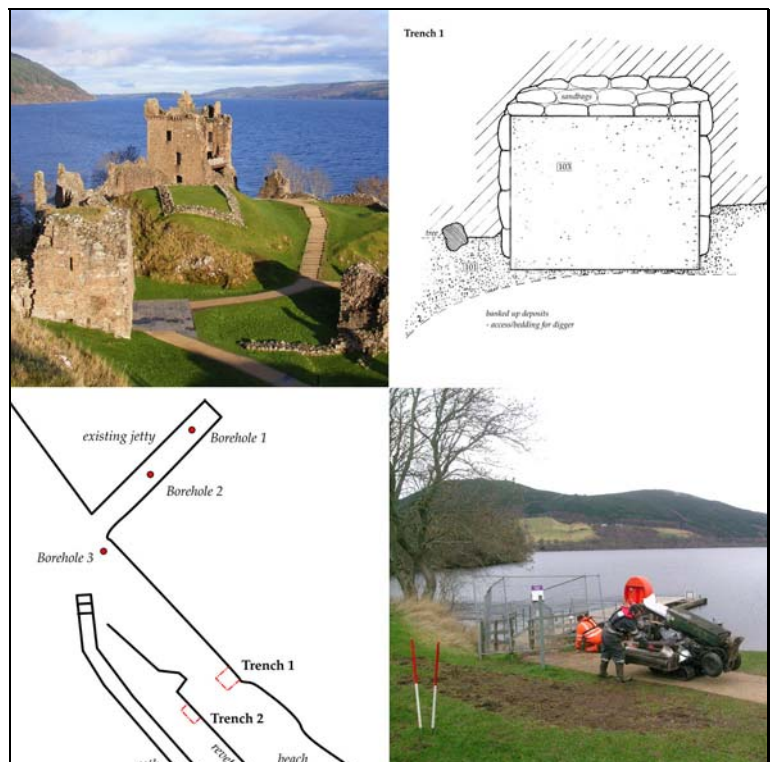


Historic Scotland
Properties in Care
Minor Archaeological Works 2008-9

Urquhart Castle:
Archaeological excavation and
monitoring,
December 2008 & February 2009

HS PIC Index number: 90309
Project codes: HSCO-90309-2008-01
HSCO-90309-2009-02



24 March 2009
Kirkdale Archaeology

<u>Site</u>	Urquhart Castle
<u>N.G.R</u>	Jetty – NH 5302 2870
	Water Gate slippage – NH 5308 2856
<u>Project Description</u>	Archaeological excavation and monitoring
<u>Project codes</u>	HSCO-90309-2008-01; HSCO-90309-2009-02

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1.0 SUMMARY

December 2008: A watching brief and small excavation were carried out within a sheet- piled cofferdam prior to the insertion of a concrete base for a temporary jetty on the shoreline to the west of Urquhart Castle. An area of slippage at the base of the slope east of the Water Gate was also examined and recorded prior to remedial work.

February 2009: A further visit was made to monitor the taking of core samples in the area of the proposed new jetty.

There were no finds or features of archaeological significance encountered in any of these works.

2.0 INTRODUCTION

Under the terms of its call-off contract with Historic Scotland, Kirkdale Archaeology was asked to undertake an archaeological excavation on the shoreline c 75 m W of Urquhart Castle in order to excavate the footprint for a concrete base to be used to secure a temporary floating pontoon. This pontoon would temporarily replace the existing wooden jetty (20 m to the East) which was considered unsafe and therefore was to be replaced. The excavation would remove deposits from the shoreline where the clay beneath the pebble surface could potentially have preserved archaeological features. Before this excavation could take place, a sheet-piled cofferdam had to be built to enclose the trench in order to hold the concrete base and keep the waters of the loch out. This proved difficult. Trees to the E and W of the excavation site made it difficult for the machine to manoeuvre the sheet piles and a path had to be built up to allow access to the shoreline. The construction of the cofferdam was started on the afternoon of 16 December and was completed by late morning on 19 December. The waters of the loch had risen considerably (by over 200 mm) on by this time and water was spilling over the sheet piles as well as through them. Sand bags were brought in to shore up the outside of the dam while a pump was used to drain the interior. Even with these measures water continued to find its way into the trench. This made it difficult to observe the layers within the trench, but it was quickly established that the fills were clean and consisted of an upper layer of water-worn pebbles on a bed of natural clay. To the S of the main trench, the area above a small

revetment wall was deturfed to provide stable access to the jetty. The trenches were dug manually. No finds of archaeological interest were uncovered.

