod handle in a partly reduced redware: glaze partly abraded.
Twenty redware body shards of which three, two and two conjoin, from what is almost certainly a small number of vessels all of which have traces of lead glaze.

(203) /021\ Shards 15: Date 14th century but may be 13th.

Ten body shards all with traces of glaze; one with white slip and all in a red sandy fabric: Two or three jugs?
One green glazed body shard from the shoulder of a jug decorated with a horizontal raised cordon below which are spaced vertical bands in groups of three: A gritty redware fabric
Two conjoining shards from Scottish white gritty ware jug decorated with spaced vertical strips of red clay between two of which there stripes of very small red pellets all under a green glaze. The past is distinctive having fine black specks
One small rim shard from a well thrown cooking pot in a red sandy fabric

(401) /45\ Shards 3: Date Late 19th century?

Three standard white earthenware shards from a plate decorated with a flow blue transfer print

(502) /28\ Shards 12: Date?

Eleven small shards of redware: Ten bodies and one rim from a many vessels
One small redware shard glazed over white slip on its one surface: almost certainly from a tile.
Four small stones discarded

(502) /28\ Shards 1: Date 16th century?

One redware sandy shard glazed on its interior surface and with heat sheen on its exterior: Scottish Post Medieval Oxidises Ware
One stone discarded

(503) /9\ Shards 2: Date 16th century?

One thick redware sandy shard glazed on both surfaces and with an internal heat sheen: Scottish Post Medieval Oxidises Ware

One small redware glazed shard from what may be a tile on in what may be the same sandy red fabric as the pottery from the site.

U/S /042\ TR5: Shards 2

Two lead glazed redware shards

U/S Surface Finds: Shards 2: Date 14th/15th centuries

Two redware shards one green glazed

ii. Faunal remains

Dave Henderson

a. Introduction

Animal bones were recovered from 11 separate contexts on site (counting (1002/2002) and (1003/2003) as representing the same deposition events recorded in adjacent Trenches 1 and 2 on the North side of the castle). No faunal remains were recovered from trial Trenches 3 or 4. Most of the material assessed here derives from layers (*002) and (*003) in Trenches 1, 2, 5 and 6; which appears to represent levelling/landscaping deposits against the wall foundations outside the castle. Some contamination of these deposits is possible. No complete soil-samples have been processed, so the assemblage comprises a hand-recovered sample, possibly biasing against the recovery of smaller bones; for example those from fish or rodents. A note on the presence of shellfish is also appended.

b. Assessment of the material

The general character of the material recovered from the most productive contexts (1002, 1003, 2002, 2003, 5002, 5003, 6002 and 6004) is large fragments of bone deriving mostly from the common domesticated species, cattle, sheep/goat and to a lesser extent, pig. Some bones from small horse and/or donkey were also identified. This material is mixed with a lesser quantity of smaller chips of bone and with remains of smaller domestic creatures such as chicken, dog and cat. Wild species were indicated by possible remains of waterfowl, game birds and two fragments of antler of red deer (from contexts (5002) and (1002)).

A large number of the bones displayed clear marks of butchery (saw-marks, chop-marks and finer knife-cuts) and the parts of the skeleton represented were more from the low-meat yielding parts of the carcass. This finding may indicate that the assemblage represents the waste from butchery (dividing the animal into "joints of meat") rather than from the remains of meals, with such kitchen waste being disposed of elsewhere on site. The very low numbers of foot and hoof bones may indicate that the main food species were brought to site as carcasses. Some gnawing marks (rodent and canine) on some of the bones suggests that the material lay exposed for a time before it was incorporated into the deposits from whence it was recovered.

