University of Leicester
Archaeological Services

Archaeological Survey and Recording of Rampart Erosion at Burrough Hill Hillfort, Burrough-on-the-Hill, Leicestershire

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ULAS Report No 2014-006

Archaeological Survey and Recording of Rampart Erosion At Burrough Hill Hillfort, Burrough-on-the-Hill, Leicestershire NGR: SK7605 1195 centre

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Summary

A programme of archaeological survey and recording was undertaken by University of Leicester Archaeological Services (ULAS) at the Iron Age hillfort at Burrough Hill in May 2013. The work focused on areas of erosion to the earthworks on the eastern side of the hillfort that had exposed stonework relating to the construction of the ramparts.

Erosion of the ramparts appears to have originated through natural processes involving soil slippage and root disturbance, but this problem has been exacerbated over time through human and animal traffic on the earthworks.

Exposure of stonework largely reflected the dumped layers of soil and ironstone rubble forming the core of the hillfort defences but several areas provided more detailed evidence. In these areas drystone walls of coursed ironstone blocks probably related to the original facing of the hillfort rampart wall.

The south facing side of the hillfort has been badly affected by numerous badger and rabbit holes which are destabilising the rampart construction. Locations of the worst of these were also recorded as part of the project.

The fieldwork was undertaken by John Thomas & Andrew Hyam of ULAS from May 28th – 31st 2013. The Archive for the project will be held by Leicestershire Museums Service under the Accession Number XA59.2013.

1. Introduction

Burrough Hill is the finest example of a large univallate hillfort in Leicestershire and has statutory protection as a Scheduled Monument (SM 17088). It is located on a flat ironstone promontory approximately 7km south of Melton Mowbray (SK7605 1195 centre) lying at a height of *c.*200m OD (Figure 1). The hillfort is defined by an almost continuous trapezoidal rampart of stone and turf, standing up to 3m high internally, which encloses an area of *c.*5 ha. An inturned entrance is located on the south-east side and is formed by 2m high banks forming a passage some 45m in length. A second possible original entrance lies at the south-west corner, where the rampart bank continues downslope outside the enclosure for some 50m.

The hillfort has received attention from antiquarians and archaeologists from at least the 16th century but despite several small-scale excavations in the past, the origins and development of the monument are poorly understood.

In 2010 the School of Archaeology and Ancient History, University of Leicester began a new research project, focussed on the hillfort and its surrounding landscape, to address this gap in knowledge. The project is designed as a five year combined research and training programme run jointly by staff from the SAAH and University of Leicester Archaeological Services (ULAS).

The hillfort and surrounding land is owned by the Ernest Cook Trust and functions as a Country Park under the management of Leicestershire County Council. The hillfort and surrounding fields are also grazed by cattle and sheep owned by Burrough Hill Farm.

2. Background to the Project

As an ancient monument with upstanding earthworks Burrough Hill has a long history of erosion problems. Evidence can still be seen at various locations around the rampart perimeter, of previous attempts to consolidate areas of erosion, in the form of staked planking some of which was installed in the 1970s (Richard Buckley *pers comm*).

