Dun Deardail Hillfort, Lochaber: Year 1 Archaeological Excavation Data Structure Report

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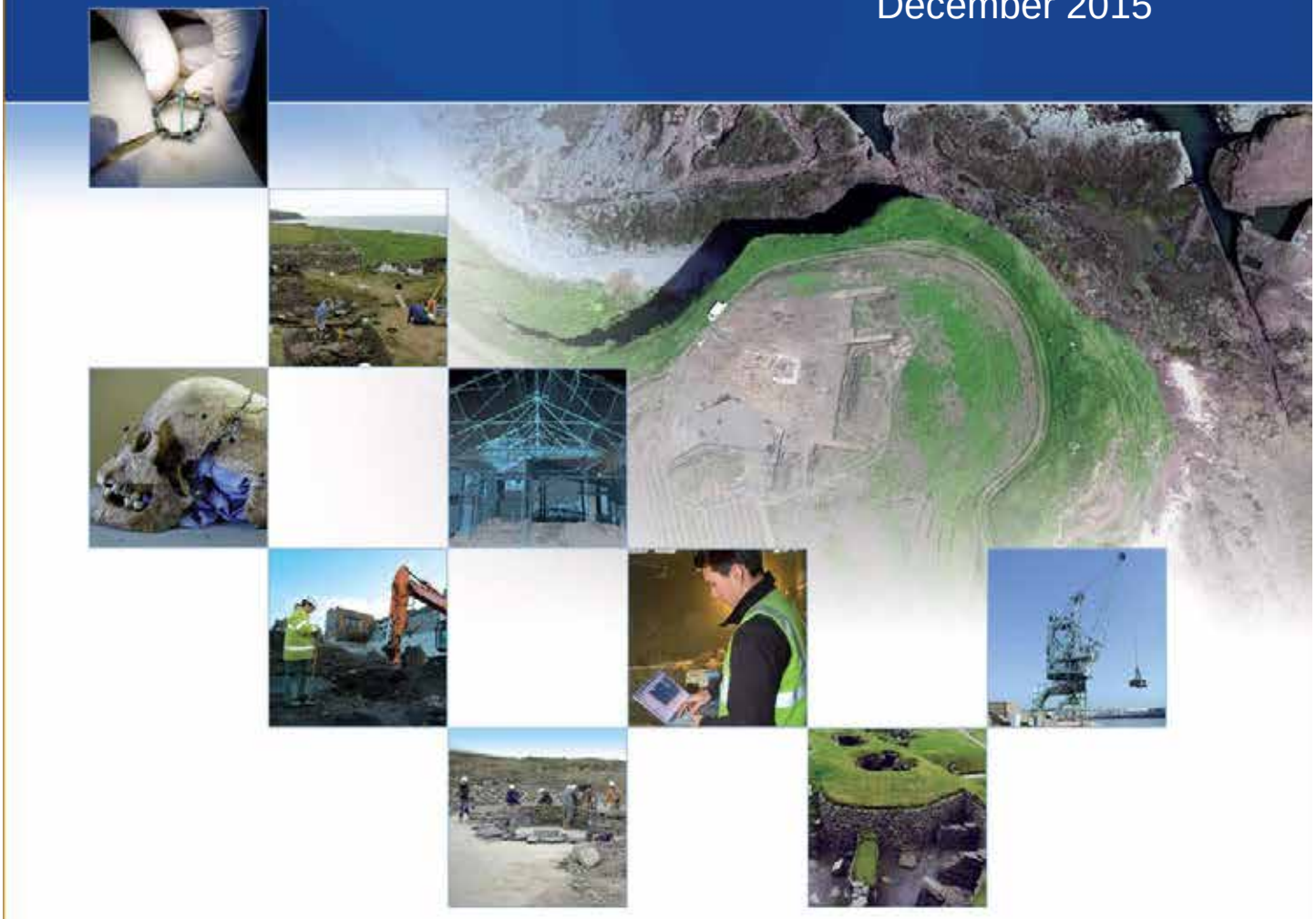

AOC Archaeology Group

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Dun Deardail Hillfort, Lochaber:

Year 1 Archaeological Excavation

Data Structure Report

On Behalf of: **Nevis Landscape Partnership**
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SUMMARY

This report presents the results of an archaeological excavation undertaken by the Nevis Landscape Partnership, with local volunteers, and AOC Archaeology Group at the vitrified hillfort of Dun Deardail, Glen Nevis, Lochaber. The 2015 works form the first phase of a three year project, with a further two seasons of field work to be completed. The first season of investigations at Dun Deardail comprised the excavation of six archaeological trenches, along with topographic and geophysical survey of the hillfort.

Two of the trenches excavated within the upper fort crossed the vitrified wall and within these a similar sequence was revealed. In both of the trenches a massively thick dry-stone wall, at least 5m thick and surviving up to 2.8m high was exposed, In neither trench was the outer wall face exposed, either due to a massively thick wall or possibly because after collapsing the outer face has slid down the steep slope of the knoll on which the fort was built. Despite not finding the outer wall considerable evidence for the structure of the rampart wall was revealed. In situ charred timbers and voids within the vitrified stone demonstrate that the rampart was of timber laced design, with a framework of timber beams built into the rampart. Medial wall faces within the thickness of the rampart were also recorded, that may also have been key to the structural integrity of the rampart. Vitrified stone is apparent around the circuit of the ramparts, the excavations showed that the upper areas of the rampart had undergone the greatest amount of vitrification, possibly suggestive of a superstructure above the ramparts.

The vitrification of the rampart did not mark the end of the life of the hillfort but did result in the collapse of the ramparts. The ramparts were subsequently roughly refaced and the rubble collapse in the interior of the hillfort was leveled and the hillfort reoccupied with structural remains overlying the rubble collapse from the ramparts. The consistent sequence of deposits and structures revealed in all of the trenches will allow for secure radiocarbon dates of the major phases identified so far, notably the construction of the ramparts, the vitrification of the ramparts and the later re-occupation of the hillfort.

As well as investigating the interior and vitrified ramparts of the hillfort two trenches were excavated over the slight remains of a bank defining a lower plateau to the outside of the hillfort. In both of these trenches the remains of an outer enclosure were identified suggesting that in at least one phase of the life of the hillfort the terraces below the hillfort were occupied.

1 INTRODUCTION

A community archaeology project, comprising the excavation of six trenches, was carried out at Dun Deardail Hillfort, Glen Nevis, Lochaber. by AOC Archaeology Group as part of the Nevis Landscape Partnership scheme. The project aims to better understand, protect and value the hillfort of Dun Deardail by:

- investigating the archaeological potential of the hillfort;
- enhance the historic environment record;
- inform ongoing condition monitoring;
- inform future conservation management;
- engage and enthuse local people in archaeology and the historic environment;
- provide a high quality archaeological higher education opportunity;
- ensure public involvement and education in regard to archaeology and the historic environment
- ensure and promote a sustainable and lasting educational legacy.

This report presents the results of the first season of fieldwork at Dun Deardail. The works were conducted according to the terms of a *Project Design* (Ellis, Cook & Ritchie, 2015). The project was undertaken with the kind permission of the landowner, Forestry Commission Scotland, to whom thanks are due, especially FCS archaeologist Matt Ritchie. AOC Archaeology Group would like to thank all of the volunteers who made the excavation a success.

2 SITE DESCRIPTION AND HISTORICAL BACKGROUND

Dun Deardail has never been the subject of intrusive archaeological investigations and is situated in an area where the later prehistoric and early medieval archaeological context is under studied.

The vitrified hillfort of Dun Deardail (NGR NN 12703 70127; NMRS No NN17SW 6; SAM 2893) lies at approx 300m above sea level in Glen Nevis, to the west of Ben Nevis (Figure 1). The site occupies the summit of a natural rocky knoll on the north facing spur of Sgurr Challum. The site is sub-oval on plan, measuring some 46m from northeast o southwest by up to 28m transversely (Figure 2). The summit of the hill is undulating and is clearly defined by a grass clad, ruinous dry-stone wall, which survives up to 2.5m in height and varies considerably in width because of its collapsed nature. The wall appears to be particularly well preserved along the south-westerly stretch before reducing in height to the current entrance; it is not clear where the original entrance would have been as there is no definable break in the wall. Lumps of vitrified material are visible around the circuit of the enclosure but are most prominent on the northern side. Much of the vitrified material appears to have been displaced from its original location sitting out from the main body of the wall. Actual wall facing is not discernible. The core of the wall appears to comprise loose rounded cobbles, pebbles and some angular rocks with a wide range of lithologies. It is clear that in places the wall has collapsed down the outer slope of the fort, with resultant hollows in the wall and wall material forming exposed patches of scree spread down the slope. Massive wall collapse is also evident by a cone of distinct vegetation which occurs on the steep slopes of the fort which is very different to the vegetation on the blanket bog. The northeastern face of the rocky knoll is almost sheer, dropping down through forestry to the floodplain below. The northern and southern sides are of the knoll are also steep but relatively short and bounded by relatively flat terraces. The western side of the fort falls away more gently with a rocky spur running off in a south-westerly direction.

Within the interior of there are two distinct areas demarcated by a curvilinear break of slope. The lower south-western end is the larger measuring roughly 30m by 28m. Within this lower area are two fairly well defined terraces, one in the southeastern corner and the other in the northeastern corner. These two terraces sit above a lower flat area with much rubble under foot. A low mound of cobble rubble sits just on the on the south side of the current entrance, although this clearly leads over the enclosure wall. The upper area (referred to as the citadel) measures roughly 20m by 15m within what appears to be much collapsed wall material in the northern corner. This area is relatively flat with a distinct break of slope on the western side. There is a possible but barely discernable bank beyond this before the curvilinear break of slope leading down into the lower area.

A possible wall or outer enclosure were noted by Feacham (1966) located on the outer knoll to the north of the fort and separated from it by a narrow flat terrace. This wall is no longer visible but the flatness of the knoll would easily lend itself to out-works or ancillary occupation possibly associated with the vitrified fort.

The site of Dun Deardail sits on an area of metamorphic bedrock (Leven Schist Formation) consisting of pelite and calcsilicate. Originally a sedimentary rock that has been altered by low grade metamorphism. This is intruded by the Ben Nevis Dyke Swarm , consisting of igneous intrusions of silica poor magma in the Devonian period. This is overlain by superficial deposits of sand and gravel deposited during glacial activity (BGS 1:50,000).

The land use of the site as depicted on historic maps is as rough pasture or marginal land .Since the Forestry Commission took on the land in the 1900's the area around the fort has been planted with coniferous plantation.

Plate 1: Dun Deardail under excavation, from NE.

3 AIMS AND OBJECTIVES

The primary aims of the project are to establish the nature, position and role of Dun Deardail within a broader landscape and social context. The working hypothesis is that Dun Deardail is a Middle Iron Age hillfort (middle to late first millennium BC) that was reoccupied and remodelling in the Early

Historic / Pictish period (middle to late first millennium AD). Excavation at Dun Deardail will provide a rare and much needed opportunity to investigate a relatively small 'citadel' hillfort with extant and visible vitrification. Excavation will contribute to our understanding of how such sites came to be, how they were used and how they fit into a wider socio-political and socio-economic context. However, by necessity the research aims have to be iterative and will be revisited at the conclusion of each of the first two fieldwork seasons as the results have the potential to alter the nature of subsequent research questions.

The Project Design (Ellis, Cook & Ritchie 2015) defines the main research questions that require further archaeological investigation. These are:

- Has the erosion present impacted on any underlying deposits?
- Is the varying thickness of the ramparts visible from the survey the product of differential weathering or different phasing?
- What is the relationship between the two halves of the hillfort?
- Is the gap in the rampart on the west an entrance or a subsequent breach and has the visitor erosion impacted on any underlying deposits?
- When was Dun Deardail vitrified?
- Is Dun Deardail a Late Iron Age hillfort remodelled into an Early Historic citadel fort?
- Is Dun Deardail a high status fort the populous of which had a wide range of economic and social contacts?
- Are the walls constructed from stone and interlaced timber?
- Was vitrification of the walls achieved by the addition of smaller stones of mixed geological types?
- Does vitrification occur at the end of the use of the hillfort?
- Was the entrance into Dun Deardail elevated and contained within the enclosing wall, explaining why none is visible in plan?
- Because of its high altitude was Dun Deardail seasonally occupied?
- Did specialised craft production take place at Dun Deardail?
- Were other non-specialised domestic activities taking place within Dun Deardail?
- Will the archaeological evidence for Late Iron Age structures within the interior comprise postholes and stone walls?
- Will the archaeological evidence for Early Historic structures within the interior comprise post-pads and sill beams rather than postholes?
- Will the Late Iron Age internal structures be circular in plan?
- Will the Early Historic internal structures be rectangular to sub-rectangular in plan?
- Was agricultural surplus stored within Dun Deardail?
- Was settlement or other activities taking place on the terraces located immediately below Dun Deardail?

4 METHODOLOGY

The fieldwork programme was undertaken under Scheduled Monument Consent (SMC) according to the terms of a Project Design (Ellis, Cook and Ritchie 2015), which was approved by Forestry Commission Scotland (FCS) and Historic Environment Scotland (HES), and in accordance with *Highland Council Standards for Archaeological Work* (Highland Council 2012). In 1995 the site was Scheduled under The Ancient Monuments and Archaeological Areas Act 1979 as 'An Dun, fort, Dun Deardail' (Index No. 2893). It lies within the administrative area of Highland Council, who are advised on archaeological matters by the Highland Council Historic Environment Team (HET). The project was undertaken with the kind permission of the landowner, FCS, and aimed to better understand, protect and value the hillfort of Dun Deardail.

4.1 Geophysical Survey

Parameters were selected that were suitable for the prospective aims of the survey and in accordance with recommended professional good practice (David *et al.* 2008, 8).

The gradiometer survey was carried out using Bartington Grad601-2 fluxgate gradiometer (see Appendix 1 and 2). Data was collected on a north-south alignment using zig-zag traverses, with a sample interval of 0.25m and a traverse interval of 1m.

A total of 10 complete and partial 30m by 30m grids were surveyed within the proposed site, totalling a surveyed area of approximately 0.56ha. The gradiometer survey was undertaken during the same period as the excavation and so attention was taken to remove or avoid metal obstacles present within the survey area, such as small tools, sieves and other field equipment, as gradiometer survey is affected by 'above-ground noise'.

All geophysical survey work was carried out in accordance with recommended good practice specified in guideline documents published by English Heritage (David *et al.* 2008), and the Chartered Institute for Archaeologists *Standard and Guidance for archaeological geophysical survey* (2014). Data processing, storage and documentation were carried out in accordance with the good practice specifications detailed in the guidelines issued by the Archaeology Data Service (Schmidt and Ernenwein 2011).

The gradiometer data were downloaded using Bartington Grad601 PC Software v313 and processed using Geoscan Geoplot v3.0. Details of processes used can be found in Appendices 3 and 4.

Interpreted point, polyline and polygon layers were created as layers in AutoCAD and technical terminology used to describe identified features can be found in Appendix 5.

4.2 Excavations

The archaeological excavation works comprised the hand excavation of four trenches (1 - 4) in locations set out in advance as outlined in the project design (Ellis, Cook & Ritchie 2015). These lay within the enclosing wall of the hillfort and within the Scheduled area and as such were subject to Scheduled Monument Consent. Two trenches (7 & 8) were hand excavated on the lower slopes of the hillfort to test for the potential features identified by Feacham (1966) and identified during topographic survey of the site.

The excavation methodology was in accordance with the project design (Ellis, Cook & Ritchie 2015). Trenches 1, 3 & 8 were not fully excavated during this seasons fieldwork with a strip map and sample strategy being employed in these areas. Trenches 2, 4, & 7 were fully excavated, as far as practical.

The trenches were excavated by hand and all features and structures revealed were cleaned by hand before being recorded by digital photography, drawn to an appropriate scale and a written record produced using AOC *pro forma* context sheets.

5 RESULTS

All archaeological works were conducted between the 14th and the 28th August 2015. Weather conditions were variable through the course of the work though the archaeological visibility was however good.

The following presents a summary of the excavation results, full details of the deposits and structures can be found in the appendices. A total of six trenches (Figure 2) were hand excavated and backfilled, of these Trenches 1 to 4 were located within the interior of the hillfort, while Trenches 7 and 8 were positioned on a roughly level plateau below the main hillfort. Concurrent with the excavation topographic and geophysical surveys of the hillfort were undertaken.

Plate 2: View of Dun Deardail, in centre, with lower terrace to right and Ben Nevis on left.

5.1 Geophysical Survey

Gradiometer survey results have been visualised as greyscale plots (gradiometer survey Figures 4 and 5). An interpretation of the gradiometer survey results can be found in Figure 6. An individual characterisation of identified anomalies can be found in Appendix 6.

5.1.1 Gradiometer Survey

Archaeology

(D1a – D1f) are composed of strong increases in magnetic response values and although the results appear fragmented, these are likely to belong to the same feature forming the ramparts of the hillfort. **(D2)** is composed of similar response values to **(D1)** and given its position is considered likely to have formed an internal boundary within the hillfort.

Discrete archaeology

There are several anomalies within the data set **(D2 – D4)** that are composed of similar patterning and response signal to **(D1)** and **(D2)**, but it is uncertain as to whether they represent collapsed material from the rampart or if they indicate further structural or defensive remains, such as a second ring of defensive earthworks. Likewise the archaeological significance of **(D4)** is also unclear, as the positioning of **(D4)** within the rampart **(D1)** suggests that it represents evidence of internal structural activity, or to collapsed rampart material that has fallen internally into the hillfort.

A linear anomaly **(D5)** runs on an east-west alignment perpendicular to the break of slope, but it is unclear as to whether this has an archaeological or geological origin.

To the north-east of Area A there are two anomalies composed of a strong increase in magnetisation, but with poor patterning and therefore it is difficult to determine whether these are of an archaeological nature and if so their form **(D6)**.

There are several linear anomalies composed of a weak patterning and increase in response values. Detailed interpretation is very tentative and it is unclear as to whether they relate to archaeological remains within the hillfort or underlying geological formations **(D7)**. In particular, the positioning of **(D7a)** suggests that these anomalies belong to internal structures or activities within the hillfort, but further investigation is required to fully characterise these anomalies and determine if they are of an archaeological nature.

Several isolated positive magnetic anomalies with a more consistent patterning are considered to possibly relate to pits representing earlier phases of activity.

Non-archaeology

The positioning and patterning of **(D15)** corresponds to an area of modern gravel path. The area surrounding **(D15)** contains highly contrasting positive and negative magnetic values that possibly relate to modern activity and above ground 'noise', such as a build up of surface rubbish and rubble.

Generally Area B contains a high level of magnetic disturbance and it is likely, given the high bedrock in this area, that **(D10)** is of a geological origin.

5.1.2 Conclusion

The geophysical survey within the Dun Deardail Hillfort has mapped fortifications and an internal boundary wall relating to the vitrified hillfort. Further features have also been identified both internally and externally to the hillfort which are considered likely to be of an archaeological nature, but it is unclear as to whether they relate to fallen rubble associated with the visible ramparts, or an additional outer ring of defences or structures.

The results have identified several linear anomalies and isolated positive magnetic anomalies with a more consistent patterning that possibly relate to former human activity, but interpretation is tentative as a consequence of the indeterminate patterning of these features. There is some evidence of possible structural remains to the north of the survey area but given the geology and areas of disturbance in this area the nature of identified features remains uncertain.

The results have also detected substrata geological transformations and an area of possible modern disturbance which may relate to surface detritus deposited by modern visitors to the site.

5.1.3 Statement of Indemnity

Although the results and interpretation detailed in this report have been produced as accurately as possible, it should be noted that the conclusions offered are a subjective assessment of collected data sets.

The success of a geophysical survey in identifying archaeological remains can be heavily influenced by several factors, including geology, seasonality, field conditions, the technique used and the properties of archaeological features being detected. Therefore geophysical survey may only reveal certain archaeological features and not create a complete plan of all the archaeological remains within a survey area.

5.2 Trench 1

Trench 1 was located at the eastern end of the hillfort, in the upper 'citadel' area of the hillfort (Figure 7). This trench measured 10m northwest southeast by 4m northeast southwest and straddled the interior slope of the enclosing wall along with providing a view into the interior of the hillfort. A strip, map and sample excavation strategy was employed in Trench 1 to allow for the identification of deposits and features to be targeted in further years.

Across the trench a deposit of turf and topsoil (100), up to 0.2m thick was removed to expose a deposit of stone (101) at the south east of the trench that had tumbled from the inner face of rampart [112]. This tumbled material comprised sub-angular stone, up to 0.45m by 0.3m by 0.2m in size and was surrounded by topsoil (100). Throughout the rest of the trench was a fine mid brown silty clay and sub-rounded to sub angular stone (103) forming a level surface at around 343.6m OD. Of the stone comprising deposit (103) a portion was vitrified.

Plate 3: Orthographic plan view of Trench 1 textured photogrammetric mesh.

Set within the levelled surface of (103) was a hearth complex comprising at least two intercutting stone hearths [102 & 108] and associated deposits. The underlying of the two hearths [102] comprised a sub-circular arrangement of slabs, surviving up to three courses high that defined the extent of the hearth that measured 1.2m by 1.2m internally with a maximum depth of 0.28m. These slabs also formed an area of rough paving, measuring 1.5m by 0.5m around the NE of the hearth. Four deposits were recorded in the centre of the hearth. Two deposits of charcoal rich sandy silt, in-situ burnt material (106, 107) lay at the base of the hearth. Overlying these in-situ burning deposits were two layers of silting of the hearth. (104, 105) composed of a silty sands and clays.

Plate 4: Hearth complex [102/108] post-excavation, from SE.

Set above and partially truncating hearth [102] was second hearth structure [108]. Hearth [108] comprised a sub-square arrangement of three edge set slabs [108] along with one of the structural stones of [102] forming the edge to the hearth. Hearth [108] measured 07.5m by 0.6m as excavated. The central area of hearth [108] was composed of four slabs laid flat forming the surface of the hearth. A single fill was recorded within hearth [108], this was a charcoal rich sandy silt (109) that appeared to be a silting up of hearth [108], unlike hearth [102] no in-situ burning deposits were recorded in hearth [108].

5.3 Trench 2

Trench 2 measured 10m NW to SE by 2m and was laid out to investigate a well-defined section of the rampart on the SE side of the fort, in the upper 'citadel' area (Figure 8). Steeply sloping ground falls away on the outside (SE side) of the visible rampart, leading to a short section of almost vertical cliff-face; while at the base of the cliff, a more gently-angled terrace leads off to the SE. The steeply sloping ground on the SE side of the rampart, contains collapsed masonry from the rampart including some large clasts of vitrified stone. Below the visible rampart, at a point to the SSE of Trench 2, possible foundation courses for the outer wall of the fort were identified comprising a short 1.2m length, surviving up to two courses high.

Trench 2 was designed to look at the surviving rampart features in this sector of the fort, including vitrified deposits visible in the top of the rampart, and where erosion on the outside face of the rampart and the visitor path along the crest had been noted previously.

Plate 5: Orthographic textured photogrammetric mesh plan view of Trench 2 pre-excavation.

