

THE CAER CADWGAN PROJECT

**Survey and Excavation in Cellan Parish,
near Lampeter, Dyfed, 1984 – 1989**

**Variously directed by David Austin, Martin Bell, Barry C
Burnham, Julian Thomas and Rob Young**

**With contributions by Helen Burnham, Peter Crew, John
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Stratigraphic Archive Report

(Compiled by BCB, 2020)



Caer Cadwgan seen from the north

(1) THE CAER CADWGAN PROJECT

INTRODUCTION

This archive report presents the results of six seasons of survey and excavation in the modern parish of Cellan, 3 miles east of Lampeter, between 1984 and 1989 (FIG. 1.1). The project was designed by the Department of Archaeology at the University of Wales, Lampeter, both for the purposes of research and as a student training exercise.

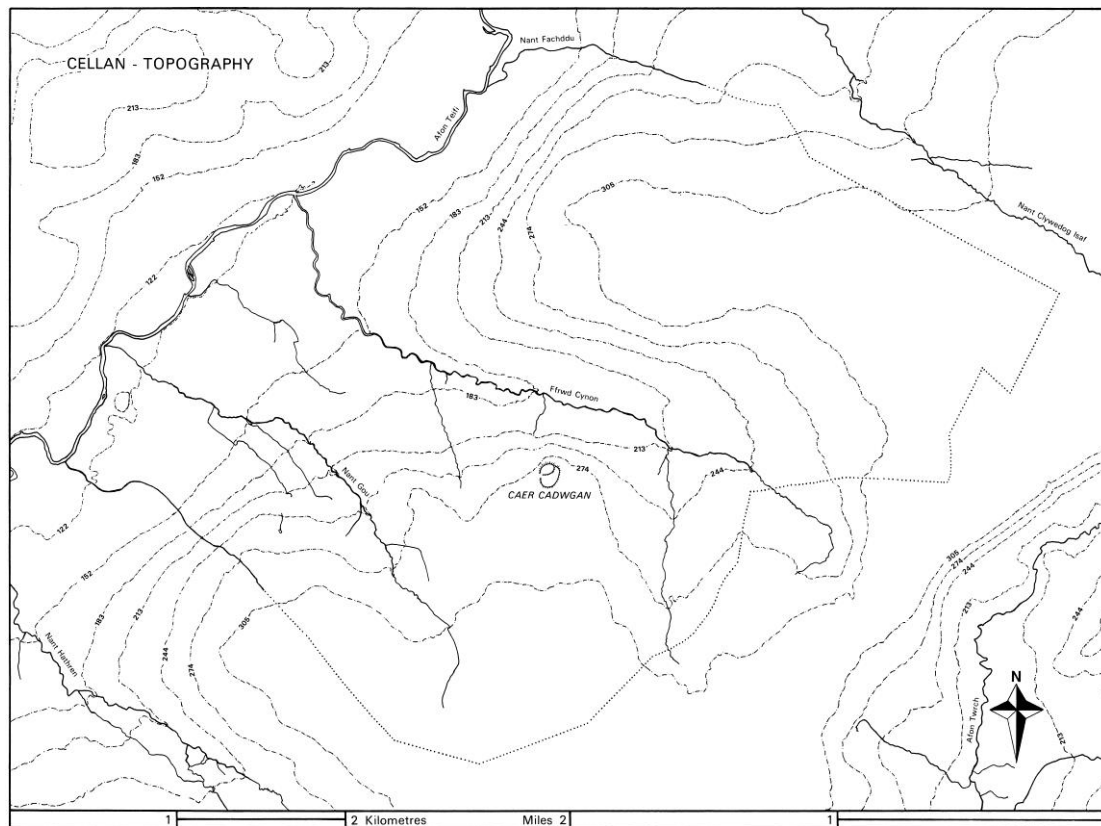


FIGURE 1.1: *Location map of modern parish of Cellan and hillfort*

The main focus of activity was the hillfort variously known as Gelli-Gaer, Gaer Maurice, Caer Morys, Y Gaer, or Caer Cadwgan (RCAHMW, Coflein record), the latter being the name adopted in the 1970s for the purposes of scheduling by Cadw, Welsh Historic Monuments (SN 6223 4796). This hillfort is a prominent feature in the local landscape of the Teifi valley, in part because of its location on a steeply sloping spur above the valley of the Ffrwd Cynon, in part because of the broad scatter

of stones spread from the collapse of its defensive wall (FIG. 1.2). Such a surface scatter is unusual for the prehistoric enclosures of the region, as is the fact that its interior has never been ploughed, so that a number of house platforms and other related features have remained largely intact. This degree of survival was the principal reason for the selection of the site, as it provided a very real chance of exploring a class of monument which, prior to 1984, had received inadequate attention within south-west Wales. By default, therefore, the associated parish was chosen at random and, as such, cannot be regarded as a special case within the region.



FIGURE 1.2: Stone spread from collapsed rampart, looking south from Trench A

In designing the project the over-riding aim was to place the hillfort and the data recovered from its excavation within the context of its immediate landscape. The work embraced three major components:

- (1) the parish history and landscape survey coordinated by David Austin;
- (2) the hillfort survey and environmental work organized by Martin Bell, supported by John Crowther and Mike Walker;

- (3) the excavations directed by Barry C Burnham (1984-9), Rob Young (1984-7) and Julian Thomas (1988).

Within these individual components student time and effort was directed at a series of inter-related themes, all of which were designed to contribute to the wider research aims of the project:

Parish history and landscape survey

Several major tasks were undertaken as part of this particular component: recording the modern land-use field by field; recording the modern land ownership and land holding patterns; collating 19th- and early 20th-century maps and population figures and such earlier documentary sources as are available; detailed analysis of individual farm histories; conventional field-walking, supported by detailed surveys of several rectangular structures in the vicinity of the hillfort, various ruined buildings in the upper part of the Ffrwd Cynon, and the Church of All Saints, Cellan; detailed recording of field boundaries and contour lynchets. One of the contour lynchets was also chosen for excavation in 1987. The aim throughout was to provide a landscape context for the hillfort, anchored within a diachronic overview of the development of both land-use and settlement within the parish through to the modern day. The results of this landscape element have already been published elsewhere (Austin 2016, 9-16).

Hillfort survey

This involved three main elements: (a) during 1984 a primary task was the preparation of an initial survey of the site at a scale of 1:200, designed to identify and illustrate the main features of the site (FIG. 1.3); (b) this was supplemented in subsequent years by a more detailed survey extending across 6,300 of the northern part of the enclosure at a scale of 1:50, incorporating both Trenches A and B (FIG. 1.4); (c) this latter was also complimented by a contour survey of the same area on a 1m grid. The aim throughout was to locate the excavation trenches within the context of their

surrounding features, while at the same time adding detail to what can be said about the hillfort as a whole.

Excavation

As originally conceived the excavation was to comprise three large open-area excavations (Trenches A to C), two focused on the inner enclosure and a third on the outer enclosure, and four much smaller slot trenches (Trenches D to H), designed to examine the land allotment boundaries which radiate out from the site. In the event time constraints dictated that only Trenches A and B could be completed, while the similarity of the results obtained from Trenches E and F suggested that little extra of significance was likely to be gleaned from their counterparts in D, G and H. Both the main trenches in the inner enclosure were sited to answer specific questions arising from a preliminary survey of the site in 1983. Trench A lay at the north-eastern corner of the site, astride both the defences and a possible entrance, and the presumed junction between the inner and outer enclosures. Trench B lay on the west of the enclosure, extending upslope through the interior to include one of the prominent house platforms and the line of a possible internal partition. Both trenches were also designed to inform on more general matters regarding the site's chronology and function.

Environmental work

Particular attention was paid throughout the project to the recovery of environmental evidence, both from on-site contexts and from further afield. Several different strategies were employed: the identification of suitable peaty deposits within the immediate locale, capable of providing long-term environmental sequences; the sampling of suitable palaeosols for pollen and soil analysis, not least those beneath the linear field boundaries; an extensive sampling and sieving programme focused on the occupation horizons and associated features across the excavated areas, designed to maximize the recovery of artifacts and biological evidence. A related programme of

sampling for magnetic susceptibility and soil phosphate analysis, was undertaken right across the inner enclosure and within both trenches, in an effort to investigate past activity patterns; some aspects of the phosphate work have been published elsewhere (Crowther 1997). The aim throughout was to establish an environmental context for the site and to recover material of relevance to its subsistence and economy, while also providing a diachronic perspective on the evolution of the wider landscape of the parish. While much of the 1986-88 site-generated material has, to date, been sieved and processed, that from the 1989 season was unfortunately lost on health and safety grounds due to a rat infestation in the store; in this stratigraphic archive only a fraction of the potential data is presented, pending its final analysis.

SITE SURVEY (FIGS 1.3 and 1.4) (By Martin Bell)

The site is located on a small relict patch of unclaimed moorland which accounts for its good state of preservation. It is bounded on the east and west by the field walls of reclaimed moorland, while on the south there is an enclosure bank bordering a partly reclaimed field. Approximately one-third of the site is in this latter field, hence the reason it is less well preserved.

The most obvious feature of the site is an oval main enclosure, measuring *c.* 96 by 55m and enclosing *c.* 0.42ha (1 acre), which occupies the crown of a prominent knoll and roughly follows the contours. Most of its circuit is marked by spreads of vacuous stone rubble representing the collapsed rampart which has slumped significantly downslope on the western side. This spread is not continuous on the south side, where it has probably been robbed for the construction of Post-Medieval field walls. At a few points around the circuit, traces of original rampart face are visible within the stone spreads, one at least on the north side represented by *c.* 8m of facing blocks (22). Close inspection of the stone spread confirms that the pronounced break of slope visible in the contours corresponds, not to the original rampart face as was initially supposed, but to the approximate back of the rampart. Clearly the monument has undergone considerable post-occupation modification with the rampart

rubble in places now well downslope of its original position. Since no clear evidence has been recognised to indicate the rampart's destruction at the end of its life, it seems likely that such downslope movement may well relate to natural slope processes, in particular the effects of grazing animals.

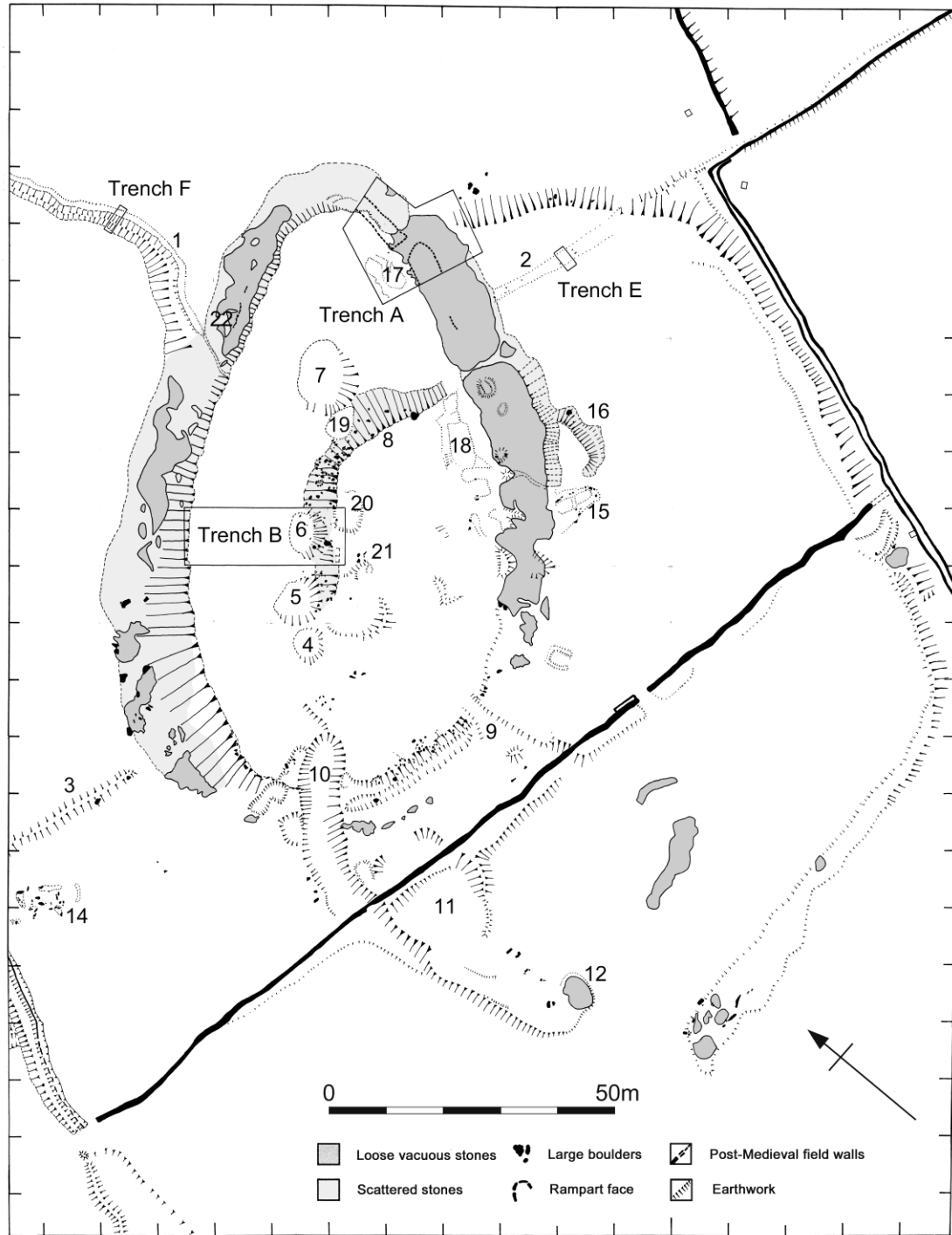


FIGURE 1.3: Site plan at a scale of 1:200

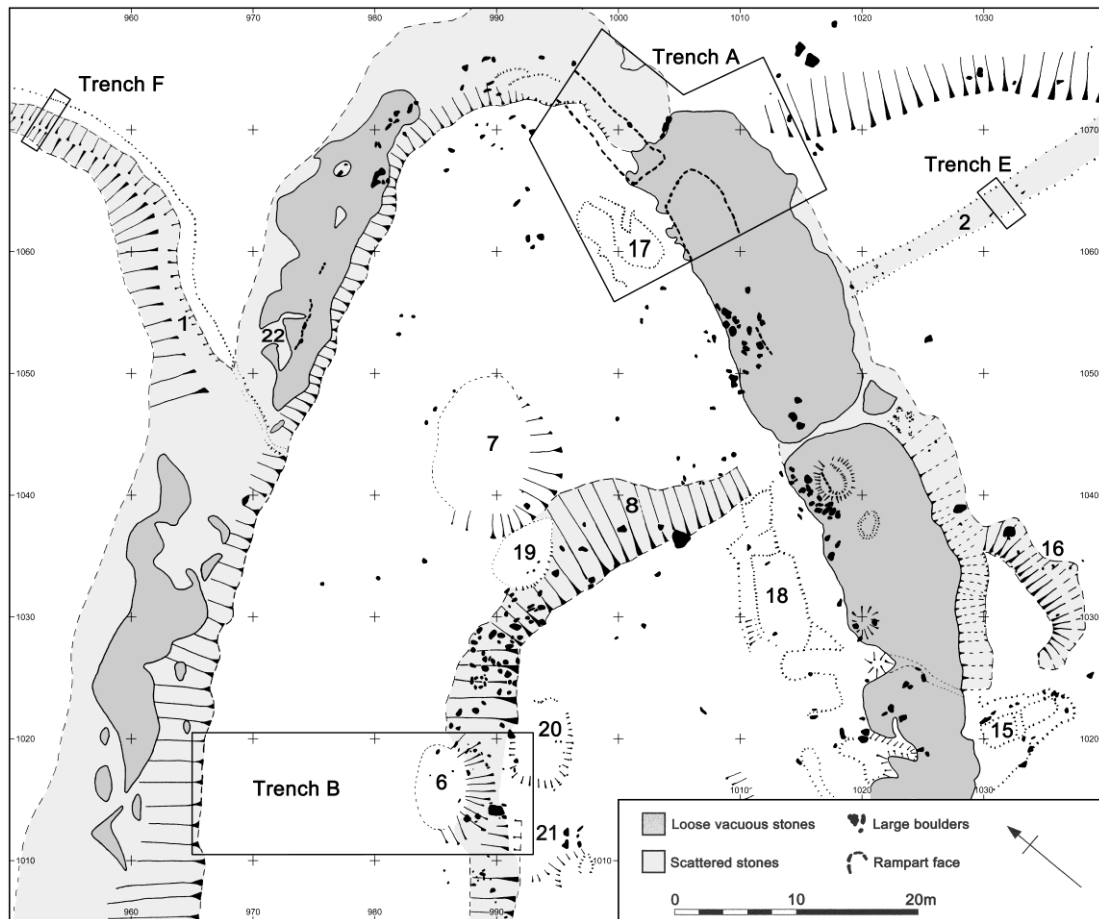


FIGURE 1.4: *Site plan of the northern part of the enclosure at a scale of 1:50*

At the south-west end of the main enclosure is an obvious entrance (10) approached by a shallow trackway. To the west of this entrance the rampart face is marked by a number of vertical stone slabs. Another putative entrance at the north-east side, marked by a further line of stone uprights, lies within the area investigated in Trench A. A third break in the rampart (9) is unlikely to represent an original feature. Part of the interior of the enclosure is divided off by a low stony bank (8), a short length of which was investigated in Trench B. Detailed survey initially suggested that this might be connected with a length of similar bank (16) outside the main enclosure, but it is more likely that the latter feature is related to a nearby rectangular structure (15). Four circular platforms (4, 5, 6 and 7), so typical of roundhouses elsewhere, are immediately obvious on the downslope side of the low

stony bank (8); to these, detailed survey added a further three slighter terraces (19, 20 and 21).