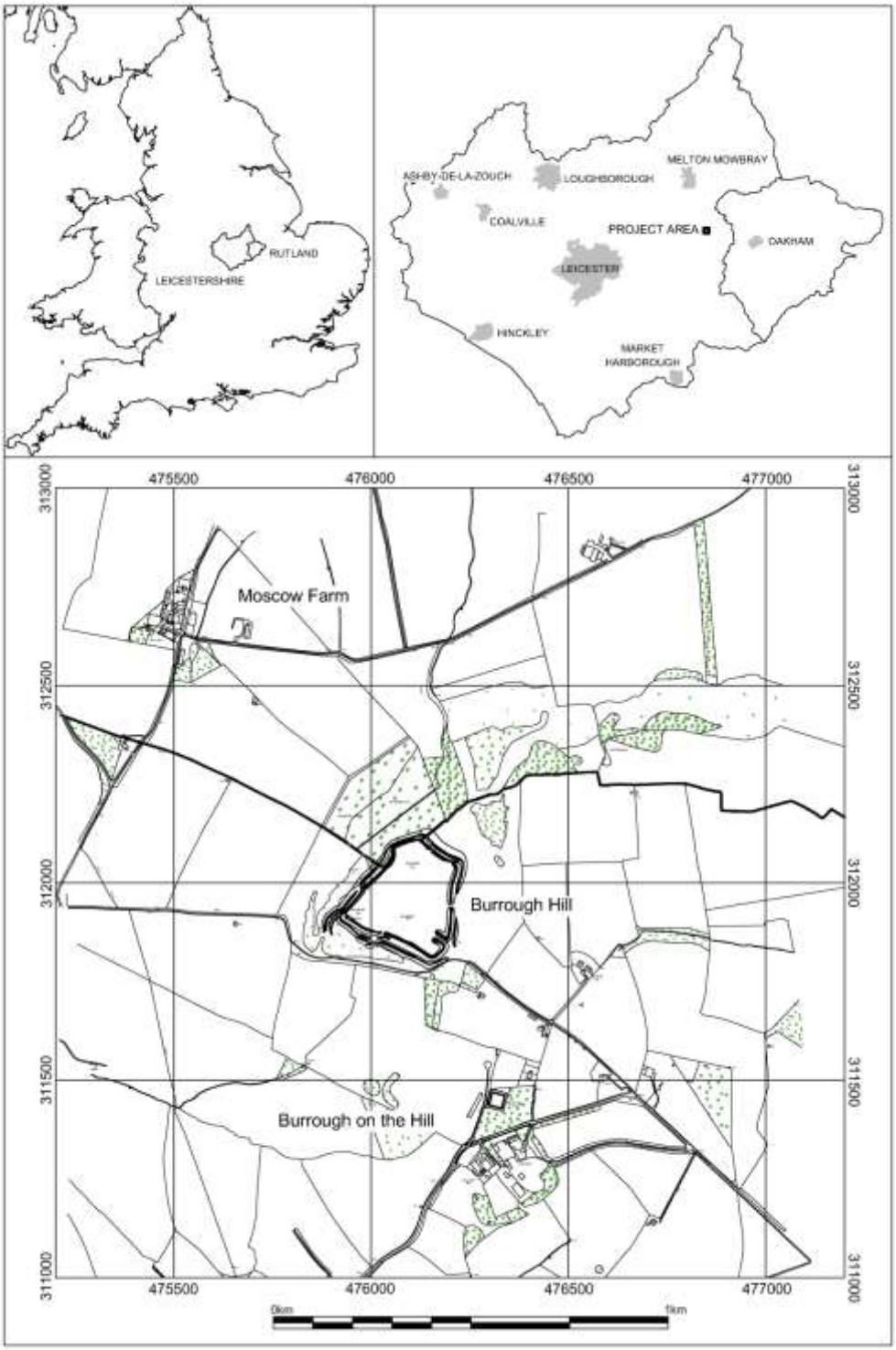

Figure 1. Location of Burrough Hill

Livestock, visitor and natural erosion at multiple locations on the eastern side of the hillfort have caused large areas of damage to the earthworks. In some cases the roots of trees and bushes growing on the ramparts have loosened stone and soil, making the ramparts vulnerable. Livestock making use of the overgrowth as shelter have exacerbated the problem by creating 'scrapes' into the earthworks. In other areas the effects of natural slippage on the earthworks have been worsened by additional damage from livestock. Areas near the top of the ramparts have gradually eroded partly as a result of visitor footfall and where stonework is clearly visible in some areas, stones have been pulled away from the earthworks, contributing to the erosion problem. On the southern side of the hillfort badger and rabbit burrowing is causing collapse and slippage of the rampart bank material.

The recent archaeological work undertaken as part of the Burrough Hill Project has enabled a clearer understanding of the formation of the hillfort ramparts (Thomas and Taylor 2011, Taylor *et al* 2012). Together with observations from earlier work, the results appear to indicate that the rampart core consisted of a series of beaten-earth and rubble layers piled up over a stone core to form a sloping face. Work in and around the hillfort entrance has also shown that in this area the ramparts were faced with a well-built dry-stone wall (Figure 2). Several of the main areas of erosion have revealed stonework consistent with dry-stone walling on the eastern face of the hillfort. The aim of the project described here was to undertake detailed recording of these exposures before they were repaired and to gather additional information to assist interpretation of the hillfort construction as part of the overall research of the Burrough Hill Project.

