



Archaeological Excavation and Repair at Nordy Bank Hillfort, Clee Liberty



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| Project | Historic Landscape Survey and Audit of Clee Liberty Common |
| Client | Our Common Cause: Our Upland Commons project, Foundation for Common Land |
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| Author | Matthew Williams |
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| Site location | 358500, 284400 |
| Site area | 3.95 ha. |





Table of contents

| | |
|--|----|
| Introduction | 4 |
| Site Background | 6 |
| Geology | 6 |
| Location and topography..... | 6 |
| Site conditions | 6 |
| Aims | 6 |
| Archaeological Recording | 6 |
| Erosion Repair..... | 6 |
| Method | 6 |
| Historic background | 8 |
| Results of Archaeological recording..... | 9 |
| Scrape 5..... | 9 |
| Scrape 8..... | 14 |
| The Stone | 17 |
| Excavation discussion..... | 18 |
| Stratigraphical summary of the sections | 19 |
| Repair works..... | 20 |
| Erosion Repair - original methodology | 20 |
| Erosion repair –observations on the methodology and comments | 21 |
| Scrape repair methodology summary..... | 24 |
| Sources consulted | 25 |



Table of figures

| | |
|---|----|
| Figure 1 – Site location..... | 4 |
| Figure 2 - Location of scrapes | 7 |
| Figure 3 - Scrape 5 section 1..... | 12 |
| Figure 4 - Scrape 5 plan..... | 12 |
| Figure 5 - Scrape 5 extension section 2 showing cut [6] | 13 |
| Figure 6 - Scrape 8 section | 16 |
| Figure 7 - scrape 8 plan | 16 |
| Figure 8 - Diagram showing sandbags, soil and hessian roll filling the scrape cavity..... | 22 |

Table of plates

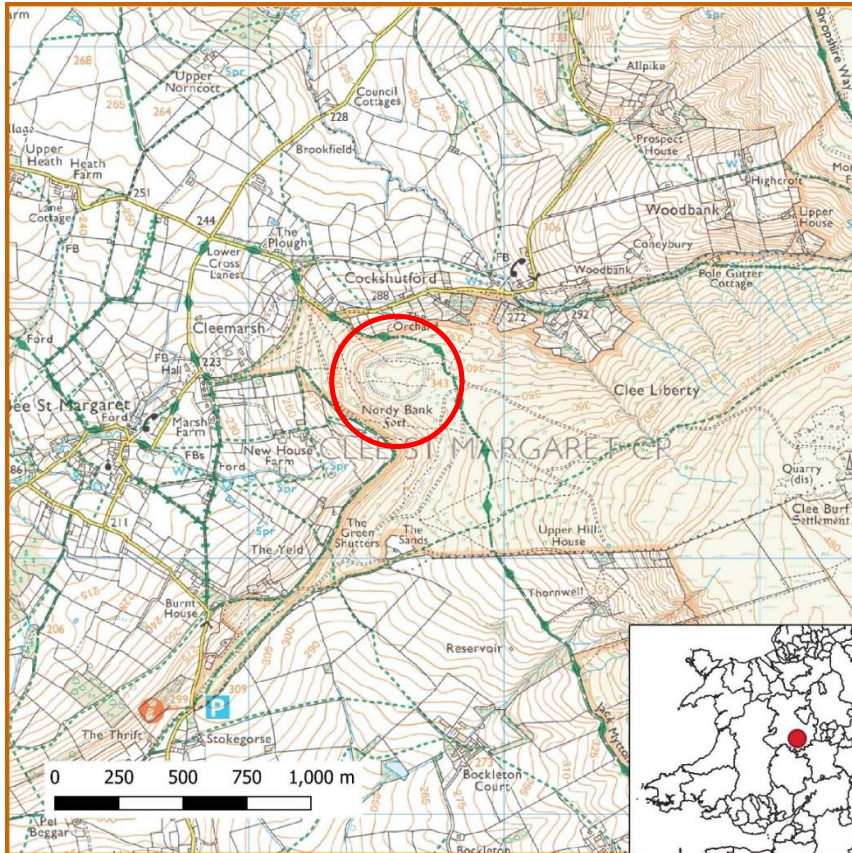
| | |
|--|----|
| Plate 2 - Scrape 5 after excavation, looking east 2 x 1m scale | 10 |
| Plate 1 - Scrape 5 prior to excavation, looking east, 1m scale | 10 |
| Plate 3 - Scrape 5 extension showing cut [6]. 1m scale, looking east. | 11 |
| Plate 4 - Scrape 8 prior to excavation, looking west. 1m scale..... | 15 |
| Plate 5 - Scrape 8 after excavation, looking west. 1m scale..... | 15 |
| Plate 6 - Red sandstone..... | 17 |
| Plate 7 - Gritty sandstone..... | 17 |
| Plate 8 - Dhu Stone | 17 |
| Plate 9 - Filling sandbags with soil | 21 |
| Plate 10 - Scrape 3, turf has been peeled back and hessian roll placed on inner edge held. It is held down with sandbags. | 22 |
| Plate 11 - Scrape 3 repaired with turf replaced | 22 |
| Plate 12 - Scrape 5 during repair, looking south | 23 |
| Plate 13 - Scrape 5 after filling, looking south | 23 |



Introduction

This report has been produced by Matt Williams of Fearn Heritage and Archaeology as part of the Our Upland Commons Project (OUC). It describes the results of archaeological investigation of the bank of the Nordy Bank hillfort (hereafter the 'Site'), and the repairs carried out to sheep scrapes and bare patches. The hillfort is a Scheduled Monument (1008390).