Appended to the main enclosure on its south and east sides is an outer enclosure of *c.* 0.85ha (2 acres). This is marked by an insubstantial earthwork, which on the east and west is little more than a break of slope resembling a lynchet, whereas on the south it takes the form of a low stony bank. There is a 17m gap on the south-west side of this enclosure but its interpretation, as with other features in this field, is made more difficult by partial moorland reclamation. Those features which do survive well are found in two specific areas: one along the Post-Medieval boundary wall, includes a semi-circular platform (11); the other, in the northern part of the outer enclosure, where the main feature is a rectangular building (15).

Some six possible rectangular structures have been recorded both inside and outside the hillfort. One (17), represented by low earth-and-stone banks, lies within the area investigated in Trench A. A similar structure (18), which also lies just inside the inner enclosure, is clearly aligned on the rampart. It took the form of a flat area, *c.* 8 by 4m, slightly terraced into the slope to the south, with some suggestion of collapsed walling on the north and west sides. Another structure (15) lies just outside the inner enclosure. It appears to represent a two-roomed building, *c.* 7 by 3m, with some evidence of side walls and a gable west end terraced slightly into the slope. An associated bank (16) may represent an associated enclosure. A further rectangular structure (14) lies outside the enclosed area down the steep slope to the west. Two more such structures have been noted elsewhere within the outer enclosure; one comprises a small three-sided structure, *c.* 4 by 3m. Such structures pose intriguing questions with regard to the site's later, post Iron Age history.

Running radially from the main enclosure into the surrounding landscape are three linear land allotment boundaries (1, 2 and 3). Their precise date remains uncertain, although it is clear that Boundary 2 at least post-dates the outer enclosure bank, before extending downslope to merge with and extend under one of the field walls associated with the reclaimed moorland.

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Austin, D. 2016: 'Reconstructing the upland landscapes of medieval Wales',
Archaeologia Cambrensis 165, 1-19

Crowther, J. 1997: 'Soil phosphate surveys: critical approaches to sampling, analysis
and interpretation', *Archaeological Prospection* 4, 93-102

(2) EXCAVATIONS IN TRENCH A, 1984 – 1986

AIMS

Work in Trench A extended over the 1984 to 1986 seasons under the direction of Barry C. Burnham and Rob Young. Initially a trench, 20 by 12m, was opened across the inner enclosure rampart in 1984, with a view to determining the existence of a gateway at this point; in the light of the results, an additional, irregular area was opened on the north-west corner of the original trench in 1985, thereby ensuring that all the gate structure could be examined (FIG. 1.4). Over the three years several inter-related problems formed the focus for the excavation:

- (i) to determine the presence/absence of a gateway in this part of the inner enclosure, to elucidate its development and that of any associated features, and to examine the structure of the rampart on either side;
- (ii) to establish the nature of the deposits immediately behind the rampart and any associated gateway, together with any structures or isolated features in the interior;
- (iii) to examine the structure of the outer enclosure which curves in towards a possible junction with the inner enclosure, and to determine their inter-relationship;
- (iv) to identify any evidence for pre-rampart activity on the hilltop;
- (v) to examine an apparently sub-rectangular structure which was visible on the surface, apparently 'attached' to the back of the inner enclosure, and to establish their inter-relationship.

PHASING

Post-excavation analysis has suggested eight broad phases in the development of this part of the site:

- (1) Pre-rampart activity;

- (2) Construction of main rampart terminals and the associated gate passage; excavation of the 'ditch'/quarry scoop;
- (3) Addition of two rows of uprights east of the rampart terminals; construction of outer enclosure;
- (4) Modifications to the gate passage, including the insertion of the 'narrowing' walls and the central 'stop-block'; construction of the coursed slab wall along the exterior of the south terminal;
- (5) Destruction of the gateway by fire and the subsequent insertion of a blocking wall across the passage;
- (6) Accumulation of main deposits behind the inner enclosure and the blocked passage, overlying various earlier features;
- (7) Abandonment and rampart collapse;
- (8) Construction of later sub-rectangular structure, using stones from the abandoned rampart.

PHASE 1: Pre-Rampart Activity (FIG. 2.1)

This was represented by several distinctive contexts which were located to the north of the later gate passage, sealed beneath the rubble infill of the rampart's north terminal. The most prominent of these was context [127], which took the form of two discrete patches of dark brown silty clay (7.5 YR 3/3) with a marked admixture of charcoal and burnt bone. Both were irregular in shape; the northern one being oval and the southern example roughly triangular. At one point in the latter, a distinctive lens of brownish black silty clay (10 YR 2/2) was identified [129], containing a concentration of charcoal and burnt bone; wet sieving also produced six prill fragments and some fuel ash slag. To the north of both of these patches lay yet another amorphous spread [126] which extended northwards as far as the section. This dark brown, silty loam (10 YR 3/3) is not shown on FIG. 2.1 because it was not always easy to distinguish from the background natural, except where it contained charcoal fragments in its make-up.

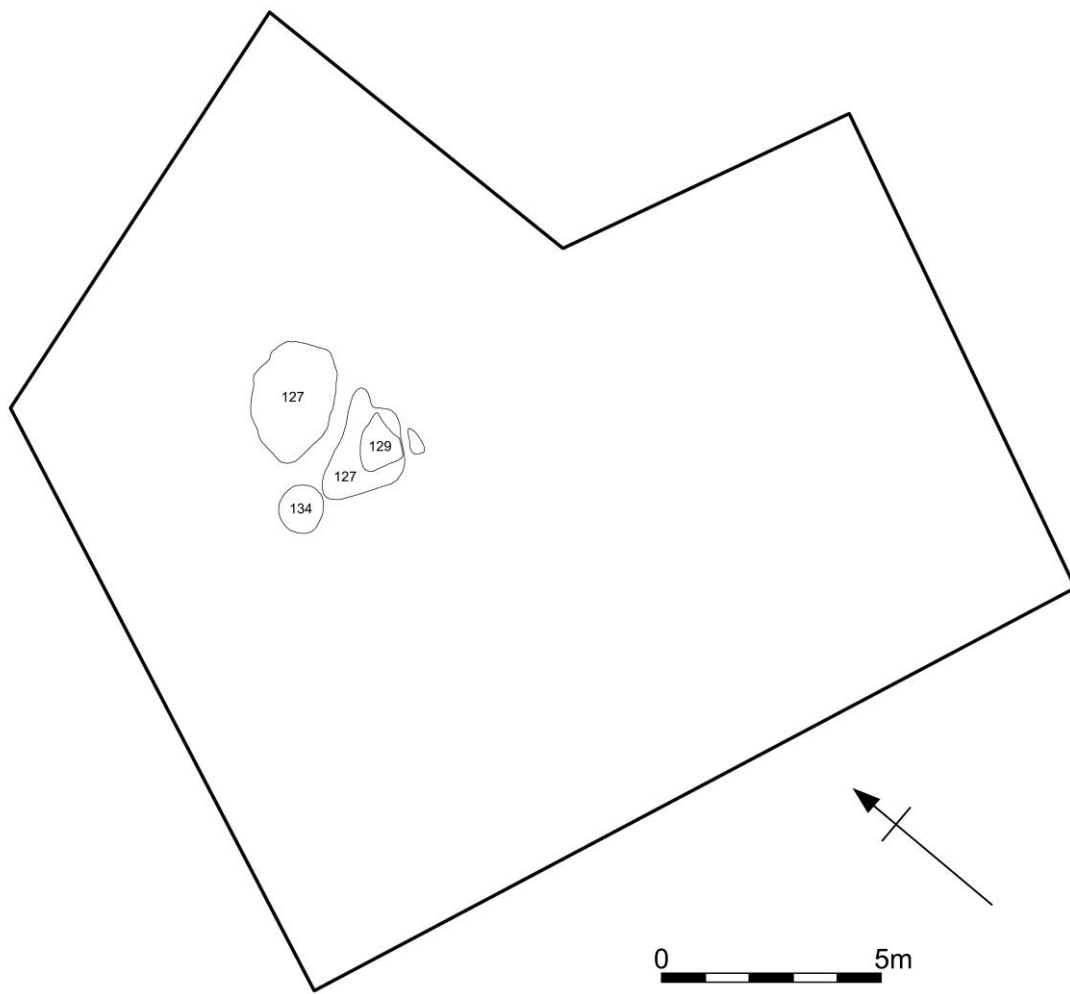


FIGURE 2.1: *Phase I*

Though seemingly discrete on the ground, all these contexts are likely to be derived from the same source. In the case of context [126], the charcoal inclusions could be the result of water percolation down through the rubble infill of the rampart, but such a process cannot really explain the main spreads [127/129] which were extensive and well sealed. These must represent a buried surface, with traces of *in-situ* burning, pre-dating the construction of the stone wall. This conclusion is reinforced by the results of the magnetic susceptibility analysis, which revealed a concentration of high values, closely associated with the charcoal in contexts [127] and [129] (see discussion below). Besides the charcoal, both contexts also produced quantities of burnt bone and cereal grains; a glass bead (FIG. 5, 518) and a fragment

of fired clay (521) also came from context [127], while wet sieving recovered some broken prill and fuel ash slag from [129]. These finds make it certain that we are not dealing with a simple case of site clearance, prior to the construction of the stone rampart, but rather with a separate phase of occupation on the site. A single radiocarbon sample from context [127] has produced a date of 240 ± 70 bc.

One further lens of material [134] which was also located beneath the rubble infill, in close proximity to the deposits already described, remains less easy to relate to this pre-rampart activity. It was a roughly circular spread of brown clay loam (7.5 YR 4/3), *c.* 1.1m in diameter, containing a high percentage of small bedrock chips together with a few fragments of charcoal and burnt bone; this is perhaps best interpreted as disturbed and redeposited natural. In the area west of the later rampart, various isolated features were excavated (discussed below), but none of them can be confidently assigned to the earliest phase of activity on the site.

PHASE 2: The Stone Rampart and Gateway (FIGS 2.2 to 2.8)

This phase is represented by the construction of the two stone rampart terminals, the development of the gateway and the excavation of a short segment of 'ditch' or quarry scoop (FIG. 2.2). Throughout most of its length the stone wall rested directly on natural subsoil [76/99], except where it sealed the pre-rampart deposits already described.

Of the two terminals, that on the south [33/34/35] was the more massive, though its overall character and construction seem to have been relatively simple (for sections see FIG. 2.3). For most of its excavated length it was shown to be *c.* 4m wide, with external faces formed by medium to large boulders, laid irregularly one on top of the other. On the west, the surviving two to three courses [33] stood up to *c.* 0.6m high, while on the east the corresponding three to four courses [34] survived to a height of *c.* 0.75m, incorporating a slight batter as the face proceeded upwards. Neither of these faces provided any evidence to suggest the use of horizontal timbers as part of the construction. Along the north side of this terminal, similar boulders had

been used, with the difference that those towards the back of the gate passage had been set into a short linear construction trench [131], which extended for *c.* 1.7m between the central and western post-holes.



FIGURE 2.2: *Phase 2*

No evidence was located in the excavated length of the south terminal for any form of internal partition and so, here at least, the rubble infill [35] had clearly been dumped between the boulder faces as the rampart was constructed upwards. Towards the south end of the trench, where the rampart met the main section, the few surviving boulders of the west face [33] indicated that the structure was beginning to narrow. This might suggest that the southern terminal had been designed to incorporate a

slightly thickened end, flanking the gate passage, as was clearly the case with its northern counterpart.

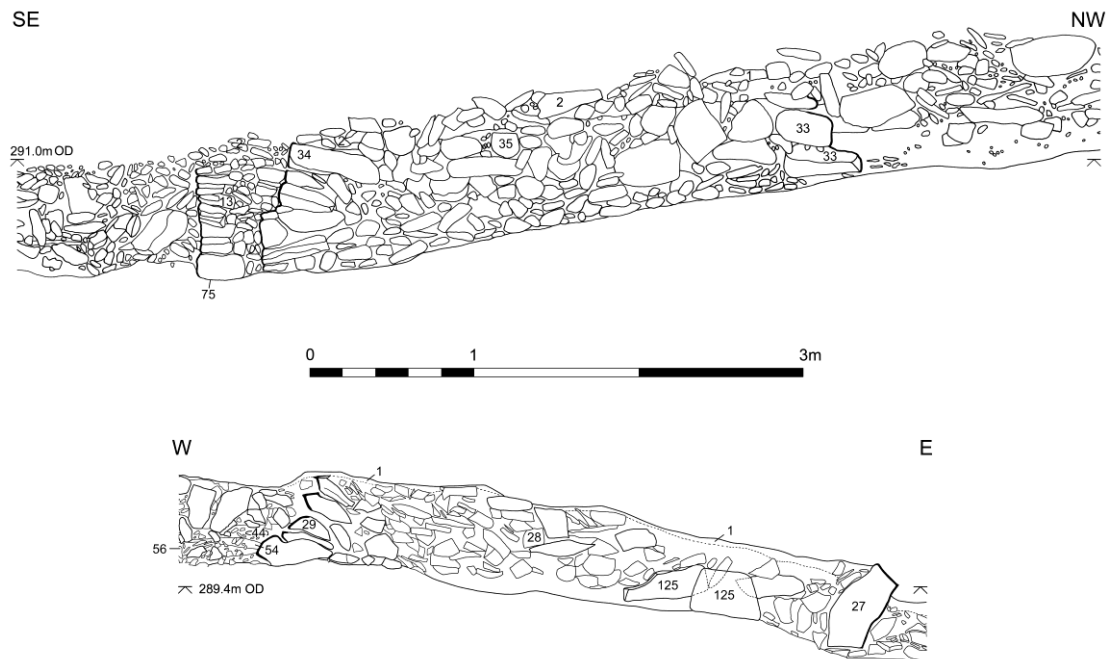


FIGURE 2.3: *Rampart details in south and north sections*

More of the northern terminal [27/28/29] was investigated in detail, over a total length of *c.* 10m. It was generally less well preserved than its southern counterpart, its rubble facing and core rarely surviving to more than one or two courses in height. Despite this, the excavations revealed some interesting variations in both width and construction. Immediately north of the gate passage, the first *c.* 3.5m was shown to be *c.* 3.4 to 3.6m wide, with an external facing of medium to large boulders much like the southern terminal. Beyond this, as far as the northern section line, the rampart narrowed to *c.* 2.8 to 3m and the character of its facing changed, with smaller stones prevailing. The only exception to this was the section of the western face [29] closest to the north end of the trench, where several larger upright slabs had been used. Four of them, at least, were set into shallow construction pits [136-139] with a packing of small stones [114-117] as an additional support. Particular problems were encountered in defining the nature of the original facing along the south side of the rampart terminal, in part because so little had actually survived *in*

situ, though it is likely that the situation here may well have been complicated by the modifications made to the gate passage in Phase 4 (discussed below).

This northern stretch of rampart also provided evidence for two separate internal partitions forming an integral part of the original design. One was a line of seven boulders [128] set at right angles to the main faces, *c.* 3m north of the gate passage, which coincided closely with the thickened stretch of rampart, already described, to the north of the gate passage. The other partition [125], which could only be partly investigated because it extended beyond the excavated area at the north end of the trench, comprised of a series of seven upright slabs, set into shallow construction pits [140]. Surprisingly these slabs seem to run at an oblique angle to the surviving faces, but this may be because they coincide at this point with a change in the alignment of the rampart, as it followed the contours of the hill.

The net effect of these partitions was to create, at ground level at least, several box-like compartments within the rampart structure, into which had been dumped the rubble infill [28]. Between the two partitions, this infill had been mixed with a brown sandy clay loam (10 YR 4/4) containing a high proportion of shattered bedrock chips and a few fragments of charcoal [72]. This was probably a dump of re-deposited natural, derived from the 'ditch'/quarry scoop [45] immediately to the east. A similar re-deposited infill may be represented by the brownish black silt loam [123] (10 YR 3/2) located in the limited area between the northern partition [125] and the edge of the trench. Various finds were recorded during the removal of the rubble infill [28] and its associated contexts, including numerous fragments of charcoal and burnt bone, a glass bead (FIG. 5, 503), a shale spindle whorl (FIG. 5, 499), several pieces of hearth lining (497; 500; 515; 727) and some fired clay (514; 550; 789).

The two rampart terminals flanked a gate passage *c.* 3m across, though its original width proved difficult to define in view of the subsequent alterations. Within this gate passage, six post-holes were recognised, arranged in two groups of three on either side, at the inner and outer ends, and at the centre of their respective terminals (FIGS 2.4 to 2.8). The most striking feature about them in plan is the obvious lack of

symmetry in their arrangement. This might, in part, be explained by the variable widths of the north and south terminals at this point, but it is equally possible that the visible plan reflects more than one phase of development which was not otherwise recognised in the surviving stratigraphy (see below for discussion).