After removal of the dense turf/root matt context (200), which in places was thin over the underlying stone, a number of contexts were revealed. At the crest of the rampart, where the visitor footpath ran across the top, large, articulated fragments of heavily vitrified stone (203) were revealed. This material penetrated down into the rampart wall core for approximately 0.8m on the SE side of the rampart and 0.3m on the NW (inside face) of the rampart. On the steep/vertical outside face of the vitrified stone (203), three regular-spaced voids measuring between approximately 180mm and 250mm across were identified. From the pattern of visible molten runs of stone within the voids, it is probable that these represent the locations of horizontal timber beams within the rampart wall.

Plate 6: Trench 2 vitrified core of rampart showing voids representing locations of horizontal timbers.

A thin mid-brown soil deposit (201) containing numerous fine roots and small angular stone fragments less than 50mm across (including some small vitrified fragments) underlay the turf matt (200) on the inside face of the rampart. This thin deposit varied in thickness; was approximately 20mm thick towards the crest of the surviving rampart and achieved a maximum thickness of 200mm at the NW end of the trench. The context also contained some small charcoal flecks.

On the outside (SE face) of the surviving rampart, removal of the turf/root matt revealed a dark brown to dark orange gritty sediment (202) containing numerous fine roots, small stone chips up to 40mm across, and larger angular stone clasts of mixed lithology between 40mm and 100mm across. The deposit also contained some small vitrified stone fragments, charcoal flecks and some small charcoal lumps. The small stone chips may be a result of frost activity acting on the exposed outer face of the rampart. The context varied in thickness from approximately 20mm thick at the top of the rampart, to 350mm thick at the SE end of the trench. Context (202) overlay a sequence of deposits comprising material relating to the failure and collapse of the outer rampart wall and core, and possible features relating to the construction of the rampart wall core.

Outer Rampart Deposits and Features

After removal of the upper sediment context (202) on the SE side of the rampart, what at first appeared to be a chaotic mass of tumbled stone (204) was revealed. This generally comprised unburnt stone clasts of mixed lithology, in particular sub-rounded granite boulders up to 400mm across and metamorphic clasts with a slab-like morphology up to 200mm across. The loose matrix between the stones included smaller stone chips and charcoal flecks within a mid-brown gritty sediment. There were also many voids between the stones and some roots had penetrated into the context. The deposit forming the context lay at an angle of around 40 degrees from the horizontal and almost certainly forms secondary collapse of the rampart wall.
Context (204) is an extensive deposit and was found to overlie more substantial collapsed rampart wall at the SE end of the trench including many large granite cobbles and boulders, but also containing some large quartz cobbles. Large air-filled voids were encountered between the collapsed material, along with pockets of gritty mid-brown sediment and charcoal flecks/lumps. This material must comprise the primary collapse of the rampart wall on the outside of the dun.

Moving NW in the trench from the collapsed material comprising context (204), more organised stone fill (212) was encountered forming what appears to be the built core of the rampart wall, comprising a sequence of roughly horizontal layers. Including the heavily vitrified material visible at the top of the sequence at the highest surviving section of the rampart wall (203), a total of nine individual sub-contexts were identified forming the wall core that was exposed at this time. These are described below, starting with the highest/top context (203):

(203) – Articulated fragments of heavily vitrified stone, with potential beam-holes visible
(212b) – A layer of metamorphic, slab-like stone fragments including small stone chips
(212c) – Granite cobbles with some larger boulders up to 350mm across
(212d) – Another layer of metamorphic, slab-like fragments including small stone chips
(212e) – Another layer of granite cobbles and larger stones clasts up to 350mm across
(212f) – A layer of metamorphic slabs up to 250mm across
(212g) – Another layer of granite cobbles and larger stone clasts up to 400mm across
(212h) – Another layer of metamorphic slabs up to 250mm across
(212i) – A layer of large granite and quartz boulders, with some smaller granite and metamorphic rock slabs up to 500mm across

Plate 7: Trench 2 rampart core (212) showing layering of granite cobbles and metamorphic stone chips.

The layers containing heavily shattered metamorphic stone chips and fragments in the upper sequence of the deposits may have been caused by the vitrification process, although there was no direct evidence of vitrified stone here. The fragmentation of the stone may also have been caused through frost action. However, it is also possible that the stone fragments and chips were used to bed in horizontal timbers/beams forming the lacing within the rampart wall – these deposits interspersed by the layers of granite cobbles and boulders.

This was the limit of excavation on the outside of the rampart wall in Trench 2 in 2015. It was obvious, almost from the start of excavations this year that excavation in the SE end of the trench was penetrating the wall core and in order to find any evidence of the outside wall face, the trench would have to be extended by at least two metres to the SE.

Inner Rampart Deposits and Features

On the inside face of the rampart the heavily vitrified stone deposit (203) was abutted by a less vitrified, fused stone/rubble (215) comprising angular rock fragments measuring between 40mm and 150mm across. A steep ramp of stone rubble (205) comprising mixed stone lithology, including granite, metamorphic rocks and quartz – some of which showed evidence for scorching and burning - ran up against context (215) and descended at an angle of around 40 degrees from the horizontal down the inside of the rampart. These angular to sub-rounded stones, varying in size between 50mm and 350mm across, are most likely the result of secondary collapse of the inner rampart wall. The deposit of stone also included some vitrified chunks up to 150mm across.

Removal of the secondary collapsed stone deposits (205) lying against the inside of the rampart wall and the mixed sediment deposit comprising context (201) revealed evidence for secondary occupation and re-use of the fort. Below context (201), a compact layer of small angular stones measuring between 60mm and 200mm across (206) formed a gently-sloping platform (dipping to the NW). Between the stones a dark brown sediment containing fine rootlets and some darker areas comprising a charcoal-rich material was recorded. A stone setting (207) had been constructed on top of the platform, comprising well-fitted slabs forming a roughly circular shape (although the feature

extended under the NE side of the trench baulk). This may have formed a large post-pad for a timber building. Several other large stones had been set on top of the platform (206), including some re-used vitrified chunks of stone, but these did not appear to form anything coherent.

The compacted stone (206) forming the platform, was retained and defined at the SE end by a crude revetment wall (208) comprising granite and metamorphic stone slabs up to 300mm across. The wall appears to have been built to hold back the collapsed rampart wall material to the SE and one section of the wall in the trench has collapsed forward onto the stone platform (206). The NW end of the stone platform (206) was defined by a single course of medium-sized boulders and slabs (209), measuring up to 300mm across. The stones appear to have been set on a very thin sediment deposit, with larger granite boulders lying below comprising collapsed material from the rampart wall. Below the stone platform (206), a compact dark brown to black greasy deposit (211) containing numerous charcoal flecks, some charcoal lumps, and small angular stone clasts was revealed. This probably formed a walkway or activity area, representing secondary use of the inside of the upper area of the fort.

Removal of revetting walls (208) and (209), and the stone platform and associated deposits (206) and (211), revealed the primary collapse material (213) and (214) from the inner rampart wall (including core material from the wall). This generally comprised sub-rounded and angular unburnt granite, quartz and metamorphic stone clasts – some of these being quite large and up to 400mm across. The stones had many air-filled voids between them, but also some sediment-filled pockets comprising mid-brown to light black gritty soil. This also contained small stone chips, smaller angular stone clasts and charcoal flecks/lumps. Some of the larger stone comprised dressed slabs, some of which showed evidence for heat fracturing, and these became more numerous towards the base of the deposit and at the NW end of the trench (context 214). Here, chunks of vitrified stone were also recovered, and it appears that this burnt stone material comprises the collapsed section of the upper rampart wall that has fallen inside the dun – indicating that the most intense burning of the rampart took place towards the top of the structure. The matrix of the stone collapse (214) at the NW end of the trench also included larger lumps of charcoal, possibly from timber lacing of the rampart, and an orange to red gritty sediment matrix.

Plate 8: Trench 2 showing stone setting (207) (on left extending into baulk) revetment wall (208) (in background in front of rampart) and stone line (209) (immediately behind ranging rods), from NW.

This collapsed material at first appeared as a chaotic mass of stone tumble. However, in the trench sections and during excavation, patterns of collapse could be identified. It appears that the main part of the wall must have collapsed during, or immediately after the vitrification process – probably the latter, due to the sequence of archaeological deposits that were identified below the collapse. The collapsed stone deposit (213) overlay a dense, black lens (up to 80mm thick) comprising small burnt stone chips, charcoal flecks and charcoal lumps (context 216). The deposit also contains thin lenses of grey wood ash with a paste-like texture and pockets of orange ash. It is possible that this deposit formed by water washing and collecting material from the overlying rampart wall collapse (213) and ponding towards its base. However, it may relate to fuel residues resulting from the burning of wood used in the vitrification process. The deposit ran at a shallow angle uphill from the NW moving SE, then rose at an angle of approximately 45 degrees. Excavation of the lens of material towards the SE revealed its abrupt end against the face of a large, well set stone and removal of additional overlying deposits comprising context (213) and (205) led to the initial discovery of the surviving, standing section of the inner rampart wall (218).

The upper part of the surviving inner rampart wall (218) was initially uncovered and removal of the destruction layer (216) adjacent to the wall revealed context (217); generally comprising small to medium-sized angular stone clasts, most of which displayed evidence for intense heat and fracturing, and numerous charcoal lumps/flecks. The deposit formed a ramp of material against the base of the rampart wall and most likely relates to stone spalling from the upper rampart during the vitrification process. Limited time at the end of the excavations in 2015 did not allow the full removal of context (217) adjacent to the rampart wall, or the removal of context (216) and the underlying

deposits at the NW end of the trench. However, at least eleven courses of stonework comprising the inner rampart wall (218) were exposed.

The wall had been constructed from large granite boulders and metamorphic blocks, in fairly regular courses and with the use of pinning stones between some of the blocks. The wall profile is almost vertical, although a few stones have bulged outwards due to settlement and collapse of the structure above, while one section of the exposed structure has completely collapsed outwards. The lowest course of the wall was not exposed, although this could be seen from above, stepping out from the main wall line.

Plate 9: Trench 2 inner face of rampart (218), from NW.

Finally, on the last day of excavation, immediately prior to backfilling, the trench was to reveal one last important piece of information. Heavy overnight rain had caused some ponding at the NW end of Trench 2 and while returning to sample the destruction layer (216), carbonised grain was noted. In order to clarify the location and source of the grain deposit, a small sondage was quickly excavated adjacent to the NW baulk of the trench. This revealed a deep, organic layer of burnt material (219) including large roundwood charcoal, fine organic matt/fibres and significant quantities of carbonised grain. The deposit was sampled and there is a high probability that this material relates to the primary occupation and destruction horizon inside Dun Deardail. The deposit is well-sealed below the primary collapse of the inner rampart wall, while the destruction deposit (216) merges with the surface of (219). The potential for burnt organic deposits is therefore significant within the fort, especially below the deep overburden represented by collapsed rampart and later occupation material.

5.4 Trench 3

Trench 3 (Figure 9) was located over the southernmost internal terrace within the fort of Dun Deardail and measured 10m northwest southeast by 4m northeast to southwest. Trench 3 was not fully excavated during this season's fieldwork with a strip, map and sample methodology being used instead.

Plate 10: Orthographic plan view of Trench 3 photogrammetric textured mesh.

Across Trench 3 was a dark brown clayey silt topsoil (300), up to 0.12m deep. Removal of this topsoil material exposed stone deposits throughout Trench 3. At the southeast end of the trench on the terrace a gently undulating surface was exposed with a number of slight features. The terrace was composed of a rubble deposit (303) of small angular stone, probably derived from collapsed rampart material and levelled out to from a rough surface. Where the deposit of rubble started to fall of the terrace at the northwest it was clear that the upper levels of the deposit comprised the finer stone with the larger material (309) deeper into the deposit. Extending into the southwest section of Trench 3 was a low mound (314) formed of small angular stone which extended for 1.9m by 1.4m and was up to 0.2m high. Running north south and extending half way across Trench 3 was a deposit of dark brown sandy silt with occasional stone. Excavation of this deposit showed it to lie in a linear hollow up to 0.85m wide and 0.15m deep.

Set into the levelled rubble deposit (303) were four similar possible post settings [304, 305, 312 & 319]. These stone settings were constructed of between 4 and 5 rounded granite cobbles, up to 0.4m by 0.4m by 0.3m in size forming four sub-circular arrangements of stone. These stone settings had a central area between 0.2m and 0.4m in diameter and an overall size of between 0.8m and 0.95m in diameter. Alongside these post-settings was an area of possible rough paving or possibly a large post-pad [302] that extended out of the area of Trench 2. Stone setting [302] comprised four flat slabs laid edge to edge forming a sub-circular platform measuring 0.96m by 0.36m. This stone setting showed a marked similarity in character and size to stone setting [207] in Trench 2.

Two features [307 & 311] were identified cut into rubble surfaces (303 & 309). After the removal of the upper 0.1m of deposits (303 & 309) in a 2m wide sondage excavated down the centre of Trench 3 five more features were revealed that were not visible at the higher level. Five of these features [311, 321, 323, 325, 330] were located on the level terrace at the SE end of Trench 3 and two [307, 327] on the slope at the NW of Trench 3.

Of the seven cut features within Trench 3 six were postholes [321, 325, 322, 307, 327 & 330] with the remaining feature [311] being a hearth. The postholes were sub-circular to sub-oval on plan,

measuring between 0.35m and 0.65m in diameter and between 0.12m and 0.42m in depth. Two of the postholes [323 & 325] lay very close together and probably represent post replacement with the profile of [325] suggestive of a post being angled into place from the south to abut against an existing post within [323].

Extending into the NE section of Trench 3 was a possible hearth [311], this feature measured 0.96m by 0.68m and was 0.42m deep. Hearth [311] was filled with two deposits the lower of which (3130 was a dark grey to black charcoal rich sandy silt that is probably the in-situ remains of the last burning within the hearth. Above this lay mid grey/brown sandy silt with frequent charcoal (310) silting deposit.

Plate 11: Trench 3 showing cut features on terrace prior to excavation, from NW.

The structural pattern that the stone-settings and cut features formed is not entirely clear. There is a consistent spacing between the post settings northwest to southeast and northeast to southwest with a spacing of 1.8m and 3.4m respectively. There are three alignments of features on a NNE-SSW axis comprising (from E) features [305 & 319]; [304, 321, 330 & 312] and [307 & 327] with feature [325 & 323] on a possible fourth row of this alignment. Additionally post-settings [319 & 323/325] lie on a perpendicular WNW-ESE alignment. There is a consistent spacing of 2.1m between these three NNE-SSW alignments on the terrace area. With this structural arrangement these features would appear to form a rectangular building with the eastern wall tied into the inner face of the rampart. A southern entrance might be suggested by the erosional hollow [317] running between post-settings [304 & 305]. In favour of this structural arrangement is that it incorporates all of the features identified within Trench 3, as well as the inner face of the rampart and the break of slope which follow a similar alignment.

There is also a possible circular arrangement of features comprising [305, 304, 321 330 & 319] with a diameter of 4.5m. Again the eastern wall of this structure might have been tied into the inner face of the rampart and a south facing entrance is suggested by the erosional hollow [317].

The two post holes [307 & 328] cut into the rubble deposit (309) forming the slope of the terrace are not suggested as being integral to any structure sitting on the southern terrace of the hillfort but probably relate to features around this structure, such as a fence line forming an enclosure around the terrace.

5.5 Trench 4

Trench 4 (Figure 10) was located to investigate a well preserved stretch of upstanding rampart at the west of the fort of Dun Deardail. Trench 4 measured 6m northeast to southwest by 4m transversely. To the outside (SW) of Trench 4 the ground dropped away sharply. A large quantity of rubble was could be made out underlying the turf for at least 6m beyond the extent of Trench 4. This rubble was clearly derived from the rampart and collapsed down the slope, possibly during or after the vitrification event. Trench 4 was designed to investigate the nature of the enclosing wall in this western arc of the defenses, along with investigating any possible internal features immediately within the enclosing wall.

Plate 12: Orthographic photogrammetric textured mesh plan view of Trench 4, pre-ex.

Across Trench 4 removal of a dense topsoil and root mat of dark brown silty clay (400) up to 0.2m in depth exposed a mass of stone (401) with no obvious structure to it. Collapsed stone (401) was composed of angular medium to large stone blocks, at the SW end of the trench this material was composed of smaller, more shattered and heat affected stone. Pieces of vitrified stone were present throughout collapsed stonework (401) but were more prevalent to the SW of the trench.

Removal of up to 0.6m of collapsed stonework (401), revealed the in-situ structural stone of rampart [402]. The inner face of the rampart was exposed in Trench 4 [403] however the outer face lay outwith the trench to the SE. Overall rampart [402] as exposed in Trench 4 was at least 5.0m thick and from the lowest course of the inner face [403] to the highest surviving element was 1.86m in height. Rampart [402] as excavated comprised a number of structural elements. The inner face of the rampart [403] was composed of large roughly squared blocks, up to 0.45m by 0.3m by 0.3m in size, laid in very rough courses, with up to three courses surviving in section. Inner wall face [403] had partially collapsed outwards, presumably from the weight of stone behind slumping and pushing forward. The inner wall face did not form a clear face running across the width of the trench, but comprised roughly aligned larger stone blocks which were disturbed from their original positions. Immediately behind the inner wall face [402] two charred timbers [410 & 411] were identified preserved as deposits of charcoal. These timbers were rectangular in cross section, measuring 0.25m by 0.12m and 0.22m by 0.05m respectively. Charred timbers [410 & 411] projected transversely into rampart [402] and are the remains of a timber lacing through the rampart, and as such are part of the original structure of the rampart.

Plate 13: Charred timbers [410] on left & [411] on right projecting into rampart core [404], from NE.

Immediately internal to the inner wall face [403] was a wall core [404] composed of sub-rounded to angular stone, up to 0.4m by 0.25m by 0.2m in size, forming a loose rubble mass with no structure. This wall core [404] had clearly partially collapsed in on itself and also slumped outwards, possibly from disintegration of the timber lacing (represented by 410 & 411) and collapse of wall face [403].

Plate 14: Orthographic plan view of textured photogrammetric mesh, showing Trench 4 sondage and structure of rampart [402]

Within the centre of rampart [402] a rough medial wall face [405] was revealed, oriented with the run of the rampart in a NW-SE direction. Medial wall face [405] was constructed of sub-angular blocks, predominately of granite up to 0.4m by 0.3m by 0.2m in size. These blocks were laid two very rough dry-stone courses. To the exterior of medial wall face [405] the character of the wall core changed to small angular metamorphic stone [406] (typically 0.2m by 0.15m by 0.1m in size) reddened and shattered by heat exposure but not vitrified . The large pieces of in-situ vitrified stone [407] within the rampart formed a band towards the SW of the trench that sat on the heat affected core material [406]. It appears that the greatest concentration of vitrified stone was located towards the outside of the rampart, however the line of vitrified stone is not the remnant of the outer face but appears to be part of the core of the rampart. Surrounding the vitrified stone was a layer of intensely heat affected stone, which has not fully undergone the vitrification process. This may be due to differing stone lithologies or possibly differing temperatures being reached in different parts of the rampart core.

Plate 15: Trench 4, exterior of rampart [402] showing medial wall face [405] (behind ranging rod, heat affected wall core [407] and vitrified stone [407], from SW

To the interior of the enclosure wall a sequence of deposits were identified that provide a narrative of the use of the interior of the hillfort. The lowest deposit excavated was a destruction layer (412) composed of a dark grey to black silt with abundant pieces of brushwood charcoal and charcoal flecks. This deposit is the remains of the fire from the vitrification event. Overlying this destruction deposit lay a collapsed rubble (409) composed of large angular stone blocks that derived from the partial collapse of rampart [402] following the vitrification process. The upper levels of this collapsed stonework had been terraced and leveled to from a surface upon which an occupation deposit (408) was laid down. Occupation deposit (408) was formed of a charcoal rich sandy silt with frequent gravel. Overlying this occupation deposit lay (401) the mass of collapsed stonework identified across the trench.

Within Trench 4 the outer face of the enclosure wall was not exposed however the inner wall face and the core of the wall provided a great deal of information about the construction and structure of the enclosure wall. The enclosure wall in Trench 4 is at least 5.0m thick and from the lowest course of the inner face exposed to the highest surviving element is 1.8m. The inner wall face was best preserved in the lower courses, where this was revealed to be constructed of large sub-rounded boulders, predominantly of granite laid in rough courses. Penetrating into the wall thickness were the charred remains of two timbers that are interpreted as the remains of timber interlacing. The wall core in Trench 4 was as in Trench 2 composed of a mixture of rounded granite boulders and smaller pieces of heat affected metamorphic rock. A possible medial or internal wall face was identified in Trench 4 that is probably a strengthening structural element of the wall. The vitrified material in Trench 4 was located within the wall core, towards the outside of the wall. As in Trench 2 the vitrification appears to have held together a crest of material towards the top of the rampart with the core of the rampart being the most vitrified element. It seemed that it was the metamorphic stone that was vitrifying rather than the granite cobbles, as the wall face on the interior was constructed of granite this may be why this area is not vitrified. As in Trench 2 the areas of vitrification were surrounded by heat affected stone, with the effects of heat lessening further from the vitrification, building a picture of a single conflagration focussed on the upper wall, possibly from a wooded superstructure.

Some particularly secure potential radiocarbon dating evidence was recovered from Trench 4 for the wall construction. Two charred timbers projecting into the wall thickness were exposed and sampled. These two timbers, being integral structural elements of the wall, should give a date of construction for the enclosure wall. A date for the vitrification should be obtained by a deposit of burnt material associated with the vitrification event that underlay the rubble of the post-vitrification collapse of the rampart.

5.6 Trench 7

Trench 7 (Figure 11) was located at the northern edge of one of the terraces below the main enclosure of Dun Deardail. Trench 7 measured 2m by 4m and was positioned, along with Trench 8 over the slight remains of an upstanding bank curving around the edge of the terrace (Figure 2).

Across Trench 7 turf and topsoil (700) up to 0.2m deep and hill wash deposits (701, 708, 709 & 710) up to 0.12m deep were removed. This exposed the remains of an earth and stone rampart [705] 1.9m wide and surviving a maximum of 0.42m high running NW-SE across the centre of the trench. Rampart [705] comprised of a stone outer face [704] of large roughly squared blocks surviving a single course high, internal to this facing course was a earthen bank (711) of clayey silt forming the core of the rampart. The earth core (711) had been set on a foundation layer [712] composed of small rounded cobbles. The cobble foundation [712] was set directly on the natural subsoil (721) that had been terraced [724] to from a level base for the rampart. Deposits of collapsed stone were identified to the outside (NE) of the rampart (702), overlying the earth core of the rampart (703, 706) and to the interior (SW) of the rampart (707). No interior wall face was exposed.

Plate 16: Trench 7, rampart face [704], in background with cobble foundation [712] in front, from SW.

At the western corner of the trench, interior to the rampart on the terrace a possible pit or linear cut feature [722] was identified. Cut [722] extended on a curving NW-SE alignment extending for 0.58m 0.37m and was 0.08m deep. Cut [722] was filled with a dark brown silt with frequent small angular stone and patches of charcoal (723) with charcoal rich lenses (717, 718 & 719).