Figure 2. Excavation of the eastern rampart in 1960.
revealing the drystone outer face of the rampart and dumped core materials behind.

Burrough Hill has recently entered into a ten year Natural England High Level Stewardship agreement and the archaeological survey and recording was undertaken as part of a wider programme of work to address conservation issues on the site.

A brief for the survey was produced by Leicestershire County Council (LCC, 2012). Previous inspection of the hillfort's eastern face had identified approximately 25 areas of erosion on the rampart earthworks that required recording.

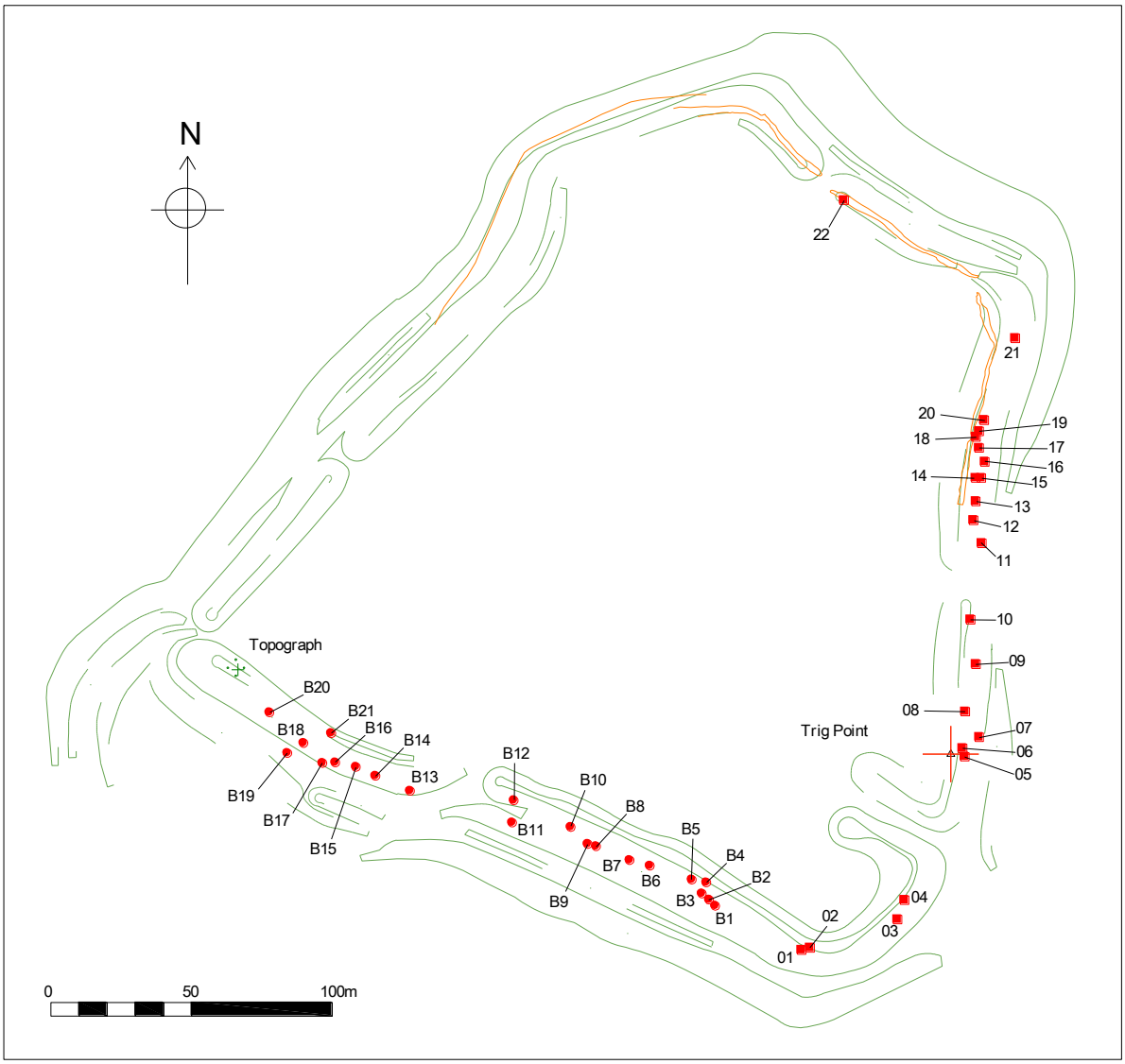

Figure 3. Plan of Burrough Hill showing the location of recorded erosion holes (red squares) and rabbit/badger holes (red circles)

3. Methodology

The methodology employed during the archaeological survey and recording was informed by the project brief (LCC, 2012) and detailed in the tender application submitted by ULAS.

