

Site Smailholm Tower

N.G.R NT 637 346

Project Description Archaeological Monitoring

Report

Attached

1.0 INTRODUCTION

A programme of archaeological monitoring was undertaken at Smailholm Tower over a period of three days in late January 2000, while contractors began construction on an extension to the public car park. The area involved consisted of a rectangular space measuring 26.50m E/W by 11.20m N/S, positioned against the S side of the farm road at the W end of the existing car park. The car park extension was to be situated in a shallow E/W aligned depression which was to be deturfed prior to being levelling up. The principal feature within this area was a stone-built, vaulted drain known as a cundie. The cundie ran E/W and drained an area of bog to the W of the car park into a farm pond to the E of the car park. The drain, although partly collapsed and containing copious amounts of debris, was seen to be still active.

The archaeological work consisted of monitoring the removal of turf and topsoil by hand from the top of the cundie and the subsequent machining away of the turf and topsoil from the rest of the site. As stated in the previous paragraph, parts of the cundie appeared to be in a state of terminal decay. In particular the E 8.50m of vaulted drain appears to have lost its keystones which seem to have fallen into the drain. Rather than repair the vaulting the initial plan for the site requires two manholes to be cut into the cundie and a 12 inch gauge plastic pipe to be inserted for the length of the structure. It was during the trial fitting of the pipe that it became clear that the pipe could not be made to fit the drain without major demolition of the remaining vaulting. The decision was therefore made to restore the cundie to its vaulted form without an interior pipe and at the same time to eliminate one of the two planned manholes.

2.0 EXCAVATION REPORT

The clearance of the site began with deturfing the cundie. This structure, [103], consisted of a vaulted drain built of rough freshly quarried slabs and blocks of locally derived whin consolidated with an extremely hard lime mortar. Internally the drain measured 550mm in width, with a maximum depth of 800mm. The external width of masonry exceeded 1.00m. The length of this structure within the work site measured 27m and was aligned E/W with the run off direction to the E.

The cundie within the work area protruded from the general round level by approximately one third of its height, i.e. 200-300mm. While most of this structure was turfed over it was noted that the easternmost 8.50m of the stonework was not only exposed to the elements but that the vaulting had been broken through to a

greater or lesser extent over this length. It was also noted that the broken vaulting although apparently in a state of severe deterioration was in fact extremely robust in condition due to the exceptionally hard mortar used in its construction.

The first day of works consisted of exposing the westernmost 18.50m of cundie by means of the removal of 200mm of clay rich topsoil and turf [101]. This process consisted of hand digging the entire length of masonry so avoiding machine damage to what might have been a potentially delicate structure. This part of the works resulted in the exposure of over 18m of intact and extremely solid masonry. It became clear at this point that hacking through the vault of the drain to provide manholes through which to put a plastic lining to the drain would be both a time consuming as well as a destructive exercise and indeed could be rendered pointless by the simple process of clearing the drain of debris and restoring the broken vault. This latter idea indeed became the final plan for the cundie. Most of the stone needed for this restoration was found lying in the 250mm of debris within the drain and which was recovered during the clearance of the structure. Only one manhole had become necessary for the new plan and this 800mm wide structure was cut into the vaulting of the drain at a point 8.00m from the edge of the old car park at the position where the collapsed vault ended.

With the clearance of the cundie ended, a machine was brought in to strip away 200mm of turf and topsoil from areas N and S of the drain. The N side was completed first and exposed a debris horizon of clay, soil, stone rubble and brick. This horizon [100] lay along the S edge of the farm road and measured 25m in length E/W with a width ranging from 2.20m to 4.00m and having a depth exceeding 300mm. Plastic items within this layer indicated a 20th-century date. The purpose of seems to be that of levelling for an early car park positioned along the edge of the farm road at a point accessible to the castle. This material reached the edge of the cundie near the old car park, but curved away from the drain towards the W. The material from this clearance was transported to a field nearby for landscaping.

Following the clearance of the N side of the site the machine then began to strip 200mm of top soil from the S side. This material [102] appears to be the original naturally derived soil horizon and consisted of 200-300mm of black brown peat rich stony soil. At places where the soil was thin patches of yellow fawn clay were exposed. This material seems to be a natural subsoil forming over the igneous bedrock and could represent the fine silts built up on the edge of a lake which now can only be seen in the boggy areas to the W and NW.

The final appearance of the site after deturfing was that of a shallow EW aligned depression butting on to the W edge of the old car park and with a raised masonry structure running down the middle. The existing hidden electricity sub station at the SE corner of the site was unaffected by these excavations.