5.7 Trench 8

Trench 8 (figure 12) lay 9m to the NW of Trench 7 and was also situated over the slight upstanding remains of the bank following the top of the break of slope of the lower terrace below the summit dun of Dun Deardail. Trench 8 measured 1.5m by 4m and was excavated using a strip map and record methodology with the archaeological deposits being left in-situ.

Plate 17: Trench 8, rampart [801], with cobble surface or foundation [802], from NW.

Removal of up to 0.12m of turf and topsoil exposed a rampart [801] running NW-SE across Trench 8, along with a cobbled surface or wall foundation [802] to the interior of the rampart. Neither of these features was excavated.

5.8 Small finds and associated materials

In total, over 100 individual hand-retrieved artefacts were recovered during the 2015 season of excavation at Dun Deardail hillfort. The assemblage is dominated by fragments of vitrified stone recovered from trenches placed to investigate various aspects of the vitrified rampart of the fort. In accordance with the project design brief, all hand-retrieved vitrified material was recorded as a small find. The most significant individual find is a fragment of highly vitrified crucible indicative of non-ferrous metalworking. The other retrieved materials include large quantities of shattered quartz, a small number of coarse stone tools and finds indicative of metalworking activities. More modern material amongst the assemblage is represented by a clay pipe fragment and various modern metals including coins which are assumed to represent casual losses during visit to the sites.

A full catalogue of the hand-retrieved inorganic objects is included in Appendix 5. A database catalogue of the quartz has been produced for the site archive. Digital photographs of significant items and all vitrified stone fragments were taken for archive purposes.

5.8.1 Metalworking evidence

Evidence of metalworking at Dun Deardail is indicated by the recovery of a single crucible fragment for casting non-ferrous metals and a very limited quantity of potential ferrous metalworking waste.

The crucible fragment (SF 001) was recovered prior to excavation whist re-conditioning the public walkway on the sloped terrace immediately below the crag on which the hillfort sits. Although the exact find spot is unknown, an association with activity undertaken at the hillfort during its occupation is not in doubt.

Plate 18: Crucible (SF 001) showing interior residues.

Plate 19: Crucible (SF 001) exterior surface. The faint linear indentations toward the centre of the image may be tool marks.

The crucible (Plate 18 & 19) is incomplete but appears to represent a fragment of a shallow, hemispherical ceramic crucible with a projecting spout which has broken after extensive use. The internal hollow of the crucible is coated with a dark grey-purple metalliferous residue and the external rounded surfaces are covered in a glassy, brightly stained residue which is a result of silicates in the clay and the metal being cast fusing together and vitrifying due to intense heat of the fire and the molten metal that the crucible contained. The bright reds and black residues on the external surfaces are indicative of the presence of copper but the alloy being melted is not possible to identify by macroscopic examination alone and will require scientific analysis to categorise more closely. Short linear indentations on the exterior surface of the crucible may be marks left by the tip of tongs used during casting and hints of layering in the fabric of the crucible could be the result of relining suggesting extended use.

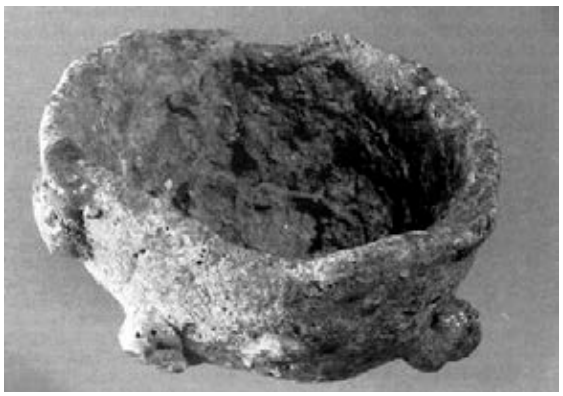

Plate 20: Type E crucible from Dunadd (Lane & Campbell 2000, illus 4.51).

The shape of the crucible, its size and the alloy being cast are all useful indicators of date and this will be investigated during full analysis in line with established typologies (Heald 2005). This initial study suggests similarities of form with Type E, hemispherical crucibles from Dunadd (Plate 20; Lane and Campbell 2000, 145, illus 4.51).

Further metalworking evidence from Dun Deardail is present in the form of a very limited quantity (less than 10g) of metalworking slags (Plate 21) suggestive of ferrous metalworking activities. These were recovered as the result of soil sample processing from contexts (105) and (109); both are soils associated with a possible hearth feature in Trench 1. The quantities present are not sufficient to argue with certainty for in situ metalworking taking place within this feature but it does strongly imply that ferrous metalworking activities took place at the summit of the hillfort.

Plate 21: Possible ferrous metalworking micro-debris from (109).

Plate 22: Vivianite stained vitrified material (SF316).

One fragment of vitrified material (SF 316, Plate 22) is more difficult to classify due to the quantity of vitrified stone present on the site. This small rounded sub-square fragment of light and porous vitrified material is coated on one face with a glassy residue, stained with a bright-blue hue. This bright pigmentation is likely to be a result of vivianite, a naturally occurring mineral often associated with metalliferous and sometimes waterlogged materials and glassy vivianite-stained vitrified material occasionally observed as inclusions within ferrous metalworking slags. Rounded edges of the fragment and its form more generally demonstrate that the fragment from trench 3 is definitely not a fragment of crucible. This bright colour has so far not been observed in any vitrified stone that derives from the ramparts of the fort. It may simply be a fragment of fuel ash slag but an association with metalworking should not be ruled out at this stage and scientific analysis may be beneficial in terms of understanding its composition.

Recommendations

The crucible would benefit from surface XRF analysis (including points on the internal, external and of the fabric of the crucible itself) to classify the composition of the metal being cast. Previous studies of non-ferrous alloy types being produced and circulated during the later prehistoric and early historic period demonstrate differences in alloys being produced throughout time and may help to define the period of activity that the crucible represents. Thin-section analysis of a broken edge and subsequent SEM analysis should be considered; this is a destructive process and should be considered in light of the full assemblage on completion of fieldwork. The crucible should be categorised as closely as possible with existing typochronological schemes (Heald 2005) and considered with reference to appropriate Scottish comparanda. Illustration of the crucible to accompany the publication is strongly recommended. XRF analysis of the vivianite-stained vitrified material would also assist classification.

5.8.2 Coarse stone tools

Only three coarse stone tools were recovered during excavation. These are small hand-held cobble tools produced from water-rounded quartzite-rich pebbles (SF 113, SF 320, SF 322).

Plate 23: Grinder fragment (SF 113).

A fractured edge fragment from a circumferential grinder (SF 113) was recovered from topsoil in Trench 1 (Plate 23). SF 320 is a possible smoother or polisher consisting of a flat, sub-rectangular quartzite pebble with one smoothed and stained face (Plate 24). The dark red-brown staining, visible around the circumference of the face may indicate use as a tool used in hide-processing as has been suggested for similarly stained stones found at Dunadd (Lane & Campbell 2000). It was recovered from a possible levelling deposit at the NW end of Trench 3 (context 309). A small fragment of a multifunction cobble tool (SF 322) came from context 324, the fill of posthole (323). Only one end of the tool survives (Plate 25) which is pitted from use as a pounder. Further wear in the form of an irregular gouged and pitted facet on the surviving rounded face suggests expedient use as an anvil stone, possibly for knapping lithics, or as a small working surface. A dark well-defined charred mark on the opposite face suggests that it was exposed to fire after use.

Plate 24: Smoother or polisher (SF 320).

Plate 25: Multifunction cobble tool (SF 322) showing damage from use as an anvil.

Recommendations

All three items of coarse stone would benefit from illustration to accompany publication. More detailed use-wear analysis will be conducted on the full stone tool assemblage on completion of excavation which may help to categorise the types of activities the tools were used for and whether specific functions can be identified. Five unworked stones were identified amongst hand-retrieved and retent finds; discard is recommended as are of no archaeological value.

5.8.3 Quartz

Quartz is an important and significant component of the majority of prehistoric lithic assemblages within the north-west of Scotland. Quartz as a raw material encompasses a group of closely related, but more or less distinctive categories including milky, translucent (greasy), rose and rock crystal, all of which are represented amongst the retrieved pieces from Dun Deardail.

Thirteen pieces of chipped stone were recovered during the Season 1 works undertaken at Dun Deardail Hillfort. This material was included in a much larger assemblage (4594.4 g) of un-worked quartz shatter derived from the local bedrock. The entire collection was macroscopically examined and weighed by context. A general characterisation of the material was undertaken. A full catalogue of the material is given within the site record.

The assemblage was overwhelmingly composed of quartz with four pieces of heat affected chert shatter. All the material can be considered to be of local derivation. Various types of quartz were identified, with the majority consisting of a coarse milky vein type. Smaller quantities of finer grained milky quartz, translucent grey (greasy quartz) and rose quartz were also identified. These worked fragments include two small flakes and two flake spalls (SF 702) which were recorded together with a larger overshot blade-like flake (SF 311.1) and four pieces of possible waste. A further four pieces (SF 800) have also been struck and may be debris from tool production.

The remaining quartz shatter, most of which derived from trench 3, is shattered but otherwise un-worked. Some of this blocky shatter was retrieved from the sites upper deposits and probably resulted from natural frost shattering and weathering of exposed veins of the material from the underlying geology or from veins within the rocks used to build the ramparts. But in addition to this naturally weathered material are shattered pieces which may be fracture damaged as the result of heat damage which may be associated with the episode(s) of vitrification of the fort ramparts. This

resulted in the artefacts displaying the characteristic effects of heat treatment, namely loss of mass, crazing and colour change.

A distinctive concentration of quartz spread across one half of trench 3 was noted during excavation of the upper soils. None of this material appears worked or represents debris from quartz tool manufacture and could be incidental shatter but a similar the background scatter of shattered quartz observed in trenches 1, 2 and 4 was not nearly as prolific as that from trench 3.

With such a large amount of raw material present at Dun Deardail it is possible that the better quality translucent quartz was used for expedient tasks within the Iron Age occupation of the site. Quartz is extremely durable however and highly susceptible to re-deposition which would allow for the possibility that the worked pieces are residual and possibly related to earlier activity on the hill. The expedient production of flakes appears typical of many late Neolithic/early Bronze Age assemblages within the Scottish Highlands. The burnt chert fragments may also represent post depositional effects such as a proximity to hearths or other episodes of burning.

Recommendations

Full analysis of the small quantity of worked fragments alongside the small fragments recovered from retents (yet to be analysed). The majority of the quartz assemblage collected in the field has on assessment been determined to be unworked and on completion of post-excavation, this unworked material is recommended for discard. A concentration of shattered quartz was noted in Trench 3. Although this material is not deliberately modified for use as tools or as working waste, the quantity of quartz noted in this excavated area is contrasts sharply with that from the other trenches excavated in 2015 where only small amounts of quartz were noted. This distribution is not well understood but one possible interpretation is that it may represent a collapsed quartz facing of the adjacent section of rampart. The unworked quartz shatter is useful to note in terms of site distribution but there is no merit in retaining this material as part of the final site assemblage and should be discarded on completion of post-excavation work. Only the worked items which may represent early or later prehistoric quartz tool production should be retained for future research purposes as part of the artefact assemblage.

5.8.4 Vitrified stone

Large quantities of vitrified stone (116.78Kg) were recovered from Trenches 1, 2 and 4. In accordance with the project design brief, all retrieved fragments of vitrified stone were recorded as small finds and have been catalogued here based on macroscopic identification (see below). Archive photographs have been taken of each fragment as a condition record prior to selection for sampling for analytical work.

A comprehensive range of local lithologies were noted including shattered rocks of grandodiorite, quartz-diorite, limestone, calcareous pelite, schist and possible greywacke but identifications of lithologies should be considered here to be interim and examination by a geologist to confirm identifications is recommended. In some instances, the degree of vitrification is too severe to allow identification of the stone type.

Plate 26: Vitrified stone (SF 111) Trench 1.

Plate 27: Vitrified stone (SF 213), Trench 2.

Varying levels of vitrification are noted, even on individual fragments which reflect the distinctive qualities and density of the lithologies as well as proximity to the source of the heat (e.g. SF 111, Plate 26; SF 213, Plate 27; SF 409 Plate 28). For example, schists and calcareous pelites appear to vitrify more comprehensively than limestones and greywackes, often becoming molten with frequent air bubble voids and occasional wood impressions. The diorites and quartz-rich rocks in contrast typically tend to become more friable rather than suffering any macroscopic level of vitrification. Molten flows and runs of vitrified stone, as seen on other vitrified forts, has not yet been observed amongst the exposed stones at Dun Deardail.

Plate 28: Vitrified stone (SF 409), trench 4.

Wood impressions are observed on several of the fragments recovered, such as that illustrated on SF 224 (Plate 29). The level of surface detail that survives varies but these should be examined by a wood specialist to determine whether any useful information can be gleaned from these impressions such as wood species etc.

Plate 29: Vitrified stone with wood impressions (SF 224).

In addition to the large quantities of hand-retrieved vitrified stone, 47.2g of small fractured fragments were recovered from soil samples. This material has been examined to check for metalworking slags

and weighed. The hand-retrieved material has been catalogued with a record of the dimensions and weight and record photographs of each have been taken to make the assemblage available for destructive sampling, where appropriate.

A small amount of vitrified stone collected from the surface of the fort is housed in the collections of National Museums Scotland (T Cowie, pers comm). Only one fragment was available to examine at the time of writing (NMS: x.HH 86). This fragment (Plate 30) is consistent in terms of the level of vitrification and lithologies observed in the excavated assemblage.

Further fragments (x.HH 987) are accompanied by a note that identify them from a fort on the south side of Glen Nevis and west of Ben Nevis which has been recognised as Dun Deardail. These fragments, yet to be examined, were donated to NMS in the late 2000's after first being gifted to Devizes Museum alongside various miscellaneous archaeological items by an unnamed donor.

Plate 30: Fragment of vitrified stone from Dun Deardail in the collections of NMS (x.HH 86).

Recommendations

Examination of the vitrified stone by a geologist to confirm the identification of the lithology of stones incorporated in these vitrified fragments from excavation is recommended. Wood and charred wood impressions noted on several fragments should be examined by a wood specialist prior to any destructive sampling. All hand-retrieved fragments of vitrified stone and pieces from soil sample retents are available to Amanda Dolan for sampling and analytical analysis as is appropriate for research purposes.

5.8.5 Modern finds

Amongst the later prehistoric/early historic artefacts which are contemporary with the occupation of the site, there are small numbers of more modern material which are likely to be casual losses left behind by visitors to the site in more recent times. This includes a nineteenth century clay pipe bowl (SF 403), twentieth century coins (SF 101, SF 102) and fragments of at least one, if not two iron tent pegs (SF 104, SF 105).

Recommendations

The clay pipe bowl is of intrinsic interest to the extended history of the site and should be retained as part of the site archive. The modern metal finds are of no archaeological value and discard on completion of post-excavation is recommended.

6 DISCUSSION

The excavations at Dun Deardail have provided an excellent chronological sequence and evidence for the construction, use and vitrification of the fort. In particular deposits relating to both the construction and vitrification of the enclosure wall were identified as was structural evidence for the post vitrification occupation of the hillfort. A consistent sequence of activity was recorded in all the excavated trenches across the site that will allow a good chronology of the site to be developed.

6.1 The enclosure wall

Two of the excavated trenches were targeted over the enclosure wall of Dun Deardail and from these a great deal of evidence about the nature of these ramparts was revealed. Although the outer wall face was not exposed in either Trench 2 or 4 the inner wall face was relatively well preserved in both. The thickness of the wall is demonstrated by the fact that neither trench exposed the outer face, implying a wall thickness of over 4.2m in Trench 2 and over 5.0m in Trench 4. The quantity of collapsed rubble on the inside of the rampart testifies to the potential height of the wall, with that of Trench 2 extending almost half way across the upper citadel area of the fort. That the wall was constructed from stone and interlaced timber is demonstrated by the presence of charred timbers [410 & 411] and voids within the mass of vitrified stonework [203] projecting into the thickness of the rampart. These charred timbers [410 & 411] should provide a secure date for the construction of the rampart, being integral structural components of the wall.

The excavations have also revealed details of the complexities of the dry-stone construction of the rampart. As well as the interlacing timbers, there was a great deal of structural evidence from the stonework. In both Trenches 2 and 4 differing stone was laid down both vertically and horizontally, possibly around the interlaced timbers. Demarcating a change in stone lithology in Trench 4 was a medial wall face [405], possibly a further strengthening device for the hugely thick wall.

6.2 Vitrification of the ramparts

The excavation of Trench 2 especially has also displayed the potential for understanding the effects of the vitrification process on the ramparts, including the complex mechanisms of collapse. The evidence of vitrification in the trench suggests that the vitrification process was most marked on the outside of the rampart, possibly due to the effects of wind on these exposed areas, or through a constant stoking of the fire by the addition of the fuel used in the burning process – which would have been difficult to add to within the interior of the fort, where the fierce heat would have inhibited this.

During the initial stages of burning it appears that the heat generated starts to shatter and spall the wall faces, this material collapsing down the face of the wall to form a ramp/wedge at its base. This deposit is also rich in charcoal lumps and fragments, and ash; possibly residues from the timber used in the timber lacing, or more likely from the wood used as fuel to vitrify the fort. An interesting point here is the thin, charcoal-rich destruction deposit at Dun Deardail (context (216), which overlies the ramp of material at the wall base and spreads out towards the NW. This must relate to the continued burning of the fort including the wall superstructure and potential buildings inside. Eventually, most likely after some time burning, the rampart wall suffers a catastrophic collapse. Whether this is assisted by human action is not clear, but the result is a spread of rubble comprising the wall facing stones and stone core material, with ash and charcoal mixed thought it. It appears

that secondary collapse of the rampart wall continues after abandonment of the site, most likely through weathering, frost action and general subsidence.

6.3 Occupation within the hillfort

That the occupation and use of the hillfort did not end with the vitrification of the walls is shown by structural evidence and occupation deposits that were recorded to some degree in all four of the trenches excavated within the hillfort. The best evidence for the nature of the nature of these late structures was recorded in Trench 3, where elements of a probable rectangular building tied into the inner face of the rampart were recorded, although a potential circular arrangement was also noted.

In the upper 'citadel' area at the NE of the hillfort post vitrification occupation was demonstrated in both Trenches 1 and 2. Within Trench 1, roughly central to the 'citadel' area was a hearth complex comprising two stone lined hearths [102 & 108]. Possibly related to the building that these hearths occupied are the circular stone setting [207] (possibly a large post-pad) and stone platform [206] and its retaining walls [208 & 209] that may have formed a walkway or activity area immediately inside the rampart. This late occupation of the hillfort appears to be widespread with an occupation deposit (408) recorded in the small internal area of the hillfort excavated in Trench 4. Secure radiocarbon dates for the post vitrification occupation of the hillfort should be possible from the fills of the hearths [311, 102 & 108] within the structures on the upper 'citadel' and the southern terrace within the hillfort. Rectangular buildings tied into the inner face of the ramparts were a identified at the Mote of Mark (Laing & Longley, 2006) and the early historic fortifications at Urquhart Castle (Alcock & Alcock, 1992).

6.4 Chronology of the hillfort

The excavations at Dun Deardail have revealed a consistent sequence within all four trenches within the fort interior for the construction, occupation and vitrification of the hillfort. The excavations have produced material that should allow for an excellent chronological framework to be developed for the phases of use of the hillfort. Dating for the construction of the ramparts will come from the charred interlace timbers [410 & 411] revealed in Trench 4 which are part of the structure of the rampart, rather than material incorporated during the vitrification event. Secure dating of the vitrification event should be possible as deposits (216 & 412) containing large amounts of charcoal relating to the burning of the hillfort were recorded in both Trenches 2 and 4. While the excavations so far have been focussed on the late occupation of Dun Deardail an early occupation deposit (219) was exposed within Trench 2. The post vitrification occupation of the hillfort can be dated from the fills of hearths [102, 108 & 311] located within structures in the upper 'citadel' and on the southern terrace within the hillfort.

6.5 The lower terraces

Trenches 7 and 8, along with the topographic survey demonstrate that there was an enclosing wall surrounding the outer knoll to the north of Dun Deardail, as suggested by Feacham (1966). The excavation trenches in this area only investigated the enclosure wall and did not investigate the interior of this enclosure. This enclosure is much slighter than that of the vitrified hillfort being 1.9m thick rather than over 5m for the main rampart, however there is a much greater area enclosed by this lower enclosure than the upper vitrified fort. Further terraces lie around the summit of Dun Deardail and there remains the possibility that successive levels of enclosure surround the main hillfort. The nature of the occupation within these lower terraces has not been demonstrated so far, but the metal working crucible found during the upgrading of the access path came from outwith the hillfort giving the possibility of craft activities on these lower terraces. This lower enclosure starts to give the hillfort of Dun Deardail the appearance of a nuclear fort, as proposed by Stevenson (1949) with successive layers of enclosure similar to Dunadd (Lane & Campbell, 2000), Dundurn (Alcock et

al 1989) and Dalmahoy (Stevenson, 1949). Excavations at Dunadd and Dundurn have demonstrated that these nuclear plans were the result of accretion over time, not an initial design of the sites (Alcock, 2003).

6.6 Erosion from the footpath

Erosion seen on the site appears to be confined to the upper topsoil deposits and the soil matrix surrounding the uppermost layers stone below the topsoil. Erosion on the site is affecting the soil deposits above the generally stone layers of in-situ archaeological deposits, the solid nature of which appears to be protecting them from erosion. Having said this there might be issues of erosion affecting soft archaeological deposits if these directly underlie the topsoil, in areas excavated this was not seen however.

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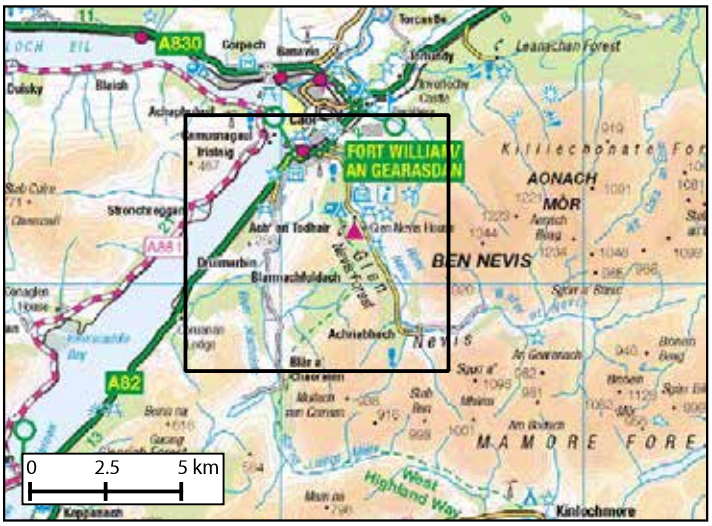
AOC would also like to thank Trevor Cowie, Curator, Scottish History & Archaeology Department, National Museums Scotland, for his information on material from Dun Deardail within NMS collections.

Plate 31: Trenches 1 (foreground) and 2 (background) after backfilling and reinstated.

Plate 32: Trenches 3 (foreground) and 4 (background) after backfilling and reinstated.

Plate 33: Trench 1 being reinstated.