The fieldwork was carried out on 16th – 19th and 23rd – 26th October 2021. All work was carried out in accordance with the method statement prepared by Fearn Heritage and approved by Historic England (Fearn Heritage 2021). A monitoring visit was carried out by Alison MacDonald of Historic England on 24th October.



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Figure 1 – Site location

Thanks are due to all the volunteers who carried out the repair work, excavation and recording: Polly Bolton, Guy Cholmeley; Simon Conolly, Clive Fisher, Nicky Fisher, Ian Heighway, Mariel Lubman, Chris Moore, Claire Nicholson, Bernard O'Connor, Gary Paris, Helen Paris, Chris Rowe, Pamela Thom and Jennifer Vine.

This work was made possible by the Our Upland Commons Project. Our Upland Commons Project is a three-year, £3m, 25-partner project helping to secure the future of upland commons in Dartmoor, the Lake District, Yorkshire Dales and Shropshire Hills. It's led by the Foundation for Common Land. The project has been made possible by funding from National



Lottery players, grants from Esmée Fairbairn and Garfield Weston Foundations. Local funders are as follows: the Millichope Foundation, amongst others.



Site Background

Geology

Nordy Bank is located on lower Devonian 'Old Red Sandstone' deposits with some limestone at the east end. Upper Devonian Old Red Sandstone (Maughans Formation) deposits lie directly to the east as the ground rises towards Clee Burf. Higher up the slopes, the sandstone is overlain by Carboniferous Limestone (BGS, 2021), which was quarried extensively at the top of Clee Burf and Brown Clee. At the top of these hills are deposits of Olivine Dolerite, a very hard igneous rock known locally as 'Dhu Stone' (Rosenbaum and Wilkinson 2005).

There are no superficial (overlying) deposits (BGS 2021).

Location and topography

The Site is located on the north west promontory of Clee Liberty hill (Figure 1). The land rises to the east to the top of Clee Liberty, where there is another Iron Age hillfort (Clee Burf) which has been severely damaged by 20th century quarrying. To the north, west and south the land drops steeply to the base of the hill. The Site is at approximately 340m OD.

On the slope to the south of the Site is a spring that forms the Clee Brook which runs west through the village of Clee St Margaret. The village of Cockshutford is at the base of the hill to the north.

Site conditions

The Site is in good condition and has not suffered from quarrying as the hillforts of Clee Burf and Abdon Burf have. There is occasional gorse which is managed by the parish and there are some small areas of bare soil where gorse has been removed. It is heavily grazed by sheep which have created 'scrapes' (small sheltered areas of bare soil) on some parts of the bank.

Aims

The aims of the works were two-fold:

Archaeological Recording

- to investigate and understand the construction of the rampart
- to gain information to characterise the nature and date of the rampart, and any phasing

Erosion Repair

- to facilitate the long-term preservation of the significant remains by repair
- to prevent further erosion of the existing scrapes by infilling and reseeding
- to train local volunteers to enable them to carry out future repairs