In addition, the archaeologists were asked to look at an area of slippage at the base of the slope E of the Water Gate. This area was S of the lower wooden-shuttered stair next to the shoreline of the loch to the E of the castle. Two sets of stone-filled Gabion baskets had been installed to protect the lower part of the slope from the erosion, but a section of the lower slope had fallen away.

A further visit was required to monitor the taking of core samples under and near the existing wooden jetty. Three boreholes were made to determine the depth of bedrock and the nature of overlying deposits. This work was carried out on 23 and 24 February 2009.

3.0 DESCRIPTION

3.1 Trench 1: Jetty

The cofferdam enclosed an area 2.08 m N-S x 2.58 m E-W. As the beach was sloping down from S-N, this required an excavated depth of 800 mm to the S while to the N it was only necessary to remove 400 mm. The presence of the trees to the E and W meant that there was a considerable amount of roots present within the trench; even though the sheet piles had severed many of them, they were still extremely difficult to move. The trench was photographed at various stages of excavation and a post-excavation trench plan was made. The upper 150 mm of the fill comprised **101**, voided, loose, yellowish brown sub-rounded pebbles <20 mm which had been continuously displaced by the cyclical action of the water at the shoreline. Below this was **102**, a very compact layer of similar pebbles in a yellowish brown sandy clay matrix held together by the numerous roots which had seemingly prevented the scouring action apparent in the layer above. The excavation reached its limit by exposing **103**, the top of a layer of compact yellowish brown sandy clay of indeterminate depth. The action of the loch had created a clean upper pebble layer, a mixed pebble and clay central layer and a clean clay lower layer. There were no features of archaeological significance encountered. Once excavated and planned,

the concrete base was to be hand batched and poured.

3.2 Trench 2: Jetty revetment

To provide a platform for access to the jetty it was necessary to de-turf an area 2.45 m S of Trench 1, 1.00 m N-S x 3.20 m E-W over an un-jointed sandstone revetment wall, **201**. A depth of only 80 mm was removed – this was not deep enough to expose the wall in plan. This exposed **202**, a layer of dark brown silt topsoil used to bed the turf; it was again heavily cut through with roots. The revetment itself, **203**, was up to 650 mm high and was formed of angular pieces of pinkish-grey sandstone (up to 300 mm across x 150 mm high), none of which were dressed. No mortar bonding was apparent. Apparently, this revetment once stood *c* 1.5 m higher, built by the local farmers in the mid-20th century as a livestock barrier. It was then reduced in the late 20th century so as not to obscure the view of the loch, and covered with topsoil and turf (pers. comm. HS staff member).

3.3 Trench 3: The Water Gate

Historic Scotland requested that a record be made of the area of slippage E of the Water Gate, at the foot of the slope separated from the loch by stone-filled Gabion baskets. This had exposed the S side of the stair and the slip comprised a roughly crescent-shaped area up to *c* 5.0 m long (N-S) and up to *c* 1.0 m wide (E-W) the exposed section was up to 800 mm high. The section comprised the turf, **301**, up to 80 mm thick over a 180 mm thick layer of moderately compact yellowish brown sand, **302**. The sand layer had been used apparently not only to bed the turf, but as a levelling layer over a compact (but cracking) layer of angular pink sandstone pieces (10-180 mm) bonded in a matrix of mid-brown silt, **303**. Below this was a layer (exposed to a depth of 200 mm) of voided pieces of angular pink sandstone **304**, 50-260 mm across, some pieces with a yellowish lime mortar adhered to their faces. This appeared to be a layer comprising material that had gathered as a result not only of the disintegration of the Gate and rampart walls but also as a result of deliberate stone robbing and shaping indicated by the varying size of the sandstone flakes and pieces.

It appeared that this area had been landscaped, most likely in the 20th Century. The

problem appears to be that the sheer weight of the deposits on such a steep incline and wave action from the loch (given that they sit at this point on voided rubble) has caused slippage. An upper (309) and lower (310) row of stone-filled Gabion baskets between the break of slope and the shoreline are signs of efforts to reduce the water erosion.