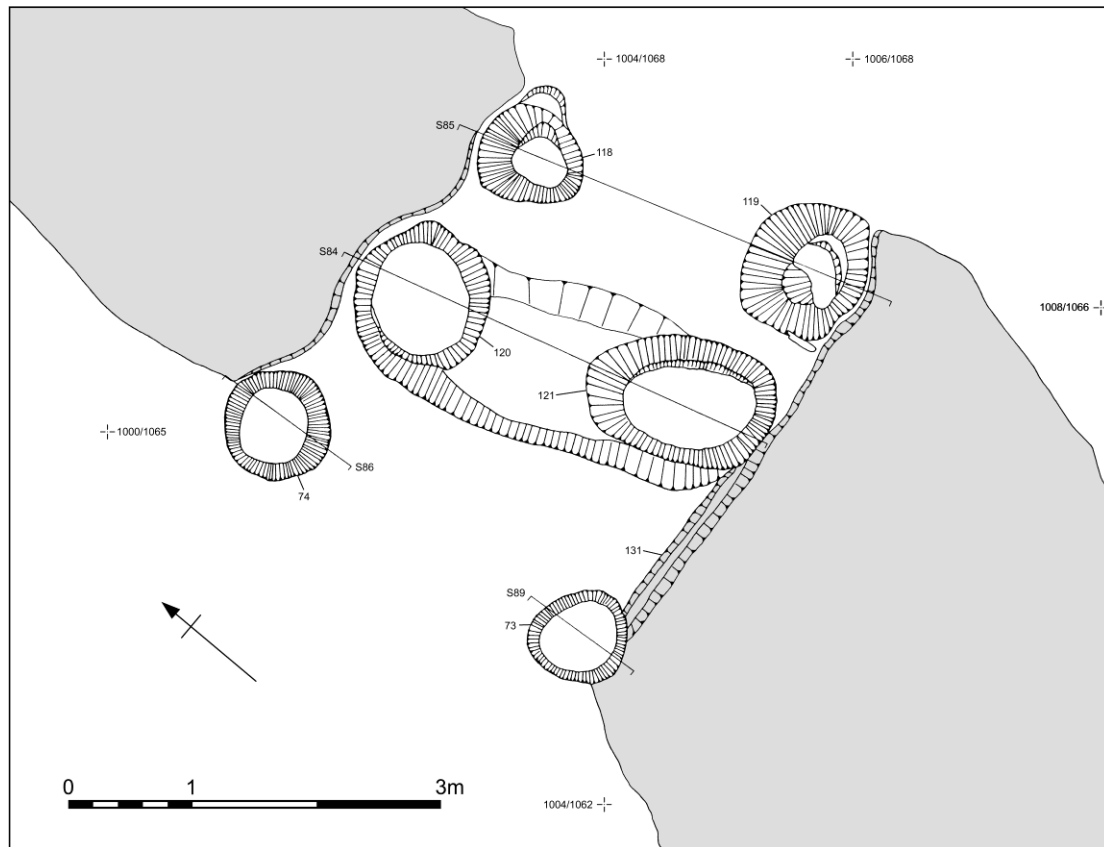


FIGURE 2.4: *Plan of gate passage with fully excavated post-holes*

The two post-holes at the inner end of the gate passage [73; 74] were half sectioned. That on the south [73] was roughly circular, *c.* 0.76m in diameter, and was cut down into the natural subsoil [99] to a depth of *c.* 0.6m (FIG. 2.7, S56). Its outer edges were defined by a rough stone packing, intermixed with a brownish black sandy clay loam (7.5 YR 3/2) containing several small stones, a single fragment of slag (728) and a small quantity of charcoal [64]. There was no obvious trace of the original post-pipe in the half section. Its northern counterpart [74] proved to be very similar, *c.* 0.9m in diameter and 0.6m deep (FIG. 2.7, S62). It too had probably begun life with a rough stone packing, but this was not easy to differentiate in the half

section from the later rubble infill, which was intermixed with a dark brown sandy loam (10 YR 3/4) and a small amount of charcoal [63]. Sieving also recovered a possible bone pin (FIG. 5, 768) and a fragment of slag prill (748) from this fill. Stratigraphically, for reasons outlined below, the timbers associated with both these post-holes must have played some part in the modified gate passage during phase 4, but there is nothing to prevent them having been an integral feature of the earlier gate arrangements, since both were evidently dug flush with the original rampart terminals.

The remaining four post-holes at the front and the centre of the passage were not examined until after the removal of the so-called narrowing/infilling walls [77/89], associated with the modified gateway in phase 4, though, as will be argued below, there can be no doubt that the central pair, at least, remained in use throughout the gate's life. With the lessons of the inner post-holes in mind, an attempt was made to half section the successive deposits while leaving the external rubble packing in place. As a result, a great deal more was learned in plan. Of the four, those at the outer end of the gate passage [118/119] proved to be the least substantial. The northern one [118] was roughly circular in plan, ranging between *c.* 0.8 and 0.86m in diameter (FIG. 2.7, S80), and had been cut some 0.6m into the natural subsoil [76]; its southern counterpart [119], by contrast, was shallower at 0.5m, and took the form of a *c.* 1.1 by 1m rectangle with rounded corners (FIG. 2.7, S74). Both had a substantial rubble packing around their outer edges [113/96 respectively], which at the base defined a possible post profile *c.* 0.4m in diameter. In both cases, the upper fills [81/83] also comprised an irregular stone pack intermixed with a dark brown sandy clay loam (10 YR 3/2 to 3/4) and a small quantity of charcoal, the implications of which will be considered later. Sieving also produced a slag sphere (726) from infill [81] and some 30 fuel ash spheres and two small fragments of slag from [83]; the numerous clay spheres said to come from the packing [96] probably also came from the latter fill.

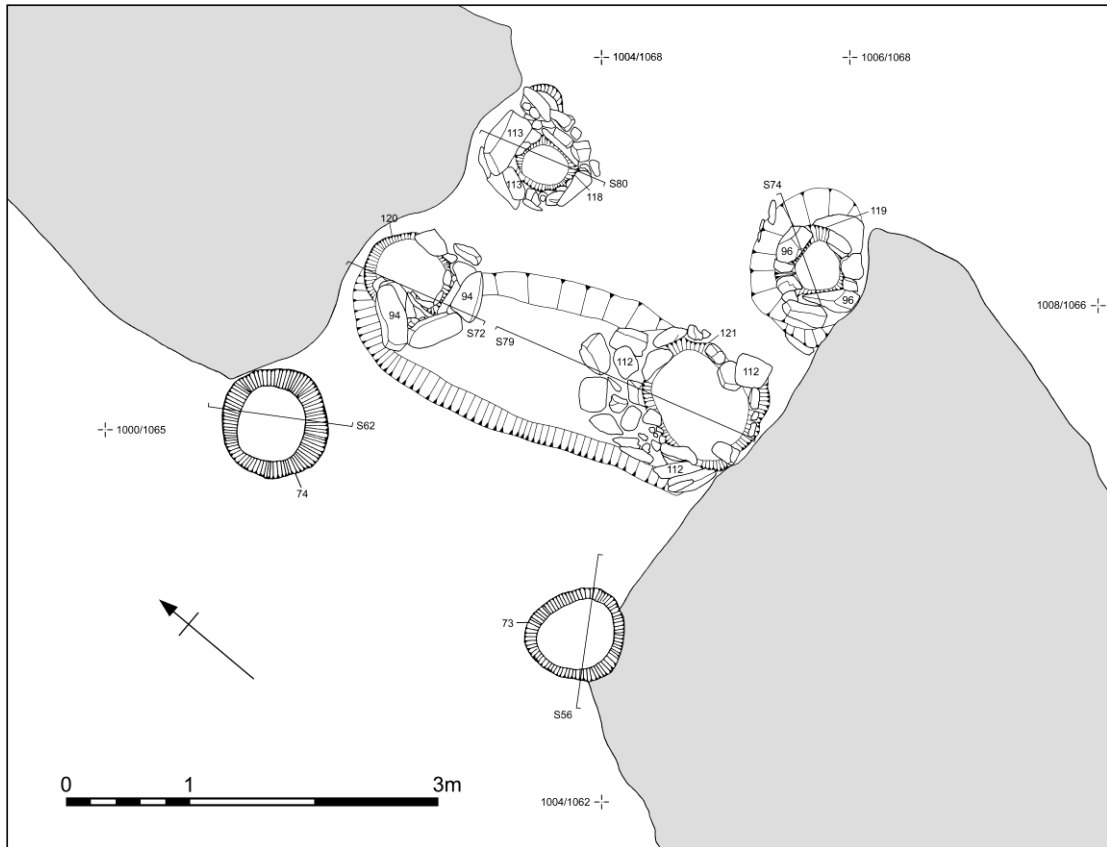


FIGURE 2.5: *Plan of gate passage with post-holes during excavation*



FIGURE 2.6: *Gate passage photographed from the outside*

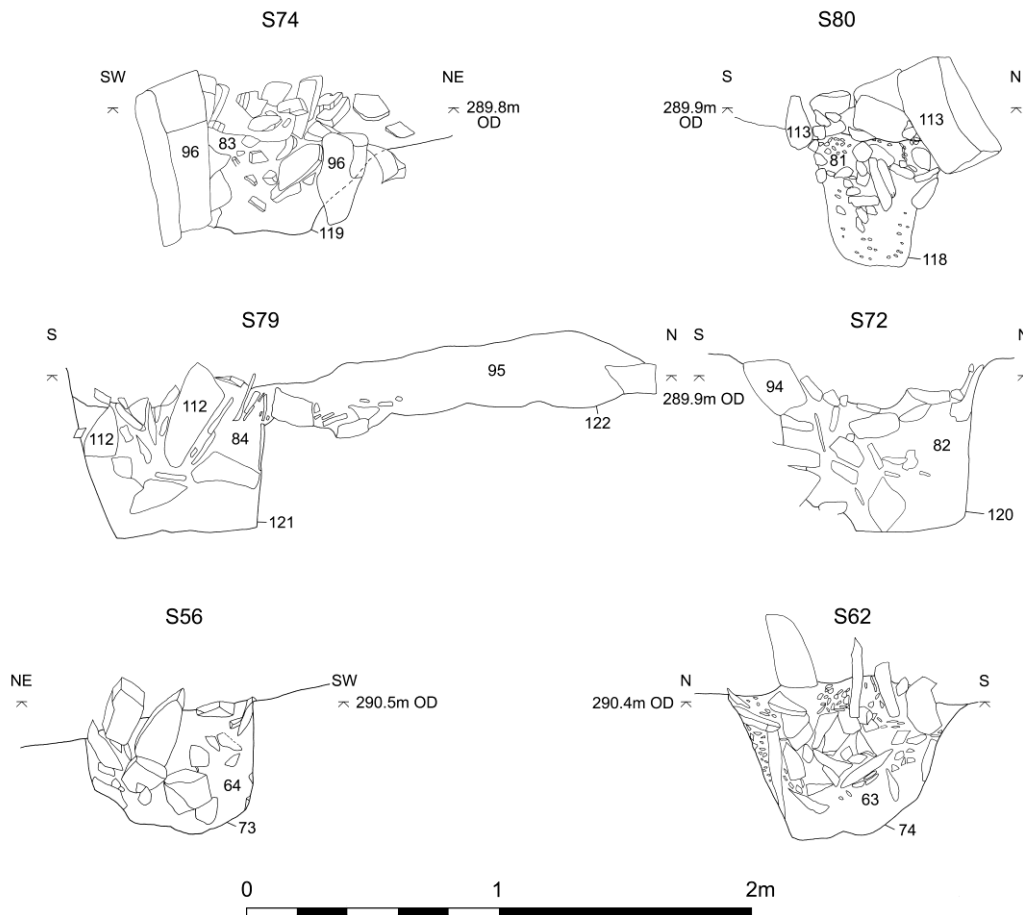


FIGURE 2.7: *Sections across post-holes flanking gate passage*

The central pair of post-holes [120/121], besides being the most massive, had obviously been a substantial undertaking, because the lower end of their profile had been entirely rock-cut to a depth of between *c.* 0.15 to 0.3m. The northern one [120] was circular in plan, *c.* 1.1m in diameter, and up to *c.* 0.9m deep overall (FIG. 2.7, S72), while its southern partner [121] had a much more pronounced oval shape, *c.* 1.5 by 1m in size, and was shallower at *c.* 0.75m (FIG. 2.7, S79). Together they formed the outer ends of a shallow gully [122] which extended across the central axis of the gate. This was *c.* 1.3m wide and up to 0.3m deep, with an infill [95] of shattered bedrock fragments in a matrix of dull yellowish brown silty clay loam (10 YR 5/4). This infill also sealed the substantial rubble packing [94/112], which had been inserted around the outer edges of both post-holes, but with the emphasis on the sides furthest from the rampart terminals. This might suggest that the timbers were levered

in close to or against the wall face and then packed in to stabilise the structure. If the post packing can be used as a guide, then the northern timber at least must have been in the order of *c.* 0.5m to 0.6m in diameter. At the very base of both post-holes, the rock-cut profile was sealed by a thin lens [98/124 respectively] of yellowish grey/greyish yellow brown sandy clay (2.5 YR 4/1 and 10 YR 4/2), which is best interpreted as the result of natural in-wash, percolating down through the rubble packing. The details of the upper fills [82/84] are discussed below.

The phasing of all of these features and the nature of the original gateway are not easy to define on the basis of the available stratigraphic evidence alone, since at least two alternative hypotheses can be advanced. The first would see all six post-holes as original features alongside the two rampart terminals, with the massive central posts supporting some kind of gate arrangement, while the inner and outer posts might have carried a timber superstructure across the passage. The principal argument against this hypothesis would seem to be the obvious lack of symmetry in the arrangement of the six post-holes already mentioned, though this might have appeared far less marked above ground when the actual timbers were in place. An alternative hypothesis, therefore, might be to see the central posts and the associated gully as being original, supporting a gate, to which was added a further four posts as part of a more elaborate and impressive entrance. Presumably at this stage the shallow gully could have housed a sill beam or door stop, though no trace of this has survived later modifications.

Surprisingly, there was little trace of any metalling in the eastern approaches to the gate or the passage itself, nor was there any visible evidence for rutting or wear. To the west of the shallow gully, however, and infilling a slight hollow in the natural just inside the gate, lay an oval spread of carefully laid, small, rounded stones [55] which would seem to represent an area of metalling *c.* 4 by 2m in extent (see FIG. 2.11). This must have overlain the rubble packing associated with both the inner post-holes, but beyond this it was not possible to determine whether it was an original feature of the gateway, or whether it was a later addition during one of the subsequent

phases. It produced a single fragment of fuel ash slag (436), as well as several pieces of charcoal and burnt bone. To the east of the gate, what was taken to be the contemporary ground surface was found to be both stonier and harder than the surrounding contexts, suggesting that some attempt had been made to ram in a layer of bedrock chippings.

Some 2m east of the northern terminal and just north of the northern set of uprights described below under phase 3, a short length of ‘ditch’ or quarry scoop [45] was sectioned by the edge of the trench (FIG. 2.7). It had been dug to a depth of *c.* 1m and was 5m long and at least 3m wide, with evidence for only a single fill [42] of dark brown loam (7.5YR 3/3) beneath the rubble from the collapsed rampart [30]. It was presumably the source of the re-deposited natural [72] found in the nearby terminal. The infill contained several fragments of charcoal and a single piece of fuel ash slag (191).



FIGURE 2.8: *Quarry scoop* [45]

PHASE 3: The Stone Uprights and the Outer Enclosure (FIGS 2.9 and 2.10)

This phase saw the addition of two rows of stone uprights [26/38] to the east of the rampart terminals and the construction of the outer enclosure bank [9] (FIG. 2.9),

though there is no absolute certainty that both were actually contemporary as opposed to successive events, nor do we know how soon they were added after the construction of the stone rampart and its associated gateway.