1. The areas of erosion indicated in the project brief formed the basis of the survey and recording project.

2. Each individual area of erosion was hand-cleaned using trowel/brush as appropriate, to reveal the detail of the stonework exposed.

3. A detailed written and photographic (digital & monochrome) record was made of each area.

4. Targeted scaled drawing (cross-section) was undertaken of areas with potential to contain information on the construction of the ramparts, such as exposed areas of coursed stone.

5. A GPS survey was undertaken to accurately locate the erosion areas in relation to the Ordnance Survey Grid.

6. The locations of the recorded areas were tied-in to the onsite trig point and the survey points established as part of the Burrough Hill Project fieldwork seasons.

Figure 4 Locating areas of erosion using a GPS

4. Results

The survey recorded a total of 22 areas of erosion with locations mainly concentrating on the eastern face of the hillfort, two on the south-east face and one on the northern face.

Overall these areas of erosion appear to have their origins in natural processes, either through soil slippage on the steep ramparts or gradual loosening of soil and stone from the roots of trees/bushes growing on the rampart.

Once open however, the erosion holes become widened by livestock scraping at the loose ground to form shelters. This is particularly evident beneath the trees and bushes but is also evident on less sheltered parts of the eastern rampart.

Other areas, particularly on the top of the eastern rampart, have eroded as a result of constant traffic (human and animal) making the cover on these areas of the earthworks very thin and prone to damage, exposing stonework.

Stonework revealed in all of the erosion holes recorded reflected the variable use of local materials in the construction of the hillfort ramparts. The majority revealed mixed ironstone fragments in a soil matrix which may relate to dumped layers forming the core of the rampart or the historic erosion of the rampart once the hillfort had gone out of use.

Figure 5 Recording exposed drystone walling.

Other areas revealed more coherent information relating to the construction of the hillfort ramparts.

Locations 06, 12 and 22 all contained similar evidence, revealing predominantly small chunks of ironstone rubble within compacted silty clay, forming part of the rampart core. In each of these locations the compacted soil lay behind a rough arrangement of larger stones, forming a distinct layer. Whether this represented a facing wall to the rampart or another layer within the core is difficult to judge on the available evidence. Given the similarity of evidence between these locations however it does suggests that this arrangement was a consistent construction method employed during the construction or maintenance of the hillfort.

More convincing evidence for drystone walling was revealed at locations 05 and 20. In both of these areas carefully laid flat pieces of ironstone, surviving several courses high, formed substantial sections of wall that conceivably may have once faced the eastern rampart of the hillfort.