The sawn antler fragments referred to above are indicative of craft-working. The larger piece of antler from (5002) is still attached to the skull, i.e. from a dead deer, rather than a shed antler collected from the ground. A complete analysis of the material will identify any other deer bones in the assemblage. Although no bones were measured for this assessment, the general size of the animals represented is consistent, in the author's experience, with domestic animals of the post-mediaeval period, but before the improved stock of the late-18th and 19th Centuries.

c. Further work

A full catalogue of material should be created, as far as possible identifying the species and skeletal part of each item of the assemblage. The catalogue would include descriptions of any butchery marks and indicators of the age of the animal at slaughter. The latter may throw light on the nature of the husbandry practices used on the stock from which the assemblage derives; for example, whether the cattle were primarily excess stock from a dairy herd, or if the sheep were kept to provide wool rather

than for lamb. An excess of younger sheep may suggest that the animals were slaughtered for higher status consumption. The presence of game animals and birds may also throw light on this question. Analysis of the pattern of the frequency with which various parts of the skeleton were deposited in different trenches may indicate spatial patterns in the use of the site.

Shellfish

A total of 32 oyster shells were recovered, half from Trenches 1 and 2, half from Trench 5 on the East side of the castle. These marine shells must have been imported to the site, possibly from the beds in the tidal part of the River Forth, approximately 25 km away. One mussel shell was recovered from context (1002). Further investigation is required to identify it as the marine or the freshwater species.

iii. Metalwork and Glass

Julie Franklin

a. The assemblage

The assemblage consists of 55 iron finds, seven finds of non-ferrous metal and 32 sherds of glass. These were largely of modern date. A handful of finds can be dated to around the mid 18th century. A few finds are potentially earlier, though only one coin can be definitively shown to predate the mid 18th century.

b. Non-ferrous metalwork

A coin (SF6) is potentially the earliest find in the assemblage, possibly of late medieval date. This coin after cleaning and identification should provide useful dating evidence. Another coin (SF22) is of Georgian date. A decorative shoe buckle (SF38) and button (SF3) belong to the same period, the buckle dating to between c.1720 and c.1770. A small tube (SF12), probably used to bind the end of a rope is a relatively unusual find. A shotgun cartridge (SF1) and fragment of light bulb are of 20th century date, and other finds, including a pen nib are likely to be of recent origin. The most notable of the finds is a finger ring (SF52), apparently of gold (SF52). It is of uncertain date at present.

c. Ironwork

The iron assemblage is mostly made up of nails, most of which are modern machine made examples. Two nails (SF9, SF36) are clearly wrought and thus most likely predate the mid 19th century. There are also some other structural fittings among the assemblage including a large loop-ended rod (SF47). A complete whittle-tanged knife (SF18) is of potentially early date, though as it was associated with modern nails, a recent date is quite possible. A large lump (SF11) may be a hammer head, though conservation work would be needed to confirm this.

d. Glass

The two oldest bottle sherds are both of the mallet wine bottle type, dating to around the middle of the 18th century (SF11, SF35). Other sherds are of 19th and 20th century date, including bottles, a jar and a goblet stem. Window glass fragments are of modern appearance.

e. Discussion

The assemblage largely fits between the mid-18th and 20th centuries. Several finds (eg. SF3, SF11, SF38,) may date to the period of military action at the castle during the Jacobite rising of 1745. Later finds may relate to the use of the ruined castle for picnicking and to conservation building works. Earlier finds are generally mixed with more recent finds. The early coin is associated with modern glass. In Trench 6 there appear to be potentially uncontaminated 18th century deposits, with context 6002 containing no later metalwork or glass finds.

f. Post-excavation recommendations

Potential

The coin (SF6) is early and provides evidence for activity at the castle, potentially as early as the late medieval period. Further analysis of some of the other finds, the knife (SF18) in particular may provide more evidence for medieval activity. However, if early, these finds appear to be residual.

A few of the 18th century finds are potentially in situ, though this would have to be confirmed by pottery dating. The possible association with the Jacobite rising of 1745 gives these finds some interest.