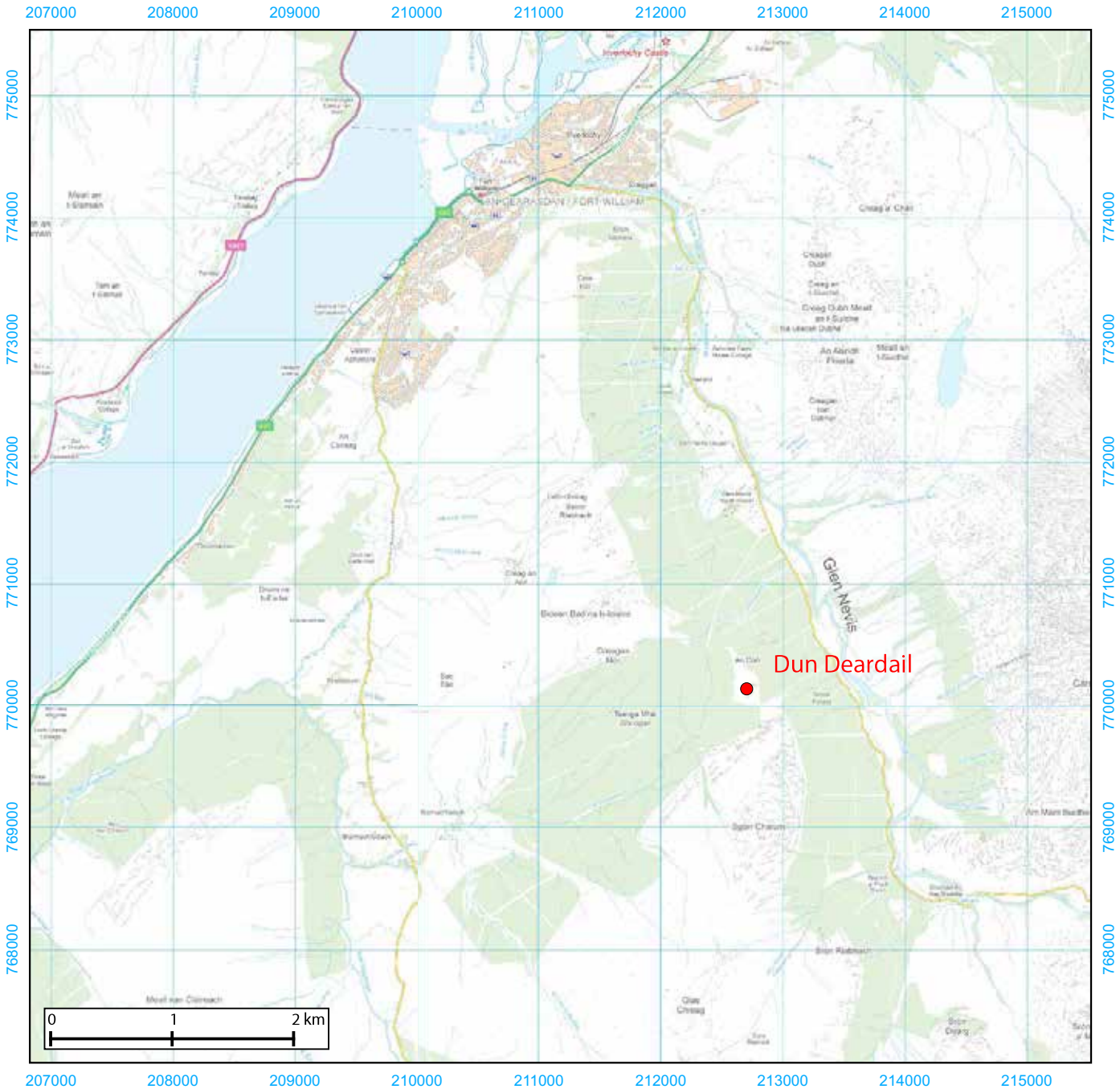


Figure 1: Site location

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T8
T7
T1
T2
T3
T4
770250
770200
770150
770100
212650
212700
212750
Natural slope
Earth and stone bank
Archaeological trench
Vitrified stone
Bedrock outcrop
Artificial slope
Possible extent of ramparts
N
0
20 m
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Location of gradiometer survey

Figure 3

N

Survey Area

0 50m

1:3000 at A3

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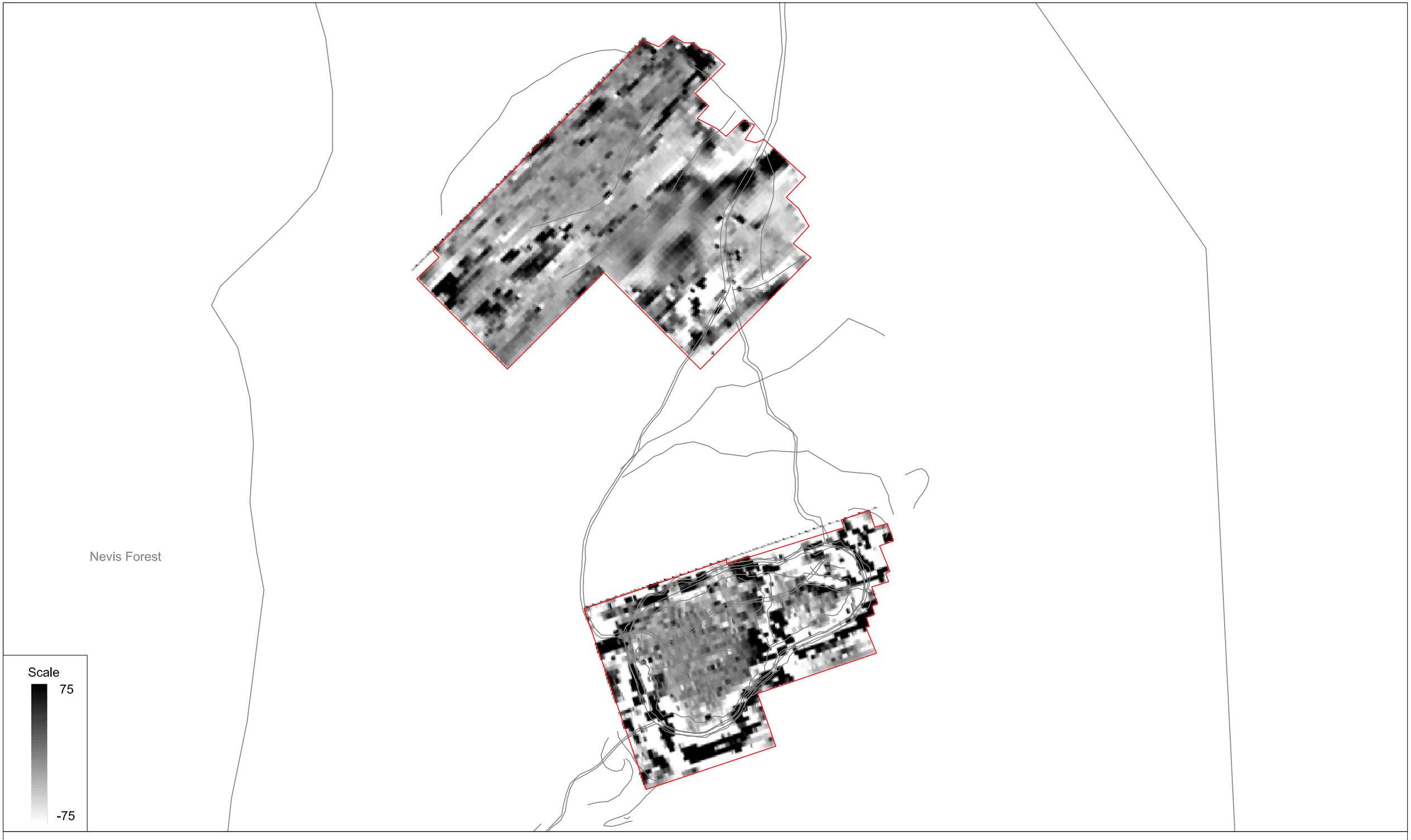

Unprocessed gradiometer survey results greyscale plot

Figure 4

N

Survey Area

0 50m

1:750 at A3

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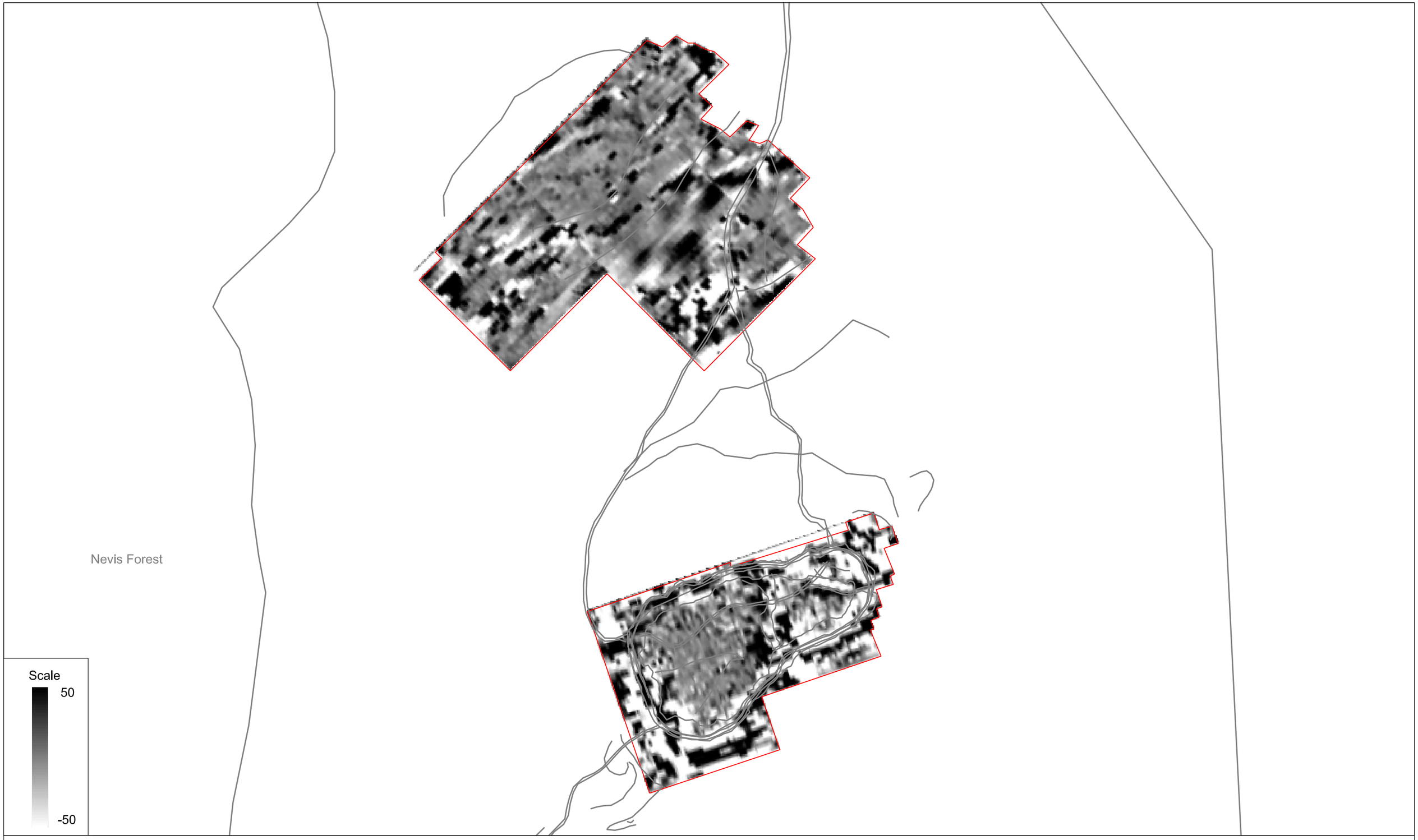


Processed gradiometer survey results greyscale plot

Figure 5

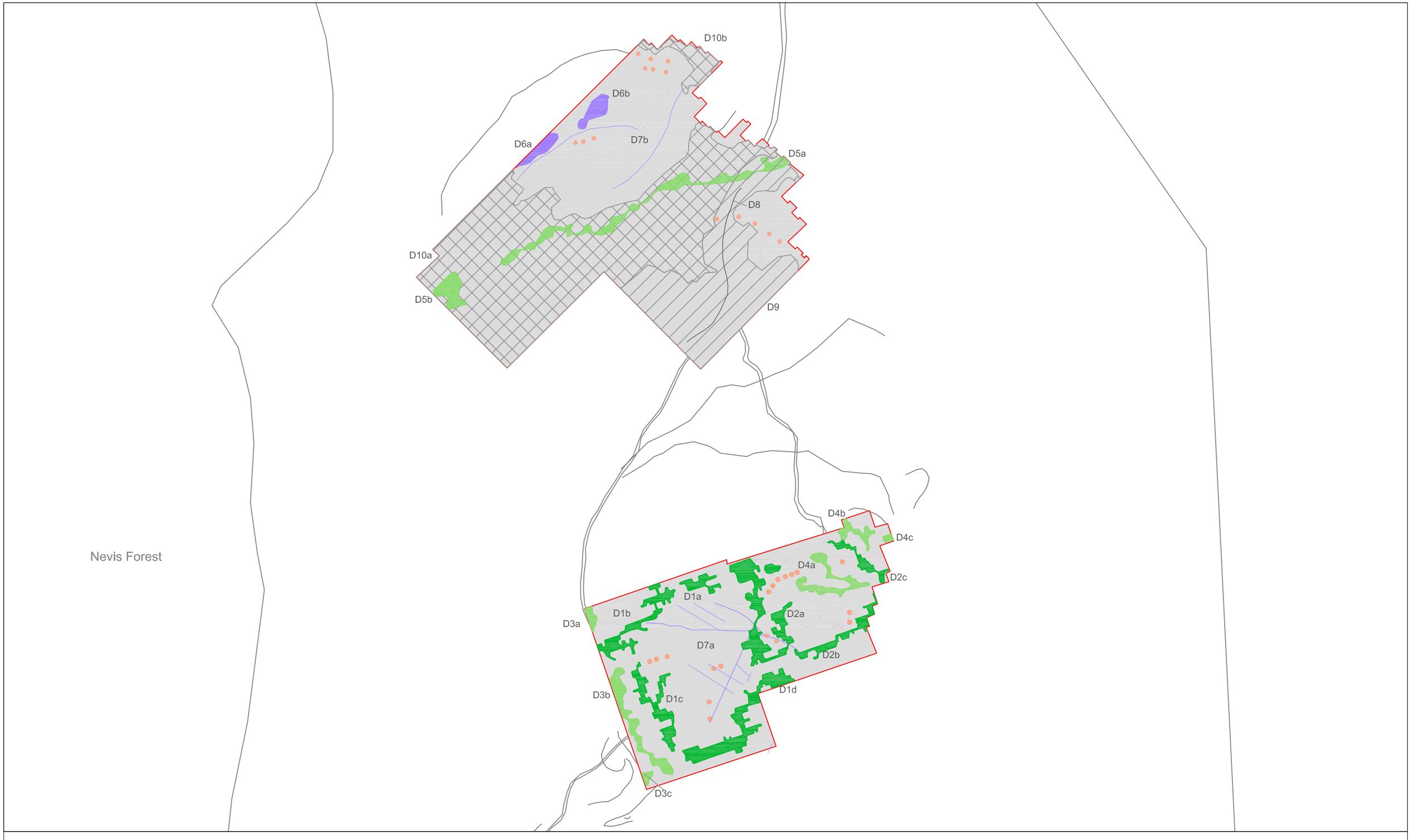
N

Survey Area

0 50m

1:750 at A3

AOC Archaeology Group



Interpretation of gradiometer survey results

Figure 6

N

Possible archaeology
Linear trend (archaeology)
Linear trend (archaeology?)
Possible archaeology
Disturbed area (modern?)
Disturbed area (geology)
Pit?
Survey area

0 50m

1:750 at A3

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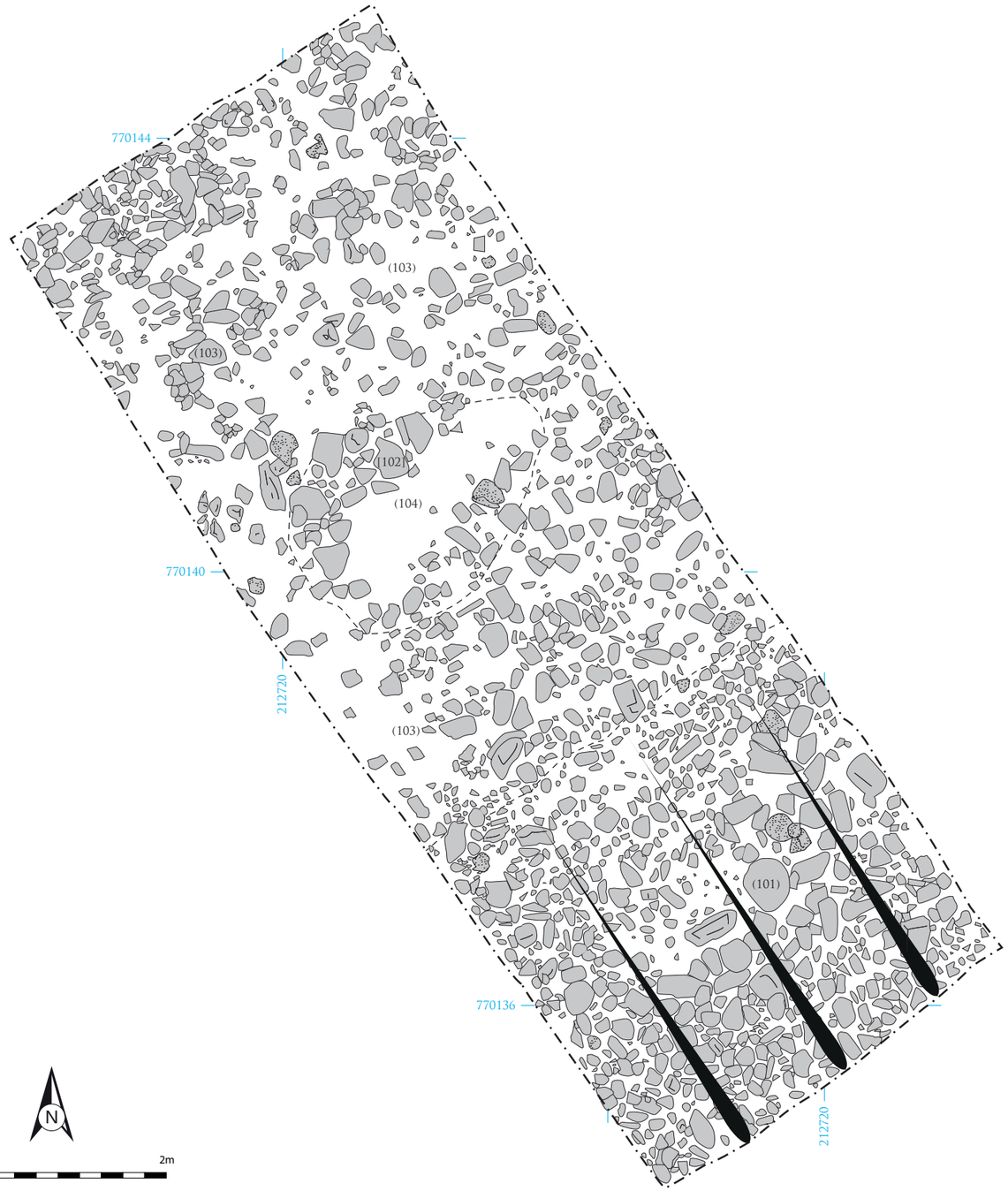
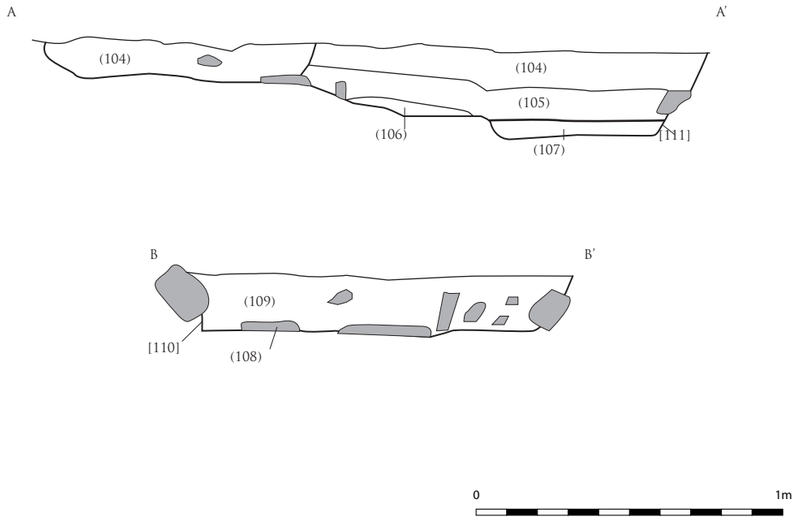
Pre-excavtion



Sections of hearth [102/108]



Post excavation plan of hearth [102/108]

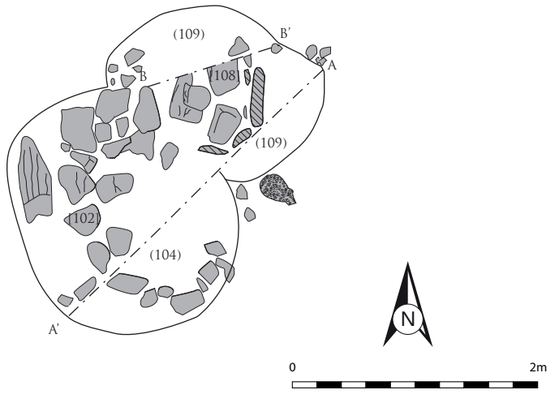


Figure 7:
Trench 1 Pre and Post
Excavation plans and
sections of trench and features

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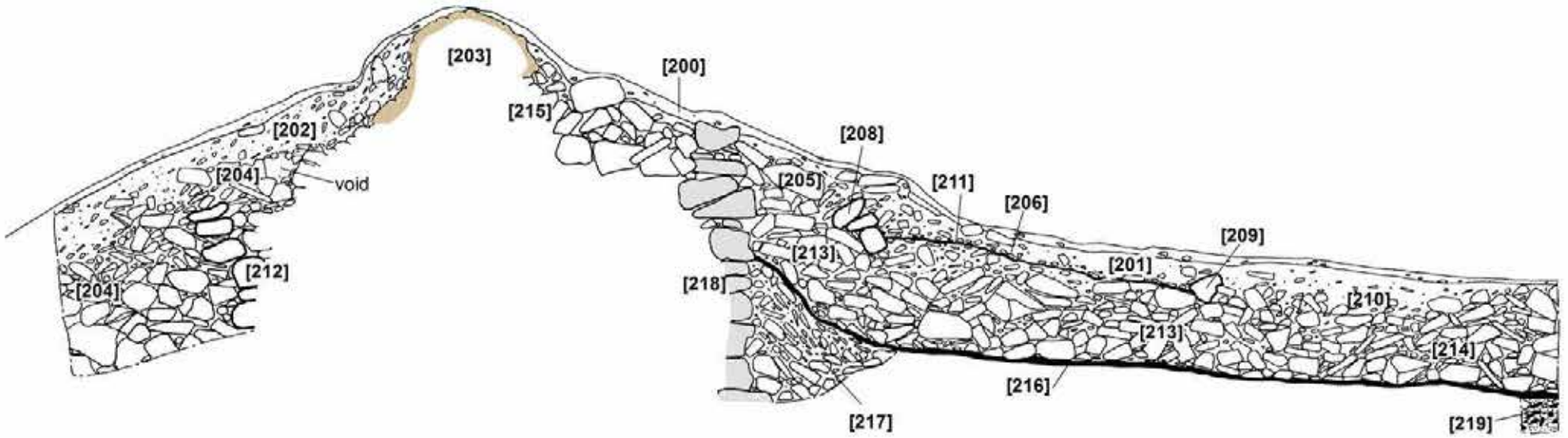