Method

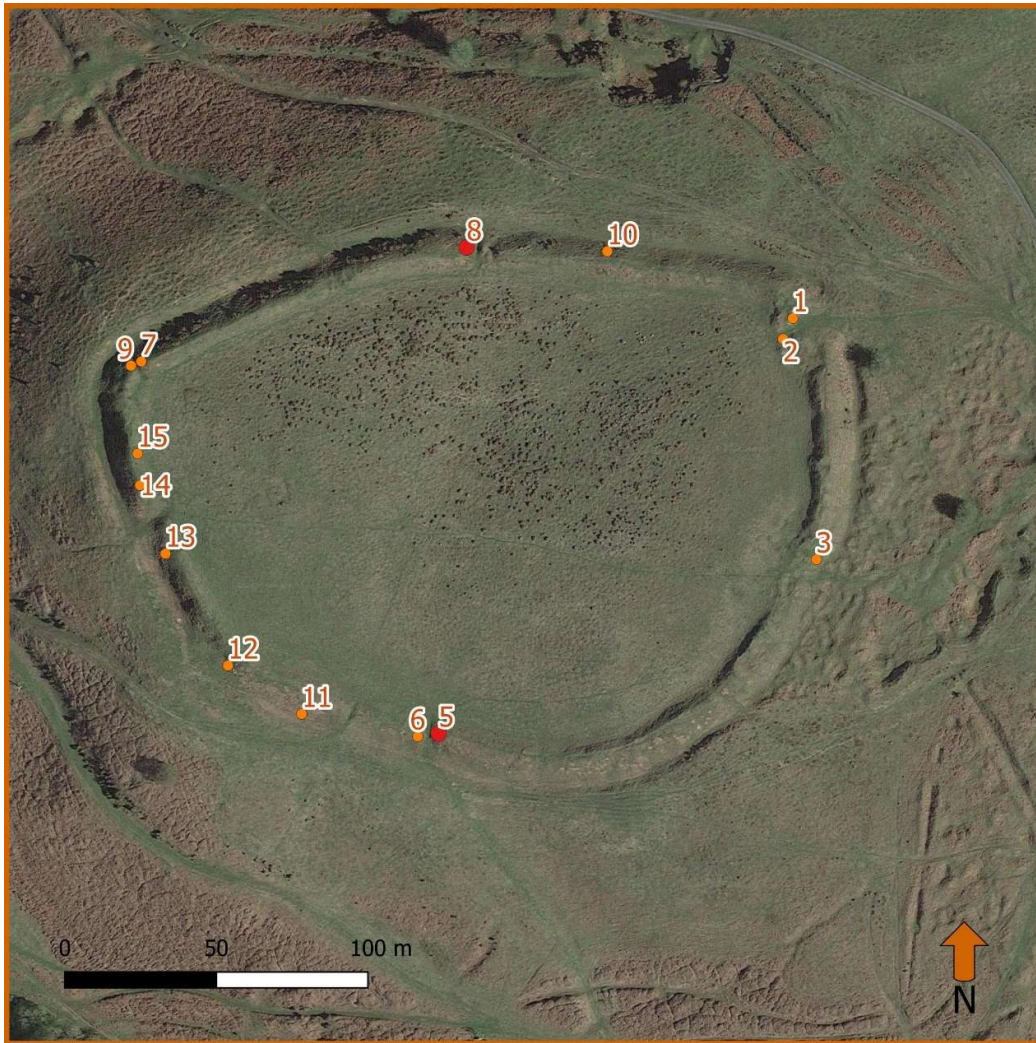
A full description of the archaeological methodology is within the WSI (Fearn Heritage 2021).

Fourteen scrapes were identified during the work (numbered 1 – 3, 5 – 15). Eight scrapes were identified in the method statement but no. 4 could not be located on the ground when the work started, and has therefore been voided. A further seven small scrapes or areas of damage were identified and these were repaired. The scrapes are shown in figure 2.



During the repair work it became clear that the method described in the method statement could be improved – these changes are described on page 19.

The repaired areas have not yet been seeded as this should occur closer to Spring when there is less chance of the seeds rotting. The seed mix to be used to re-seed the repairs is 'Acid Soils Grasses Mixture' from Naturescape, product ref N12G.



Background image - Google Maps

- Identified scrapes
- Archaeologically recorded scrapes

Figure 2 - Location of scrapes



Historic background

Nordy bank is a slight univallate hillfort, described in the Historic England scheduling as:

'roughly oval in plan, the earthworks having maximum dimensions of some 260m east to west by 198m north to south and enclosing an area of approximately 3.2ha. The defences include a substantial and well defined rampart averaging 1.5m high around all but the east side, where it is up to 2.8m high.... The line of the ditch is disturbed around the south east quarter of the site where later surface quarrying has encroached onto the earthworks. There are five entrances to the interior of the enclosure, two of which appear to be original features.

The main entrance is believed to lie at the north east corner of the hillfort facing the natural approach along the ridge top. Here the northern section of ditch is interrupted by a causeway across the ditch 9m wide. The rampart is also interrupted at this point, although the entrance gap is only 3m wide and offset from the line of the causeway, slightly to the north. Such offsetting was designed to deflect any direct approach to the interior of the site, particularly by mounted attackers. Both sides of the rampart curve slightly inwards to create a simple inturned entrance. A broadening and lowering of the ramparts flanking this entrance suggest that guard house structures once controlled this gateway. (Historic England 2022)

Various paths cross the fort and link the entrances. Apart from the new entrances and paths, the structure of the hillfort is well preserved. Quarrying has not directly impacted the hillfort and many of the larger and more eroded tracks pass to the north.

The Site forms part of Clee Liberty common and has been grazed as common land since the Medieval period at least. Bell pits and other evidence for mining and quarrying surround the Site but there is no suggestion of this within the fort, although earthworks on the east side suggest that limestone may have been quarried close by. There are several horseshoe shaped lime kilns within the vicinity of the fort which probably date to the late Medieval or Post Medieval period.

There are two sub-rectangular features in the west of the fort. One may be a 20th c. military feature although this has not been proved.



Results of Archaeological recording

Scrapes 5 and 8 were identified as suitable for archaeological excavation and recording (Figure 2). They were chosen because they were easily accessible, large, and appeared to have deposits of potential archaeological interest within the exposed sections.

Scrape 5

Scrape 5 was located on the east side of the southern entrance to the fort (Figure 2). This is thought to be an original entrance as there is a break in the outer ditch (ie it was not excavated) suggesting an original, planned causeway into the fort (Historic England 2021).

The vertical face of the scrape was cut back and the base of the scrape was cut level. A narrow extension was cut from the centre of the section down to the base of the rampart, the purpose of this was to identify the base of the rampart construction and the underlying natural geology. Following excavation, the upper section measured 5.20m N – S and 0.80m high and the extension measured 3.50m E – W and 0.50m across.