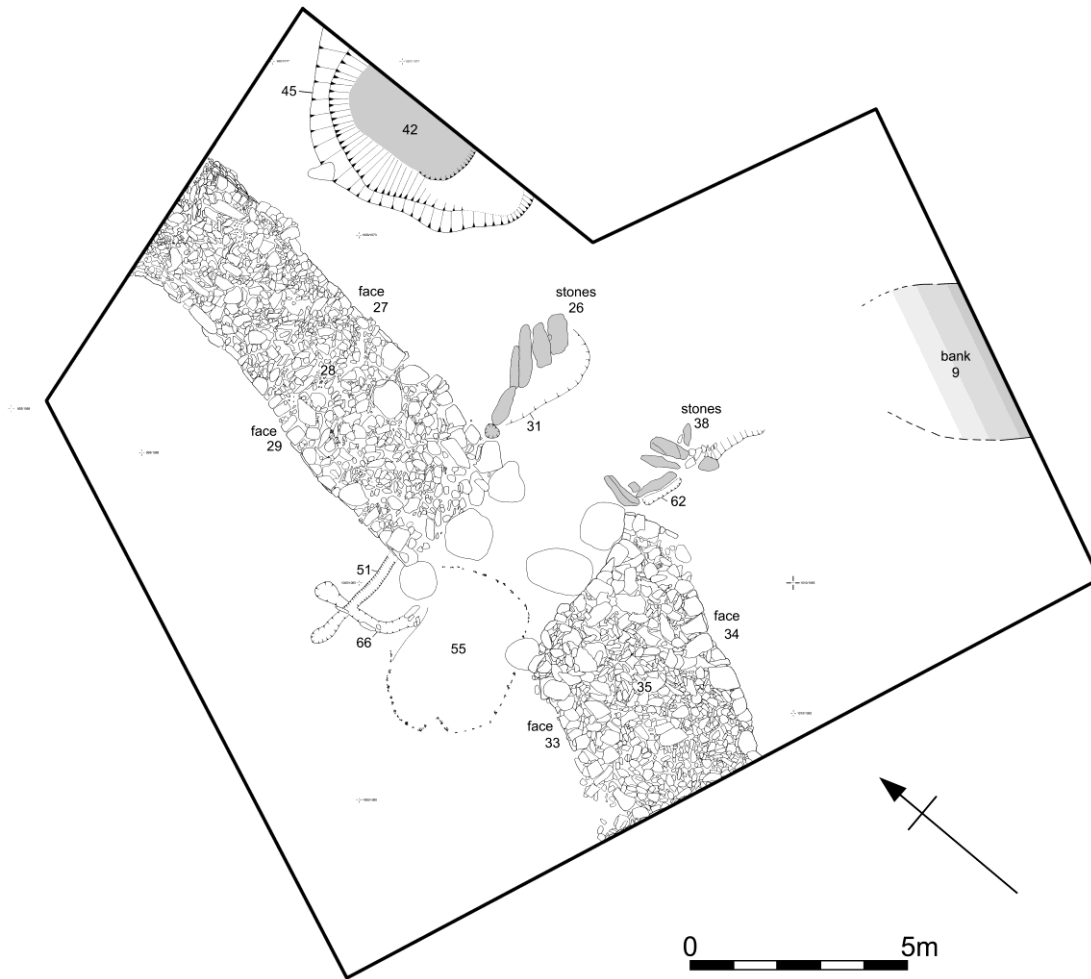


FIGURE 2.9: *Phase 3*

The northern set of uprights [26] had originally comprised six roughly rectangular slabs up to 1.5m in length, though the smallest one, which stood next to the rampart, was inadvertently removed early on as part of the rubble collapse (see FIG. 2.16). They were all found to be lying on their backs when excavated, but they had clearly been designed to stand upright in a shallow construction trench [31], with a mixture of re-deposited natural and several small stones as packing. Whereas, this northern set had been visible from the outset of the work, the corresponding southern

uprights [38] were not discovered until the second season of excavation, when an original control section left across the site was removed. They too had been much disturbed and pushed sideways by the rubble collapse, but it was clear that, originally, there had been at least five slabs up to *c.* 1m or so in length, set into a shallow construction trench [62] extending just over 2m east of the terminal. This contained much the same infill of re-deposited natural and small packing stones as its northern counterpart. When upstanding, both sets of uprights would have extended the gate passage eastwards, presumably to help channel movement into the hillfort, between the shallow 'ditch'/quarry scoop [45] on the north and the outer enclosure [9] on the south.



FIGURE 2.10: *Enclosure bank [9] visible in east section of trench*

The outer enclosure [9] was sectioned by the east end of the trench in 1984-85 (FIG. 2.10). This revealed an ephemeral bank, no more than 0.20m high, laid directly on top of the contemporary ground surface [19/36], though no actual buried soil was recognised. It seems to have comprised an earth core with an irregular admixture of small to medium-sized stones. This was in marked contrast to its more prominent

appearance elsewhere in the circuit, not least in the improved fields to the south, where a much higher stone content seems to be indicated. Within the trench itself, no trace of any coherent bank was recognised in plan when the later rubble collapse of the main rampart was removed. This suggests that only the butt end of the outer enclosure had actually been sectioned. This arrangement would have left room for access into the outer enclosure at this point, between the bank and the southern set of uprights, which could have been closed off as necessary, without leaving any archaeological trace.

PHASE 4: The Modifications to the Gate Passage (FIGS 2.11 to 2.13)

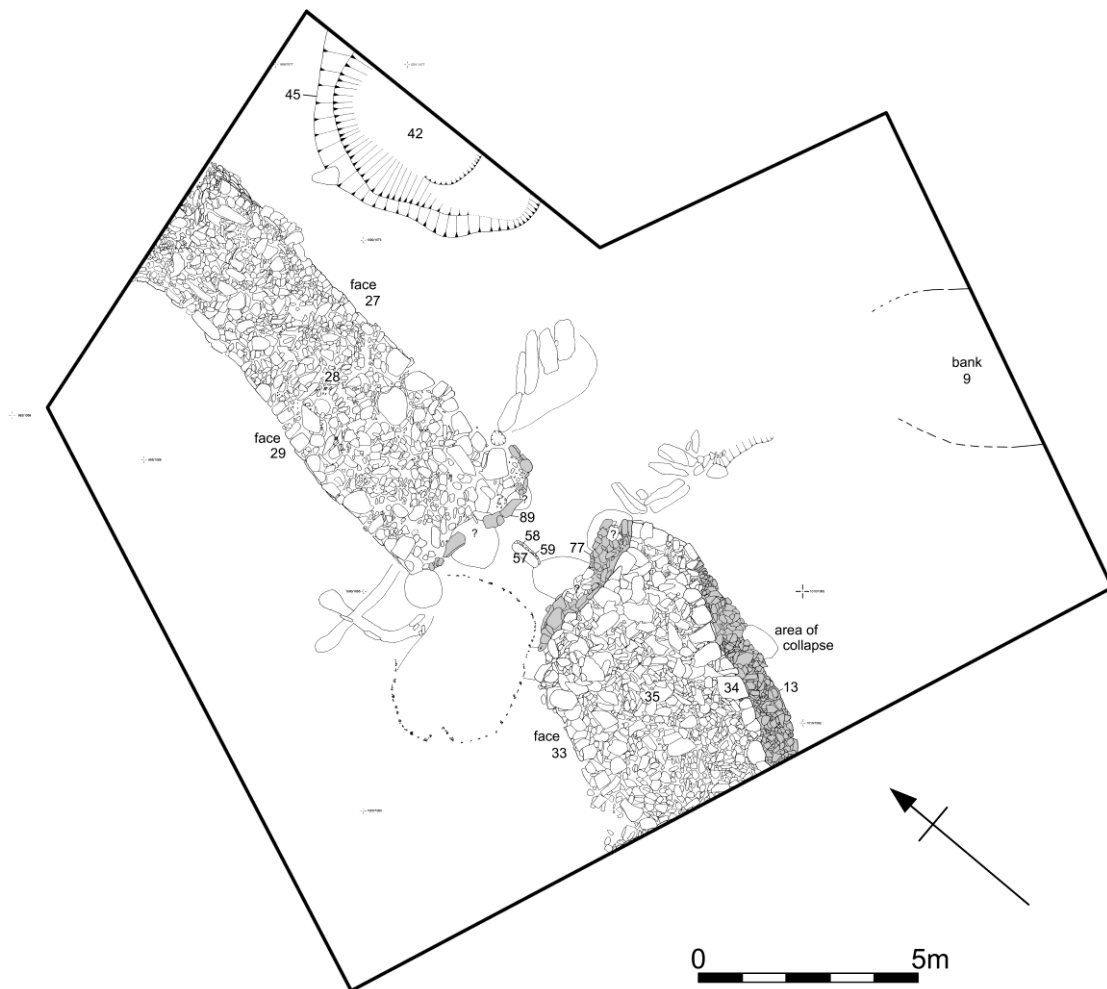


FIGURE 2.11: *Phase 4*

This phase proved to be the most difficult to unravel, because so many of the essential details had been obscured either by the subsequent blocking of the gateway in phase 5 or by the even later robbing of its collapsed remains. The most obvious element, however, was a *c.* 0.5m ‘narrowing wall’ [77] inserted along the southern side of the gate passage against the original stone face of the southern terminal. This was originally thought to extend across both the outer and central post-holes [119/121] and their respective infills, leaving only the inner gate post as a fully functional member of the new gate, but a closer inspection of the photographic record has suggested an alternative possibility based upon the variations in the structure of the walling (FIG. 2.12). This would maintain that the narrowing wall [77] had actually been inserted between the in-situ timber uprights, not across their infilling, with the implication that the basic design of the gateway must have remained much the same as its phase 2 predecessor.



FIGURE 2.12: *Detail of infill walling [77] along south side of gate passage, distinct from irregular infills above gate posts*

The evidence for this is clearest above the central post-hole [121], where the irregularly laid rubble infill seems to be very different in character to the more obviously *in-situ* walling to either side. This contrast is further reinforced by the variations in the walling itself. To the east, it was shown to comprise some three to four courses of flat slabs standing *c.* 0.4m high, whereas its western counterpart comprised three courses of rubble facing up to 0.5m high, the upper two resting on a foundation of larger boulders. These latter had been inserted into a shallow construction trench [130], extending between the central and the inner post-holes, with a packing of small stones along their outer edges.

The suggestion that the walling had been inserted against an *in-situ* timber upright at the centre of the gate falls naturally into line with the evidence from the inner post-hole [73], where the timber had clearly stood in a right angled recess formed by the vertical slabs of the original gate passage and the end of the secondary narrowing wall. The situation at the outer post-hole [119] is slightly more difficult to resolve, because the evidence is capable of alternative interpretations. At ground level, the surviving three to four course of flat slabs certainly seem to terminate in a right angled recess, as if to accommodate an *in-situ* timber, but above this there are clearly traces of a continuous line of facing stones, apparently sealing the rubble infill above the post-hole. The simplest interpretation of this sequence is that more than one phase is represented, the earliest at least conforming to the observed pattern at the central and inner post-holes. A single piece of amorphous prill slag (449) was found in the make-up of the narrowing wall [77].

Along the north side of the passage, the evidence is even more difficult to interpret, because so little of the original wall facing [89] has survived *in situ*, though there seems to be little doubt that some modifications were made during this phase. The clearest indication of this came from the area of the inner post-hole [74], where the three surviving courses of small flat slabs associated with the facing [89] clearly formed a right angled recess, as if to accommodate an existing timber. This corresponds closely with the modified arrangements, already noted, along the south

side of the gate passage, and suggests a similar sequence on the north. Interestingly, all three courses had slumped progressively sideways from their original vertical position, presumably under outward pressure from the rampart structure. Further proof that the north terminal had probably been modified came from immediately to the east, where a single *in-situ* facing slab was found to overlie the rubble packing [94] associated with the central post-hole [120]. This suggests that it had been inserted against an existing upright much like its southern counterpart. The situation at the outer post-hole [118] is more complex, because one of the two surviving facing slabs clearly seems to overlie the postulated position of the timber upright. This remains difficult to resolve on current evidence, unless either the post-hole went out of use or more than one phase is represented.

The reconstruction of this modified gateway presents as many problems as its phase 2 predecessor. From the evidence discussed so far, the simplest interpretation would seem to be that the gaps between the existing timbers were merely infilled with rubble walling and that the basic design of the gateway initially survived intact, i.e. a six-post arrangement in which the central pair of posts carried the gate. In association with these changes, there may well have been corresponding modifications to the central gully across the axis of the passage, perhaps involving the replacement of the original sill beam or door stop by the infill of shattered bedrock fragments [95] already described. Into this had been dug a narrow, oval, pit [59], in preparation for the insertion of an upright stone slab [57], roughly *c.* 0.5m square, which was held in place by at least five small packing stones along its eastern side, accompanied by the jawbone of a sheep [58]. It stood at somewhat of an oblique angle to the axis of the two central post-holes and was presumably designed to act in some way as a door stop.

What remains uncertain in this interpretation is whether all six post-holes remained in use throughout this phase, prior to the destruction of the gate by fire. This can only be tentatively answered on the basis of the stratigraphic evidence presented so far, but further clues can be derived from a study of their respective

infills (FIG. 2.7). In this context, the fills associated with the central pair of post-holes [120/121] would seem to be the most decisive, suggesting that both remained in use until the last. In the case of the northern post-hole [120] and its associated post packing [94], the main infill [82] comprised a loose brownish black sandy clay loam (10 YR 3/3), containing a high percentage of charcoal and small stones. This represents the horizon associated with the destruction of the gate in phase 5, intermixed with, and overlain by a rubble pack laid as part of the subsequent blocking. Much the same sequence was recorded in its southern counterpart [121], above the associated post-packing [112], where the main fill [84] comprised a dark brown sandy clay loam (10 YR 3/3) with an even higher percentage of charcoal down the profile.

For the remaining four post-holes [73/74/118/119], the evidence of the fills is far less decisive. All four have a superficially similar infill sequence to their central counterparts, involving an irregular stone packing intermixed with a sandy clay loam [63/64/81/83], but significantly there is far less charcoal and the fills appear to be far more compacted. Such evidence might indicate that the associated timbers had been withdrawn prior to the destruction of the gate, which might also help to explain some of the anomalies already noted above in the discussion of the relationship between the outer post-holes and the associated facing stones of the infill walling [77/89].

One further feature which can be tentatively associated with the modifications to the gateway is the addition of a coursed slab wall [13] along the east face of the south terminal, to the south of the stone uprights [38]. The lowest course comprised a row of larger stones, set, as a foundation, into a shallow construction trench [75] cut into the natural subsoil [76] alongside the original boulder face [34]. The wall itself was best preserved close to the southern section of the site (FIG. 2.13), where it survived to a height of *c.* 0.6m. There would seem to be no obvious structural reason for this facing, which was not recorded along the north terminal, or in the exposure of the rampart face less than 10m to the south. Its function is thus uncertain. Equally difficult to interpret is a thin lens [18] of brown sandy clay loam (7.5YR 4/4) which

had apparently been spread across the top of the natural subsoil [76] for up to *c.* 1.50m east of the coursed slab of the wall.



FIGURE 2.13: *Relationship of coursed slab wall [13] to original boulder face [34] as evidenced in south section*

PHASE 5: The Destruction and Subsequent Blocking of the Gateway (FIGS 2.14 to 2.16)

Excavation revealed an extensive spread [25/43] of charcoal-rich brownish black sandy loam (10 YR 2/2), which was closely confined to the gate passage between the north and the south terminals, and to the approach route to the east, between the two rows of stone uprights (FIG. 2.14). In places it comprised 100% pure charcoal, which was extensively sampled for the purposes of dating and environmental analysis. At its maximum, the spread extended over an area *c.* 7 by 3m, though its inner edge proved more difficult to define particularly where it merged with and underlay, the extensive deposit [32] of brownish black sandy clay (7.5 YR 2/2), which had been allowed to accumulate behind the rampart once the gate passage had been blocked with rubble.

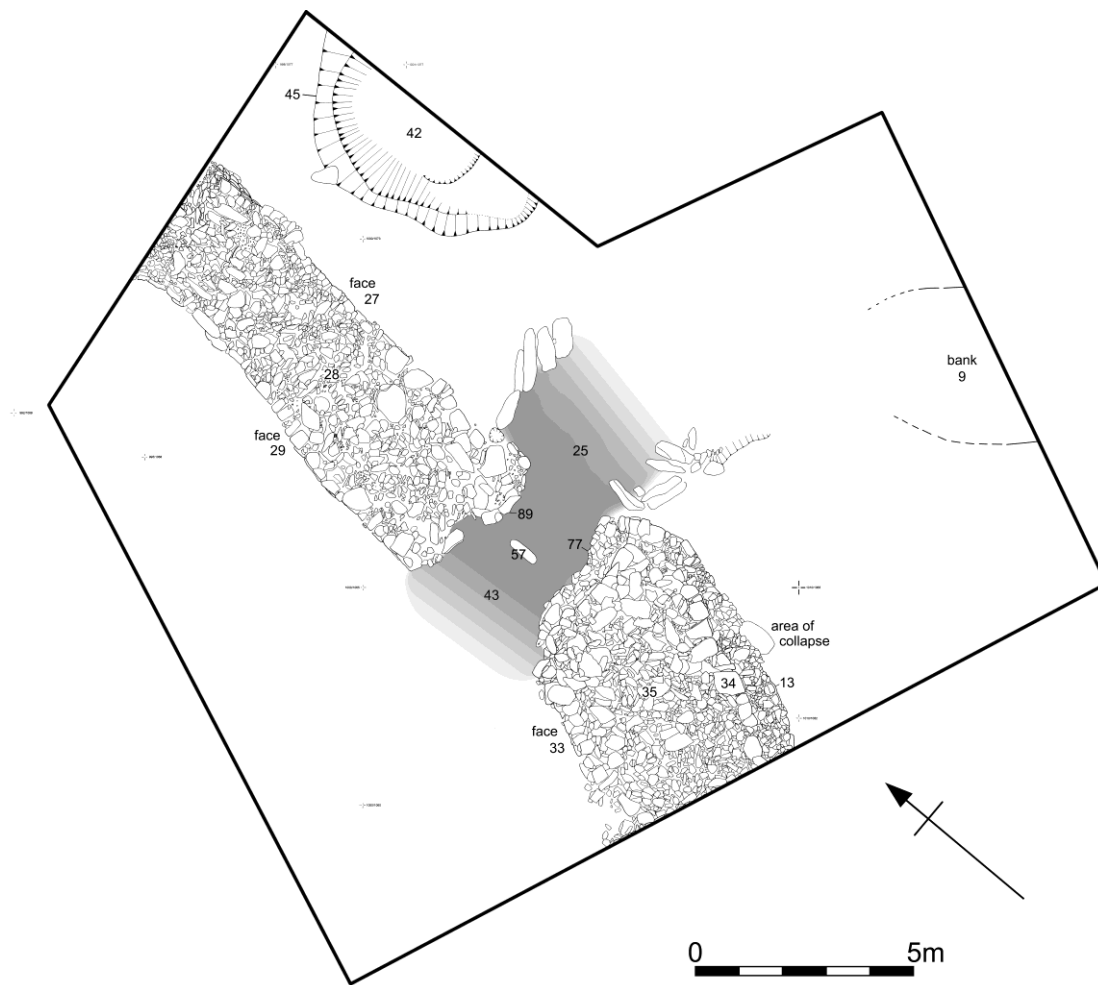


FIGURE 2.14: *Phase 5.1*

Such a charcoal rich lens can only be the result of the wholesale destruction of the timber members of the gate by fire. It has already been suggested (see phase 4 above) that the main fills [82/84] of the two central post-holes should be related to this episode, even if the situation with the other four posts must remain uncertain. Two radiocarbon dates have been obtained from this spread [43], both from sealed contexts beneath the later blocking of the gate; these came out at 2360 ± 70 bp (CAR 968) and 2580 ± 70 bp (CAR 969), somewhat at variance with the date derived from a pre-rampart horizon in phase 1. There were, in addition, several noteworthy finds from this spread, including a yellow, annular glass bead (FIG. 5, 22), found during wet sieving; three water-worn pebbles (FIG. 5, 218; 300; 319), some pieces of fired

clay (287; 288), a crucible fragment (275) and several pieces of amorphous slag (223; 291; 293).