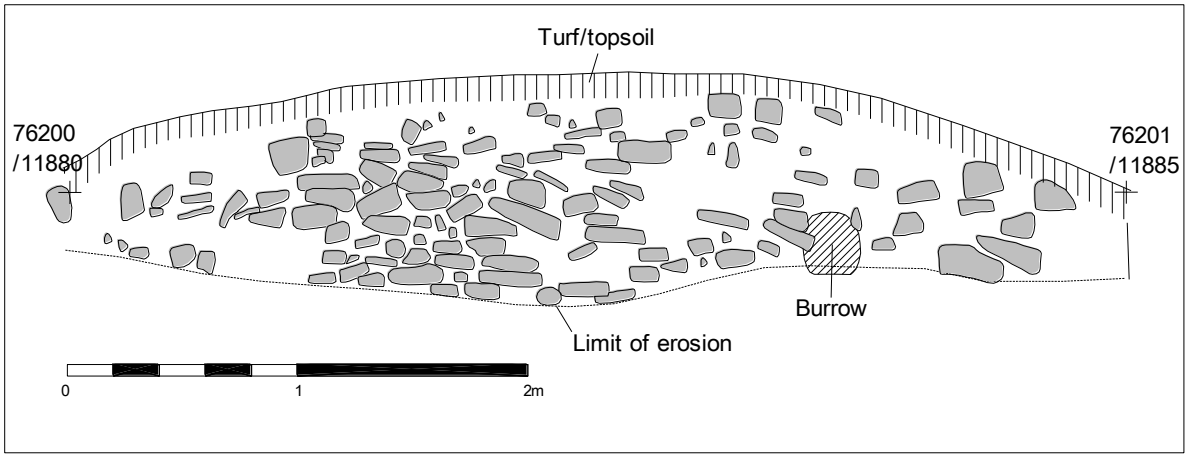

Figure 6 Exposed drystone walling in Location 05.

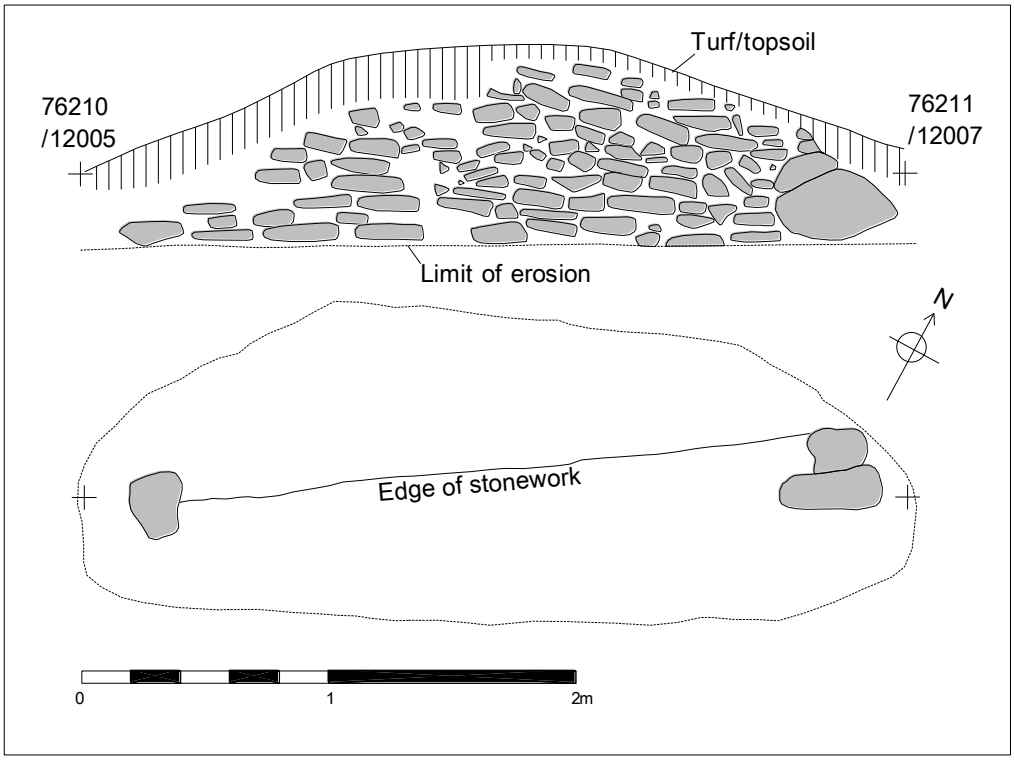

Figure 7 Exposed drystone walling in Location 20.

5. Bibliography

Leicestershire County Council, 2012 Brief *for Survey and Repair at Burrough Hill Scheduled Monument near Melton Mowbray, Leicestershire.*

Thomas, J. and Taylor, J. 2011 Excavations *at Burrough Hill, Burrough-on-the-Hill, Leicestershire, Interim Report 2010.* Unpublished ULAS Report 2011-018.

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6. Archive

The project archive consists of this report, a photographic record of all recorded erosion holes (in digital and monochrome format), digital survey data, three A3 permagraph sheets of drawings and other information & field record sheets for all areas recorded.

7. Acknowledgements

The fieldwork was undertaken by Andrew Hyam and John Thomas and the project was managed by Richard Buckley. ULAS would like to thank Tim Maydwell for his cooperation during the fieldwork.