The steps leading from the Water Gate to the shoreline appear to postdate the landscaping of the slope. A sloping cut (only partially exposed to the S of the stair), 305, truncates the slope make up and within it sits a deliberately laid rubble base, 306, of angular pink and grey sandstone pieces up to 300 mm across - this is 400 mm high where exposed. On top of this is a thin black Terram, 307, which beds the wooden-edged concrete steps, 308. To the S of the steps, the area between the steps and the Terram is backfilled with a mixture of silt and angular sandstone, 311, which is likely to be a re-deposited fill comprised of excavated material from 303.

3.4 Monitoring of boreholes

Three core samples were taken from three boreholes by contractors. One was on the bank above the loch side, to the N of the path leading to the existing wooden jetty, while the other two holes were drilled under the jetty itself. Boreholes 1 & 2 encountered bedrock at a depth of *c* 4.0 m, while in Borehole 3 it was at a depth of 3.65 m.

In Borehole 3, 100 mm of turf and topsoil overlay *c* 1.0 m of mid brown sandy silt with stones and fragments of red sandstone. Below this was *c* 1.0 m of gravel and orange brown sand, then *c* 1.0 m of clay over bedrock.

4.0 INTERPRETATION AND OBSERVATIONS

The close proximity of Trench 1 to the castle meant that there was a possibility that this area could have been used as a landing point in the past. It was possible that objects or features might have been encountered within the more static lower layers within the trench. It transpired that no significant features were seen and this allowed the concrete base to go quickly ahead at a time of year when weather conditions were particularly poor.

Trench 2 revealed little due to the minimal depth excavated.

The examination of the slippage at the Water Gate revealed modern landscaping overlying original deposits. Although the imported materials have been eroded and collapsed, they may have helped protect more significant deposits below them.

The remedial work for the slippage is intended to include the replacement of the slipped bank with similar turf and topsoil, which should preclude the need to excavate the section by formal archaeological means. However, if intrusive excavation is necessary it should be carried out under archaeological supervision.

The layers seen in the core samples taken from the three boreholes revealed little, but did not appear to indicate the presence of any significant archaeological deposits.

A1.0**APPENDIX 1: LIST OF CONTEXTS**

#	Description
F101	Voided loose yellowish brown sub-rounded pebbles <20 mm
F102	An extremely compact layer of the same pebbles (F101) in a yellowish brown sandy clay matrix
F103	Compact natural yellowish brown sandy clay below F102
F201	Turf 80 mm thick over F202
F202	Dark Brown Rooted Silt under F201
F203	Reduced un-jointed sandstone revetment below F202
F301	Turf 80 mm thick
F302	Levelling Sand 180 mm thick between F301 and F303
F303	Compact Angular Sandstone and Silt Levelling over F304
F304	Voided Rubble at Foot of Slope sealed by F303
F305	Cut for Rubble Step Base F306
F306	Rubble Base for Steps within Cut F305
F307	Terram over F306
F308	Wooden Edged Concrete Steps over F307
F309	Upper Gabions
F310	Lower Gabions
F311	Backfill of Cut F305, Re-deposited material from F303

A2.0**APPENDIX 2: LIST OF DRAWINGS**

#	Description	Scale
1	Plan of Slippage at Water Gate	1:20
2	E-Facing Section of Slippage at Water Gate	1:20
3	Post-Ex Plan of Trenches 1 & 2	1:20
4	Location Plan of Trenches 1 & 2	1:250