The earliest deposit (at the base of the main section) was the core of the bank (2). This was a clean mid orange course clay with no inclusions. It was overlain on the south by a single layer of sub angular granite cobbles of fairly uniform size 100 – 160mm within an orange brown clay matrix (3). These appear to be the slightly tumbled remains of a stone facing on the outer (southern) face of the bank. Above this layer on the south side was a 0.40m thick deposit of dark orange brown clay silt containing frequent sub-angular granite stones (4). Unlike the facing layer (3), the stones in this layer varied greatly in size (90 – 250mm) and did not appear to be forming (or lying on) a surface, but were distributed randomly throughout the deposit. It is interpreted as collapsed material from a structure, such as a low parapet or paved path, on the top of the rampart.

Overlying (4) and (2) in the north was a c. 0.30m thick compact dark brown silt topsoil (1) and overlying turf (5). The base of the scrape consisted of firm dark orange brown clay (8); this was the result of sheep trampling and compacting the surface of (2).

The extension was 0.50m wide (N-S) and 3.50m long (E-W) and ran from the centre of the main section down the slope of the entrance at about 25°. The turf (5) was removed to the top of the more compact topsoil (1). At the top (east) of the extension the clay bank deposit (2) could be seen running westward below (1). Deposit (1) was not removed within the extension and therefore the trench was not deep enough to follow the clay bank downslope; as a result, the base of the bank was not revealed.

Part of a rounded cut [6], which ran into the northern section, was revealed in the extension approximately 1m from the base of the rampart cut into (1). It measured 0.43m E-W and 0.23m deep. The sides were vertical and the base flat. It was filled by a soft dark brown silt (7).



Plate 2 - Scrape 5 prior to excavation, looking east, 1m scale



Plate 1 - Scrape 5 after excavation (cut [6] unexcavated), looking east, 2 x 1m scale

The results from the main section show a large homogeneous deposit of clay (2) forming the core of the rampart. It is clean and there are no obvious laminations, indicating it was probably deposited quickly e.g. by an organised workforce. Some clay may have come from the ditch excavation on the outside of the rampart bank, although most must have been imported as much of the ditch appears to have been cut through rock. The profile across the top of (2) is uneven; this may be the result of structures on the bank or wear from a path.



On the southern face of (2) is a row of evenly sized stones forming revetting (3) on what would have been the outward face of the rampart. The stone is mostly sub-angular red sandstone and gritty sandstone which is available locally. None of the stone showed toolmarks or evidence for quarrying; indeed most corners and edges were rounded suggesting they had been exposed long before use. On the surface of the north of (2) was a single flat stone 0.35m across and 70mm thick. This may be a remnant of paving as seen in scrape 8.

Overlying the (3) is a deposit of stones within clay silt (4). This could be the remains of a tumbled structure or feature that was located on the outer apex of the rampart, although none of the stones seem regular or worked. It may also be a crude later phase of construction to raise the rampart and increase its outer gradient.

The cut feature [6] is difficult to interpret - In plan it resembled one half of a posthole although it was too shallow to support a large post, however it is possible that the surrounding surface has eroded.

It was sealed by the upper turf deposit (5) but cut the topsoil (1). Given that (1) sealed the rampart construction deposits it is likely that [6] is later than the rampart. The true character of this feature could not be clarified as it was not fully exposed. This cut represents a final phase of use, possibly long after the hillfort was abandoned.

There were no finds from this trench and no environmental samples were taken.



Plate 3 - Scrape 5 extension showing cut [6]. 1m scale, looking east.

