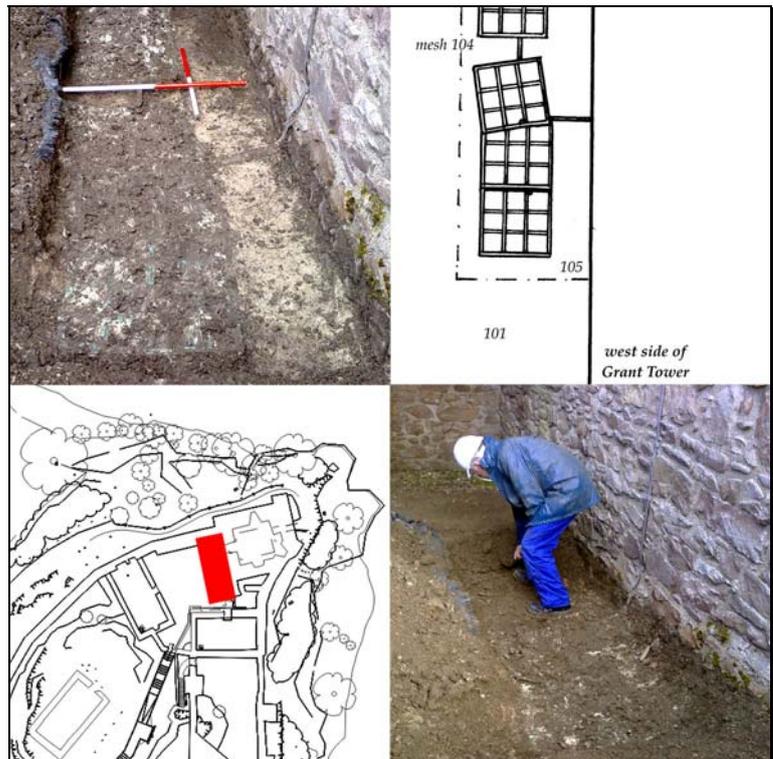


Historic Scotland
Properties in Care
Minor Archaeological Works 2009

Urquhart Castle (Grant Tower): Archaeological monitoring, October 2009

HS PIC Index number: 90309
Project code: HSCO-90309-2009-03



22 March 2010
Kirkdale Archaeology

<u>Site</u>	Urquhart Castle
<u>N.G.R</u>	NH 5309 2864
<u>Project Description</u>	Archaeological excavation
<u>Project code</u>	HSCO-90309-2009-03

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Summary

A minor excavation was carried out to reveal the extent of the earthing mesh of a lightning conductor running from the southwest battlement of the Grant Tower to the base of the ditch by the south face of the tower. The area excavated was previously disturbed ground, having been excavated and backfilled during the installation of the earthing mesh.

1.0 INTRODUCTION

Under the terms of its call-off contract with Historic Scotland, Kirkdale Archaeology was asked to an archaeological excavation on the W side of the Grant Tower to uncover the earthing mesh (for the dispersal of current) serving a lightning conductor sitting on the battlements of the SW corner of the tower. As the conductor was giving a poor reading, it was necessary to uncover the earthing mesh to establish where the problem lay. The trench was hand-excavated to a maximum depth of 300 mm as it was only necessary to expose the extent of the earthing mesh. As a result, the trench was dug entirely through backfilled material related to the original installation of the mesh. The mesh itself was bedded on the stone lining of the ditch, but this was only very partially exposed as the mesh was sealed in a non-conductive grease (to make sure that any current dispersed downwards).

The Grant Tower occupies a prominent position on the NE angle of the area known as the Inner Close. It was largely built in the early 16th century by Sir John Grant, although it may be built on an earlier foundation and vault. The tower is entered by a doorway in its W façade - the access to this is gained by a footbridge spanning a defensive ditch, which originally protected the S and W sides of the Tower. The area of ditch on the S side has been infilled. The excavation took place in the area of the W ditch.