Trench 2
N-facing section of rampart

Wall
Vitrification

Scale at A4: 1:40

0 0.5 1 2 3 Meters

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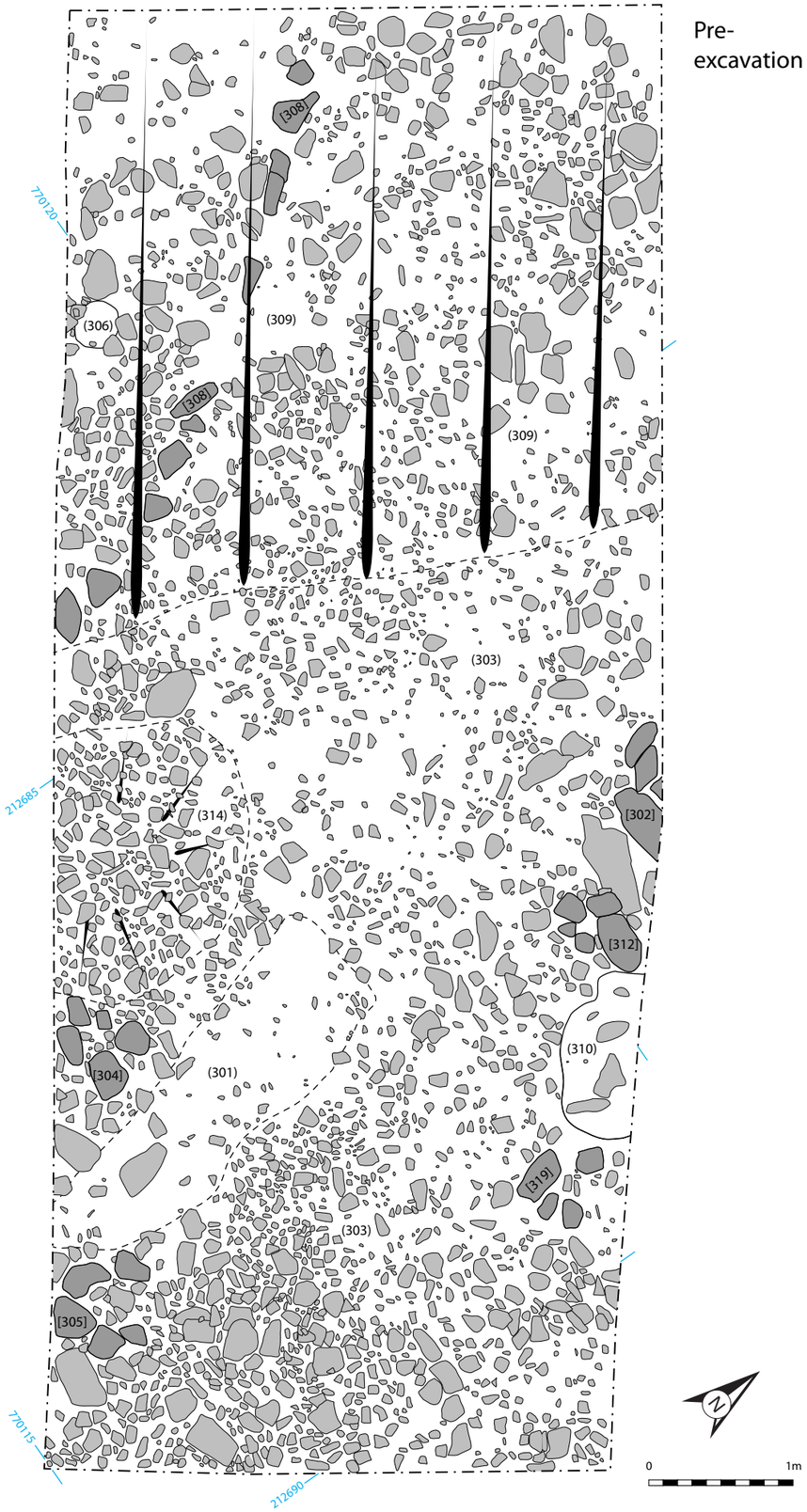
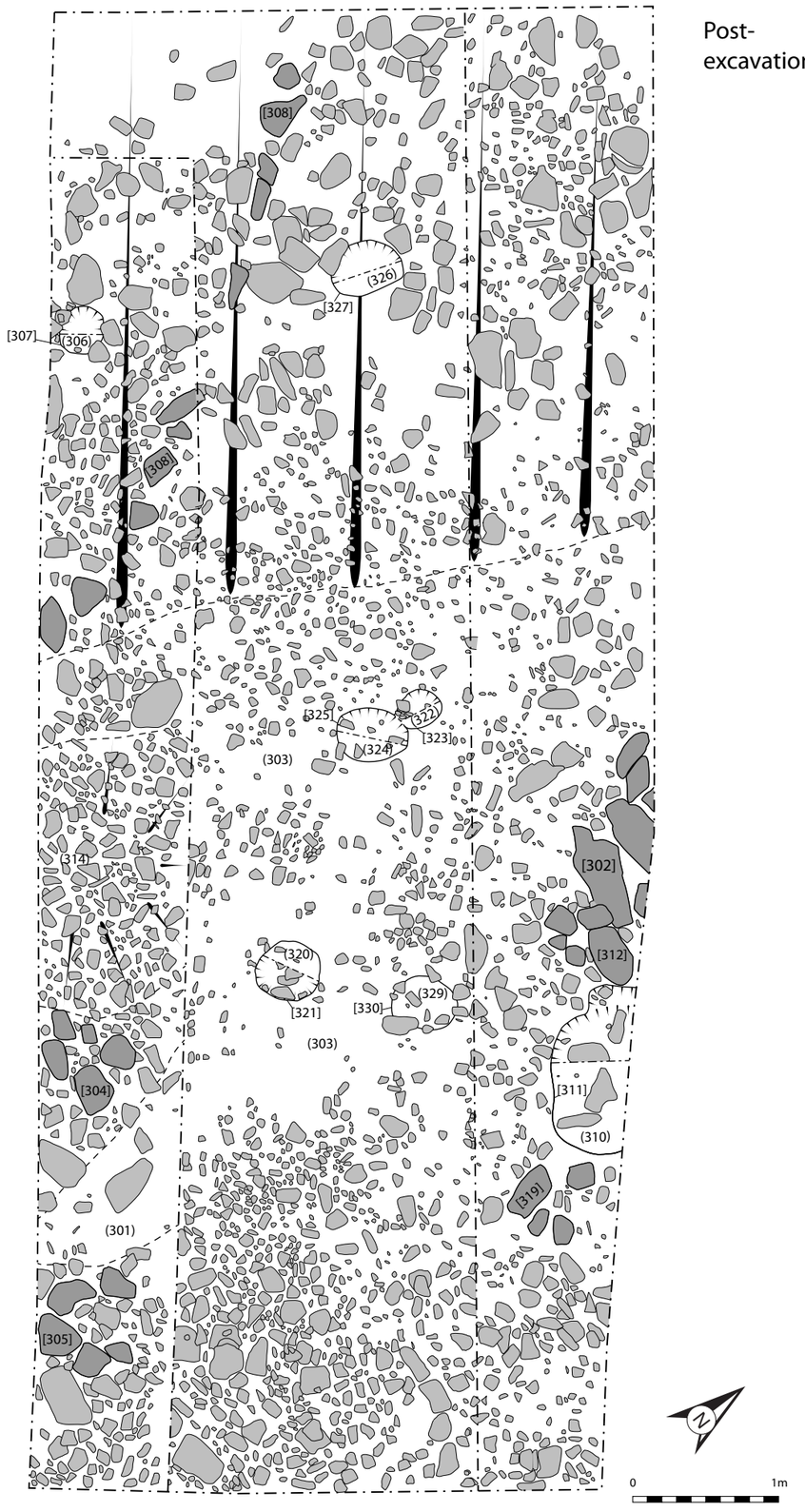
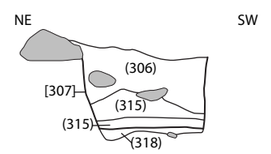
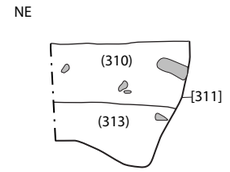
Pre-excavation

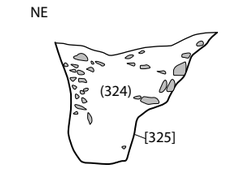


Post-excavation









Sections of features

Figure 9:
Trench 3 Pre and Post Excavation Plans and Sections of Features

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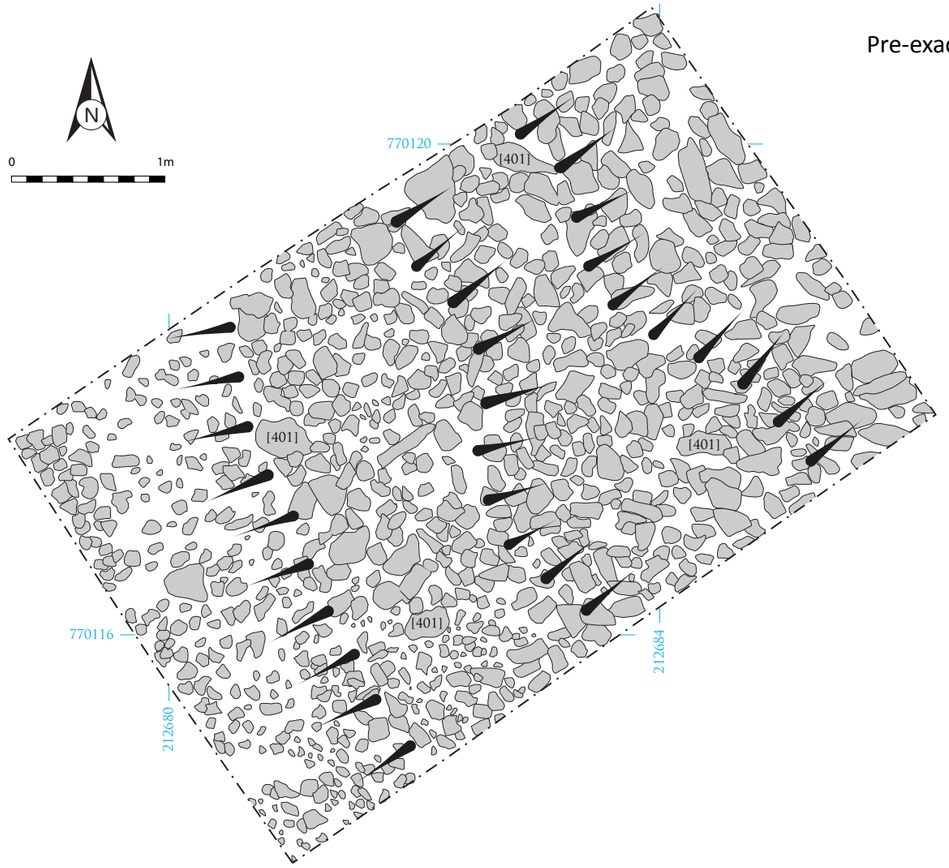
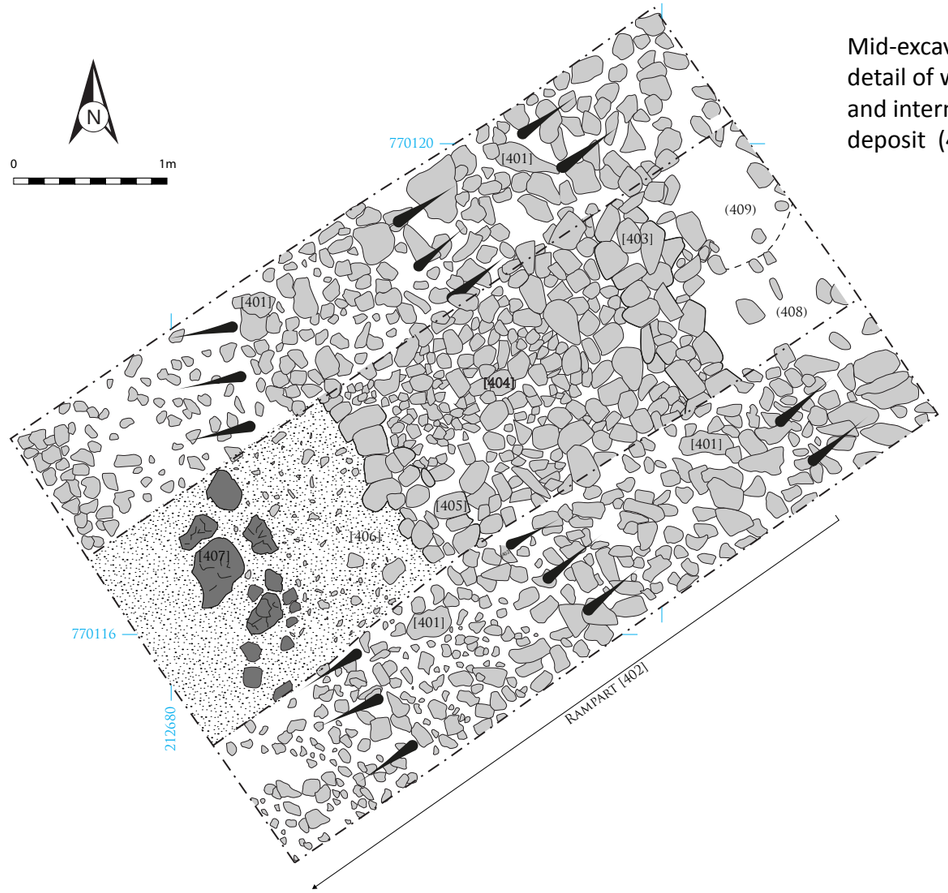
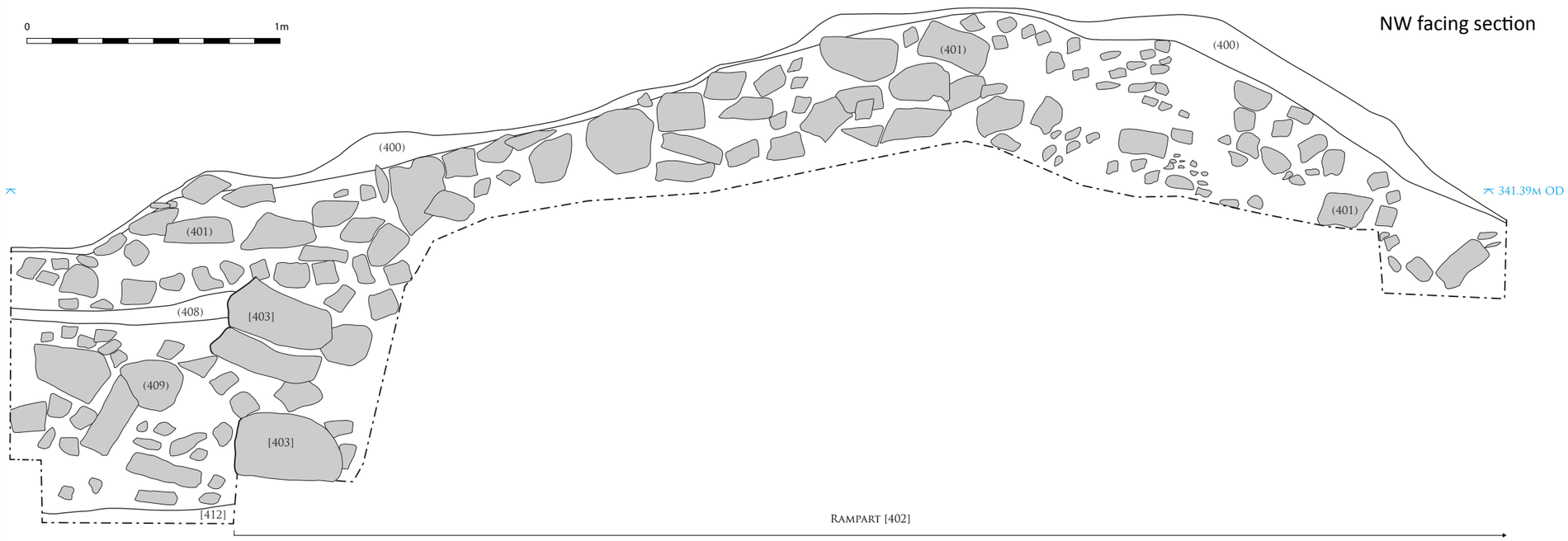
Pre-exacvation



Mid-excavation showing detail of wall construction and internal occupation deposit (408)



NW facing section



Key:

- Stone
- Vitrified stone
- Small heat shattered stone

Figure 10:
Trench 4: Pre and Post Excavation Plans and Sections

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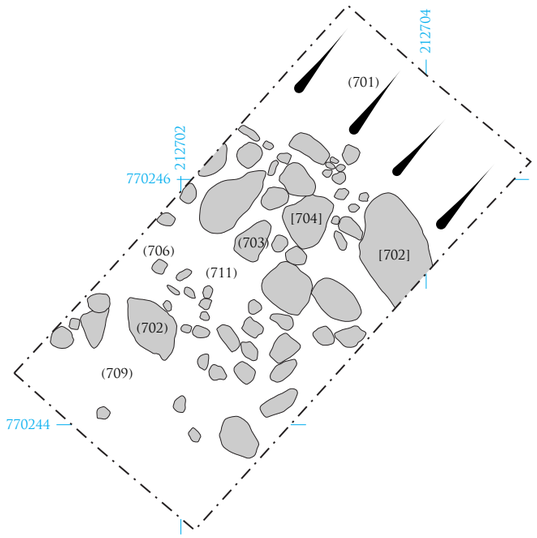
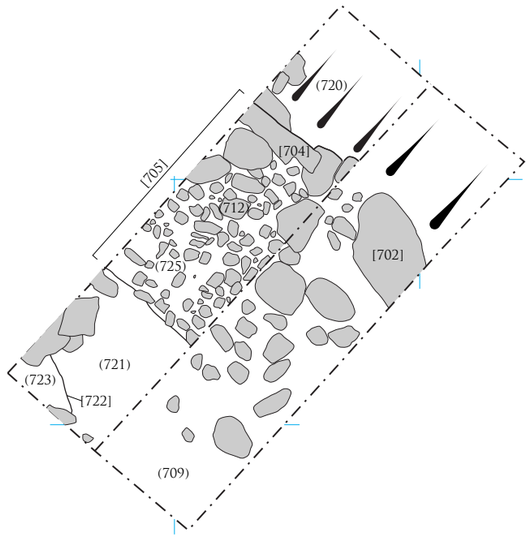
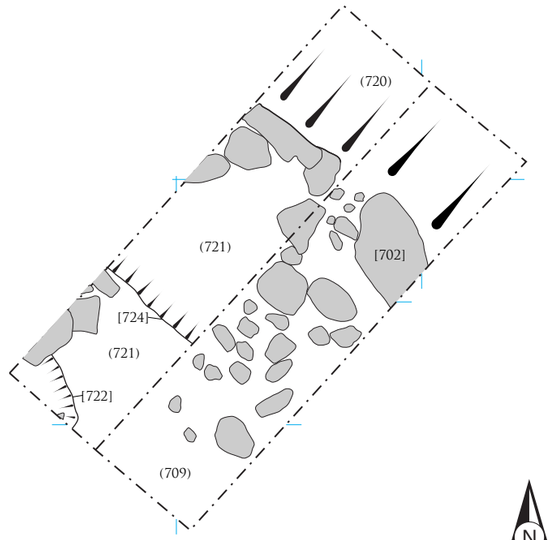


Pre-excavation

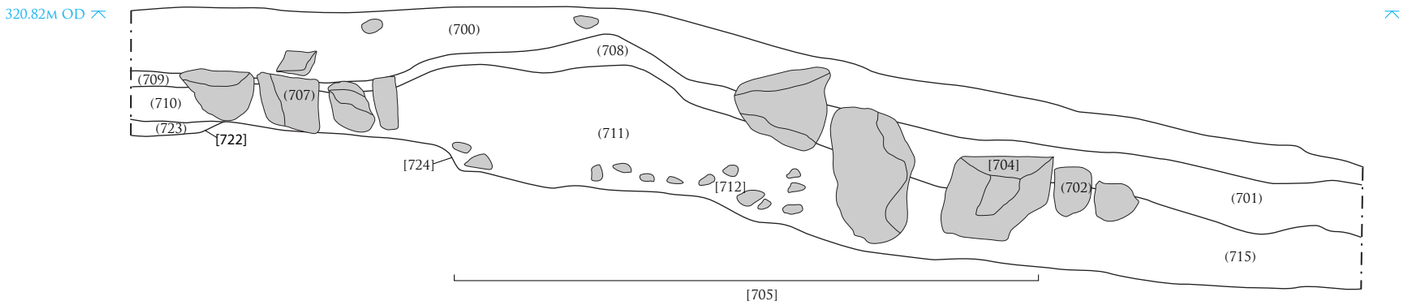


Mid-excavation



0 1m

Post-excavation



SE facing section

0 1m

Figure 11:
Trench 7
Plans and Sections

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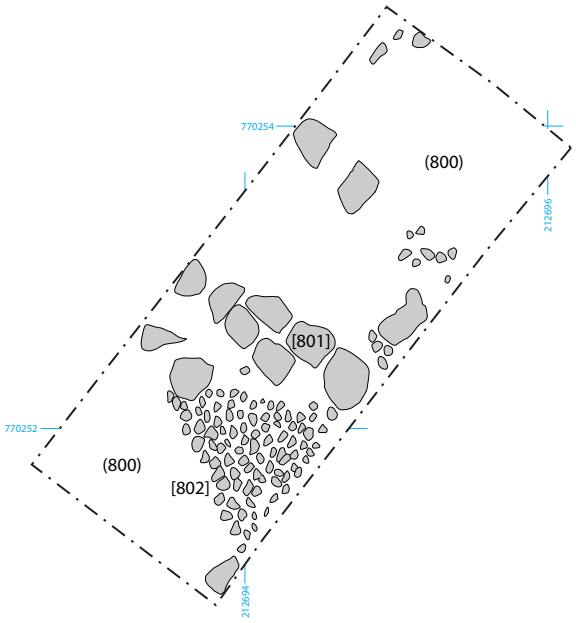

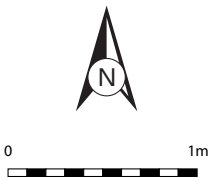

Figure 12:
Trench 8 Plan

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Dun Deardail Hillfort, Lochaber: Year 1 Archaeological Excavation Data Structure Report

Section 2: Appendices

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APPENDIX 1: CONTEXT REGISTER

Trench	Context	Context Type	Description
1	100	Deposit	Turf and topsoil across trench.
1	101	Deposit	Tumble and loose stones from rampart scattered across trench overlain and surrounded by topsoil.
1	102	Deposit	Discrete arrangement of flat slabs, angular stone blocks and vitrified stone mid way along trench overlain by (100). Possible vitrified stone from destroyed rampart (101).
1	103	Deposit	Fine, slightly powdering homogenous, mid brown soil underlying (100) at break of stone c. 2.5 m from SE trench end beyond concentration of rampart tumble (101).
1	104	Deposit	Dark brown/black clayey silt with inclusions of charcoal and burnt bone fragments. Fill of (102) stone setting. Possible hearth fill.
1	105	Deposit	Dark brown/black deposit of sandy silt with frequent charcoal. Mid fill of hearth.
1	106	Deposit	Charcoal rich sandy silt at N end of hearth (102). Probable in-situ burning deposit.
1	107	Deposit	Dark brown/black deposit of sandy silt with frequent charcoal and small stone inclusions.
1	108	Structure	Square hearth sitting composed of three upright edge set slabs defining a central area of flat stones. Stone hearth setting from hillfort occupation. Earlier of two hearths overlain by (102).
1	109	Deposit	Dark brown grey sandy silt with frequent charcoal chunks and occasional small stone inclusions. Fill of hearth (108) but earlier than the previous fills.
1	110	Cut	Sub angular cut with steep sides, base not revealed as hearth (108) not removed.
1	111	Cut	Sub circular cut with steep sides. Base not revealed as hearth (102) not fully excavated. Construction cut for hearth (102).
2	200	Deposit	Long grass and a dense root mat up to 50mm thick, covers entire trench although some vitrified stone showing at crest of rampart.
2	201	Deposit	Mid-brown sediment containing numerous fine roots, some stone fragments (less than 50mm across) and some charcoal flecks. Small fragments of vitrified stone. Deposit only on west side of rampart.
2	202	Deposit	Dark brown to dark orange sediment east of rampart, contains fine roots and small stone chips (>40mm across) and small stone clasts (>100mm across, some angular and some slabs), with some small vitrified stone clasts. Context lies below (200) on steep slope below exposed vitrified stone. Some charcoal flecks and small lumps.
2	203	Deposit	A vitrified mass of stone forms east crest of rampart. The mass of material is penetrated by three equally-spaced voids running E-W, which could be beam/timber holes. Sits above unburnt rubble on the east side (204) and deposit (202).
2	204	Deposit	Unburnt stone collapse on east outer face of rampart includes granite and metamorphic stone, including angular small slabby fragments (>200mm across) and larger rounded boulders (> 0.4m across), and smaller stone chips. Some root penetration, charcoal flecks and voids between stones. Deposit lies at steep 45-degree angle down slope.