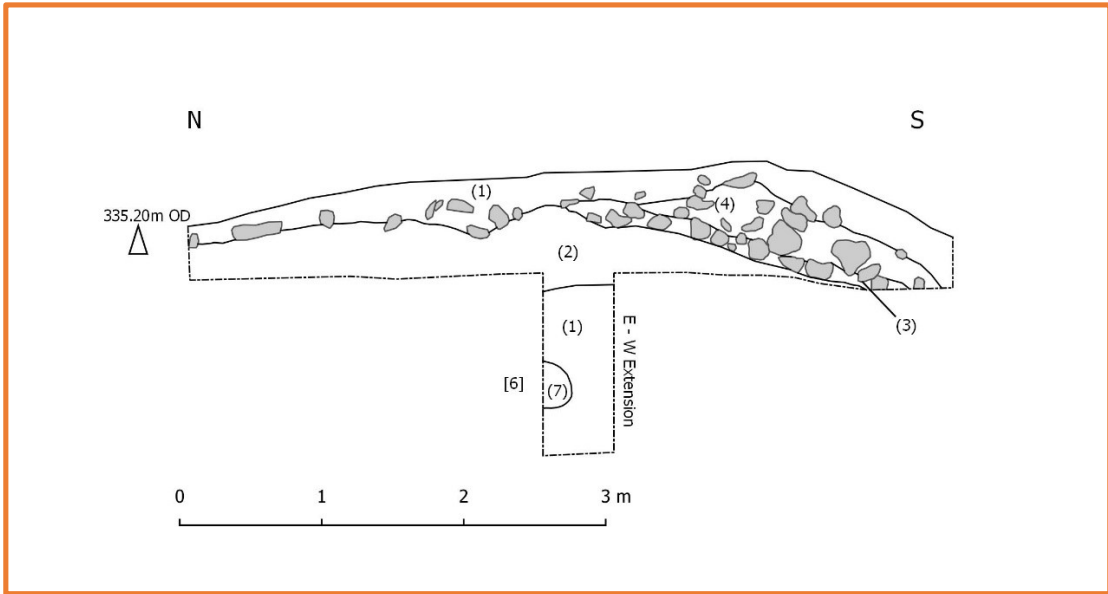


Figure 3 - Scrape 5 section 1

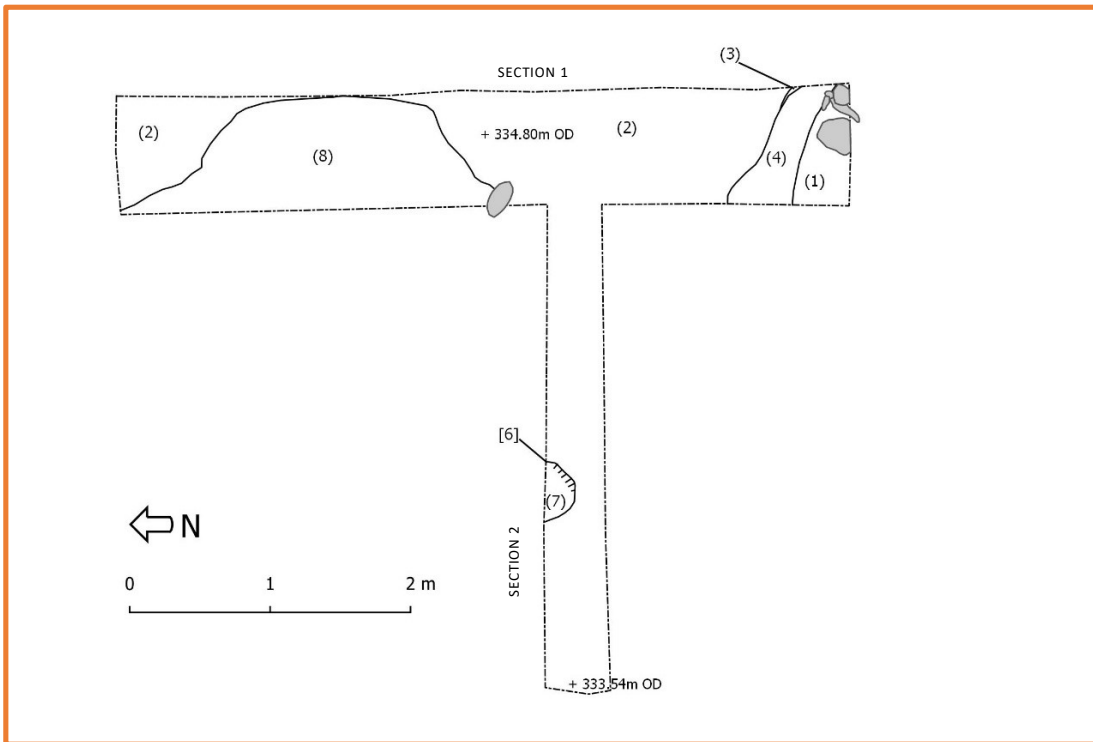


Figure 4 - Scrape 5 plan

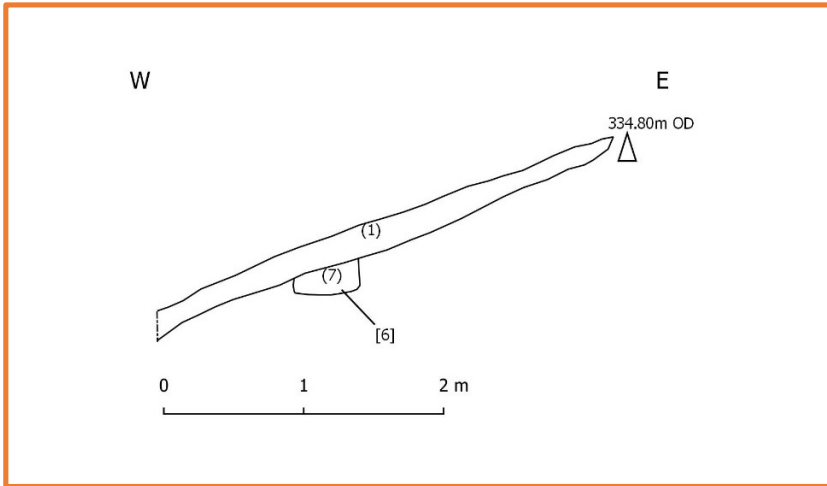


Figure 5 - Scrape 5 extension section 2 showing cut [6]



Scrape 8

Scrape 8 is located in the north of the rampart, almost directly opposite scrape 5. It is unlikely to be an original entrance.