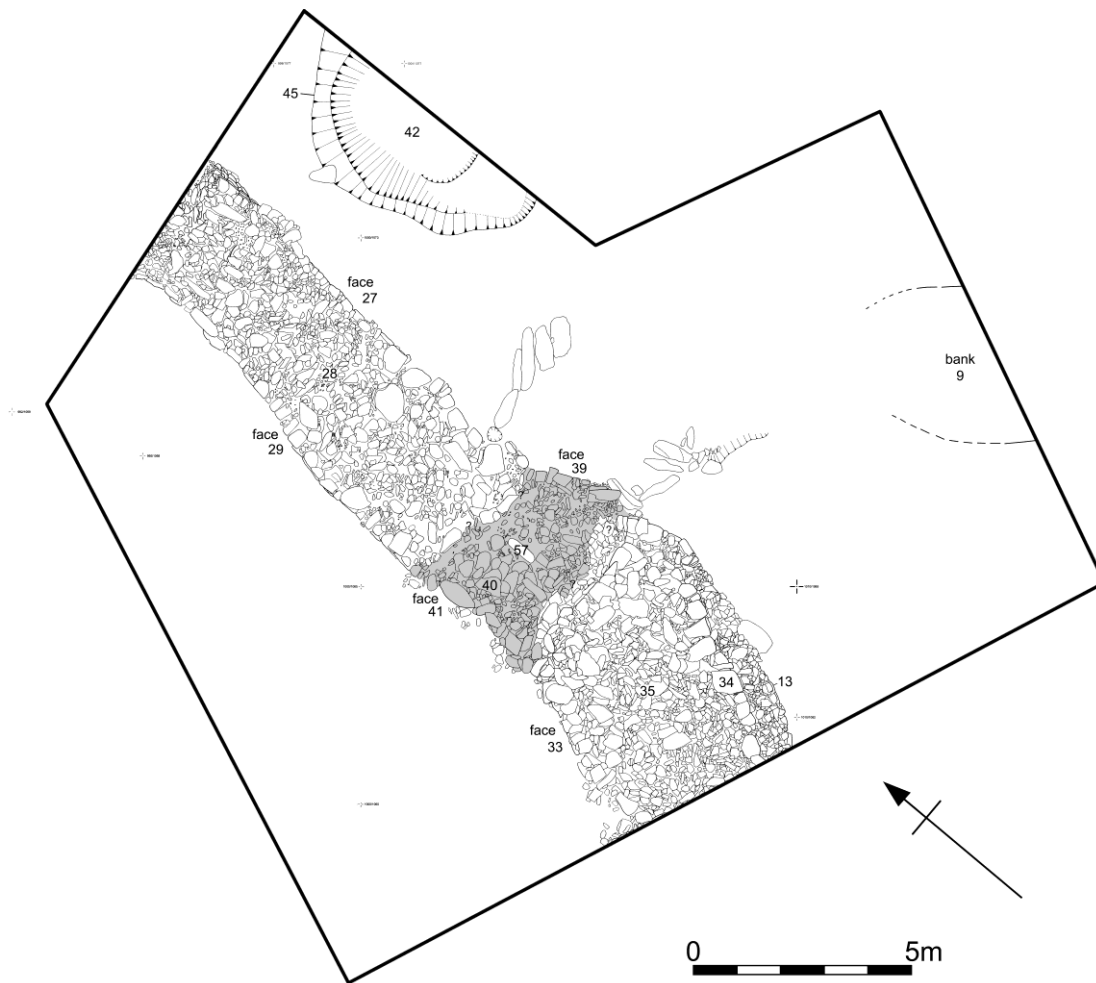


FIGURE 2.15: *Phase 5.2*

No attempt seems to have been made to clear away the traces of this destruction spread, nor to reinstate the gate. Instead a rubble and boulder blocking wall [39/40/41] was inserted across the whole width of the gate passage (FIGS 2.15 and 2.16), between the modified north and south terminals [77/89]. As part of this operation, rubble was probably also packed into the upper fills of the two central post-holes. Along the western side of the old gate passage, the external facing was formed by a line of medium to large boulders [41] in marked contrast to its eastern counterpart, which comprised a coursed slab wall [39]. This distinction in the nature

of the facing seems to have been maintained also in the rubble infill [40], with larger boulders predominating in the western half and smaller stones in the east. The coursed slab wall had survived best at its southern end, to a height of *c.* 0.4m, though even here it had been forced sideways from its original position by the subsequent collapse of the rampart



FIGURE 2.16: *Blocked gate passage photographed from the outside*

Several finds were made during the removal of this blocking; from quite high up came a modern glass bead (FIG. 5, 15), while from lower down, close to the interface with the charcoal spread [43], came a flint (263) and a water-worn pebble (FIG. 5, 322).

PHASE 6: The Deposits behind the Rampart and Gate Blocking

This phase is represented by several deposits [32; 67; 44/54?] to the west of the rampart and the blocked gateway, which were shown to overlie a series of earlier features of indeterminate date (discussed later in this section). Of these overlying deposits, the most prominent were two marked concentrations [32/67] of brownish

black sandy clay loam (7.5 YR 2/2), which would seem to be the surviving remnants of a once more widespread horizon across much of the western part of the site (FIG. 2.17). Early on in the excavation this had proved to be difficult to distinguish from the contemporary ground surface [5/6/16], because of the prevailing dry conditions, with the result that some of the detailed evidence was inevitably lost. The larger of the two concentrations [32] lay immediately west of the boulder face to a depth of *c.* 0.2m but tended to thin out from there towards the north and west. Its smaller counterpart [67] was shown to be roughly oval in shape *c.* 4.7m by 3m in size, with a maximum depth at its centre of *c.* 0.1m.

Both these spreads proved to be very rich in charcoal and burnt bone, and so they were extensively sampled on a 1m grid for subsequent wet sieving in the laboratory. The principal finds from the main concentration [32] included: two very similar stone objects with chipped-out depressions (FIG. 5, 172 and 226); half a small blue annular glass bead (FIG. 5, 6); numerous pieces of fired clay/pottery (225; 253; 258; 261; 264; 501); two fragments of hearth lining (4; 5); several pieces of slag cake (204; 271; 309); various fragments of fuel ash slag (227) and slag prills (278; 724); a single crucible fragment (721) and a piece of possible tap slag (26); and various water-worn pebbles (FIG. 5, 105; 109; 141). There were, in addition, several hazel nut fragments, while the sieving programme identified quantities of charred grain in most samples, alongside glume and spikelet fragments, and other waste from crop processing. The sieving also produced a marked concentration of over 2,000 cereal grains in grid square 1004/1061, immediately behind the rampart face. This concentration argues against a simple process of hillwash as the explanation for this deposit, as does the magnetic susceptibility analysis, which revealed high values in association with this context, suggestive of *in-situ* burning (see discussion below). Far fewer finds were recovered from the smaller oval spread [67], but they still included two pieces of iron (448; 450), a crucible fragment (460), two pieces of slag cake (452; 454) and a slag prill (458).



FIGURE 2.17: *Context [32] seen in 1984 behind rampart face*

In the north-west corner of the trench, excavation cut across a spread of rubble [44], intermixed with a brownish black silt loam (10 YR 2/2), which proved to be the latest in a series of layers in this part of the site. The rubble itself may represent later collapse from the rampart, but the matrix and the underlying deposit [54] could arguably belong with the current phase.

Earlier Features (FIG. 2.18)

Upon excavation, all three spreads were found to overlie a series of features in the area west of the two rampart terminals, all of which must clearly pre-date phase 6. Since they cannot be confidently assigned to any one of the preceding five phases, they are best considered together at this point, alongside what conclusions can legitimately be drawn about activities within this part of the site.

The main spread [32] at the south end of the site sealed several features, the most prominent of which was a large post-hole [47], *c.* 0.7m in diameter, which lay *c.* 2m west of the south terminal and 0.2m north of the south end of the trench. It had been dug to a maximum depth of 0.4m, into which had been inserted a substantial stone packing [53] around the original timber post. This latter may have been withdrawn at a later stage, since the packing stones were sealed by a mixed fill [46] of smaller stones set in a black loam, incorporating a few fragments of burnt bone and charcoal (7.5 YR 2/1). This post-hole closely paralleled a second feature *c.* 2m to the west, beyond the edge of the main spread [32], which was first recognised beneath the walling [17] associated with the rectangular enclosure constructed in Phase 8. It too proved to be a roughly circular post-hole [71] up to 1m in diameter and *c.* 0.53m in depth, with a packing of large stones [70] around its outer edge. Two of these stones still defined the feature clearly on the north and east, but the rest seem to have been disturbed, perhaps by the removal of the timber upright. The packing had subsequently been sealed by a mixed infill [68] of brownish black loam (7.5 YR 3/2) and small stones, some of them burnt. Both post-holes logically belong together, but

whether they represent the end wall of a timber building set against the face of the rampart or a free standing four/six post structure must remain uncertain.

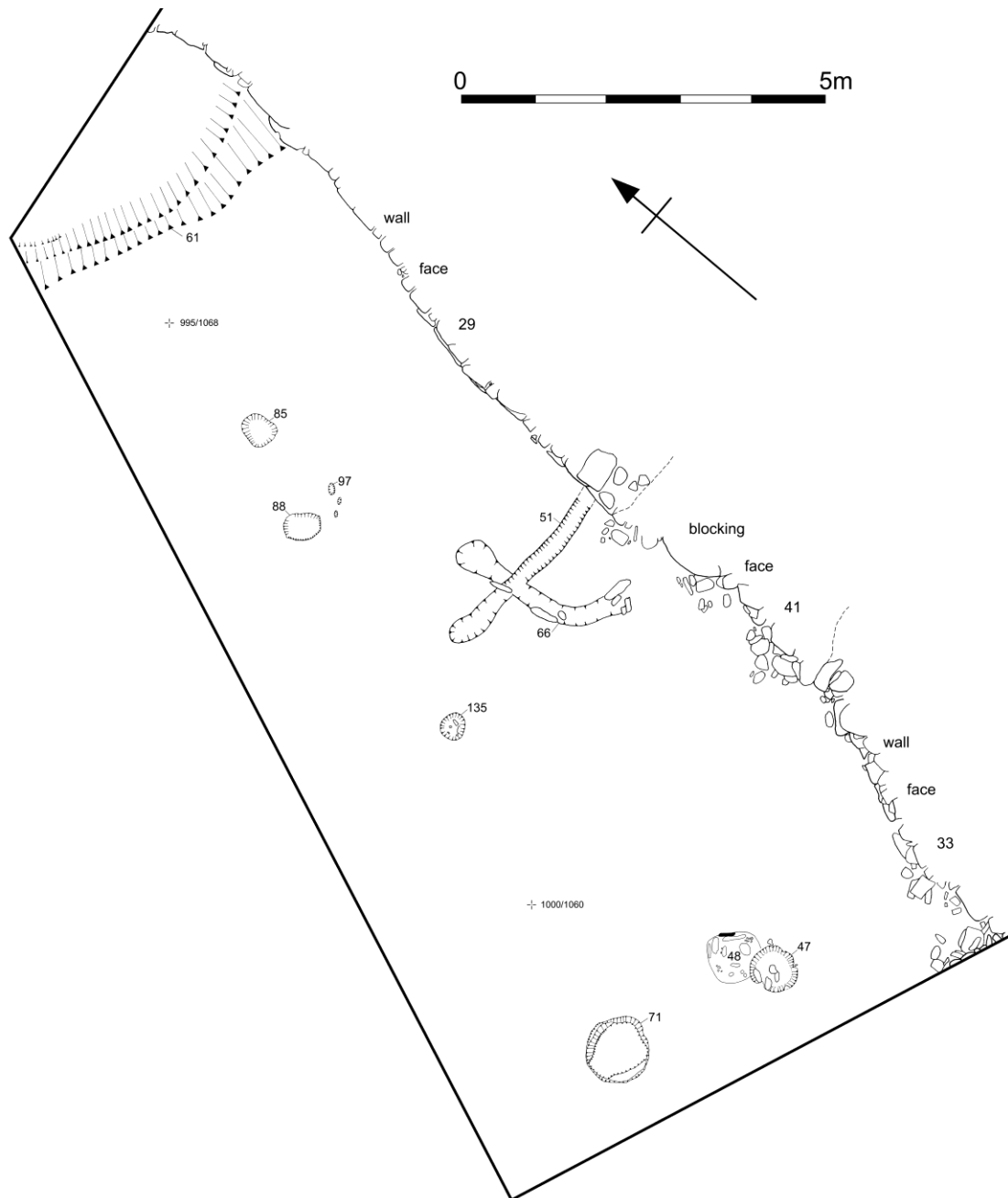


FIGURE 2.18: *Internal features behind rampart*

Two other features were sealed by context [32] to the west of the south terminal. One was an isolated post-hole [135], c. 0.4m in diameter, which lay c. 3.5m west of the main rampart to the north of the building just described. It had been dug

into the natural subsoil [99] to a depth of *c.* 0.32m, and contained a post-packing of small stones [133] around its outer edge. These had slumped inwards before being sealed by a mixed infill [132] of brown sandy clay loam (7.5 YR 4/4) and small stones. Such a clean infill would seem to suggest that the post-hole was a relatively early feature, which had gone out of use well before the accumulation of the overlying deposit [32]. The other feature sealed by this horizon was a roughly circular spread [48] of mixed black loam (7.5 YR 2/1) and small stones, *c.* 0.7m in diameter, with traces of a possible post-packing around its edge. This lay immediately to the east of one of the large post-holes [47] described above, which may even have post-dated it to judge from the arrangement of the packing stones. It was originally interpreted as a post-hole [49] but this had to be rejected when the feature turned out to be a shallow lens no more than 0.05m thick. Its function is otherwise unknown.

The two final features sealed beneath context [32] lay towards its northern end, immediately to the west of the north terminal. Both were v-shaped gullies, one cutting across the other. The later of the two [66] proved difficult to excavate, but ran roughly north-south for a distance of *c.* 2m before curving away eastwards and petering out close to the northern side of the metalling [55] at the western end of the gate passage. For most of its length it was up to *c.* 0.3m wide, except at its northern end where it terminated in a shallow circular hollow *c.* 0.46m in diameter. Its fill [65] seems to have included a high proportion of bedrock fragments. This feature cut through an earlier linear gully [51] which extended *c.* 2.0m west of the rampart face to terminate in a shallow butt end. It was found to be *c.* 0.16m deep and to vary in width from *c.* 0.24 to 0.34m, with an infill [50] of intermixed brownish black silty clay loam (10 YR 3/1) and small /medium shale fragments. This actually extended beyond the edges of the gully to a width of *c.* 0.5m and was found to contain a fragment of amorphous slag (352), as well as a few fragments of burnt bone and charcoal. To the north was an isolated spread [52] of brown loam (10 YR 4/6) with bedrock fragments, which is difficult to interpret but seems to be a patch of redeposited natural.

The more northerly spread [67] also overlay several enigmatic features within a relatively small area, most of which are difficult to interpret. The sole exception was a stake-hole [97] *c.* 0.1m in diameter, which was discovered beneath a somewhat irregularly shaped spread of brownish black silty loam (10 YR 2/2) containing much charcoal and burnt bone. The most interesting of the other features, which lay *c.* 0.6m to the south-west of this stake-hole was a roughly oval hollow [88] measuring *c.* 0.51 by 0.37m. It was found to contain three successive fills [80/86/87], despite being only *c.* 0.14m deep at its maximum. The lowest fill [87] proved to be a brownish black silt loam (10 YR 2/2) across the base of the hollow, containing a few fragments of charcoal, above which rested a layer of closely packed burnt stones [86]. These were covered in their turn by an oval shaped lens [80] of brownish black sandy clay loam (10 YR 2/2) containing a few stones, some charcoal and a slag fragment (723). This particular sequence suggests a distinctive function, even if it remains difficult to define on current evidence.

The two remaining features are even less informative, though there are some general similarities. One was a roughly circular hollow [85] *c.* 0.5m in diameter and little more than 0.15m at its deepest, which was infilled with a brownish black silt loam [79] (10 YR 2/3), containing several small burnt stones as well as fragments of charcoal and burnt bone. The other was a somewhat larger hollow [93] *c.* 0.7m in diameter (plan not located in archive), covered by a lens [92] of brownish black loam (10 YR 2/2). Unfortunately neither of these features produced any diagnostic finds to help clarify their function.

Perhaps the most interesting sequence was found in the north-west corner of the trench (FIG. 2.19) where a series of successive deposits [54/56/60/90] was examined, sealed beneath the rubble spread [44]. These were originally interpreted as the infill of a possible platform/scoop [designated 61], but subsequent excavation suggested that the construction of the rampart had provided a suitable retaining wall against which material had progressively accumulated. This process has been noted elsewhere in the field survey and in Trench B.