The 19th and 20th century finds are of less interest, though can still illustrate the use of the area after the Castle falls into ruin.

g. Preliminary work

Conservation

Four finds are recommended for cleaning and stabilisation: the two coins, the finger ring and the shoe buckle (SF6, SF2, SF38, SF52). Two finds are recommended for x-ray: the knife and the possible hammer head (SF11, SF18). Other finds are either clearly modern and/or well enough preserved to make x-rays unnecessary.

Analysis & Reporting

The assemblage is of some interest and a short report on the metalwork and glass should be included in any publication of the excavations. This should include identification and dating of the coins; typological dating of the finger ring; further dating and analysis of the glass assemblage; analysis of the finds assemblage in relation to the stratigraphy and history of the castle. It should concentrate on the finds of 18th century and earlier date, with only a brief note about the more modern assemblage.

Illustration

Four finds are recommended for illustration (finger ring, SF52; buckle, SF38, knife, SF18; bottle, SF11), with potentially a further three based on the results of conservation and further analysis (hammer?, SF11, button, SF3, tube, SF12). Some of these could be effectively illustrated by photography or by a combination of photography and line drawing.

iv. Clay tobacco pipes

Ben Blakeman

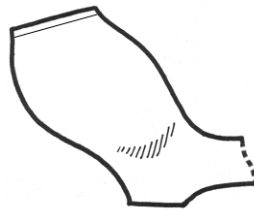
a. Summary

A total of 66 clay pipe fragments comprising 15 bowls, 2 mouthpieces and 49 stems were recovered during excavations from 8 different contexts (with 1 from surface collection and 4 were unstratified as they were recovered from mole hills). The majority of the clay tobacco pipe fragments from the site are of 17th century date. The main pipe form is one of a medium sized bulbous bowl with a flat base. Of the 6 intact bowls 5 were of this type (c.1660-1680) with the other smaller and possibly of earlier date (c.1640-1660). Several bowls displayed a rouletted ring just below the rim of the bowl which in each case was poorly executed.

In general the stem diameter ranges from 7-9mm with a bore diameter of 2.5-3mm. The fabric of the pipes is restricted to the usual white clay. Only 3 mouth pieces were recovered but their sparsity isn't

uncommon in archaeological contexts due to being the narrowest part of the stem and thus very fragile. Only one fragment of stem showed any sign of glazing.

Several bowl fragments appear to be of later date due to their projected size, bowl diameter and straighter sides. There are also a few stem fragments which are much thinner in section than the 17th century assemblage and which have smaller bore diameters, typical of much later clay pipes. Three stem fragments exhibit maker's names. One fragment has ".....& Co" engraved. The name 'W.RICHMON....' is moulded on another stem with '.....EITH' on the reverse, possibly relating to Leith. No information relating to this maker could be found. The final stem has '...CHRISTI...' visible with '...LASGOW' on the opposite side, both with a dotted surround. The maker of this pipe is probably William Christie of Glasgow whose factory was active between 1857 and 1962. A mould-imparted hand motif with a lattice structure was present on one bowl fragment but was incomplete.



Typical clay pipe bowl form from the Doune assemblage (c.1640-1660)

The majority of the 66 clay pipe fragments were recovered from trenches 1 and 5, 29 and 16 respectively. In trench 1 context (102) alone contained 25 fragments. This is probably misleading however as (102) was located across the largest trench (along with trench 2) and was also a particularly deep deposit.

b. Table

Context	Stem Frag.t Length (mm)	Stem Diam. (mm)	Stem Bore Diam. (mm)	Bowl Frag. Height (mm)	Bowl Diam. (inside rim) (mm)	Comment	Description/Interpretation	Date
Surface	22	6	2			Glazing	Plain stem	
Unstrat.	28	7	2.5				Plain stem	
Unstrat.	27	8	2.5				Plain stem	
Unstrat.	41	8	3				Plain stem	
Unstrat.			3	33	11		Medium sized bulbous Bowl almost intact (chipping around rim), fragment 34mm in length. Flat circular base, relief ring below rim.	c.1660 -1680
101	15	7	2.5				Plain stem	
101	16	8	3				Plain stem	
101				36	c.18	Decorated	Bowl fragment, 36mm high x 24mm, inside bowl diameter probably c.18mm, mould-imparted hand mottif (lattice structure).	
101	57	9	2			Imprinted	Stem fragment with broken base present and the beginning of the bowl. Inscription "W.RICHMON....." on one side and ".....EITH" on the other. Maker unknown.	
102	27	7	2.5				Plain stem	