No archaeological artefacts were recovered. The work was carried out on 1 October 2009.

2.0 DESCRIPTION

The trench was originally intended to be quite small until it became apparent that

there was a considerable amount of the earthing mesh spread along the base of the ditch. The trench started 500 mm from the N end of the ditch, extending S by 4.75 m. To the W the trench abutted the Tower and projected E by 1.20 m. It was excavated to a maximum depth of 300 mm. The upper layer consisted of **F101**, a layer of beach pebbles 50 mm thick. Below this was a relatively compact layer of backfilled silt, sandstone pieces and pebbles **F102** 250 mm thick - the backfill of the original trench to fit the earthing mesh. The backfill was full of modern plastic and glass. The backfill cleared onto a c 100 mm layer of non-conductive grease **F103** sealing the earthing mesh. The mesh **F104** was a series of seven 600 mm square copper pads divided into nine squares each by four internal copper bars. The pads were connected together to form a wide carpet to allow the lightning dispersal (under the protection of the non-conductive grease). The mesh was only partially exposed; the purpose of the excavation had been to uncover its extent, not to remove it. The mesh was bedded on a surface of mortared yellow sandstone **F105**, probably the lining of the W defensive ditch. This could date to the early 16th-century rebuild of the tower or could be contemporary with the basements, which are considered to be of an earlier date. There was not enough of its surface exposed to make a proper record of its extent or make-up. This is perhaps the only area of archaeological interest encountered the excavation.

3.0 INTERPRETATION AND OBSERVATIONS

The extent of the trench was dictated by the excavation brief, which required exposure of the earthing mesh in plan. As such, it was not possible to locate the original cut for the trench to emplace the mesh- it may have been cut through accumulated layers of archaeological interest. The exposure of only a small part of the stone-lined base of the ditch precluded any valuable archaeological comment. If future works to resolve the problems with the bedding of the lightning conductor require the mesh to be removed, it would provide a good opportunity to examine the ditch fabric.

A1.0 APPENDIX 1: CONTEXT REGISTER

#	Description
F101	Sub-rounded beach pebbles <20mm
F102	Compact layer of backfilled silt, sandstone pieces & pebbles
F103	Non-conductive grease over F104
F104	Copper earthing mesh
F105	Stone lining of ditch

A2.0 APPENDIX 2: PHOTOGRAPHIC REGISTER

#	Description	From	Date
1	Pre-ex Shot Looking N	S	1/10/2009
2	Pre-ex Shot Looking NNW	SSE	1/10/2009
3	Shot of Tower & Drawbridge & Ditch looking NE	SW	1/10/2009
4	Shot of Tower & Drawbridge & Ditch looking NNE	SSW	1/10/2009
5	General Shot showing the lightning conductor strap running down from the SW parapet	W	1/10/2009
6	Pre-ex Shot showing lightning strap entering the ditch	WSW	1/10/2009
7	Pre-ex Shot Looking NNE	SSW	1/10/2009
8	General shot of SSE portion of Ditch	NNW	1/10/2009
9	Shot of Tower looking NNE	SSW	1/10/2009
10	Detail shot of lightning strap	SW	1/10/2009
11	Excavation in progress looking NNE	SSW	1/10/2009
12	Excavation in progress looking NNW	SSE	1/10/2009
13	Exposed mesh & sandstone base looking NE	SW	1/10/2009
14	Post Ex of Earthing Mesh & Sandstone Ditch base looking N	S	1/10/2009
15	Post Ex of Earthing Mesh & Sandstone Ditch base looking N	S	1/10/2009
16	Post Ex of Earthing Mesh & Sandstone Ditch base looking NNE	SSW	1/10/2009