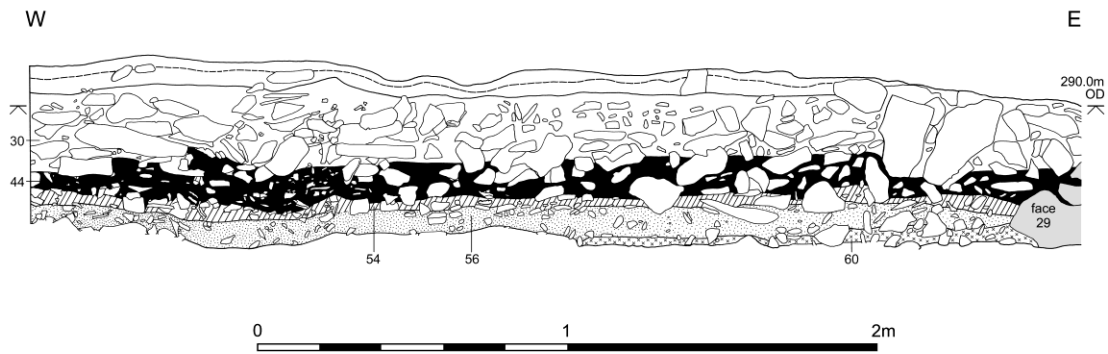


FIGURE 2.19: *Successive contexts in north-west corner of trench behind rampart*

The lowest layer [90] was found to be a brownish black sandy clay loam (10 YR 2/3) containing a significant amount of charcoal, which was overlain in turn by two further deposits. One [60] was a greyish yellow silt loam (10 YR 4/2) containing numerous charcoal fragments and some possible slag (445), the other [56] a dark brown loam (10 YR 3/3) with only a single piece of charcoal. The final layer [54] before the rubble spread proved to be a black loam (10 YR 2/1), which was particularly rich in charcoal and burnt bone, as well as several fragments of fired clay/pottery (373; 375; 404; 426), a fragment of crucible (360), a slag sphere (366) and half a yellow annular glass bead (FIG. 5, 358). These finds match the material from within the matrix of the rubble spread [44], which also included charcoal and burnt bone fragments, as well as several pieces of several pieces of pottery/daub (268; 311; 314; 318; 334) and one fragment of amorphous slag (335). Unfortunately, not enough of the relevant deposits were sampled to determine whether the material had accumulated as a result of human or natural agencies.

PHASES 7 and 8: The Rampart Collapse and the Construction of the Later Rectangular Enclosure (FIGS 2.20 and 2.21)

At some stage, the upstanding stone rampart had obviously collapsed or been demolished, thereby creating the extensive spreads of rubble which are such a characteristic feature of the surviving surface remains. This collapse was closely examined in the excavated area [2/30], in an attempt to expand on the evidence

available from the field survey. It soon became clear that surprisingly little rubble had fallen inwards, because the surviving debris rarely extended more than 1.5m from the rear face. Instead, the bulk of the rampart seems to have fallen outwards, to lie in a tumbled mass up to *c.* 6m wide in places (cf. FIG. 1.2). In the process, this had infilled the remaining vestiges of the ditch/quarry scoop [45] as well as disturbing and overturning the two sets of uprights [26/38]. The force of the collapse was also illustrated at two other points along the east face, first where a substantial boulder belonging to the south terminal [34] had toppled sideways and crashed down through the coursed slab wall [13], and second where the surviving slabs of the blocking wall [39] had been dislodged and pushed outwards from their original position.

Unfortunately, none of this evidence is capable of proving how the rampart came to collapse, whether by deliberate design at the end of its life or progressively over time, in conjunction with extensive stone robbing. There is some reason to suggest, however, that only a relatively short interval of time had elapsed between the last phase of internal activity, in phase 6, and the subsequent collapse of the wall in Phase 7. The evidence for this comes from the area immediately behind the rampart, where the rubble had clearly collapsed directly on top of the underlying occupation horizon [32], without any discernible build up of stratigraphy in between.

One further feature of the rubble collapse which needs to be mentioned is the relative absence of all but a few large stones in its make-up. This is surprising given what we know of the use of large boulders in particular points in the facing, not least along the eastern side of the south terminal. Even allowing for selective stone-robbing, this discrepancy remains difficult to explain on current evidence, unless we assume that the character of the rampart structure actually changed from larger to smaller stones above the surviving *in-situ* facing. Various finds were made during the excavation of the rubble collapse [30] across the northern end of the trench, most from close to its interface with the underlying deposits. These included numerous fragments of charcoal and burnt bone, a large bead made from an amber pebble (FIG. 5, 370); a glass button (24); a perforated shale disc or possible spindle whorl (FIG. 5,

327); two fragments of crucible (336); and fragments of slag cake (427), amorphous slag (36) and prill slag (54).

Where the surviving rubble was at its maximum thickness, in the area of the southern terminal and the tumbled mass to the east, it had not subsequently become covered with turf [1]. Excavation, however, noted that the lowest courses of the rubble spread to the east were intermixed with a brownish black sandy clay [15/24] (7.5 YR 3/2), overlain in places by a slightly blacker horizon [14]. A similar phenomenon was observed inside the south terminal and the associated narrowing wall, where the matrix [69/78] comprised a dark brown sandy clay loam (10 YR 3/3). The simplest interpretation of these horizons is that they represent a natural process, whereby material has percolated down through the stones over time, to create a soil horizon. Clearly the material to the east post-dates the collapse of the rampart, whereas some of the matrix inside the terminal could have accumulated during its active life, as the admixture of charcoal suggests. A perforated rectangular shale object (FIG. 5, 777), a thin circular shale disc/counter (FIG. 5, 749) and an iron stud or rivet (769) were also recovered from this context [69], the latter during sieving. At the extreme edges of the stone spread, these soil formations merge with the surrounding turf.

The final phase (8) on this part of the site is represented by the construction of a rectangular structure/enclosure immediately to the west of the rampart and its associated rubble spread (FIG. 2.20). This was actually visible on the surface before the excavation began, and measured *c.* 8 by 5m. Removal of the turf revealed a series of rubble spreads (FIG. 2.21), that on the south and west [3] proving to be the more pronounced than the corresponding one on the north [7]. Along the eastern side, the nature of any surviving structure was difficult to separate from the tumbled rubble of the rampart, though two stone spreads [11/12] were thought to represent possible internal partitions. Further stripping of the rubble only revealed a convincing wall structure on the south and west [17]; here enough facing stones survived *in situ* to indicate an original width of *c.* 1.3m. This was not matched by any corresponding

wall along the northern side, nor beneath the two possible partitions. No internal floor levels were identified and it is doubtful whether any ever existed.

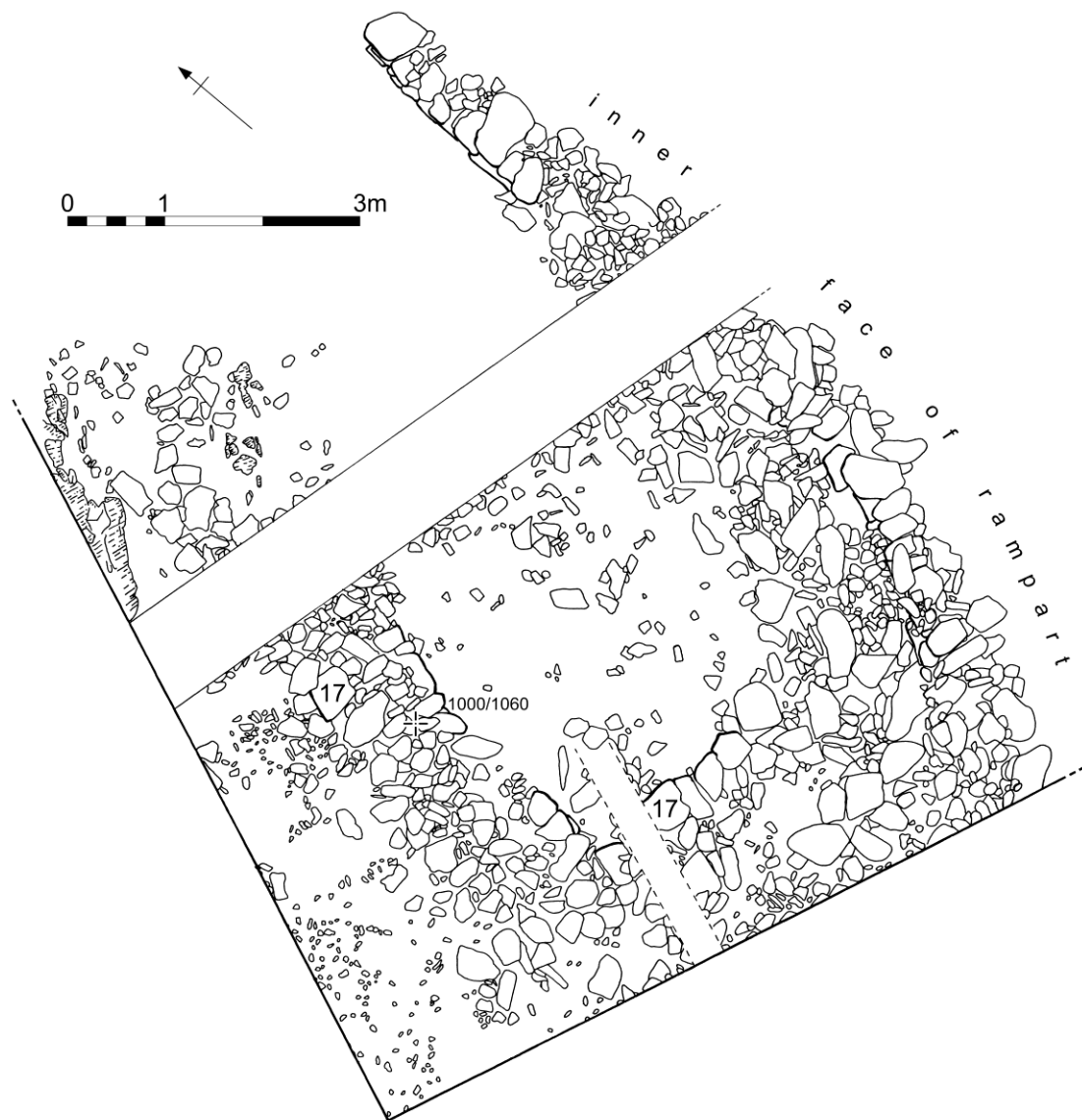


FIGURE 2.20: *Phase 8*

Given the ephemeral nature of this enclosure/structure and its overall construction, as well as the extent of subsequent stone-robbing, it is hardly surprising that it proved difficult to define a relationship between its rubble collapse and that of the rampart. Close analysis of the plan and section, however, makes it clear that the structure must have been built behind the rampart, but up and over its rubble collapse, which had itself already sealed the underlying occupation horizons. No securely

stratified dating evidence was found within the structure to determine when this had happened, though a quantity of metalwork (1) was found in the turf horizon [1] between the two possible partitions, which included recognisable fragments from two horse-bits and parts of a possible hinge or lock, of relatively recent date. Unfortunately none of this material can be certainly associated with the use of the enclosure.



FIGURE 2.21: *Rubble spread of rectangular structure/enclosure immediately west of rampart*

MAGNETIC SUSCEPTIBILITY ANALYSES (By Martin Bell)

Magnetic susceptibility enhancement has elsewhere proved to be a useful guide to past activity patterns, as enhanced values can occur in burnt contexts and sediments of topsoil origin (Oldfield *et al.* 1985). During 1986, a pilot study of susceptibility variation was undertaken in Trench A, involving sampling on a 1m grid at the surface of the B horizon, just below the main occupation horizon (FIG. 2.22). Susceptibility was measured on a Bartington MS meter using 10gms of soil and is expressed in 10^{-8} SI units per kg.

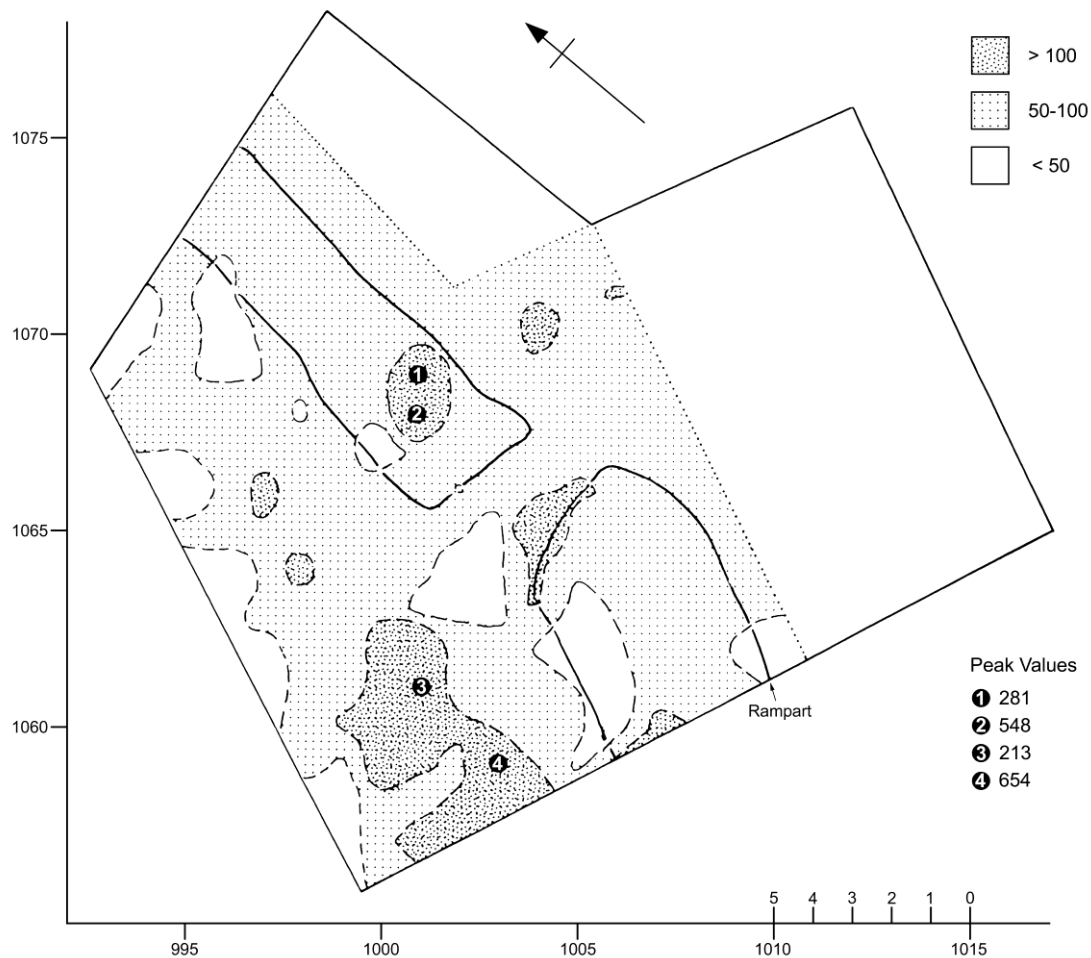


FIGURE 2.22: *Magnetic susceptibility variation in Trench A*

Background levels in the trench were between *c.* 40 and 70. Particularly low levels occurred along the western side of the area, where bedrock was close to the surface. The main concentration of high values lay to the west of the rampart's south terminal and the gate passage, where there were peaks of 654 and 213. This coincided with part of the occupation spread [32] and probably represents a particular concentration of *in-situ* burning, most likely at some point after the gateway had been blocked in phase 5.2. A second concentration was associated with the discrete spread of material [contexts 127 and 129] located beneath the rampart's north terminal, where there were peaks of 281 and 548; this, too, probably represents *in-situ* burning, pre-dating the construction of the rampart in phase 2. A third concentration of high values occurred along the south side of the gate passage. This would probably have

appeared less localized but for the fact that sampling took place below the main burnt horizon [25 and 43], which had been removed in 1985.

(3) EXCAVATIONS IN TRENCH B, 1987 – 1989

AIMS

Work in Trench B extended over the 1987 to 1989 seasons under the direction throughout of Barry C. Burnham, Rob Young (1987) and Julian Thomas (1988). Measuring 28 by 10m, it was designed to sample the interior of the hillfort, extending upslope from the face of the inner enclosure rampart to a point just inside the line of what was thought to be a possible internal partition (FIG. 1.4). Over the three years several inter-related problems formed the focus for the excavation:

- (i) to clarify the character of the presumed internal partition and to establish its relationship with any associated features;
- (ii) to examine one of the prominent platforms which are clearly visible in this part of the interior, immediately downslope from the partition, and to establish the structural sequence thereon;
- (iii) to provide a section through any occupation deposits on the steep slope behind the main rampart;
- (iv) to determine the character of the inner enclosure rampart by exposing its rear face.