Trench	Context	Context Type	Description
2	205	Deposit	Mass of stone rubble lies at steep angle on west side of rampart from vitrified crest, at around 45-degrees. Comprises mixed stone lithologies including metamorphic, quartz, and granite - some of which shows evidence of burning. Some vitrified fragments of stone embedded within. Some root penetration.
2	206	Deposit	Compact layer of small (60mm) to medium sized (200mm across) stones, possibly form a platform within the upper courtyard of the fort. Dark brown soil matrix between stones with fine roots and some patches of charcoal. Some larger stone clasts within compact material may form a setting. Also, some vitrified chunks of stone set on top of context. Collapsed stone (205) overruns the context, and slab setting also sits on surface (207).
2	207	Structure	Setting of well-fitted flat slabs/boulders forms a circular shape on the NW side of the trench within the fort. These may form a hearth, or the edge of a paved area/activity surface. The structure is built over the compact surface/platform (206). Feature runs under NW baulk of trench.
2	208	Structure	Possible fragment of crude revetting wall retaining rubble (205). Packed cobbled surface (206) runs up to wall face possibly representing secondary use of the site. Wall is battered back and comprises granite and metamorphic stone clasts >0.3m square and >0.18m deep. Some soil/sediment matrix. Centre of wall has collapsed forward in the trench.
2	209	Structure	Alignment of thin metamorphic slab/stone (0.28m x 0.20m x 0.10m deep), and smaller granite boulders (>0.30m x 0.20m). Runs N-S through trench and appears to retain cobbled surface (206). The stones sit on a thin soil sediment horizon, bur larger granite boulders lie below.
2	210	Deposit	Compact deposit of small angular stones, from 50mm to 100mm across, lies to the west of revetment wall (209). Contains some fine roots and charcoal flecks within a mid-brown gritty sediment matrix. Surface of deposit is undulating and forms a s semi-circular bank in which is a less compact deposit.
2	211	Deposit	Compact dark brown to black greasy deposit with numerous charcoal flecks and some lumps, lies to east of revetment wall (209). Deposit contains some small angular stone clasts and runs below revetment wall (209).
2	212	Structure(deposit)	Wall core in east end of trench 2. Comprises x8 individual deposits. Includes layers of metamorphic shatter, granite cobbles/boulders and metamorphic slabs. The upper metamorphic deposits are heavily shattered and may have been affected by the vitrification process above. The schist/metamorphic layers may have held the horizontal timber-laying in the rampart wall.
2	213	Deposit	Massive collapsed stone deposit with voids and some mid-brown to light black sediment containing stone chips and charcoal. The stone includes granite, quartz, and metamorphic clasts - but little vitrfied material (although there is some burnt stone). Some larger dressed slabs (>0.40m x 0.40m x 0.18m deep); while most material is smaller, including angular clasts and stone chips - heat fractured?
2	214	Deposit	Some large granite blocks and smaller angular stone clasts (many burnt); and some vitrfied fragments. Mid-brown to

Trench	Context	Context Type	Description
			orange-red gritty matrix, with stone chips and some large charcoal fragments. Most likely material from upper burnt section of rampart wall, and core.
2	215	Deposit	Generally small angular rock fragments fused together, but not fully vitrified. Rocks generally between 40mm and up to 150mm across. Lies to west inside rampart crest, abutting vitrified stone (203); and overlies voidy rampart collapse (213). Rock is reddened.
2	216	Deposit	Thin lenses (>80mm thick) of small stone chips; small burnt stone fragments and charcoal lumps/flecks is destruction deposits at base of rampart wall/core collapse (213, 214). Also contains lenses of pasty grey ash, orange ash pockets. The deposit may have partly been formed by water washing material through voids in rampart wall/core collapse.
2	217	Deposit	Small stone chips and small angular stone clasts, with some charcoal fragments, forms wedge of deposits at base of inner rampart wall (218). Underlies charcoal rich deposit (216) and relates to initial burning of upper rampart with heat-affected stone/stone spalling from wall facing stones.
2	218	Structure	Granite boulders and metamorphic blocks from inner rampart wall. Stands to maximum of 8 courses with some stones displaced outwards. Collapse in centre of wall with surviving elements/structure within south baulk. Some pinning stones within vertical wall face. Lower course steps out forming revetment/foundation supporting course.
2	219	Deposit	A charcoal and ash-rich deposit may relate to primary occupation of fort. Sealed below destruction deposit (214) and (216). Contains burnt grain.
3	300	Topsoil	Dark brown clayey silt with frequent gravel, roots and stone. Throughout Trench 3 up to 0.12 m deep.
3	301	Deposit	Dark brown sandy silt deposit with moderate charcoal chunks and occasional stone at SE end of trench. Fills gully extending N-S across trench.
3	302	Stone	Stone setting extending into NE section of trench. Comprises 4-5 flat slabs forming a semi-circular setting.
3	303	Stone	Deposit of small angular stones at SE end of Trench 3. Comprised of small (up to 0.1 x 0.1 x 0.05 m) angular stone probably derived from rampart collapse laid on a rough surface/track at SE end of trench immediately internal to rampart.
3	304	Stone	Possible stone setting in Se corner of trench. Consists of 5-6 large stones packed with multiple smaller stones on Western side of (301); possibly associated with (305). Probable post-pad/stone setting for upright post.
3	305	Stone	Possible stone setting in SE corner of trench located on eastern side of (301). Consists of 4-5 large stones packed with multiple smaller stones possibly associated with (304). Possible post-pad/stone setting for upright timber.
3	306	Deposit	Dark grey brown sandy silt with occasional charcoal. Top fill of hearth/post-hole with in-situ burning.
3	307	Cut	0.64 x 0.37 m NW facing section through (307). Dense stone area with possible post hole. Section has charcoal rich deposits with grey silt layer (316). Cut is deep sided with undulating bottom cut into (307)

Trench	Context	Context Type	Description
3	308	Stone	Possible stone setting in a linear format at the North west corner of Trench 3.
3	309	Deposit	Deposit of angular stone at NW end of Trench 3. Composed of small sub angular stone (up to 0.1m x 0.1 m x 0.05 m) in a matrix of sandy silt. Deposit of levelling/terracing material at NW end of Trench 3
3	310	Deposit	Deposit of mid grey/brown sandy silt with frequent charcoal. Upper fill of heart/post-hole (311)
3	311	Cut	0.45 m x 0.36 m NW facing section through (311). Dense charcoal rich deposit surrounded by large stones on surface. Few stones within feature. Cut is deep sided with stone at bottom.
3	312	Structure	Stone setting at NE edge of trench. Comprises 5 rounded stones set in a circular arrangement. Probable post –pad/stone setting associated with (304), (305) and (319)
3	313	Deposit	Dark grey to black charcoal rich deposit of sandy silt. Lower fill of hearth/post-hole (311)
3	314	Deposit	Low mound of angular stone (up to 0.15 m x 0.15 m x 0.1 m) set in a sandy silt matrix. Probable surface formed from collapsed rampart material
3	315	Deposit	Black charcoal rich sandy silt. Upper mid fill of hearth/post-hole with in-situ burning.
3	316	Deposit	Mid grey silt – probable charcoal ash. Lower mid fill of hearth/post-hole with in-situ burning.
3	317	Cut	Linear hollow extending N-S across Trench 3. Possible gully cut through structure formed of past settings (304), (305), (312), (302) and (319).
3	318	Deposit	Black charcoal rich sandy silt. Lower fill of heart/post-hole with in-situ burning.
3	319	Structure	Possible stone setting comprising of 4 rounded boulders sat in a circular arrangement at NE side of trench. Possible post – pad/setting for upright post associated with (312), (304) and (305) representing late occupation of hillfort.
3	320	Fill	Dark brown to black deposit of sandy silt of posthole
3	321	Cut	Sub circular cut of post-hole with steep sides and concave base. Part of structure on back terrace.
3	322	Fill	Dark grey brown sandy silt with frequent charcoal and gravel.
3	323	Cut	Sub circular cut with shallow sides and a concave base of post hole within structure.
3	324	Fill	Dark brown sandy silt with frequent charcoal and angular stone that is collapsed packing.
3	325	Cut	Sub-circular cut with near vertical sides and a concave base of post-hole within structure inside edge of terraced area.
3	326	Fill	Upper fill of post-hole. Dark brown to black charcoal rich sandy silt.
3	327	Fill	Lower fill of post-hole. Charcoal chunks in a sandy silt matrix.
3	328	Cut	Sub-circular cut with steep sides and a flat base of post-hole at edge of terrace associated with (307).
3	329	Fill	Dark grey brown sandy silt with frequent charcoal. Edge defined by upper edge set stones that are probably not post –packing.
3	330	Cut	Sub-circular cut post-hole feature of structure (331). Not excavated.
3	331	Structure	General structure number for post-built structure or terrace

Trench	Context	Context Type	Description
			inside rampart of hillfort.
4	400	Deposit	Turf and topsoil across extent of Trench 4
4	401	Deposit	Tumble from rampart of hillfort. Angular medium to large stone blocks comprising tumble from stone rampart. No obvious alignment, orientation or configuration at this stage; underlies turf and topsoil throughout. Stones at SW end of trench are more shattered and small but represent same material. Includes occasional lumps of vitrified stone.
4	402	Wall	Wall/rampart.
4	403	Wall face	E-W aligned inner face of wall. Loose dry stone wall style construction, no visible suture, mixed lithologies and angular stones (pelite, granite, calc pelite). Dimensions 1.87 m wide by 0.38 m deep by 0.48 m high. Wall bulges towards soil face. Soil horizons : Dark organic rich clay, charcoal burn layer (contains charcoal pieces, 15 mm x 10 mm) brown sandier layer , west side of trench contains rubble coarse layer (0.5 mm) with rubble pieces up to 60 mm)
4	404	Structure	Loose rubbish in fill of wall (402). Composed of sub-rounded to angular stone up to 0.4 m x 0.25 m x 0.2 m in size of mixed geologies forming core of rampart between inner face (403) and
4	405	Structure	Line of sub-angular blocks (predominantly granite) within rampart (402). Composed of blocks up to 0.4 m x 0.3 m x 0.2 m. Forming a rough internal facing wall (402).
4	406	Structure	Rubble infill of wall (402) between face (405) and vitrified material (407). Composed of heat shattered small angular stones up to 0.2 m x 0.15 m x 0.1 m predominantly red coloured that forms line across rampart.
4	407	Structure	Linear band of vitrified stone extending across Trench 4 sondage to exterior of heat affected stone (406).
4	408	Deposit	Dark brown to black charcoal rich silt with frequent gravel and angular stone. Laid against rebuilt inner face of rampart (403). Deposit laid on levelled/terraced collapsed material (409). Occupation/floor surface abutting refacing rampart.
4	409	Deposit	Angular stone up to 0.1 m x 0.1 m x 0.05 m in size in a loose matrix of dark brown silty sand. Terraced/levelled rampart collapse to form a surface for late occupation of hillfort.
4	410	Structure	Burnt timber extending transversely through rampart (402), very degraded.
4	411	Structure	Burnt timber extending transversely through rampart (402), very degraded.
4	412	Deposit	Dark grey to black ash and charcoal layer with abundant stone. Destruction layer
7	700	Topsoil	Turf and topsoil, black loose soils.
7	701	Deposit	Homogenous, patchy, compact gravelly soil; ranging in colour from pale yellow brown/mid – brown/red –brown / black-brown. Under (700) at NE end of trench at outer face of (704), [705].
7	702	Stone	Sizeable rounded glacial boulders covered by (700) & (701). Possible tumble from stone built structure.
7	703	Stone	Angular cobbles, rubble core or tumble from wall (to NE) at NE end of trench (705).
7	704	Stone	Linear alignment of angular stone blocks running roughly W-E across NE end of trench; outer face of (705).

Trench	Context	Context Type	Description
7	705	Structure	Faced wall approximate W-E alignment with a possible rubble/earth/turf core. Comprises facing stones (704); tumble (703). Possible stones of inner face or tumble to SW end of trench (706) & (708); bank material (711). Wall of outer enclosure related to the use of the hillfort, likely continues in Trench 8.
7	706	Deposit	Small angular cobbles at SW extent of possible wall (705). Tumble from inner face (705).
7	707	Deposit	Medium to large angular stone blocks, inner face of wall? Approximately W-E aligned. Tumble of wall (705).
7	708	Deposit	Homogenous, patchy, compact, gravelly soil. Patchy in colour: pale yellow, brown, mid brown and grey brown at centre of trench. Same as (701)
7	709	Deposit	Homogeneous, patchy, compact, gravelly soil and patchy in colour. Ranging from pale yellow – brown – mid brown – grey brown at centre of trench at SW end of trench. Similar to (701).
7	710	Deposit	Very compact, patchy, dense clayey soil. Lots of very small gravel inclusions. Patchy in colour, very distinct from (709) as more patches of loose powdery yellow grey soils.
7	711	Deposit	Compact, dense silty soils homogeneous in colour and texture overlying (712). Bank material behind tone wall face.
7	712	Deposit	Small rounded cobbles underlying (711) mid length along trench. Several layers of cobbles laid directly below turf bank (711) and (705).
7	713	Deposit	Pocket of charcoal rich soil amongst stones at outer face of wall (704) [705] and tumble (703).
7	714	Deposit	Compact, patchy silty soil, small gravel inclusions; homogenous in colour and texture. Mottled appearance; in SW extent of trench. Possibly lower lense of (710). Possible earlier layer of hillwash below (710) built up against bank (711).
7	715	Deposit	Compact and dense pale grey, mid brown soil, frequent shattered angular grave and occasional charcoal flecks and lumps. Abutting outer face (704) of (705) at NE end of trench.
7	716	Deposit	Soil under stones of (705), mid brown powdery soil. Very few inclusions; occasional charcoal flecks. Soil matrix enclosing stones of (705).
7	717	Deposit	Shallow discrete patch of charcoal rich soil. 1 cm deep sub-angular in plan, continuing into SW trench edge. No obvious cut within (723)
7	718	Deposit	Discrete patch of charcoal rich soil in W corner of trench; edges not well defined. Approximate 2-3 cm deep max and 16 cm diameter but extends into trench edge. No obvious cut within (723).
7	719	Deposit	Discrete deposit of charcoal stained soil underlying angular stone blocks on W edge of trench at interface of (714) & (721). No obvious cut; edges well defined with max depth of 3 cm , max diameter 17 cm but extends into W trench edge within (723)
7	720	Natural	Pale yellow grey degraded boulder clay stone.
7	721	Natural	Mottled homogenous silty clay soil underlying (714) at SW end of the trench. Patches of green/grey yellow dense soil with mid brown inclusions.
7	722	Cut	Cut of sub circular pit/posthole in W corner of trench Extent of feature not fully revealed as extends into W & SW trench edges.

Trench	Context	Context Type	Description
			Filled by (723) and includes discrete charcoal lenses (717), (718) and (719).
7	723	Fill	Dark/mid brown silty sand fill of small shallow pit (722), frequent small angular gravel patches of charcoal stained & occasional charcoal flecks.
7	724	Cut	Linear cut of foundation trench for wall (705); filled by (712) and (725).
7	725	Deposit	Mid brown silty soil with occasional charcoal flecks. Soil matrix of cobble foundation for wall (705) and bank (711).
8	800	Topsoil	Turf and topsoil. Black to dark brown loose sandy silt 0.12 m across trench.
8	801	Stone	Large sub rounded/sub angular stones, quartz, and granite. 0.6 m wide.
8	802	Stone	Small sub rounded cobble stones approximately 0.05 m – 0.07 m x 0.05 m -0.10 m. Measures 2.6 m wide. Forming a platform/compact base for wall.

APPENDIX 2: PHOTOGRAPHIC REGISTER

Digital Photographs

Frame	Trench	Description	From
1-2	2	Trench 2 NW end showing possible wall [209] and stone setting [207]	NW
3	2	Trench 2 showing wall [209] and rampart re-facing [208]	NW
4	2	Trench 2 showing wall [209] and rampart re-facing [208]	S
5-6	2	Trench 2 NE facing section of trench to exterior of rampart	NE
7-8	2	Trench 2 SW facing section of trench to exterior of rampart	SW
9-11	2	Trench 2 rampart to exterior showing vitrification [203] and possible internal face [212]	SE
12-70	2	Trench 2 photogrammetry	-
71-123	4	Trench 4 photogrammetry	-
124		Working shot	SW
125-126	3	Trench 3 general view of sondage	NW
127-128	3	Trench 3 general view of sondage	SE
129-130	3	Trench 3 sondage	NE
131	3	Posthole/pit [321] pre-excavation	NW
132-133	3	Trench 3 sondage general view	SE
134-135	3	Posthole [321] half section	NW
136-137	1	Hearth complex [108] mid-excavtion	SE
138-139	1	Hearth complex [108] mid-excavtion	NE
140	1	Hearth complex [108] mid-excavtion	NW
141-146	4	Trench 4 Poorly peserved wall face [403] showing in-situ burnt transverse timbers [410, 411]	NE
147-154	4	Detail of burnt timbers 410, 411]	NE
168-169	7	Trench 7 NE facing external elevation of rampart [705]	NE
170-187	7	Trench 7 photogrammetry	-
188-197	4	Trench 4 NW facing section	NW
198-265	4	Trench 4 photogrammetry	-
266-267	1	Hearth complex [108] post-excavation	NE
268-269	1	Hearth complex [108] post-excavation	NW
270-271	1	Hearth complex [108] post-excavation	SE
272-273	1	Hearth complex [108] post-excavation	NE
274-277	1	Hearth complex [108] post-excavation	SW
278-281	1	Hearth complex [108] NW facing section	NW
282-283	1	Hearth complex [108] post-excavation	NE
284-287	1	Hearth complex [108] NW facing section	NW
288-289	1	Trench 1 general view	NW
290-372	1	Trench 1 photogrammetry	-
373-374	7	Trench 7 cobble base of rampart	W
375-380	7	Trench 7 cobble base of rampart	NW

Frame	Trench	Description	From
381-382	7	Trench 7 NE elevation of rampart and cobble foundation	NE
383-387	7	Trench 7 general view of ramprat	NE
388	7	Trench 7 post-excavation	NE
389	7	Trench 7 post-excavation	SW
390	7	Trench 7 post-excavation	SE
391-392	7	Trench 7 SE facing section	SE
393-405	7	Trench 7 photogrammetry	-
406	8	Trench 8 general view	SE
407	8	Trench 8 detail of rampart	SE
408	8	Trench 8 general view	SW
409	8	Trench 8 general view	NW
0062-0097	3	Pre-ex photogrammetry	-
98	3	Trench 3 de-turfed	NW
99	3	Trench 3 de-turfed	S
100	3	Trench 3 de-turfed	SE
101	4	Trench 4 de-turfed	NE
102-169	4	Pre-ex photogrammetry	-
170-171	2	Trench 2 de-turfed showing rampart crest and vitrified material	SE
172	2	Trench 2 de-turfed , general view showing area internal to rampart	NW
173	2	Trench 2 de-turfed showing rampart crest	NE
174-178	2	Trench 2 de-turfed	various
179	2	Trench 2 stone setting [207]	NE
180-183	2	Trench 2 de-turfed	-
184-187	4	Trench 4 showing collapsed stone (401)	NE
188-190	4	Trench 4 showing collapsed stone (401)	SE
191-194	4	Trench 4 showing collapsed stone (401)	SW
195-198	1	Working shots trench 1 de-turfing	-
199-275	2	Trench 2 Photogrammetry	-
2456-2475	2	Trench 2 photogrammetry	-
2476		Working shot	-
2477		View of Glen Nevis	-
2478-2723	4	Trench 4 photogrammetry	-
2724-2800	2	Trench 2 photogrammetry	-
2801-2950	3	Trench 3 photogrammetry	-
2951-2953	2	Vitrified stone to exterior of rampart	SE
2954-2959		Working shots	-
2960-2965		Panorama over Glen Nevis	-
2966		Working shot	-
2967	4	Wall core to exterior of crest	SW
2968	4	Wall core to exterior of crest	NW
2969	4	Wall core to exterior of crest	NE
2970	4	Wall core to exterior of crest	SE