Prior to excavation a row of stones (2) was visible near the base of the scrape. The section was cut back to the level of these stones (about 0.70m out from the face of the section) but the surrounding area was cleaned. This allowed the stones to be recorded in plan and preserved in situ. The section measured 4.80m E – W and 0.68m high. The cleaned area in plan measured 5.00m E – W and 1.30m N – S.

The earliest deposit was a firm dark orange brown silt clay (1) which formed the core of the first phase of the rampart. On the north face of (1) were evenly sized sub-angular stones (2) that were visible prior to excavation, these are interpreted as the remains of a revetted outer face. Stones were also present at this level to the south, although they were slightly larger and more angular; here they could have been paving rather than revetting. (2) was overlain by a 0.40m thick layer of compact mid brown silt with occasional small angular granite pebbles (3), which was overlain by a firm/friable mid-dark brown silt (4). On the outer (northern) face of (3) was a sloping deposit of friable dark brown silt containing frequent flat granite slabs, up to 250mm long and 70mm thick (5); this deposit may be equivalent to (4) on the south. Overlying (5) was a mid-brown silt containing occasional similar slabs.

In the southern part of the section a feature [7] appeared to cut through (4) and (3). It was 0.44m wide and 0.32m deep in section, although it was not excavated below the base of the section. It was filled with a mid-brown compact silt with frequent angular stones (8); the feature was noticeable in the section because the stones were not flat and level but thick and angular. They resembled posthole packing stones rather than paving or revetting. Cut [7] was sealed by 0.25m thick topsoil and turf.

This section is very similar to the scrape 5 section. The core of the rampart is a thick clay deposit with tumbled revetting stones on the outer face. Flatter stones, which could be the remnant of paving, continue to the south. This horizon is overlain by a deposit of silt; it is very thick and would not have built up naturally on the crest of the rampart, so is interpreted as a deliberate later re-construction or heightening of the bank. On the outer northern face of this is a layer of tumbled flat stones and silt, perhaps the remains of a structure. At this level, towards the inner face, is a possible posthole containing post packing stones which could have supported a palisade or walkway.

There were no finds from this trench and no environmental samples were taken.