A3.0**APPENDIX 3: LIST OF PHOTOGRAPHS****Trenches 1-3, 16-19 December**

#	Description	From
9801	Site of the excavation from the Visitor's Centre	SW

#	Description	From
9802	Pre Ex Shot of Beach	SW
9803	Pre Ex Shot of Beach, Revetment and Loch	W
9804	Pre Ex Shot of Beach, Revetment and Loch	SE
9805	Pre Ex Shot of Revetment at Trench 2	N
9806	Pre Ex Shot of Beach, Revetment, Loch and Jetty	E
9807	Looking NW at slippage at Water Gate	SE
9808	Looking SW at slippage at Water Gate and Gabions	NE
9809	Looking W at slippage at Water Gate and Stairs	E
9810	Looking SW at slippage at Water Gate	NE
9811	Looking W at E Facing Section of Slippage Showing Voided Rubble F304 at base with Silt and Stone Make-Up F303 above	E
9812	Looking N at exposed Rubble Foundation F306 and Stair F308	S
9813	Piling Work in Progress at Trench 1	SW
9814	Piling Work in Progress at Trench 1	SW
9815	Piling Work in Progress at Trench 1	SW
9816	Inundated Piling at Trench 1	SW
9817	Inundated Piling at Trench 1	SE
9818	General Shot of Trench 1 Location	S
9819	Piling the E side of Trench 1	SE
9820	Inundated Cofferdam at Trench 1	SW
9821	Inundated Cofferdam at Trench 1	SW
9822	Inundated Cofferdam at Trench 1	SE
9823	Inundated Cofferdam at Trench 1	SE
9824	Trench 1 with pumps working	SE
9825	Trench 1 with pumps working	S
9826	Trench 1 with pumps working	SE
9827	Trench 1 with pumps working	SW
9828	Trench 1 showing manual removal of Pebbles F101	SW
9829	Trench 1 showing manual removal of Pebbles F101	SW
9830	Trench 1 showing manual removal of Pebbles F101	SW
9831	Trench 1 showing manual removal of Pebbles F101	SW
9832	Trench 1 showing manual removal of Pebbles F101	SW
9833	Trench 1 showing manual removal of Pebbles F101	SW
9834	Trench 1 working shot – Checking depth of Excavation	NE
9835	Trench 1 showing manual removal of F102	SE
9836	Trench 2 and revetment after deturfing looking SW	NE

#	Description	From
9837	Trench 2 looking E	W
9838	Trench 1 pile cutting	S
9839	Trench 1 pile cutting	S
9840	Post Ex Shot of Trench 1	SW
9841	Post Ex Shot of Trench 1 cut to top of F103	SW

Monitoring of boreholes, 24 February 2009

#	Description	From
9842	General view of jetty, Hole 3 next to ranging rod	S
9843	General view of jetty, Hole 3 next to ranging rod	S
9844	General view of jetty	S
9845	General view of jetty	S
9846	General view of jetty	S
9847	Core sample from Hole 3	-