Frame	Trench	Description	From
2971-3015	1	Trench 1 photogrammetry	-
3016	3	Pit [311] plan view	NE/Vertical
3017	3	Pit [311] post-excavation	W
3018	3	Pit [311] post-excavation	SW
3019	3	Pit [311] post-excavation	NW
3020	3	Posthole [307] post-excavation	SW
3021	3	Posthole [307] NW facing section	NW
3022-3023	2	Trench 2 general view showing stone setting [207] and wall [209]	NW
3024-3026	2	Trench 2 showing collapse layer 2013	S
3027-3028	3	Posthole [307] NW facing section	NW
3029	3	Posthole [307]	SW
3030	2	Trench 2 wall core [204] and possible internal face [212]	SE
3031	2	Trench 2 possible internal wall face [212]	SE
3032	2	Trench 2 wall core [204] and possible internal face [212]	SE
3033	2	Trench 2 wall core [204]	S
3034-3035	2	Trench 2 wall core [204] and possible internal face [212]	SW
3036-3039		View from site in mist	
3040-3041	4	Inner wall face [403] of rampart in trench 4	NE
3042	4	Inner wall face [403] of rampart in trench 4	SE
3042-3043	4	Inner wall face [403] of rampart in trench 4	S
3044	4	Inner wall face [403] of rampart in trench 4	SW
3045	4	Wall core [404] and heat affected stone [406]	SW
3046	4	Wall core [404] and heat affected stone [406]	NW
3047	4	Wall core [404] and medial face [405]	NW
3048-3083	4	Photogrammetry	-
3084-3107	2	Photogrammetry	-
3108-3116		Working shots	-
3117-3119	7	stone faced wall [705]	S
3120-3121	7	stone faced wall [705]	S
3122-3177	7	Photogrammetry	-
3178-3179	7	Working shots	-
3180-3181	7	Bank material between stones	W
3182-3183	7	Bank material between stones	E
3184-3185	7	After removal of bank material of [705]	SW
3186-3187		After removal of bank material of [705]	E
3188-3189	7	After removal of 701 showing stones 705	NE
3190-3191	7	After removal of 701 showing stones 705	NE
3192-3248	7	photogrammetry	-
3249-3253	7	Trench 7	SE
3254-3255	7	Trench 7	SW
3256-3257		Working shot	-
3258-3259	2	Trench 2 NE facing section showing wall [218]	NE

Frame	Trench	Description	From
3260-3262	2	Trench 2 detail of wall face [218]	N
3263-3264	2	Trench 2 post-excavation showing burnt layer (216)	N
3265	2	Trench 2 post-ex showing SE facing baulk of trench	SE
3266-3267	2	Trench 2 showing burnt deposit with grain (219)	E

APPENDIX 3: DRAWING REGISTER

Drawing No.	Trench No.	Details	Scale
101	1	Pre-ex plan	1:20
102	1	Post-ex plan of hearth [102/108]	1:20
103	1	NW facing section through hearth [102]	1:20
104	1	S facing section through hearth [108]	1:20
105	1	NE facing section of trench	1:10
201	2	Pre-ex plan	1:20
202	2	Sondage within interior of rampart showing walls [208 & 209]	1:20
203	2	NE facing section of trench	1:20
204	2	NE facing section of trench, exterior to rampart crest	1:20
301	3	Pre-ex plan	1:20
302	3	NW facing section through [307]	1:10
303	3	NW facing section through [311]	1:10
304	3	SW facing section through [321]	1:10
305	3	NE facing section through [325]	1:10
306	3	NNW facing section through [323]	1:10
307	3	Post-ex plan	1:20
308	3	SW facing trench section	1;20
401	4	Pre-ex plan	1:50
402	4	NE end of trench 4 sondage showing occupation deposit (408)	1:20
403	4	Plan showing detail of wall construction with: wall face [403] wall core [404], medial face [405, heat shattered stone [406] and vitrified stone [407]	1:20
404	4	NE facing elevation of wall face [403] showing burnt timbers [410 & 411)	1:10
405	4	NW facing trench section	1:10
701	7	Pre-ex plan	1:20
702	7	Mid-ex plan showing tumble (703) and charcoal rich deposit (713)	1:20
703	7	Mid-ex plan showing (703, 704, 716, 719 & 720)	1:20
704	7	Mid-ex plan showing cobble foundation (712) and pit [722]	1:20
705	7	Post-ex plan	1:20
706	7	SE facing trench section	1:10
707	7	Wall face [704] NE facing elevation	1:10
801	8	Pre-ex plan	1:20

APPENDIX 4: FINDS REGISTER

Trench No.	Find No.	Context No.	Description
N/A	001	Unstratified	Crucible fragment with sprout found by forestry commission prior to excavation
1	100	100	Quartz fragment
1	101	100	1979 Brass penny
1	102	100	Burnt bone
1	103	100	Modern 20 pence coin
1	104	100	Small iron nail
1	105	100	Modern iron tent peg
1	106	103	2x burnt bone fragments
1	107	104	2 x burnt bone fragments
1	108	103	Possible lithic material
1	109	105	Burnt bone fragment
1	110	101	Vitrified stone
1	111	100	Vitrified stone
1	112	100	Vitrified stone
1	113	100	Vitrified stone
1	114	100	Vitrified stone
1	115	100	Vitrified stone
1	116	100	Vitrified stone
1	117	100	Vitrified stone
1	118	100	Vitrified stone
1	119	100	Vitrified stone
1	120	100	Vitrified stone
2	201	206	Iron concentration/vitrification
2	202	206	Iron slag/vitrification
2	203	201	Quartz
2	204	201	Vitrified stone
2	205	201	Vitrified stone
2	206	201	Vitrified stone
2	207	201	Vitrified stone
2	208	201	Vitrified stone
2	209	201	Vitrified stone
2	210	201	Vitrified stone
2	211	201	Vitrified stone
2	212	201	Vitrified stone
2	213	201	Vitrified stone
2	214	201	Vitrified stone
2	215	201	Vitrified stone
2	216	201	Vitrified stone
2	217	205	Vitrified stone
2	218	205	Vitrified stone
2	219	205	Vitrified stone
2	220	205	Vitrified stone
2	221	205	Vitrified stone
2	222	205	Vitrified stone
2	223	205	Vitrified stone
2	224	205	Vitrified stone
2	225	205	Vitrified stone
2	226	205	Vitrified stone

Trench No.	Find No.	Context No.	Description
2	227	205	Vitrified stone
2	228	205	Vitrified stone
2	229	205	Vitrified stone
2	230	205	Vitrified stone
2	231	205	Vitrified stone
3	301	300	Burnt bone fragment
3	302	300	Quartz fragment
3	303	300	Burnt flint core
3	304	300	Flint core
3	305	300	Flint
3	306	300	Quartz fragment
3	307	300	Flint
3	308	300	Quartz
3	309	300	Quartz
3	310	300	Quartz
3	311	300	Charcoal
3	312	300	Flint
3	313	300	Bone
3	314	300	Bone
3	315	300	Quartz
3	316	300	Charcoal fragments
3	317	300	Vitrified material
3	318	300	Burnt material
3	319	300	Burnt bone
3	320	301	Burnt bone fragments
3	321	309	Rubbing stone
3	322	309	Possible hammer stone
3	323	324	Fire cracked hammer stone
4	400	400	2x fragments of vitrified stone from rampart dislodged during de-turfing
4	401	400	Angular fragment of quartz, possibly worked
4	402	400	Quartz from outer wall tumble
4	403	400	Clay pipe bowl
4	404	401	Large piece of vitrified rock from rubble layer
4	405	401	Large piece of vitrified stone from rubble layer
4	406	401	Large piece of vitrified stone from rubble layer
4	407	401	Large piece of vitrified stone from rubble layer
4	408	401	Large piece of vitrified stone from rubble layer
4	409	401	Large piece of vitrified stone from rubble layer
4	410	401	12x vitrified rocks from rubble layer
4	411	401	Large vitrified block of stone from rubble layer
4	412	401	15x vitrified stones from rubble layer
4	413	401	Vitrified stones from rubble layer
4	414	401	Large piece of vitrified rock from rubble layer
4	415	401	Large vitrified piece of rock from rubble layer
4	416	401	Large piece of vitrified stone
4	417	401	4x vitrified rocks from rubble layer
4	418	401	Large piece of vitrified rock
4	419	401	Large piece of vitrified rock from rubble layer
4	420	401	Vitrified stone
4	421	401	Vitrified stone
4	422	401	Vitrified stone

Trench No.	Find No.	Context No.	Description
4	423	401	Vitrified stone
4	424	401	Vitrified stone
7	701	700	Angular quartz fragments
7	702	710	Worked quartz
8	800	800	Worked quartz

APPENDIX 5: FINDS CATALOGUE

Metal working evidence

SF 001 Crucible fragment. Fragment of a shallow, possibly hemispherical, fired ceramic crucible, broken across the centre of the bowl adjacent to a rounded projecting spout (W 22 mm). Approximately 30% of the original circumference survives. The rim is damaged but survives at the spout where it is plain, the walls (T 8mm) slope gently downwards and thicken towards the base (T 16.6 mm) which has also been lost. The internal round-based hollow (H 28 mm) is coated in a thick layer of residue (max 3.5 mm), dark grey-purple to red in colour. The external surface is rounded but uneven, heavily coated with a glassy, vitrified residue in bright hues of red, yellow-green, green and black suggesting the presence of copper. Short liner indentations (L 8 W 2 mm) on the rounded external surface may be tool marks from a set of fine tongs used to hold the crucible after heating. The fabric of the crucible itself is difficult to categorise but appears to be a very highly vitrified ceramic with frequent angular quartz temper but macroscopically looks like stone. The matrix of the material displays a range of colours from pale grey to white to cream and is glassy and vesicular. Hints of re-lining are present, suggesting the crucible was used and modified several times. Surviving H 47.2 mm, surviving W 42.5 mm. Context unstratified. Scientific analysis (XRF/SEM) and illustration recommended.

No sf. Three fragments of molten-looking ferrous metalworking slag, includes one slag sphere which is magnetic and a magnetic prill. 4.7g. Context 109 (retents).

No sf. Single fragment of molten-looking ferrous metalworking prill. 4.7g. context 105 (retents).

Coarse stone tools

SF 113 Grinder fragment. Curving edge fragment from a water-rounded quartzite cobble with band of facetted abrasion around surviving circumference. After use as a tool, the cobble has been used as a pot boiler. Surviving L 60.5 W 54.5 T 30 mm. Context 100. Illustration recommended.

SF 320 Possible smoothing stone or polisher. Flat, sub-rectangular pebble of quartzite with one wide, asymmetrically rounded end, undulating parallel vertical sides, tapering to a damaged narrow rounded tip. One flat face is particularly smooth, accompanied by a light sheen which is absent on all other surfaces and has dark red-brown staining around the circumference of the face, particularly concentrated at opposing corners of each end. L 66 W 41 T 20 mm. Context 309. Illustration recommended.

SF 321 Ovoid water-rounded quartzite cobble. Surfaces naturally smooth and rounded throughout with no evidence of working or modification from use. Cobble probably deliberately brought to site for use but no evidence of modification apparent. L 98 W 83.4 T 62.3 mm. Context 309. (Discard recommended)

SF 322 Multifunction cobble tool. Blunt rounded end fragment from a water-rounded, ovoid, quartzite cobble. Tip of the surviving rounded end, flattened by well-defined oval pitted facet (34.5 x 20.5 mm) resulting from use as a pounder; the opposite end and most of one rounded face has been lost due to secondary use as a pot boiler and the original length is unknown. The surviving rounded face has an irregular pitted facet (28 x 20 mm) from expedient use as an anvil or working surface and the face has frequent angular hairline cracks

resulting from heat damage, probably from use as a pot-boiler. Most of the opposing face has been lost but what remains has a right-angled dark black-grey stain, possibly sooting or heat damage. Remaining L 63 W 54.5 T 48 mm. Context 324. Illustration recommended.

From retents (all four fragments are unworked and discard is recommended)

Context 315. Angular fractured fragment of quartzite-rich cobble with one natural, water-smoothed surface surviving; all other surfaces lost. No evidence of use or modification.

Context 306. Angular fractured fragment of a quartzite cobble with one natural, water smoothed surface and rounded edge surviving; all other surfaces lost. No evidence of use or modification.

Context 715. Angular edge fragment from a water-rounded quartzite cobble; no evidence of use or modification.

Context 322. Rounded and weathered fragment of heat affected stone. No obvious use or modification.

Vitrified Stone

SF 110 Vitrified stone. Large weathered lump of heat affected and vitrified stone comprising large angular blocks of various lithologies (including schist,?greywacke etc). One face only displays severe vitrification where the rock has suffered a loss of mass, become vesicular and brittle in texture. No obvious wood impressions or inclusions. L 261 W 189 T 162 mm. Mass 4392.4g. Context 101.

SF 111 Vitrified stone. Sub-square block of vitrified stone comprising several angular stones fused together from exposure to intense heat. The base consists of an angular block of ?sandstone which is split and fractured from heat damaged, with patches of vesicular vitrification but relatively unmodified in contrast to the opposing face which is molten in appearance. This face incorporates several rocks of different lithologies including a banded ?siltstone which has warped and fused with other stones, around which a second lithology has melted and flowed. This melted rock is vitrified and vesicular; it is porous in patches but has also turned glassy. A distinct large air bubble (W 39 mm) is present on one broken edge. L 169 W 154 T 96 mm. Mass 2260g. Context 100.

SF 112 Vitrified stone. Angular, amorphous fragment of vitrified stone consisting of a fused lump of many different small angular rocks which have melted together due to exposure to intense heat. Individual rocks can still be distinguished on the surface but these have been surrounded by a stone type (?sandstone) which has been more heavily affected by the heat resulting in it becoming viscous and melting around the other rocks. This vitrified stone is porous and highly vesicular but glassy in patches, particularly where quartzite-rich stones have become incorporated. A sub-circular void on one face of the fragment, towards one broken edge, may be a cavity left by a burnt out material, such as a timber post. L 192 W 175 T 125 mm. Mass 2884.4g. Context 100.

SF 114 Vitrified stone. Large amorphous fragment of vitrified stone comprising multiple small angular fractured pieces of rock of various lithologies (grandodiorite, limestone, quart-diorite, schist etc) fused together as the result of exposure to intense heat. Many of the angular rock fragments are still distinct and recognisable but have become submerged in a molten-looking, dark red-brown vitrified stone which is porous and vesicular and glassy in patches. L 149 W 170 T 124.5 mm. Mass 1934.2g. Context 100.

SF 115 Vitrified stone. Angular fragment of vitrified stone encompassing a fused lump of grandodiorite., schist and possibly calcareous pelite that has melted together as a result of exposure to intense heat. One rock type in particular (not identified though macroscopic identification) has vitrified more completely than the others, becoming molten and flowed in appearance. L 163 W 178 T 123 mm. Mass 2479.5g. Context 100.

SF 116 Vitrified stone. Sub-ovoid fragment of vitrified stone consisting of fractured pieces of quart-diorite, limestone, and calcareous pelite fused together as the result of intense heat; vitrified in patches. L 144 W 119 T 80 mm. Mass 1133.9g. Context 100.

SF 117 Vitrified stone. Sub-oval fragment of vitrified stone, plano-convex in section, consisting of fragments of quartz-diorite and ?greywacke fused together through exposure to intense heat. A mass of molten-looking vitrified stone (lithology not identified macroscopically) joins the two stones mentioned which preserve occasional square charcoal/charred wood impressions. L 127.5 W 93.5 T 48 mm. Mass 400g. context 100.

SF 118 Vitrified stone. Angular sub-triangular fragment of vitrified stone dominated by a flat fractured piece of calcareous pelite with horizontal laminations which has warped and cracked as the result of exposure to intense heat. Fused onto this is a fractured and irregular piece of heat affected stone (?lithology). L 125.5 W 124.5 T 88 mm. Mass 717.4g. Context 100.

SF 119 Vitrified stone. Small angular fragment of vitrified stone encompassing a fragment of schist or calcareous pelite fused onto a fragment of ?greywacke. One edge is vitrified, appearing molten with frequent vesicules. L 84 W 57.5 T 27 mm. mass 106.4g. Context 100.

SF 120 Vitrified stone. Sub-oval, rounded fragment of vitrified stone consisting of heavily heat affected and vitrified diorite which is molten-looking and glassy in patches. Embedded within this vitrified stone is a heat affected but un-vitrified flat fragment of ?limestone. L 98.5 W 84 T 64 mm. Mass 469.6g. Context 100.

SF 201 fragment of iron-rich stone, collected in the field as an iron object but on drying appears to be laminated heat affected stone. x-ray would be recommended to confirm. L 29 W 20 T 8 mm. 3g. context 206.

SF 202 Small angular fragment of vitrified stone. Flat, sub-rectangular broken fragment of vitrified stone, pale green-brown in colour on the weathered surfaces with occasional glassy patches and pale grey and vesicular where the surface has been lost and the internal material has been exposed. One sharp, angular corner is a fused but not fully vitrified angular piece of ?siltstone. L 50 W 28 T 15 mm. Mass 11g. Context 206.

SF 204 Vitrified stone. Angular amorphous fragment of vitrified material consisting of various unworked angular rock types including limestone, calcareous pelite, pink porphyry and small quartzite-rich flecks from deteriorated quartz diorite which have fused together with a more heavily vitrified stone. L 100 W 119 T 82.5 mm. Mass 872.5g. Context 201.

SF 205 Copper stained stone. Angular fragment of ?limestone, unremarkable save for the bright and vivid dark green staining on one face that may be the result of contact with copper. This is probably entirely natural but assessment by a lithologist is recommended. L 44.5 w 40.5 t 30.5 MM. Mass 69.9g. Context 201.

SF 206 Vitrified stone. Small angular fragment of calcarious pelite and limestone which have fused together as the result of exposure to intense heat. One face is heavily vitgrified consisting of a dark brown-grey vitrifie dmateiral, porous with frequent vesicles. L 53 W 60.5 T 36 mm. Mass 117.8g. Context 201.

SF 207 Vitrified stone. Sub-circular, plano-convex fragment of vitrified stone comprising a warped and partially vitrified fragment of unworked ?greywacke. The concave face of the stone has vitrified and become molten as the result of exposure to intense heat. L 131 W 103.5 T 62 mm. 498.9g. Context 201.

SF 208 Vitrified stone. Angular fragment of vitrified stone comprising a heat affected angular fragment of limestone fused together with a heavily vitrified, vesicular and glassy material which is molten in appearance. L 94.5 W 71.5 T 55.5 mm. Mass 357.4g. Context 201.

SF 209 Vitrified stone. Angular amorphous fragment of vitrified stone comprising angular fragments of pink porphyry, calcareous pelite and limestone fused together as the result of exposure to intense heat. The angular rocks which are heat affected are fused together by a dark brown vitrified stone (lithology not identified) which is porous, vesicular and glassy in patches. L 105.5 W 78.5 T70 mm. Mass 421.5g. Context 201.

SF 210 Vitrified stone. Angular fragment of vitrified stone, plano-convex in section. The broken edge demonstrates the interface between a heavily vitrified stone, possibly a calcareous pelite which has become molten and glassy in appearance, on to a heat affected piece of limestone. Charred wood impressions are visible on one surface. L 109.5 W 92 T 63 mm259.4g. Context 201.

SF 211 Vitrified stone. Heavily vitrified amorphous fragment comprising multiple flat stones of various lithologies which have fused together as the result of exposure to intense heat. At least two layers of flat limestone, a flat piece of calcarious pelite have become embedded in a dark red-brown vitrified stone (lithology not possible to identify macroscopically) which is molten in appearance, vesicular and within which frequent small charred wood impressions are visible. L 137 W 84.5 T 39 mm. Mass 292.9g. Context 201.

SF 212 Vitrified stone. Angular fragments of calcerious pelite or schist fused together with limestone as the result of exposure to intense heat. L 112 W 67 T 74 mm.324.7g. Context 201.

SF 213 Vitrified stone. Elongated angular fragment of vitrified stone which comprises several horizontally banded fragments of ?limestone which have warped and laminated as the result of heat damage and fused together with fragments of vitrified schist and diorite. L 168 W 82.5 T 84 mm. Mass 591.9g.

SF 214 Vitrified stone. Four angular and fractured fragments of vitrified stone. All four fragments are heavily heat affected, the rock becoming molten as a result of exposure toe intense heat. The vitrified amterial is molten in appearance with frequent vesicules and glassy in patches. It is not possible to identify the type of stone from macroscopic examination alone. Mass 225.5g. Context 201.

SF 215 Vitrified stone. Angular fragment of vitrified stone encompassing a fused lump of grandodiorite., schist and possibly calcareous pelite that has melted together as a result of exposure to intense heat. One rock type in particular (not identified though macroscopic identification) has vitrified more completely than the others, becoming molten and flowed in appearance with frequent charcoal or charred wood impressions. L 127 W 100 W 69 mm. Mass 449.4g. Context 201.

SF 216 Vitrified stone. Angular fractured fragment of vitrified stone consisting of small fused angular rock fragments of a variety of lithologies (quartz diorite, limestone, schist etc) melted together as the result of exposure to intense heat. Very little of this material is molten in appearance. L 135 W 87.5 T 60 mm. Mass 309.7g. Context 201.

SF 217 Vitrified stone. Rectangular, bar-shaped fractured fragment of vitrified stone comprising a concave/convex-sectioned, warped and heat affected piece of calcareous pelite, blue-grey in colour with horizontal pale grey/white banding. Red-tint on original surfaces is an effect of heat damage with some vitrification of one rounded surviving original edge and loss of mass. L 82 W 23 T 25 mm. Mass 65.1g. Context 205.

SF 218 Vitrified stone. Small angular fractured fragment of vitrified stone comprising a fused mass of several small angular calcareous pelite rocks which have discoloured, warped and melted together under exposure to intense heat. The interface between the individual stones is clear and smaller embedded fragments of grando-diorite and limestone are visible. Very little 'original' surface survives but where patches do remain, they are vitrified with a molten-looking appearance. L 80.5 W 63.5 T 38.5 mm. Mass 125.7g. Context 205.

SF 219 Vitrified stone. Angular ovoid fractured fragment of vitrified stone comprising a fused mass of small angular rocks of various lithologies. The fragment is dominated by a large, heat affected but un-vitrified fragment of laminated ?limestone over and around which has melted a flat fragment of calcareous pelite within which is also embedded a heat affected but un-vitrified fragment of quartz diorite or grandodiorite. The blue-grey and white calcareous pelite has warped through exposure to intense heat but the banding of the stone is still visible and the interface between it and the other rocks is clear. One exposed surface of the calcareous pelite is heavily vitrified as indicated by the molten appearance and frequent large air bubble voids . L 124.5 W 102 T 121 mm. mass 1092.2g. Context 205.

SF 220 Vitrified stone. Angular sub-rectangular fractured fragment of vitrified stone comprising a flat fragment of calcareous pelite which has become fused to a fragment of laminated ?limestone as the result of exposure to intense heat. The calcareous pelite is a blue-grey and white banded rock which has clearly warped and suffered a loss of mass as the result of heat damage. The interface between the two lithologies is heavily vitrified being molten-looking in appearance with frequent vesicles. L 102 W 60 T 53.5 mm. Mass 241.6g. Context 205.

SF 221 Vitrified stone. Angular, fractured, fused mass of fragments of calcareous pelite, laminated limestone and ?schist vitrified together as the result of exposure to intense heat. The limestone is discoloured and laminated, the calcareous pelite has warped but the ?schist has become viscous and flowed around the other stone fragments. L 89 W 69 T 77 mm. Mass 173.5g. Context 205.