Plate 4 - Scrape 8 prior to excavation, looking west. 1m scale



Plate 5 - Scrape 8 after excavation, looking west. 1m scale

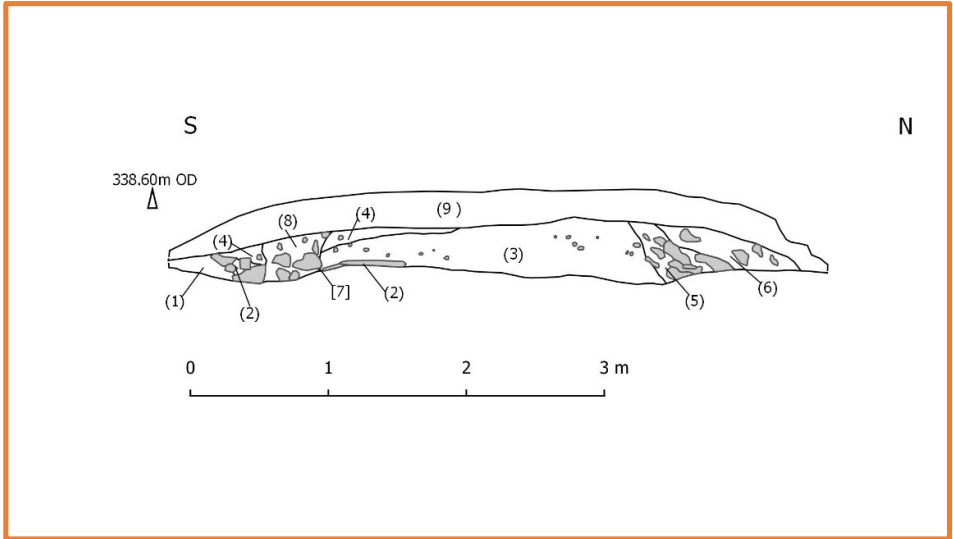


Figure 6 - Scrape 8 section

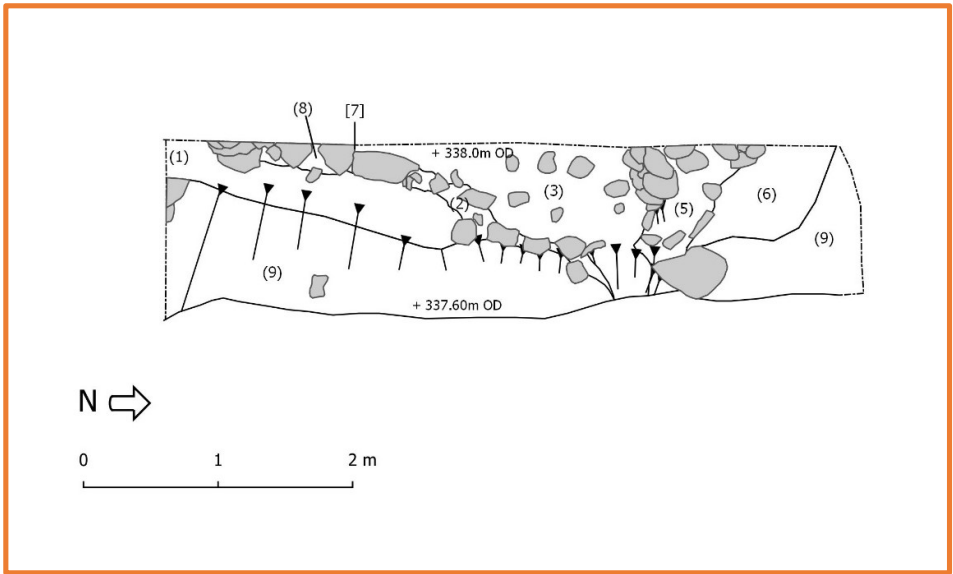


Figure 7 - scrape 8 plan



The Stone

Three types of stone were identified in the construction of the defences. The most common was the smooth red sandstone which is locally abundant and easily splits into slabs; there were also slabs of denser gritty sandstone. Both are part of the Devonian 'Old Red Sandstone' deposits and probably came from the excavation of the ditch; the gritty stone resembles the stone exposed in outcrops on the southern face of the ditch. There were also occasional rounded nodules of Dhu Stone (Dolerite) from the top of the surrounding hills. The Dhu Stones are very noticeable, being smooth and rounded, dark grey and extremely dense. They may have been used as decorative features within the revetting or perhaps even as effective missiles.



Plate 6 - Red sandstone



Plate 7 - Gritty sandstone



Plate 8 - Dhu Stone



Excavation discussion

The two excavations have revealed useful information about the construction and phasing of the rampart. Both sections were cut through the upper part of the main rampart. Section 5 was cut on the slope of an original entrance, whereas section 8 was cut through a later intrusion.

Some characteristics of the rampart can be identified with confidence. There are at least two phases of construction. The core of the original bank was constructed from clay silt and the outer face of this core was faced with rocks. This was overlain by a later remodelling which heightened the bank.

The clay material for the bank may have come from the ditch, however much of the ditch is cut through rock so it is likely that clay had to be imported. The rock from the ditch was probably used for the revetting and other structures.

There is evidence for further detail within these phases but the interpretation is less confident. In both sections there were occasional flat stones on top and inner face of the clay core which may have been paving along the top of the rampart. The uneven top of the clay core in section 5 may also be evidence for a pathway.

Both sections also showed evidence for later remodelling. In section 5 this comprised two deposits of tumbled stones and silt on the outer face; in section 8 it comprised another core of silt with tumbled stones and silt on the outer face. In both sections the stones may be the remnants of facing, a path or parapet along the crest of the rampart. A vertical cut with packing stones at the inner top of the later core in section 8 could be a posthole supporting a walkway. It is too far back on the rampart for a palisade. A posthole on the inner face of the entrance at section 5 post dated the subsoil which sealed the later construction and therefore is unlikely to be associated with the defences.

In summary, the excavation suggests that the first phase of the rampart consisted of a revetted bank with a stone path and perhaps a parapet across the top. The rampart was later heightened by adding a bank on the top of the rampart and there is evidence for stone structures and perhaps a wooden walkway along the crest. The form of this later rampart is not known as the stones have tumbled down the outer face. A final third phase, post-dating the occupation of the hillfort, consisted of a single cut in the soil that sealed the bank.

The excavation has shown that evidence for the construction of the defences is well preserved below the topsoil.

The base of the original clay bank was not revealed in either section and no undisturbed part of the rampart was excavated in plan, therefore further detailed interpretation was not possible. Future excavation in plan across the top of the rampart could clarify the path or palisade features.



Stratigraphical summary of the sections

| SCRAPE 5 | SCRAPE 8 | PHASE |
|---|--|---------|
| Turf Cut [6] Topsoil (1) | Turf Topsoil (9) | PHASE 3 |
| Collapsed stone – structure or revetting (3) and (4) | Cut/posthole [7] Collapsed stone – structure or revetting (5) and (6) Silt core (3) and (4) | PHASE 2 |
| Stone revetting and paving (3) Clay core (2) | Stone revetting and paving (2) Clay core (1) | PHASE 1 |



Repair works

A total of fourteen scrapes or areas of bare earth were recorded and ten had some kind of repair carried out. Scrape 15 was not easily accessible and numbers 10, 11, 13 and 14 were areas of bare earth that did not require repair (but will be reseeded). Repairs that were carried out ranged from simply covering slightly eroded bare ground with hessian prior to re-seeding, to combinations of sandbags, soil and hessian to repair large, steep cavities. A range of methods could be used and each scrape required careful thought before work started. Each scrape was photographed prior to repair.

Repairs generally followed the original methodology as in the submitted scheduled monument consent; however, it soon became apparent that the method could be improved with some minor adjustments. The original methodology; is below it is followed by the revised version which describes the changes along with comments.

Special thanks are due to Guy Cholmeley who constructed the bag filler and allowed the use of his vehicle throughout. Thanks also to Guy, Clive and Nicky Fisher, Ian Heighway and Chris Moore whose hard work and dedication throughout the project made it such a success. The modifications to the repair methodology are entirely from this team, and their comments and adaptations on scrape repairs will surely make an important contribution to future management of heritage earthworks.