PHASING

No overall phasing for this part of the site was possible, in part because of the isolated nature of its component elements, in part because of the absence of any sufficiently extensive stratigraphic horizons with which to inter-relate them. Complex stratigraphies were recorded, however, both behind the inner enclosure rampart and on the various platforms, the latter with several distinct structural phases. For convenience the results will be discussed under the following subdivisions, working from east to west across the site (FIG. 3.1):

- (1) The platform in the north-east corner;
- (2) The internal partition wall;

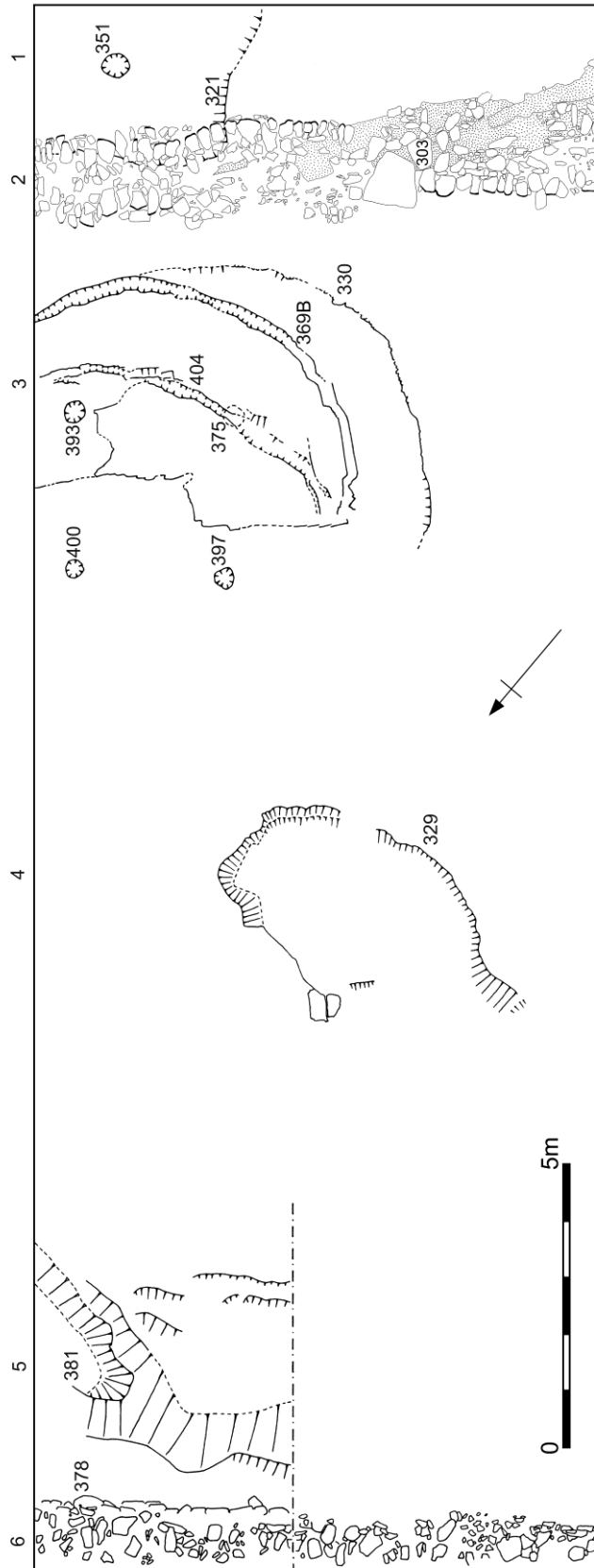


FIGURE 3.1: Site subdivisions and principal archaeological features. The inner partition wall is shown as an overlay.

- (3) The main platform immediately west of the partition;
- (4) The platform on the downhill slope;
- (5) The deposits on the slope behind the main rampart;
- (6) The stone rampart of the inner enclosure.

This final report is based upon the interim accounts prepared by Barry C Burnham and Julian Thomas, each of whom took responsibility for directing discrete parts of the site (BCB: areas 1 to 3; JT: areas 4 to 6).

(1) The platform in the north-east corner (FIG. 3.2)

During the excavation of the internal partition and its associated rubble spread [301/303] in 1987 an unsuspected, apparently sub-rectangular, house platform was discovered in the north-east corner of the trench (FIG. 3.1). Its recognition provided an important clue to the origin of several patches of reeds, scattered at various points across the inner enclosure, which must therefore mark the sites of further platforms. The excavation of this platform [321] showed that, along its western edge, it underlay the internal partition wall, making it the earliest stratigraphic feature in this part of the site. Only its south-western corner, measuring at least *c.* 3.5 by 3m, lay within the excavated area, though originally it must have been somewhat larger, to judge from the extent of the associated reed patch. It had been cut into the underlying natural [304] to a maximum depth of *c.* 0.2m, providing in the process a relatively level platform which contained a series of deposits, partly of human and partly of natural origin. From its surface, most probably associated with the overlying spread [322] came two rounded quartz hammerstones (FIGS 5, 580 and 581), both unlike anything else from the site.

Two successive occupation horizons were identified during the excavation of the platform. The lower one comprised a spread [322] of dark brown silty clay loam (10 YR 3/3), containing an admixture of small to medium-sized bedrock chips and several charcoal fragments (FIG. 3.2A). It proved to be especially thin across the base of the platform, but seemed to be somewhat thicker towards the edges. It was

tentatively identified as a ‘floor surface’, though there were no associated finds to corroborate this. As such it might well have been associated with several other features [354; 326/332; 350/351], even if their precise relationship could not always be established. In the north-eastern corner of the excavation the putative early ‘flooring’ [322] partly overlay a patch of burnt stones [354], which was initially thought to be the fill of a post-hole, based on the presence of two possible packing stones; subsequent excavation did not reveal any obvious post-cut, however, which leaves the precise interpretation of the feature open to question, unless it represents the base of a small hearth.

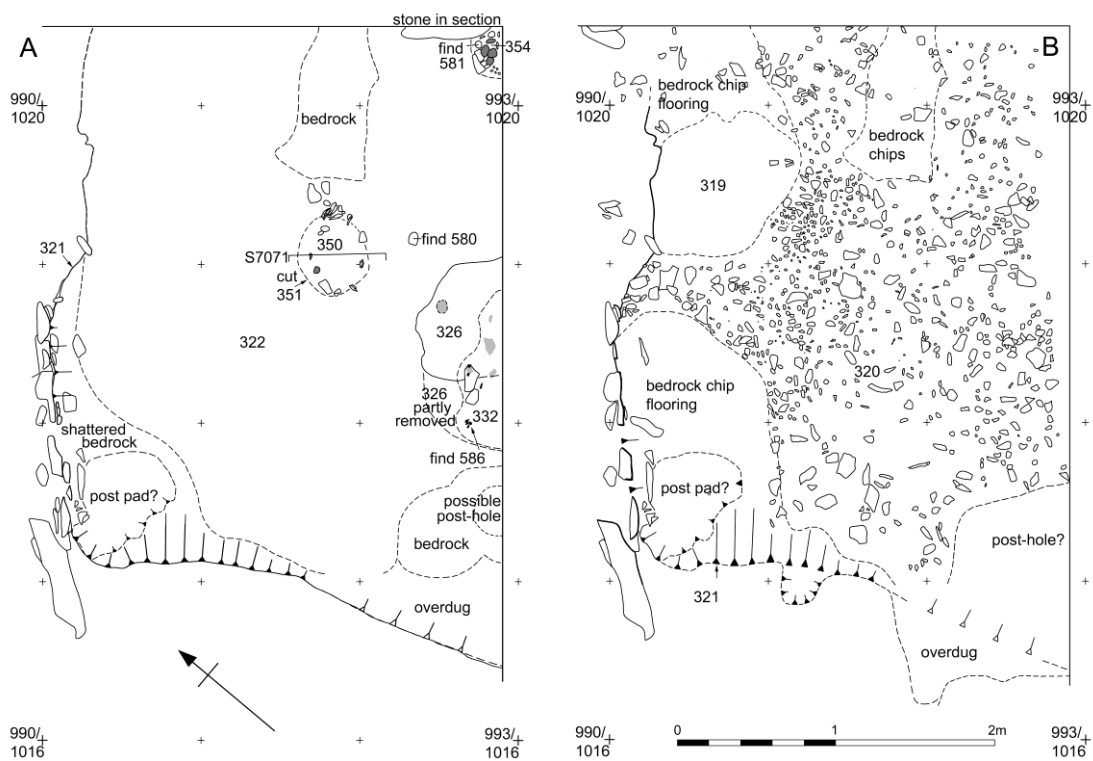


FIGURE 3.2: *A – lower occupation horizon. B – upper occupation horizon*

Along the eastern edge of the trench the ‘flooring’ also merged with a semi-circular lens [326] of brownish black silty clay loam (10 YR 3/2), which itself overlay a spread [332] of brownish black silty clay loam (10 YR 2/2) containing frequent patches of reddish brown silty clay (5 YR 4/8). Both layers produced a significant

quantity of charcoal, while the lower of the two [332] also yielded a possible iron object (589); all this might be suggestive of a possible hearth or fireplace, though such an interpretation does not seem wholly convincing given its location somewhat close to the edge of the platform. Only one structural feature can be associated with this early 'flooring' with any certainty, though it was not actually recognised until the final cleaning of the platform. It turned out to be a shallow post-hole [351], *c.* 0.45m in diameter and 0.15m deep, containing a fill [350] of brownish black sandy clay loam (7.5 YR 3/2), small stones and bedrock chips, with no trace of any original post-pipe or post-packing.

All these features had been sealed by a second occupation horizon, represented by a patchy layer of small to medium-sized bedrock fragments [320], highly suggestive of a laid floor surface (FIG. 3.2B). At one point, in the north-west corner of the platform, this layer was overlain by a roughly circular patch [319] of brownish black sandy clay loam (10 YR 2/2), containing a small amount of charcoal. No definite structural features were identified, though the on-site plans noted two disturbed patches within the floor surface, one at its south-west corner, the other along its southern side immediately adjacent to the section edge; these were tentatively interpreted as possible post-bases. These different layers had been sealed by a spread [309] of dark brown loam (7.5 YR 3/3), the finds from which included a glass bead (FIG. 5, 544), a water-worn pebble (FIG. 5, 549) and a fragment of fired clay (545). The sieving programme also recovered several charcoal fragments from this context, together with an iron stud or rivet, tentatively identified on the object record card as a possible hobnail (767); the presence of the latter, if correctly identified, would seem to point to activity during the Romano-British period. Significantly this productive layer was itself overlain along its western side by the stonework associated with the internal partition [303], clearly demonstrating that occupation had ceased on this site prior to the latter's construction. The final layer within the platform [307] was an infill of natural origin, which had clearly accumulated in and around the tumble [301] from the collapse of the partition.



FIGURE 3.3: *The internal partition wall photographed from the north*

(2) The internal partition wall (FIGS 3.3 and 3.4)

During the detailed site survey it had been noted that part of the inner enclosure was divided off by a prominent stony bank, which broadly enclosed the flatter, upper part of the hillfort (FIG. 1.4, no. 8). This was most plausibly interpreted as an internal partition, though the possibility that it represented part of a leveled and degraded bank belonging to a pre-hillfort enclosure could not be discounted. Removal of the turf horizon in 1987 rapidly revealed a spread of stone tumble [301], derived from what remained of the original partition wall. Most of it had clearly collapsed downslope to the west, onto the deposits infilling the prominent house platform on this side, though a small amount was found scattered to the east as well. Beneath this tumble lay the

fragmentary remains of the original wall [303], extending roughly north-south across the site and measuring *c.* 1.3m wide. At its southern end, it had been built on top of a rock outcrop and so little of its original facing remained, except on the downhill side; to the north, however, where it overlay the platform in the north-east corner of the trench, it had survived up to two courses high above the infilling deposits.

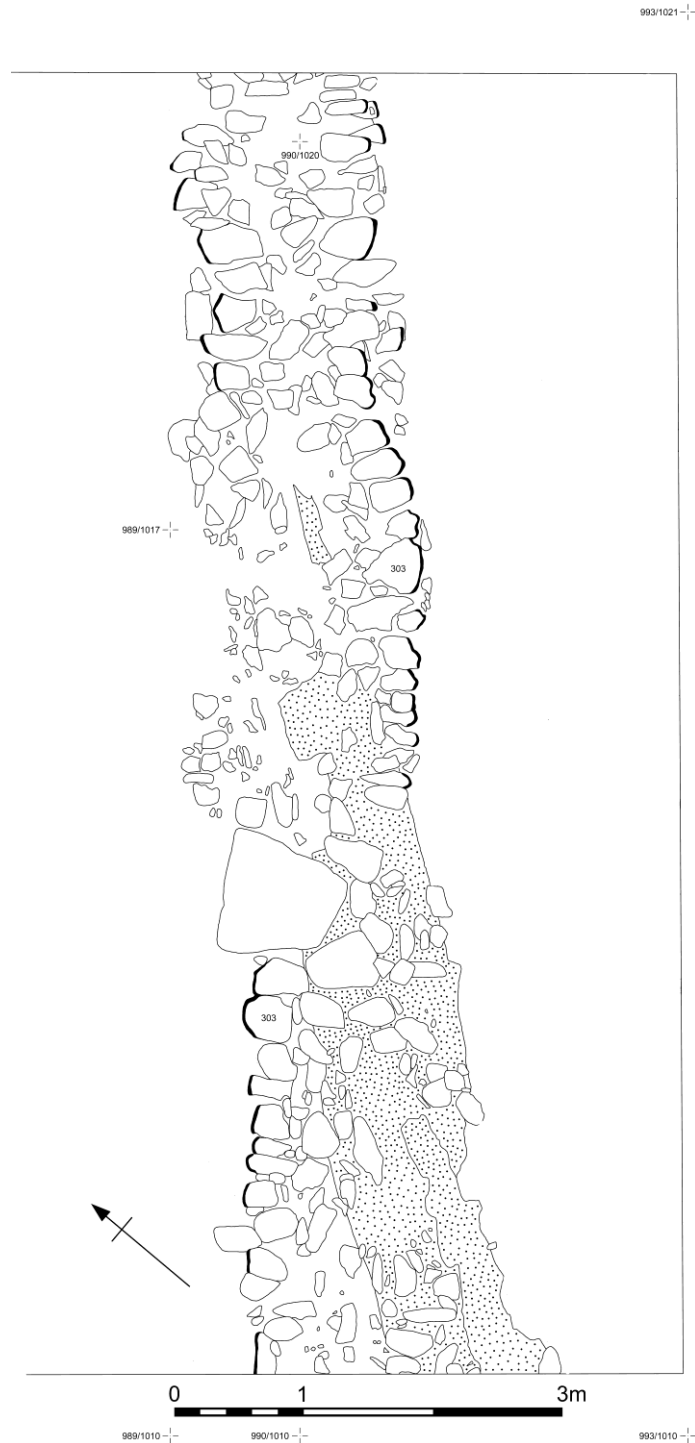


FIGURE 3.4: *The internal partition wall*

Nothing was found in association with the partition to help define its precise date, over and above its relative position in the stratigraphic sequence. While it clearly post-dated the occupation associated with the platform in the north-east corner, no such precise relationship could be established with the successive horizons in the main platform to the west. Certainly the stone collapse post-dated the latest phases of occupation, but the wall itself could theoretically have been constructed at any time before this, potentially (but not certainly) contemporary with any of the preceding phases. The suspicion remains, however, that the partition is later than the main hillfort phase, though only a close examination of its junction with the main stone rampart would help to resolve this.

(3) The main platform immediately west of the partition (FIGS 3.5 to 3.14)

The sequence in this part of the site proved to be extremely complex, with several discrete phases being represented in the surviving stratigraphy. Post-excavation analysis has suggested at least five such phases, including the remains of up to three separate circular houses (FIGS 3.1 and 3.5: [380; 369B; 404]) and one four-post structure [375; 393; 397; 400], separated by various horizons of human or natural origin. Particular problems were encountered during the excavations in differentiating the precise boundaries between some of these intervening horizons, except where specific stone spreads or cut features intervened across the platform.

In 1987 work was directed at removing two successive infill deposits [302; 311], which had clearly accumulated both before and after the collapse of the internal partition. These were interpreted as hillwash and frost shatter, derived in part from the exposed uphill slopes to the east and south-east of the platform. Only a very small area of the underlying occupation deposits, including [310], was partly examined on the north-western side of the platform. The removal of the final remnants of the two main infill deposits [311] was completed in 1988, though there remains a suspicion that in the dry conditions prevailing at the time this may have been over-excavated into the underlying horizons on the uphill side of the platform (most notably [327]);

this would help to explain some of the post-excavation problems in correlating the stratigraphy across this part of the site. This work revealed a series of occupation layers and associated rock-cut features, which were to form the focus for the rest of the 1988 and 1989 seasons.