SF 222 Vitrified stone. Angular, amorphous fused fragment of vitrified material. The lithology of the stone is unclear due to the level of heat damage but this may be a fragment of schist that has become porous, brittle with occasional vesicles. L 95.5 W 81.5 T 47 mm. Mass 176.8g. Context 205.

SF 223 Vitrified stone. Fractured fragment of vitrified stone, molten in appearance with frequent charred wood impressions. The lithology of the stone is not possible to determine by macroscopic analysis alone as the material has been modified too extensively by exposure to intense heat. The molten stone which is brittle and vesicular in texture has flowed between fragments of organic material, probably charred wood and left smooth, poorly-defined impressions but no inclusions of wood are present. L 96 W 43.5 T 46.5 mm. Mass 82.4g. Context 205.

SF 224 Vitrified stone. Ovoid fractured fragment of vitrified stone with angular surfaces which incorporates small fractured rock fragments of various lithololgies including quartzite-rich rock, calcareous pelite, limestone and schist. The interface between the different stones is masked by the level of vitrification. One concave face has an extensive and well-defined series of charred wood impressions with some charred organic residues surviving within the voids in the vitrified stone. *recommend that a wood specialist examines this prior to sampling. L 136 W 105.5 T 78 mm. Mass 605.2g. Context 205.

SF 225 Vitrified stone. Amorphous, angular, fractured fragment of vitrified stone, with clear dark-grey/white banding which has distorted as the result of exposure to intense heat. The lithology is not confirmed but it may be a calcareous pelite which has fused with fragments of ?greywacke and ?limestone. The stone has suffered a loss of mass, becoming porous and brittle with occasional glassy, vesicular, vitrified patches. L 88 W 76.5 T 52 mm. Mass 146.6g. Context 205.

SF 226 Vitrfied stone. Angular, sub-ovoid fractured fragment of vitrified stone comprising various small angular rocks of a range of lithologies (Schist, calcareous pelite, quartzite and ?greywacke) which have melted and fused together as the result of exposure to intense heat. The fragment is dominated by pieces of schist and calcareous pelite which has vitrified and become molten in places and is highly vesicular. One fractured end has a series of well-defined wood impressions surviving in the vitrified surface. *recommend that a wood specialist examines this prior to sampling. L 145 W 117 T 76 mm. Mass 1140.8g. Context 205.

SF 227 Vitrified stone. Small fractured angular fragment of vitrified stone consisting of superimposed fragments of two distinct lithologies fused together; one, possibly schist is partially vitrified, molten in appearance with wood impressions on one surface, the second lithology is unclear but has become glassy and finely vesicular. L 100.5 W 84.5 T 37.5 mm. Mass 291.5g. Context 205.

SF 228 Vitrified stone. Large sub-oval angular fragment of vitrified stone consisting of a fused mass of various lithologies including angular schist, calcareous pelite, limestone and grando-diorite. Embedded amongst molten-looking schist and calcareous pelite is a friable heat affected fragment of white grandodiorite or quartz diorite as well as laminated pale yellow ?limestone. L 172 W 142 T 86 mm. Mass 1315.2g. Context 205.

SF 229 Vitrified stone. Large angular fragment of vitrified stone dominated by heat affected, laminated limestone rocks fused together with more heavily vitrified lithologies which appear to include schist, calcareous pelite and ?greywacke. Some wood impressions are visible amongst molten-looking, slightly flowed stone at the tip of one corner. L 167 W 124 T 105 mm. Mass 1853.9g. Context 205.

SF 400a Vitrified stone. Irregular sub-oval fragment of vitrified stone, surfaces rounded as the result of weathering. The fragment is dominated by a dark brown-grey, porous and vesicular vitrified stone, probably a fine grained sandstone, which has taken on the appearance of grey pumice due to the effect of heat and vitrification. Incorporated within this matrix are glassy patches which appear to be vitrified quartz-rich material as well as angular fragments of less heat-affected yellow and grey fine-grained stones (?siltstone). L 140 W 114 T 111 mm. Mass 1106g. Context 400.

SF 400b Vitrified stone. Irregular, angular fused fragment of vitrified stone, incorporating at least six angular rocks fused together through exposure to intense heat. One lithology, possibly a fine sandstone, appears to have been more heat affected than the other rocks becoming viscous and molten looking in appearance. Although the other rock types present are undoubtedly heat-affected (evidenced by discolouration and warping) they have remained relatively unmodified by the temperatures in contrast to the ?sandstone. L 117 W 115 T 81 mm. Mass 589.1g. Context 400.

SF 404 Vitrified stone. A sub-oval cobble of grandodiorite with inclusions of more quartz-rich diorite which has warped and cracked as the result of exposure to intense heat. L 149 W 132 T 105.5 mm. Mass 1469.6g. Context 401.

SF 405 Vitrified stone. Large amorphous fragment of vitrified stone comprising several large angular fragments of ?porphyry fused together with quartzite, calcareous pelite, schist and grandodiorite. L 221 W 160 T 121 mm. Mass 2925.7g. Context 401.

SF 406 Vitrified stone. Large angular fragment of vitrified stone incorporating several smaller angular stones of a variety of lithologies which have fused and melted into one another as the result of exposure to intense heat. This includes a fragment of quartzite-rich granite which has become friable as the result of heat damage but does not appear to have been as heavily affected by heat as the other lithologies present. L 145 W 141 T 95 mm. Mass 1464.8g. Context 400.

SF 407 Vitrified stone. Large angular sub-rectangular block of heat-altered ?greywacke. The base of the block is bipartite and displays multiple hairline fractures from heat damage; the broken edge of this stone reveals a loss of mass, the rock becoming glassy with fine vesicles, particularly concentrated on and just below the exposed surfaces of the block. One side is more vitrified than the other, and has fused with smaller fragments of horizontal lamininated ?limestone and possibly schist. Ephemeral wood impressions are present in this vitrified mass. L 224 W 200 T 112.5 mm. Mass 4105.6g. Context 401.

SF 408 Vitrified stone. Angular fragment of vitrified stone comprising a large block of ??schist, the surface of which have begun to vitrify, becoming molten in places with frequent air bubble voids. Embedded in the upper surface, towards the middle of the rock is an angular discoloured fragment of pale yellow ?limestone surrounded by the molten-looking vitrified rock. Ephemeral wood impressions are noted on the opposing surface. L 216 W 184 T 135 mm. Mass 3077.1g. Context 401.

SF 409 Vitrified stone. Large, angular amorphous fractured fragment of vitrified stone consisting of frequent small angular flat rocks of various lithologies, fused together with the result of exposure to intense heat. Most of the angular rocks appear heat affected in terms of discoloruation and warping but heavily vitrified and molten-looking material is sparce. L 218 W 158 T 122 mm. Mass 2450.3g. Context 401.

SF 417A Vitrfied stone. Large angular block of vitrified stone comprising fractured angular blocks of grandodiorite, calcareous pelite and ?pink porphyry fused together as the result of exposure to intense heat. Two faces in particular appear more heavily heat affected than the others resulting in the diorite becoming

porous and vesicular with the appearance of a grey pumice. L 174 W 144 T 128 mm. Mass 2773.3g. Context 401.

SF 417B Vitrified stone. elongated sub-oval block of vitrified stone comprising small fractured angular fragments of various rock types (garnet bearing schist, calcareous pelite, limestone etc) fused together as a result of exposure to intense heat. The interface between the fused stones is masked by a dark red-brown vitrified stone (lithology not identified) which has become molten with frequent vesicles. L 192 W 124 T 196 mm. Mass 1545.7g. Context 401.

SF 417C Vitrified stone. Amorphous rounded fragment of vitrified stone, dominated by a large irregular cobble of ?greywacke/limestone which is heat affected particularly on two adjacent faces. One face is glassy in appearance and greasy to the touch and fused onto this as the result of intense heat is a fragment of garnet rich schist and a piece of limestone. The adjacent face has a vitrified surface, red-brown in colour with occasional vesicles. L 155 W 111.5 T 112 mm. Mass 1413.5g. Context 401.

SF 417D Vitrified stone. Large, blocky, irregular ?greywacke cobble with heat affected surfaces as indicated by radiating hairline cracks and fractures. Adhering to one face is a lump of vitrified stone which appears to be a fused amalgam of quartz-rich stone and schist. L 178 W 144 T 137 mm. Mass 2948.3g. Context 401.

SF 410A Vitrified stone. Small flat triangular piece of vitrified stone, the lithology is difficult to determine due to the extent of heat damage. One surface has vitrified, becoming molten with charred wood impressions preserved. L 42 W 51 T 28 mm. Mass 44.5g. context 401.

SF 410B Vitrified stone. Small fractured angular fragment of heavily vitrified stone. The lithology of the rock is not possible to identify due to the level of vitrification caused by exposure to intense heat. The stone is dark red-brown/grey, molten in appearance with frequent vesicles and is glassy in patches. L 50 W 33.5 T 30 mm. Mass 20.9g. Context 401.

SF 410C Vitrified stone. Angular fractured piece of vitrified stone; fracture surface shows interface between two distinct lithologies, a pale grey voided rock (possibly schist) with a greasy feel and appearance and a more heavily vitrified, vesicular lithology, possibly calcareous pelite. L 104 W 80 T 51.5 mm. Mass 253.8g. Context 401.

SF 410D Vitrified stone. Angular fractured fragment of a rounded quartz-diorite cobble , vitrified on one surface resulting in the surface becoming smooth and glassy. L 103 W 62 T 71 mm. Mass 310.1g. Context 401

SF 410E Vitrified stone. Small angular fractured facet of a dark grey-blue-green vitrified stone with frequent small white inclusions. The stone has vitrified, the surfaces becoming molten-looking in appearance with frequent vesicules but also appears greasy or waxy in appearance. The lithology of he stone is difficult to determine but it may be a calcareous pelite. L 58 W 43 T 31.5 mm. Mass 53.4g. Context 401.

SF 410F Vitrified stone. Large sub-square fragment of vitrified stone. The block incorporates small angular shattered rocks of various lithologies, some of which remain distinctive individual stones (quartzite, Calcareous pelite, grandodiorite and horizontal laminated limestone) but others have vitrified more heavily to become molten, vesicular and porous in appearance. Occasional wood or charcoal impressions survive within the vitrified stone. L 150 W 127 T 154 mm. Mass 1675.4g.

SF 410G Vitrified stone. Small sub-rectangular fractured fragment of vitrified stone which consists of small shattered angular stones of mixed lithologies (calcareous pelite, quartzite, schist and ?diorite) which have fused together as the result of exposure to intense heat. L 97.5 W 65 T 38.5 mm. Mass 166g. Context 401.

SF 410H Vitrified stone. Heavily heat affected fractured fragment of a calcareous pelite or schist cobble which has warped and discoloured as the result of exposure to intense heat. The surfaces doe not appear vitrified but the grey-blue-green colouration of the stone has changed to red-brown in patches where the heat

has effected the stone and the natural bedding of the stone has begun to laminate. L 83 W 54 T 54 mm. Mass 256.3g. Context 401.

SF 410I Vitrified stone. Large angular block of fused and vitrified stone consisting of angular shattered fragments of laminated limestone, ?greywacke, calcareous pelite and schist. A variety of levels of vitrification are present from those stones which are lightly heat affected (laminations and discolouration) through to those that have completely vitrified, becoming molten and vesicular with a glassy surface sheen. The consistency of one lithology (not identified macroscopically) after vitrification appears similar in texture to grey pumice. L 175 W 129 T 118.5 mm. mass 1907.9g. Context 401.

SF 410J Vitrified stone. Small angular fragment of vitrified stone encompassing a split fragment of quartzite rich pale yellow/white schist fused onto a molten-looking vitrified material. This molten looking stone is dark red-brown in colour, porous and heavily vesicular but the lithology has not been possible to determine through macroscopic analysis alone. L 97.5 W 67.5 T 52.2 mm. Mass 207.5g. Context 401.

SF 410K Vitrified stone. Elongated ovoid fragment of vitrified stone encompassing heavily fused angular shattered fragments of various rock types (granodiorite, calcareous pelite, schist recognisable amongst the fused mass) fused together by a dark grey-brown molten vitrified rock, vesicular and glassy in patches. L 154 W 84 T 86.5 mm. Mass 1104.9g. Context 401.

SF 410L Vitrified stone. Concave-convex sectioned fragment of an ovoid cobble which has shattered as the result of heat damage. The surfaces have vitrified, particularly on one face where an angular stone of a distinct lithology has become fused together. The surface, in patches, is molten looking in appearance with a light sheen. L 128 W 116 T 67.5 mm. Mass 658.6g. Context 401.

SF 411 Vitrified stone. Large angular, amorphous fragment of vitrified stone comprising multiple angular and shatter rocked fragments fused together as the result of exposure to intense heat. Many of the individual stones are recognisable and distinct showing minimal heat damage (e.g schist, greywacke and limestone fragments) but are embedded in a more vitrified stone which has become molten in appearance, vesicular and glassy in patches. Wood impressions are visible on one edge (photo). 325 W 264 T 239 mm. Mass 14.2kg. Context 401

SF 413 Vitrified stone. Large amorphous fragment of green-grey ?greywacke, heat affected on two opposing sides, and one edge in the form of red-brown discolouration, warping and cracking of the surfaces. The rounded corner of the stone is more heavily heat affected and has started to vitrify as indicated by the porous and vesicular surface. L 152 W 150 T 145mm. Mass 2645.9g. Context 401.

SF 414 Vitrified stone. Large angular sub-rectangular fractured fragment of vitrified stone comprising multiple angular shattered rock fragments of a variety of lithologies (e.g. ?greywacke, calcareous pelite, quartz diorite or grandodorite, quartzite and schist) which have melted and fused together as the result of exposure to intense heat. The morphology of different lithologies have reacted in a variety of ways to fire: the grandodiorite and quartz have become friable and cracked, the greywacke has suffered a loss of mass and become glassy whist others, perhaps the calcareous pelite and schist have vitrified more extensively, becoming molten in patches, vesicular and brittle. L 307 W 232 T 213 mm. Mass 9.5Kg. Context 401

SF 415 Vitrified stone. Large sub-rectangular angular block of vitrified stone which consists of a vitrified, fused and molten-looking mass of red-brown/grey stone which is highly vesicular, porous and glassy in patches. The parent rock type is unclear but this vitrified material surrounds angular, less heat affected rocks such as quartz diorite, limestone and schist. One concave face consists of a fused lump of distinctly red-brown material which may be degraded and heat affected pink porphyry. L 230 W 148 T 156 mm. Mass 2503g. Context 401.

SF 416 Vitrified stone. Large amorphous angular fragment of vitrified stone which consists of various angular rocks of different lithologies which have warped, partially melted and fused together as the result of exposure to intense heat. The variation in rock types can be distinguished in terms of their colour, consistency,

texture and density and include limestone, calcareous pelite, grandodiorite. Each lithology has reacted in a distinct way to the fire; some have melted and become viscous (vesicular and glassy in patches), flowing around more stable lithologies whilst others have warped and discoloured but show no macroscopic sign of vitrification. L 172 W 167 T 167 mm. Mass 3288g. Context 400.

SF 417 Vitrified Stone. Large, amorphous, angular fractured mass of vitrified stone comprising multiple angular shattered rock fragments of a variety of lithologies (e.g. banded schist, ?greywacke, quartzite-rich rock) fused together by exposure to intense heat. The individual rocks are still quite clearly distinguishable but the interfaces between the stones are obscured in most cases by molten-looking, vesicular, vitrified material. Inclusions of grandodiorite are also observed but this material has discoloured and become friable rather than vitrifying. L 297 W 259 T 125 mm. Mass 7kg. Context 401.

SF 419 Vitrified stone. Large angular sub-ovoid fragment of vitrified stone comprising multiple angular and shattered rock fragments. L 326 W 303 T 284 mm. Mass 13.5kg. Context 410

SF 420 Heat affected stone. Fragment of calcareous pelite with distinct natural horizontal banding, lightly vitrified in patches towards one blunt fractured end and across one rounded face. The rock is otherwise unmodified. L 113.5 W 70.5 T 43 mm. Mass 379.9g. Context 401.

SF 421 Vitrified stone. Flat, triangular fragment of vitrified stone comprising an unworked fragment of ?calcareous pelite which has discoloured and warped as the result of exposure to intese heat. One corner has started to vitrify, becoming viscous, porous and vesicular and the surfaces have developed a set of parallel hairline cracks. Loss of mass. L 107.5 W 109 T 51 mm. Mass 350g. Context 401.

SF 422 Vitrified stone. Angular blocky fragment of vitrified stone comprising an angular rock of limestone fused with smaller stones whose lithology is not possible to determine through macroscopic analysis alone due to the modification caused by exposure to intense heat. One face of the stone is vitrified comprising grey-brown vesicular material, porous and brittle but glassy in patches. L 130.5 W 111.5 T 89 mm. Mass 595.2g. Context 401.

SF 423 Vitrified stone. Large angular fragment of vitrified stone comprising an angular, unworked fragment of quartz diorite fused with a flat block of ?fine grained limestone as the result of exposure to intense heat. The quartz diorite has vitrified in places becoming dark brown-grey in colour, molten in appearance with frequent vesicles, particularly at the interface between the two lithologies. The finer-grained rock type is warped and discoloured as the result of heat damage but is not vitrified. L 139 W 120 T 131 mm. Context 1783.2. Context 401.

SF 424 Vitrified stone. Flat, hour-glass shaped fragment of vitrified stone, incorporating vitrified pieces of calcareous pelite, limestone and grandodiorite. An angular rectangular fragment of pale heat affected schist is embedded at the centre of one face. L 166 W 110 T 68 mm. Mass 856.3g. Context 401.

From retents (dimensions not recorded)

(214) 28.1g;	(409) 1.3g;	(104) 9.9g;	(322) 27.2g;	(310) 2.8g;	(306) 0.8g
(408) 31.2g;	(714) 0.5g;	(301) 14.1g;	(211) 2.2g;	(211) 1.2g;	(216) 2.7g
(105) 16.1g;	(313) 1g;	(204) 4.1g;	(106) 3.2;	(403) 2.1g	

Modern finds

SF 101 Modern brass penny. Minted in 1979. Context 100. (discard recommended)

SF 103 Modern twenty-pence coin. Mint date not legible. Context 100 (discard recommended)

SF 104 Small iron tack or tip of tent peg, modern. Xray recommended. L 22 W 18 mm. Context 100

SF 105 Modern iron tent peg, heavily corroded. Context 100. (discard recommended)

SF 403 Clay pipe bowl. Off-white large plain bowl from clay pipe, broken across the junction with stem; vertical seam from moulding during manufacture is visible on the external face and the internal facing surface is covered with rootlet staining. H 42.5 ext. D 23 int D 17.4 D of stem 11.5 D of hole in stm 2.1 mm. Context 400. illustration recommended.

APPENDIX 5: SAMPLES REGISTER

Trench No.	Context No.	Quantity
1	104	1 Bag
1	105	1 Bag
1	106	1 Bag
1	107	1 Bag
1	109	1 Bag
2	204	2 x 3L
2	211	3L
2	213	3L
2	214	4L
2	216	4L
2	219	3L
3	301	2 Bags
3	306	2 Bags
3	309	1 Bag
3	310	3 Bags
3	313	1 Bag
3	315	1 Bag
3	316	1 Bag
3	320	1 Bag
3	322	1 Bag
3	324	2 Bags
3	326	1 Bag
3	327	1 Bag
4	408	2 Bags
4	409	1 Bag
4	410	1 Bag
4	411	1 Bag
4	412	1 Bag
7	701	1 Bucket (10 litres)
7	708	1 Bucket (10 litres)
7	709	1 Bucket (10 litres)
7	711	1 Bucket (10 litres)
7	713	½ Bucket (5 litres)
7	714	1 Bucket (10 litres)
7	715	2 Buckets (20 litres)
7	716	1 Bucket (10 litres)
7	717	1 Bucket (10 litres)
7	718	1 Bucket (10 litres)
7	719	1 Bucket (10 litres)
7	723	1 Bucket (10 litres)

APPENDIX 6: *'DISCOVERY AND EXCAVATION IN SCOTLAND'* REPORT

LOCAL AUTHORITY:	Highland
PROJECT TITLE/SITE NAME:	Dun Deardail
PROJECT CODE:	23046
PARISH:	Kilmallie
NAME OF CONTRIBUTOR:	Jamie Humble
NAME OF ORGANISATION:	AOC Archaeology Group
TYPE(S) OF PROJECT:	Excavation
NMRS NO(S):	NN17SW 6
SITE/MONUMENT TYPE(S):	Fort
SIGNIFICANT FINDS:	Ceramic non ferrous metal working crucible
NGR (2 letters, 6 figures)	NN 1270 7013
START DATE (this season)	14th August 2015
END DATE (this season)	28th August 2015
PREVIOUS WORK (inc DES)	None
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	An archaeological excavation was undertaken by the Nevis Landscape Partnership, with local volunteers, and AOC Archaeology Group at the vitrified hillfort of Dun Deardail, Glen Nevis, Lochaber. The 2015 works form the first phase of a three year project, with a further two seasons of field work to be completed. The first season of investigations at Dun Deardail comprised the excavation of six archaeological trenches, along with topographic and geophysical survey of the hillfort. Two of the trenches excavated within the upper fort crossed the vitrified wall and within these a similar sequence was revealed. In both of the trenches a massively thick dry-stone wall, at least 5m thick and surviving up to 2.8m high was exposed, In neither trench was the outer wall face exposed, either due to a massively thick wall or possibly because after collapsing the outer face has slid down the steep slope of the knoll on which the fort was built. Despite not finding the outer wall considerable evidence for the structure of the rampart wall was revealed. In situ charred timbers and voids within the vitrified stone demonstrate that the rampart was of timber laced design, with a framework of timber beams built into the rampart. Medial wall faces within the thickness of the rampart were also recorded, that may also have been key to the structural integrity of the rampart. Vitrified stone is apparent around the circuit of the ramparts, the excavations showed that the upper areas of the rampart had undergone the greatest amount of vitrification, possibly suggestive of a superstructure above the ramparts. The vitrification of the rampart did not mark the end of the life of the hillfort but did result in the collapse of the ramparts. The ramparts were subsequently roughly refaced and the rubble collapse in the interior of the hillfort was leveled and the hillfort reoccupied with structural remains overlying the rubble collapse from the ramparts. The consistent sequence of deposits and structures revealed in all of the trenches will allow for secure radiocarbon dates of the major phases identified so far, notably the construction of the ramparts, the vitrification of the ramparts

	and the later re-occupation of the hillfort. As well as investigating the interior and vitrified ramparts of the hillfort two trenches were excavated over the slight remains of a bank defining a lower plateau to the outside of the hillfort. In both of these trenches the remains of an outer enclosure were identified suggesting that in at least one phase of the life of the hillfort the terraces below the hillfort were occupied.
PROPOSED FUTURE WORK:	Two further seasons excavation planned along with a programme of post-excavation analyses
CAPTION(S) FOR ILLUSTRATIONS:	N/A
SPONSOR OR FUNDING BODY:	Forestry Commission Scotland
ADDRESS OF MAIN CONTRIBUTOR:	AOC Archaeology Group, Edgefield Road Industrial Estate, Loanhead, Midlothian, EH20 9SY
EMAIL ADDRESS:	admin@aocarchaeology.com
ARCHIVE LOCATION	Archive to be deposited in NMRS









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