Appendix 1

Catalogue of Recorded Erosion Areas

Location 01 (SK 76146 / 11816)

Medium-sized crescent area of erosion on the south eastern side of the hillfort measuring *c.*2.20m wide x 0.33m high x 0.42m deep. Erosion and sheep scraping here has exposed small and medium-sized ironstone rubble from the rampart, none of which appears to have been deliberately laid. A spread of loose stone beyond the area indicates continued erosion of this location.

Location 02 (SK 76149 / 11817)

Two large conjoined crescent-shaped erosion areas measuring *c.*5.50m wide x 0.60m (max. height) x 1.10m (max. depth). Erosion has exposed mixed rubble comprising small, medium and large ironstone pieces (up to *c.* 0.35m x 0.15m x 0.15m in size) probably forming part of the rampart core materials. Loose stone to the south of the area indicates continued erosion.

Location 03 (SK 76180 / 11827)

Large crescent-shaped area, measuring *c.*3.60m x 0.60m x 1.20m deep. Damage here has apparently been caused by turf slippage and animal scraping. Erosion has exposed mainly smaller stones within a matrix of topsoil and subsoil (reddish-brown silty clay). No stones are visible on the exposed base of the area.

Location 04 (SK 76182 / 11834)

This area consists of two animal scrapes measuring *c.*1.00m wide and 2.20m wide respectively, x 0.55m high x 0.70m deep. Larger rubble exposed in this area within a matrix of smaller rubble and reddish-brown silty clay. Stonework also exposed within floor of exposed area, probably relating to rampart core materials.

Location 05 (SK 76204 / 11885)

The largest area of erosion located on the eastern rampart slightly north of the main hillfort entrance. This location is a large crescent-shaped area measuring *c.*6.50m wide x 1.20m high x 2.30m deep. This substantial area of turf and soil slippage has been gradually further eroded by animal scraping and burrowing. Rubble and soil rampart core materials are exposed here along with 6-7 courses of drystone wall that may have originally faced the rampart.

Location 06 (SK 76203 / 11888)

Crescent-shaped area measuring *c.*3.20m x 0.65m x 1.10m deep, created by soil slippage and animal scraping. A number of large ironstone blocks present here measuring up to 0.58m x 0.36m x 0.15m. Although these stones do not form a coherent wall there are similar sized stones within an area of slipped loose rubble immediately beneath the erosion area. Within the erosion hole the larger stones appear to lie immediately in front of rubble core material consisting of small ironstone rubble in a matrix of reddish-brown silty clay.

Location 07 (SK 76209 / 11892)

Small crescent-shaped area measuring *c.*1.90m x 0.50m high x 1.10m deep. Some exposed rubble in this area but no coherence to the stones. Two large stones are evident protruding through the turf to the north of the area and a spread of loose stones exists beneath the area on the lower slopes of the rampart.

Location 08 (SK 76204 / 11901)

Large rectangular area of erosion near the top of the rampart measuring c.6.00m x 0.80m high x 1.40m deep. Larger stones exposed here as well as smaller rubble / soil mix. There is no evidence for coherent coursing or deliberate lying of the stones so it is possible that they relate to rampart core materials. The overall area affected by the erosion here is approximately half the height of the surviving rampart earthworks.

NB This area had been the site of previous erosion management works with a shoring construction of planking still surviving.

Location 09 (SK 76208 / 11918)

Large circular area of erosion (*c.*4.00m diameter) encircling the base of a large tree growing on the rampart. Some disturbance must have been caused by the trees roots but essentially the main erosion here has been through animal use of the area as a shelter. The area has exposed a large part of the rampart from its base to within a metre of the earthwork's top. A number of a large stones are exposed that are potentially rampart facing stones but it is difficult to be sure. These lie in front of (and below) subsoil-type material of reddish-brown silty clay.

Location 10 (SK 76206 / 11934)

Oval area of erosion measuring *c.*5.00m x 3.00m concentrated around the base of a small tree growing on the rampart earthworks. As above the area has been eroded due to its use as a sheep shelter along with root disturbance. A number of large stones exposed within a reddish-brown silty clay matrix. No coherence of form to them.