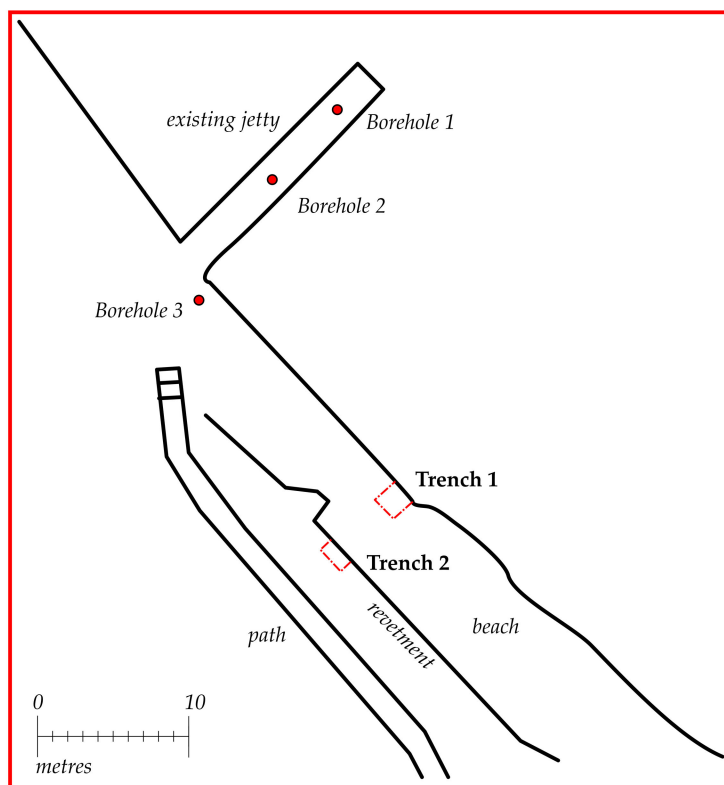
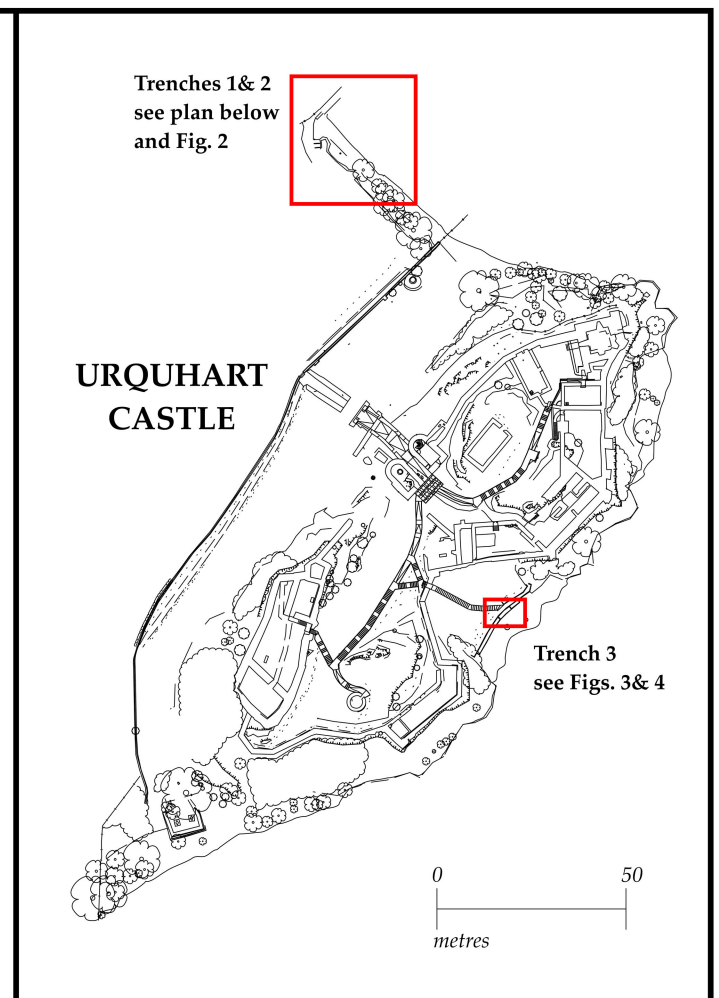
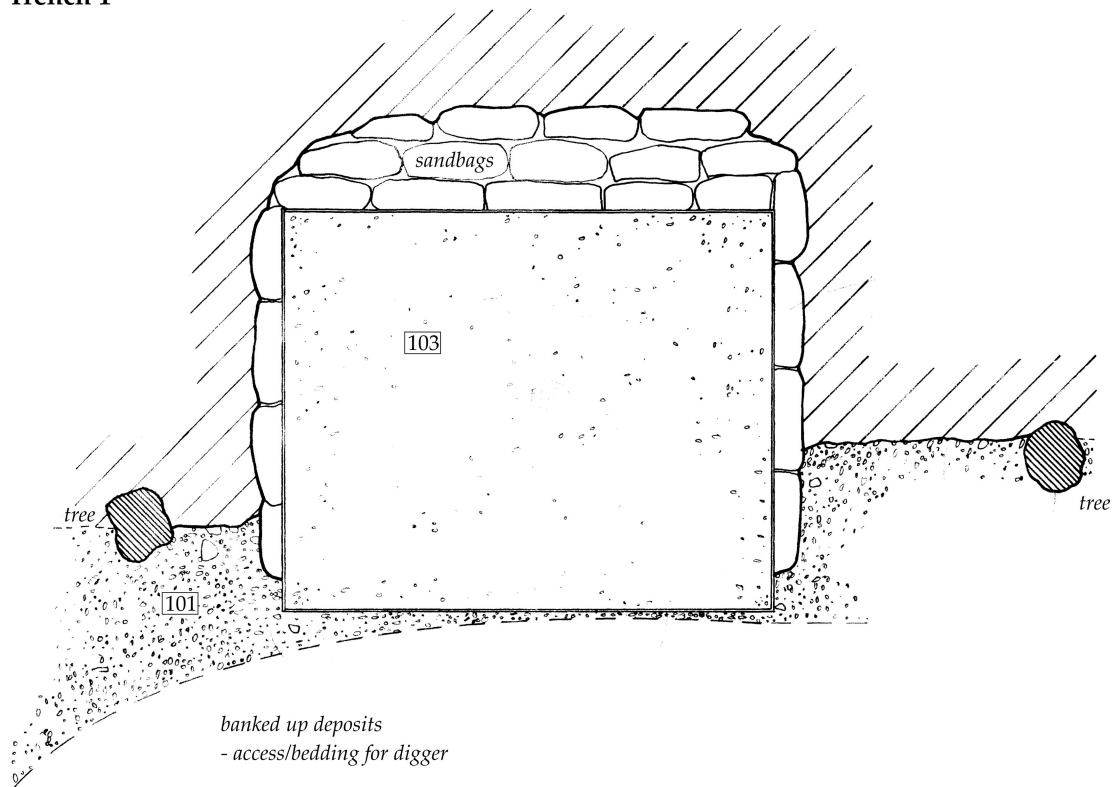