Erosion Repair - original methodology

This is the original methodology (Fearn Heritage 2021).

1. On the larger scrapes a toe board will be placed at the base of the scrape to prevent slippage. This may not be necessary on the very small scrapes.
2. Hessian sandbags will be filled with soil, taken from elsewhere on the common (but not within the scheduled monument area).
3. The level will be built up with layers of sand bags, firmed into the erosion scars to re-establish a profile close to the original profile of the ramparts.
4. All erosion repairs will be covered by a hessian or jute mesh to prevent slippage
5. An appropriate grass seed mix will be sown over the surface of the sandbags after firming is complete.
6. Sandbag repairs will be watered as required and regularly monitored to ensure the grass takes and the repairs do not slip or collapse.
7. Agreement to fence of the larger scrapes in order to allow vegetation to re-establish will be sought.
8. The area subject to the works shall be recorded by annotated photographs which will be included in the final report.



Erosion repair – observations on the methodology and comments

Toe boards were not necessary in any of the scrapes. Hessian bags 130mm x 300mm were used as these were the correct size for the filling apparatus and not too large to carry when full. The bags were filled using a device consisting of six plastic pipes fitted in a wooden collar - bags were placed over the pipes and soil was tipped into the pipes. This meant we could fill six bags in about the time it would have taken to fill one. Soil was taken from north of the scheduled area. The ideal fill level was about 2/3 – this allowed the bags to be squeezed into shape within the scrapes.



Plate 9 - Filling sandbags with soil

Sandbags were only placed around the edge of the scrape and the centre was filled with loose soil and compacted by hand. This meant there were fewer cavities in the fill; it also saved bags and filling time. Additional rows of sandbags were built into the fill of large, steep scrapes.

Once repaired, smaller and medium sized scrapes were covered with hessian held in place with wooden pegs. The pegs will be removed once the grass has taken.

For some repairs 20cm of turf was peeled back from the edge of the scrape. The scrape was then cleared of loose soil and a length of hessian roll was placed around the inner edge. Filled sand bags were packed around the edge which formed a firm edge to the repairs and also held the hessian in place. The scrape was then filled with soil and compacted.

The hessian roll was then pulled over the bags and additional hessian was used to cover the centre. Finally, the turf was rolled back over the edge of the scrape (plates 10 and 11).



Plate 10 - Scrape 3, turf has been peeled back and hessian roll placed on inner edge held. It is held down with sandbags.



Plate 11 - Scrape 3 repaired with turf replaced

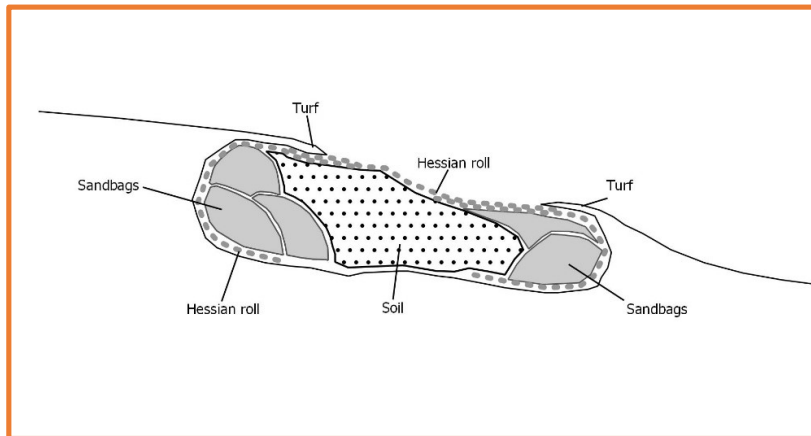


Figure 8 - Diagram showing sandbags, soil and hessian roll filling the scrape cavity



Scrape 5 was very large and the gradient of the repair made it difficult to hold the soil in place. Toe boards were inadequate to hold back the soil, so rows of sandbags were built into the fill: Hessian was laid over the filled scrape to hold the soil in place. Compacting the soil during filling was critical.

Work on scrapes like this could not be carried out in wet conditions as it became far too slippery.



Plate 12 - Scrape 5 during repair, looking south



Plate 13 - Scrape 5 after filling, looking south. Hessian was placed over the repairs.



Scrape repair methodology summary

Each scrape required a slightly different methodology depending on the size, depth and gradient. The steps below are a general methodology devised during the works:

1. Peel back c. 30cm of turf from around the scrape.
2. Clear out loose soil and stones.
3. Place hessian roll around the inner edge of the cavity leaving enough excess to fold over the filled scrape.
4. Place sandbags around the inner edge of the cavity to hold the hessian in place.
5. Fill the cavity with loose soil, compact continuously whilst filling. Additional rows or individual bags may be needed in large or steep scrapes to retain the fill.
6. Fold the excess from the edge of the cavity over the fill.
7. Cover the remaining exposed fill with additional hessian roll.
8. Replace the turf to hold down the hessian.
9. Watering the repaired scrape will help the soil settle.
10. Re-seed.
11. Remove any wooden pegs used in the repair.
12. Check to ensure seed has taken and soil is not eroding.



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