Location 11 (SK 76210 / 11961)

Small area of soil slippage and erosion approximately halfway up the rampart, measuring *c.*1.55m x 0.36m x 0.90m deep. No stonework exposed but small ironstone rubble in a reddish-brown silty clay matrix.

Location 12 (SK 76207 / 11969)

Oval area of erosion at the top of the rampart measuring *c.*2.80m x 0.60m x 1.50m deep. A concentration of medium to large stones revealed in this area – also evident at the base of the hole. No clear evidence for deliberate coursing is evident here but a similar pattern of larger stones in front of more rubbly / soil mix is apparent, perhaps indicating remains of rampart facing. A spread of loose stones in front of the area and on the lower banks indicates continued erosion of this area.

Location 13 (SK 76208 / 11976)

Oval area of erosion measuring *c.*2.00m x 3.00m surrounding the base of a small hawthorn tree growing near the top of the rampart. The area has developed as a result of root disturbance and sheep scraping through use as a shelter. Larger stones revealed here but in no coherent pattern. The stones lie in a similar silty clay matrix seen in the other areas.

Location 14 (SK 76210 / 11984)

Animal scrape below hawthorn tree growing near the top of the rampart. The area is crescent-shaped and measures *c.*1.30m 0.30m x 0.80m deep. A few stones exposed but they are not in a coherent form and may not be *in situ*.

Location 15 (SK 76208 / 11984)

Crescent-shaped area measuring *c.*2.40m x 0.45m x 1m deep. Some possible stone coursing evident towards the top of the hole with smaller (?slipped) rubble below.

Location 16 (SK 76211 / 11990)

Crescent-shaped area of erosion measuring *c.*2.50m wide x 0.45m x 0.80m deep located midway down the rampart earthwork. Mixture of large stones and smaller ironstone/silty rubble exposed but with no real coherent form. Several loose large stones have tumbled down from this area to the slopes below.

Location 17 (SK 76209 / 11995)

Large crescent-shaped area of erosion measuring *c.*3.20m x 0.45m x 0.80m deep. A fairly coherent spread of large stones revealed but no coursing apparent.

Location 18 (SK 76208 / 11999)

Circular erosion area below hawthorn tree growing near the top of the rampart. The area measures *c.*2.30m diameter x 0.35m x 1.20m deep and is a result of tree root disturbance and animal scraping. Several large stones exposed but no real pattern to them.

Location 19 (SK 76209 / 12001)

Crescent-shaped area on top of the rampart measuring *c.*2.20m x 0.40m x 1.20m deep. A loose collection of large stones is evident here, all looking recently disturbed. No coherence to any of the stones exposed.

Location 20 (SK 76211 / 12005)

Large area of erosion towards the top of the rampart measuring *c.*3.00m wide x 0.80m x 1.50m deep. Approximately 8 courses of drystone walling exposed here with a coherent face aligned NE-SW along the width of the area. This area provides the most complete evidence for rampart facing exposed within the erosion areas.

Location 21 (SK 76220 / 12034)

Circular area of erosion surrounding a small tree on the NE ends of the eastern rampart. The area measures *c.*3.00m x 0.40m x 2.70m deep and formed through root disturbance and sheep scraping. A number of large stones are exposed approximately halfway down the area and smaller rubble exists towards the upper area of the rampart. No real coherence to the exposed stones.

Location 22 (SK 76161 / 12003)

This is a square erosion hole/sheep scrape on the northern rampart near the NW corner of the hillfort. It measures *c.*1.5m wide x 0.50m x 1.50m deep and contains apparently laid stones forming part of the rampart. In a similar sequence to some of the other erosion areas larger (?facing) stones are backed by tightly-packed medium sized rubble in a matrix of smaller ironstone chunks and soil.

Appendix 2 Example of Erosion Recording Form

SITE NAME		**Acc No.**	
LOCATION No.		DATE	
BURROW/SCRAPE/EROSION			
DIMENSIONS			
LAID STONE			
RUBBLE			
NATURAL			

CHECKBOX	
Finds?	
Features?	
Photos?	
Plan/Section?	
Located?	

NOTES: -

Sketch Drawing:-

PHOTOS:-

B/W No:	Colour No:	Description	Orientation	Scale

APPROXIMATE LOCATION OF DAMAGED AREA