Fig. 1 : Location plan

Trench 1



Trench 2

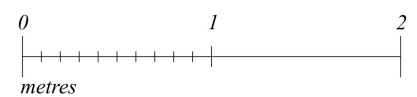
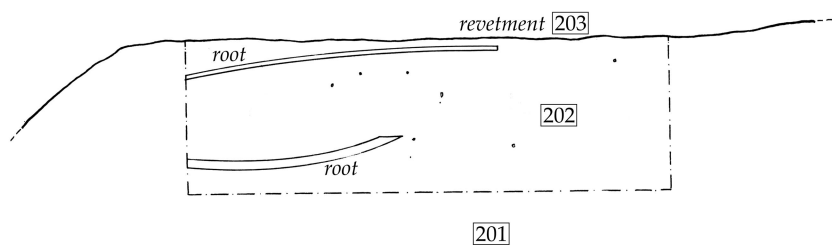


Fig. 2 : Plans of Trenches 1& 2

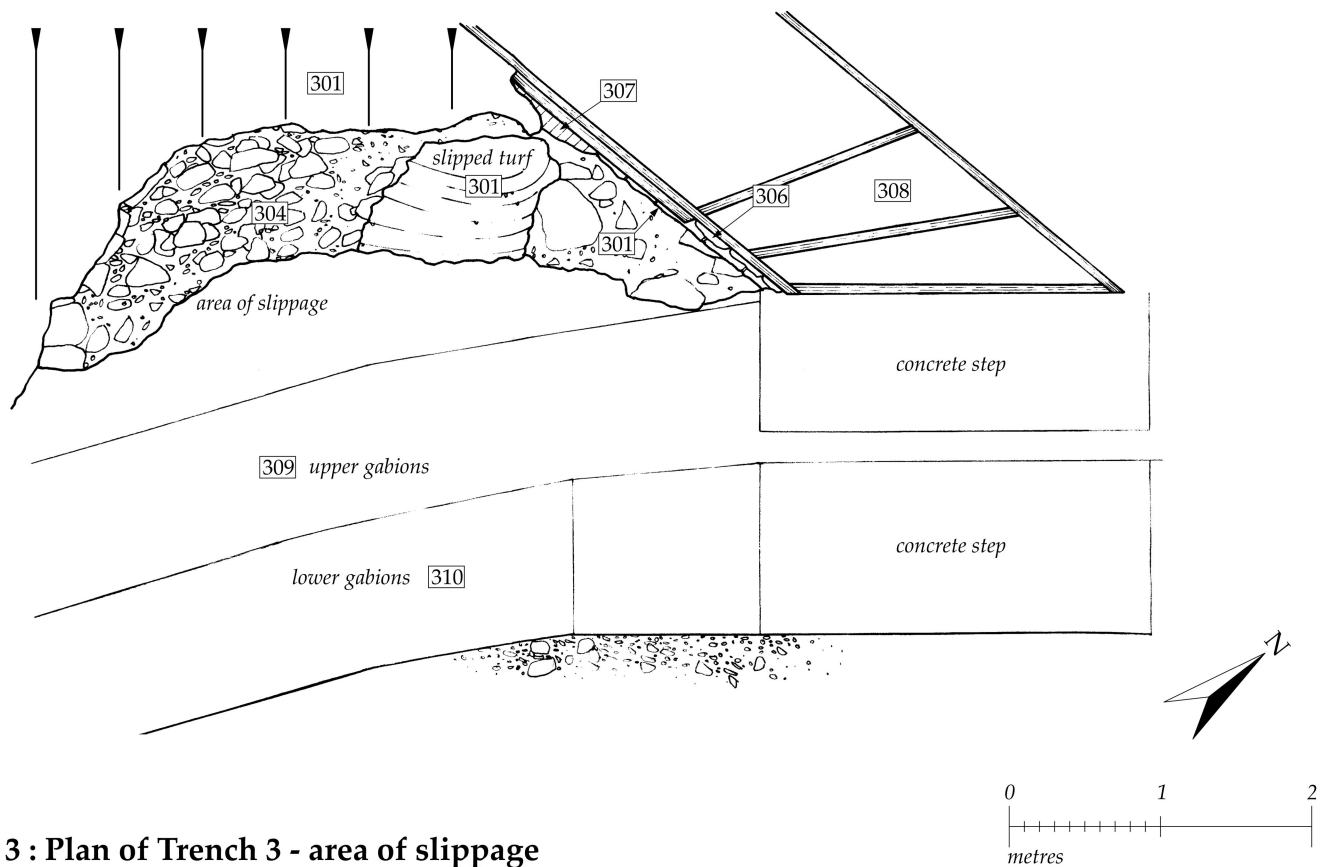


Fig. 3 : Plan of Trench 3 - area of slippage

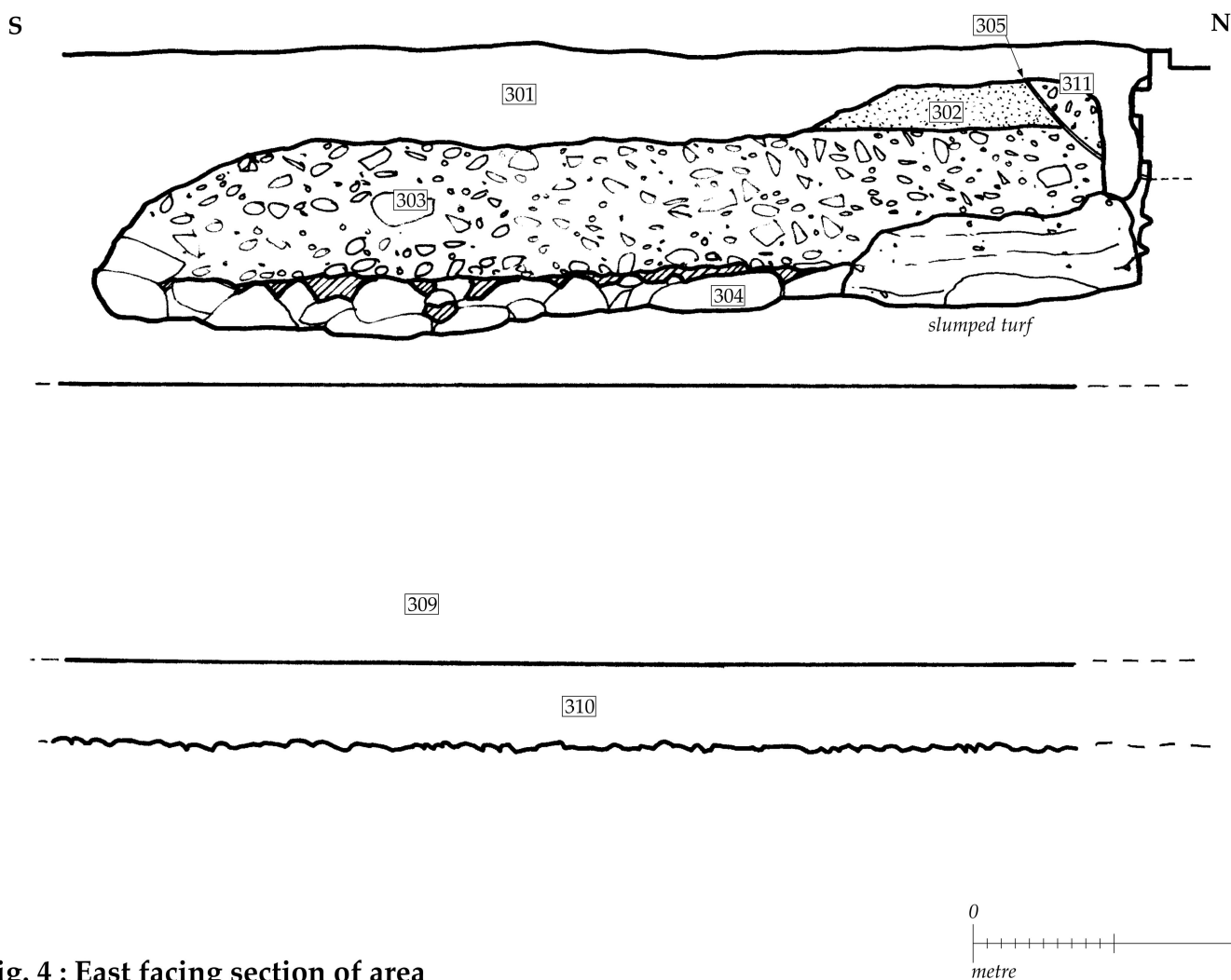


Fig. 4 : East facing section of area