There were no finds during this exercise.

3.0 CONCLUSION

The shallowness of the present excavation prevented any real examination of the subsoil within this area which may have revealed post pipes and other evidence of wooden structures. In fact no occupation material was uncovered. The only visible activities comprised the vaulted drain of uncertain age and a late attempt at improving the car parking along the side of the road.

The cundie proved to be far more resilient than had been surmised. The fact that part of the vaulting had been beaten through at some stage was offset by the ability of the broken vaulting to sustain the weight of a person without the support of a keystone. Restoration of this structure would be both historically and structurally sensible, understanding of course that this is still a working drain.

A1.0 APPENDIX 1 : LIST OF CONTEXTS

100	20th century late levelling. Rubble, bricks, soil and clay.
101	Turf and topsoil sealing the cundie. Original landscaping
102	Turf and topsoil over the general area. Dark brown soil
103	The masonry forming the vaulted drain. Freshly quarried whin
104	Naturally derived subsoil. Yellow / fawn clay.

A2.0 APPENDIX 2 : DRAWING LIST

No 1	Plan	W end of vaulted drain (cundie)	1:20	27/1/00
No 2	Plan	Extract from HS plan 145/280/156	1:100	Sept 97

A3.0 APPENDIX 3 : PHOTOGRAPHIC LIST

A3.1 COLOUR PRINT FILM 1

Frame	Subject	Taken	Date
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		from	
4-6	General shots, pre-excavation	E	25/01/00
7-8	General shots, pre-excavation, long-distance	S	25/01/00
9	General shots, pre-excavation	W	25/01/00
10	Partially excavated site, drain clearance works	E	26/01/00
11-12	Exposed cundie, long view	E	26/01/00
13	Site of central manhole, pre-excavation	E	26/01/00
14	Site of central manhole, pre-excavation	S	26/01/00
15	Site of central manhole, pre-excavation, section of cundie, detail view	E	26/01/00
16	Site of central manhole, pre-excavation, section of cundie, distance view	E	26/01/00
17-18	Full length of cundie, pre manhole dig	E	26/01/00
19-20	W end of cundie, cleaned area of intact masonry	E	27/01/00
21-23	W end of cundie, cleaned area of intact masonry	S	27/01/00
24-25	W end of cundie, cleaned area of intact masonry, E facing section	E	27/01/00
26-27	Whole exposed cundie, distance view	N	27/01/00
28-29	Cundie, W end, final 4 metres	N	27/01/00
30	Site of new manhole along cundie	W	27/01/00
31-32	W part of cundie with broken vaulting	E	27/01/00
33	Cundie stonework, W end	NW	27/01/00
34	General view, whole site	W	27/01/00
35	General view, whole site, distance view	SE	27/01/00
36	Electricity sub-station entrance	E	27/01/00

A3.2

MONO PRINT FILM 1

Frame	Subject	Taken from	Date
2-4	General shots, pre-excavation	E	25/01/00
5-6	General shots, pre-excavation, long-distance	S	25/01/00
7	General shots, pre-excavation	W	25/01/00
8	Partially excavated site, drain clearance works	E	26/01/00
9-10	Exposed cundie, long view	E	26/01/00
11	Site of central manhole, pre-excavation	E	26/01/00
12-13	Site of central manhole, pre-excavation	S	26/01/00
14-17	Site of central manhole, pre-excavation, section of cundie, detail view	E	26/01/00
18-19	Full length of cundie, pre manhole dig	E	26/01/00
20-21	W end of cundie, cleaned area of intact masonry	E	27/01/00
22-25	W end of cundie, cleaned area of intact masonry	S	27/01/00
26-28	W end of cundie, cleaned area of intact masonry, E facing section	E	27/01/00
29-30	Whole exposed cundie, distance view	N	27/01/00
31-32	Cundie, W end, final 4 metres	N	27/01/00
33-34	Site of new manhole along cundie	W	27/01/00
Frame	Subject	Taken from	Date
35	W part of cundie with broken vaulting	W	27/01/00

A3.2**MONO PRINT FILM 2**

Frame	Subject	Taken from	Date
5	Cundie, broken vaulting	NW	27/01/00
6	Masonry inside new manhole	N	27/01/00
7-9	Masonry at W end	NW	27/01/00
10-14	General view of whole site	W, SE	27/01/00
15-16	Masonry of sub-station entrance	E, N	27/01/00