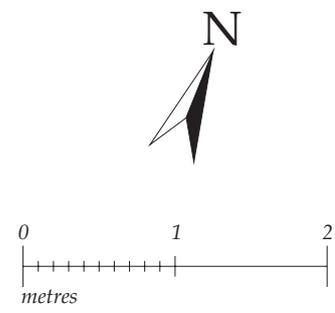
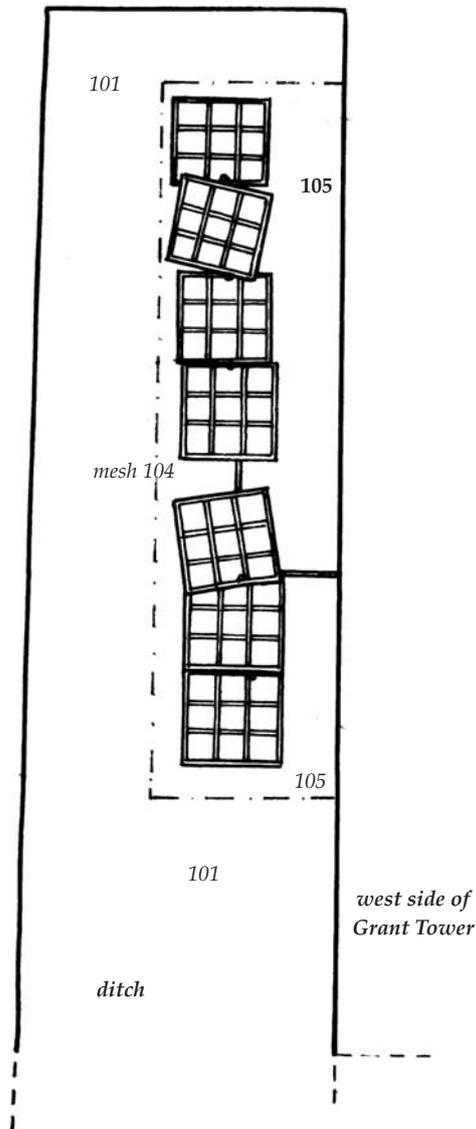
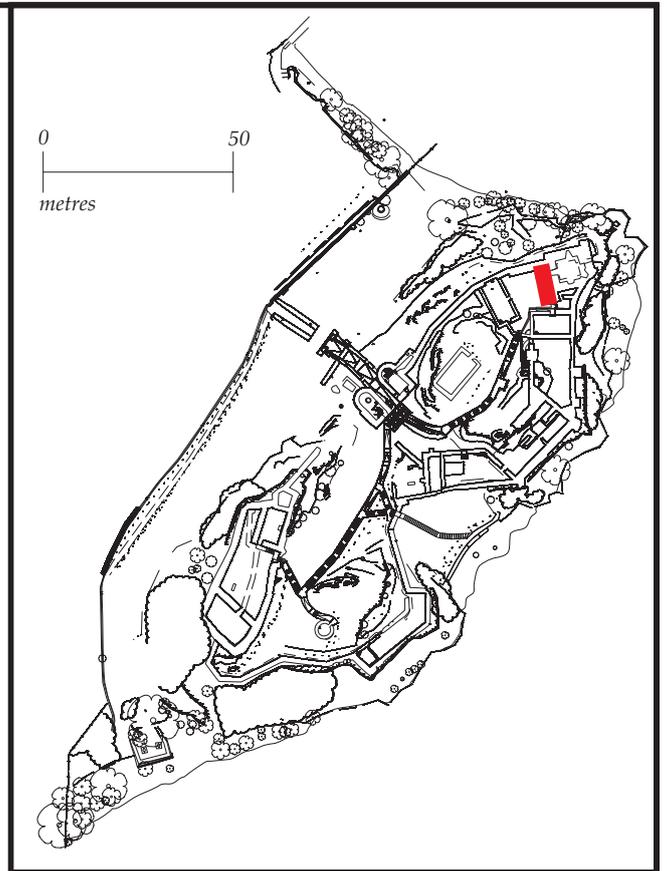


Fig. 1 : Location plan and plan (1:50) of excavated area