102	28	6	3				Mouthpiece (tapered end)	
102	25	8	3				Plain stem	
102	49	10	2			Imprinted	end of maker's name present "....& Co "	
102	38	8	3				Plain stem	
102	30	9	3				Plain stem	
102	17	8	2				Plain stem	
102	25	5	1.5				Plain stem	
102	21	5	1.5				Plain stem	
102	32	9	3				Plain stem	
102	32	9	3.5				Plain stem	
102	25	7	4				Plain stem	
102	45	7	3				Plain stem	
102	27	9	3				Plain stem	
102	30	8	3				Plain stem	
102	21	6	3				Plain stem	
102				21			Bowl fragment, side of bowl, 14mm in length.	
102			3	15			Bowl fragment, 17mm in length, base damaged.	c.1660 -1680
102				9	c.11		Bowl rim fragment, 13mm in length, milled ring below rim.	
102	25	6	3				Plain stem	
102	33	8	2.5				Plain stem	
102	25	8	2				Mouthpiece (rounded)	
102	38	9	2.5				Stem plus part of base, flat oval shaped base	
102				29	9		Small bulbous Bowl base missing, 28mm in length, almost lipped rim.	c.1640 -1660
102				30			Bowl fragment c. 1/4 remaining.	c.1660 -1700
201	27	10	3.5				Plain stem	
201	22	9	2.5				Plain stem	
201	26	8	3				Plain stem	
201	29	7	3				Plain stem	
201	26	6	2				Plain stem	
201			2.5	13			Bowl fragment, 20mm in length, flat base, acute angle to bowl from base.	c.1620 -1680
201			2.5	8			Bowl fragment, 16mm in length, flat base.	c.1620 -1680
202	25	8	3				Plain stem	
401	35	7	3				Mouthpiece (rounded)	
401	42	11-16	1.5				Eyeshaped in cross section	
401				31	c.14		Bowl fragment, side of bowl, 19mm in length.	
401				25	c.14		Bowl fragment, side of bowl, 20mm in length.	
401			3	32	12		Medium sized bulbous Bowl almost intact, part of rim missing, slightly flared mouth to bowl, 29mm in length, circular flat protruding base.	c.1660 -1680
401	35	11	2			Imprinted	Stem fragment with "CHRISTI..." engraved on one side and "[G]LASGOW" on the other. Text surrounded by small dot marks. Probably William	

							Christie of Glasgow, factory active 1857 - 1962.	
502	14	9	3				Plain stem	
502	14	6	3				Plain stem	
502	30	8	3				Plain stem	
502	20	8	3				Plain stem	
502	24	9	3.5				Plain stem	
502	42	8	3				Plain stem	
502	40	7	2				Stem fragment with partial flat circular base.	
502			2.5	28	11		Medium sized bulbous Bowl intact, flat oval base, 36mm in length, rouletted ring rim poorly done.	c.1660 -1680
503	22	9	2.5				Plain stem	
503	27	6	2.5				Plain stem	
503	20	9	2.5				Plain stem	
503	38	10	3				Plain stem	
503	26	10	3				Plain stem	
503				15	c.11		Bowl fragment, side of bowl, 15mm in length.	
503			3	32	10.5		Medium sized bulbous Bowl almost intact, part of rim missing, ring present below rim, 29mm in length, circular flat protruding base.	c.1660 -1680
504			2.5	31	10		Medium sized bulbous Bowl, part of rim missing, 34mm in length, Oval flat base, relief ring below rim.	c.1660 -1680
602	30	8	3				Plain stem	
602	24	7	3				Plain stem	