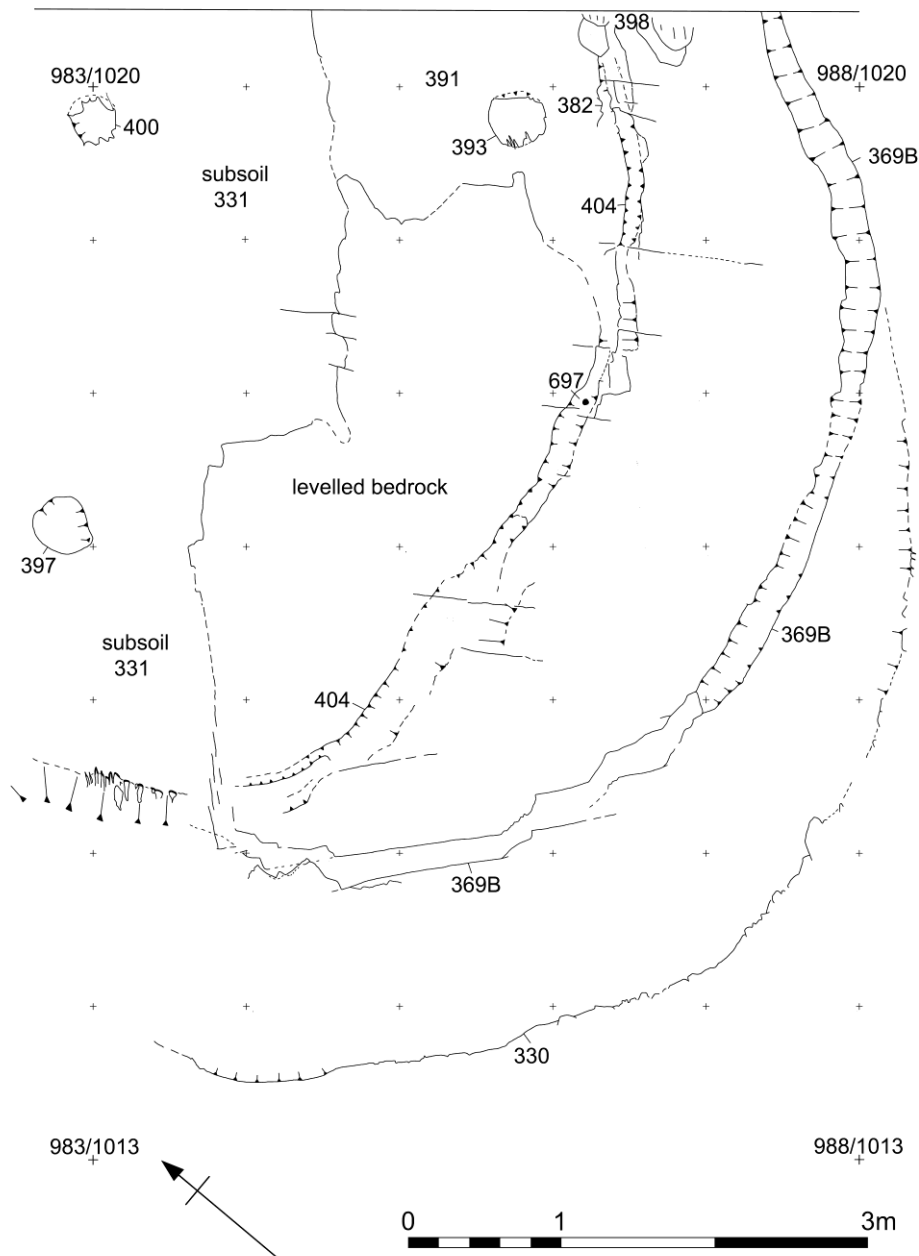


FIGURE 3.5: *Principal rock-cut features on main platform*

The interpretation of the sequence presented here assumes that the platform was progressively cut back into the hillside over time, though it is hypothetically

possible that the reverse is true; this would, however, require significant revision to some of the key stratigraphic relationships as they were interpreted and recorded on site during the excavations.



FIGURE 3.6: *The main platform fully excavated, except for the silt infill [403] which still remains in the innermost gully [404].*

House 1: This was represented by the innermost, rock-cut gully [404] located in the base of the platform (FIGS 3.5 and 3.6). It was roughly semi-circular in plan, though its overall nature and profile were somewhat shallow and irregular, particularly where it cut across the grain of the underlying bedrock. For the most part it contained a sterile silty fill [403], though in the deeper segments there were a few flecks of charcoal. More than likely it originally defined the uphill side of a structure *c.* 9.6m in diameter. No obvious structural features or layers were seen to be associated with this gully, nor were there any related finds. As recorded it would seem to have been truncated by the re-cutting of the platform associated with the construction of House 2 [369B], though much depends on its relationship to the ‘overlying’ spread [365], which is discussed further below. If correct this would make it the earliest structure

on this part of the site. It is possible that the silt lens represents a natural silting of an open gully, perhaps indicating a short phase of abandonment at the end of its life.

House 2: This was represented by a pronounced, rock-cut gully [369B], forming the outer, uphill side of a semi-circular platform, *c.* 7.6m in diameter, which extended further south-east into the hillside (FIGS 3.5 to 3.7). Along the eastern part of its circumference this gully proved to be broadly V-shaped, averaging 0.2m wide by 0.1m deep, with an infill of medium-sized, angular bedrock fragments [387], which had clearly been used as packing for the stakes forming the superstructure of the associated building (FIG. 3.8); at one point the position of four such stakes was defined by a series of distinctive circular silty fills, spaced at roughly 0.3m intervals (FIG. 3.9). On its southern side, however, the gully was found to be very different in character, with no trace of the original shale filling. Here it took the form of several box-shaped features, which had been cut between a series of parallel fault lines in the underlying bedrock; these separate lengths had then been interlinked by irregularly-cut grooves to create the necessary circular plan. It will be suggested below that this section of gully had been cleaned out in a later phase for reuse as a drain [369A], perhaps but not certainly associated with yet another structure [330] which extended even further into the hillslope to the south-east.

The creation of the associated platform [369] had necessarily involved some degree of leveling across the bedrock and related deposits, though how extensive this was remains uncertain. On the downhill side of the platform, at least, some of the irregularities in the bedrock would seem to have been erased in the levelling process. This might also have been expected around the outer, uphill side, despite the greater irregularity of the underlying bedrock, but here the picture was somewhat complicated by the presence of a thin spread [365] of dark brown silty clay loam (10 YR 3/3), containing a high proportion of bedrock fragments. In places there seemed to be little doubt that part of this layer had sealed the shale infill [387] associated with the external gully; this initially suggested that it might have accumulated as a result of

natural processes, reflecting a period of disuse following the demise of House 2, prior to the construction of the later four-post structure. Elsewhere, however, it seemed evident that the 'same' deposit had been cut by the excavation of the external gully, with the implication that it must represent a conflation of at least two otherwise indistinguishable horizons, which here overlay the underlying bedrock.

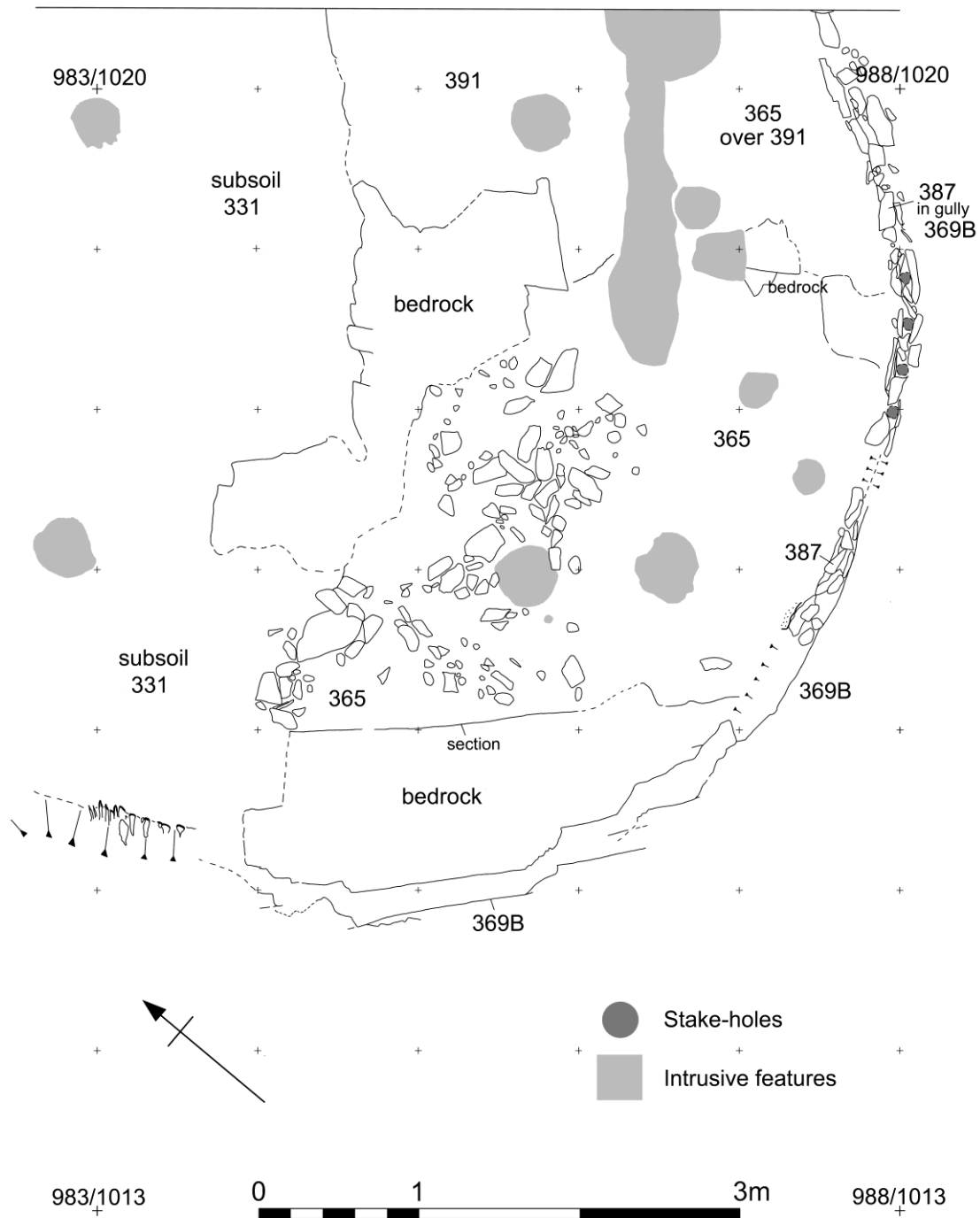


FIGURE 3.7: House 2 on main platform



FIGURE 3.8: *House 2 under excavation*



FIGURE 3.9: *Four stake-holes within packing stones [387]*

This stratigraphic problem is now incapable of resolution, beyond noting that the initial explanation seems to this writer to be the more likely one; where it appeared to be cut may simply represent otherwise unrecognised subsoil deposits infilling irregularities in the underlying bedrock forming the base of the platform. No structural features were certainly associated with this building, nor were there any related finds, with the single exception of a distinctive black, rounded pebble or counter (FIG. 5, 694) from context [365].

One further issue relating to context [365] concerns its original extent across the platform. As excavated and planned, it appeared to peter out along an irregular line of shale fragments which clearly overlay the fill [403] of the rock-cut gully [404] associated with House 1. This became apparent during the removal of two overlying spreads [373; 376], when the weather was especially wet and the platform was rather waterlogged, so it remains a distinct possibility that a thin smear of layer [365] could have been removed at the same time, with the implication that it might originally have been more extensive. A more radical possibility might be that the irregular spread of shale fragments effectively hides the fact that the layer was actually truncated by the excavation of the excavation of the gully and platform associated with House 1; in this scenario the apparent 'extent' of layer [365] would represent post-abandonment spread across its platform. While this would reverse the stratigraphic sequence outlined above and, thereby, the relative phasing of the two houses, it would not invalidate the presence here of two successive structures on the main platform.

The four-post structure: This was represented by a regular arrangement of four post-holes [375; 393; 397; 400], apparently forming a square *c.* 2.8m along the sides (FIG. 3.10). Three [393; 397; 400] had been cut down into the natural subsoil above the bedrock, while the fourth [375] had been cut into the layer [365], described above, directly above the gully [404] associated with House 1. The first three only became visible after the removal of the overlying spreads [373; 376].

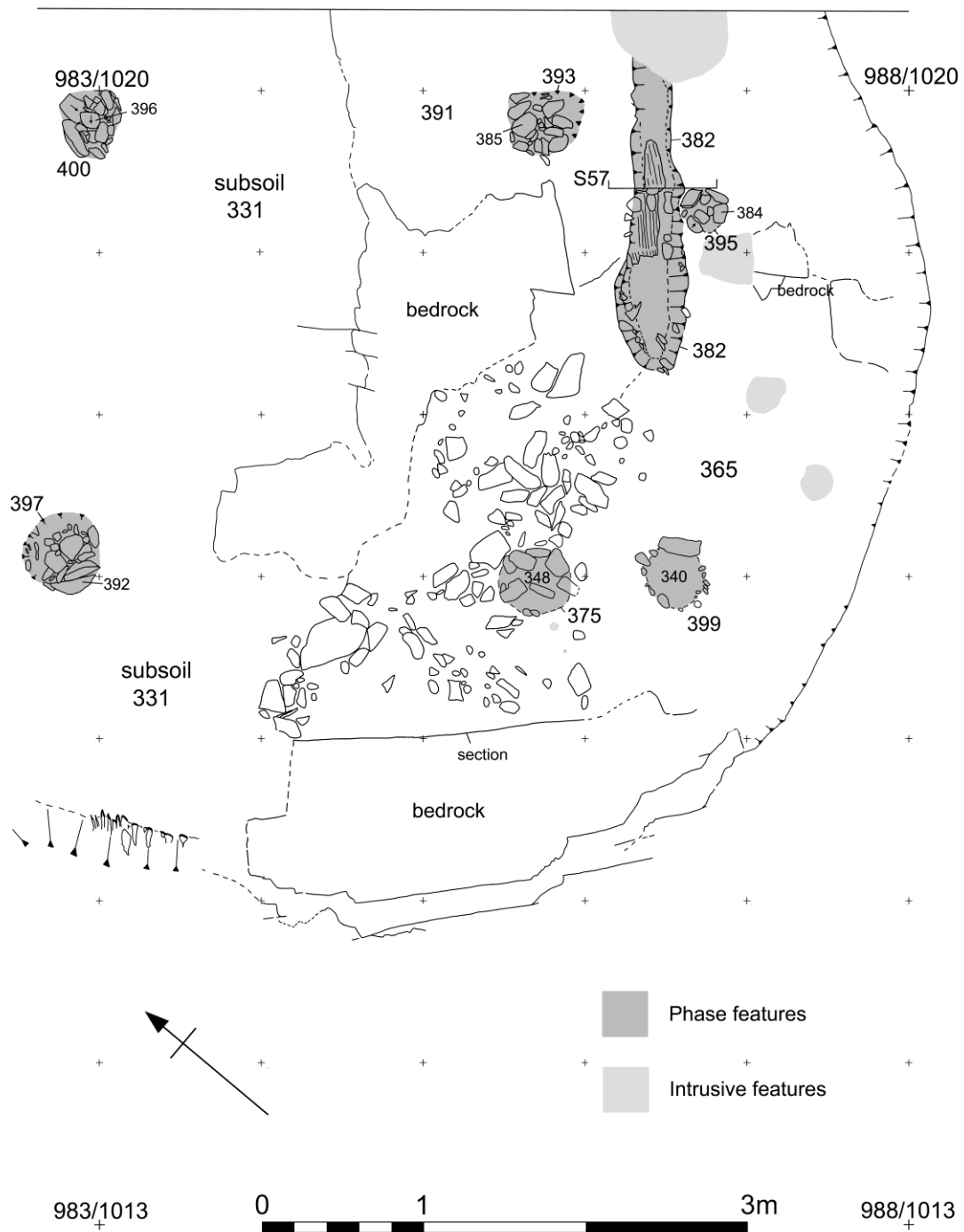


FIGURE 3.10: *Four-post structure and possible related features*

All four were broadly comparable in size, with a distinctive infill which is clearly indicative of a similar structural history. At the north-east corner, where the post-hole [393] measured *c.* 0.36m in diameter and 0.15m deep, the fill [385] comprised a jumbled mixture of the original packing-stones and a later infill, the latter

perhaps inserted after the original post had been removed. A similar sequence was noted at the north-west corner, where the post-hole [400] measured *c.* 0.33m in diameter and 0.15m deep; here too there was a jumbled fill of medium-sized shale fragments [396], the largest of which probably represent the disturbed remains of its primary packing. At the south-west corner, the situation was a little more complex. Here the post-hole [397], which measured *c.* 0.38m in diameter and 0.2m deep, was found to contain an outer packing of larger shale fragments, with an inner fill of smaller stones across the top [392], roughly preserving the outline of the original post-pipe. On site these fills were not given separate context numbers, unlike the sequence recorded at the south-east corner. Here the post-hole [375], which measured *c.* 0.38m in diameter and 0.15m deep, contained a primary fill of broken shale fragments [374] representing the slumped remains of the original post-packing, overlain by a secondary fill of stones [348], though in this case it was impossible to define any post-pipe. It would seem likely, therefore, that all four holes had seen the removal of their respective posts, a process which had disturbed the original packing stones to varying degrees. The resulting depressions were then backfilled with an irregular arrangement of loosely packed stones.

From the concentric arrangement of these features within the area previously occupied by House 2, it would seem likely that they represent the reuse of the platform for a new building, following what might have been only a short period of disuse. While it is hypothetically possible that they formed the central elements in some sort of circular building, the most likely interpretation is that they supported a freestanding four-post structure, of a type otherwise familiar to us from a variety of other sites. Nothing was found in association with the post-holes to elaborate further on the character or function of this structure.

Of the various features which had been cut into layer [365] across the uphill side of the platform, three might tentatively be assigned here, though all could equally represent separate phases of activity. One was a short length of U-shaped gully [382], which lay roughly 0.45m east post-hole [393] forming the north-eastern corner of the

main structure. Like the post-hole it had been sealed by the same extensive spread [373], which might suggest a possible relationship. Only *c.* 1.9m was available for excavation, from the rounded terminal at its south end to the point where its north end had been truncated by a later feature [398] which lay right on the edge of the trench. It varied in width from 0.2 to 0.45m and reached a maximum depth of 0.15m. Nothing was found in association with its fill to indicate its original function, and so it remains unclear whether it had a structural role or whether it acted as some sort of sump draining runoff from the uphill side of the platform.

Immediately to the east of the gully [382] lay a second feature, which had also been sealed by the same overlying spread [373]. It proved to be a post-hole [395], measuring 0.3m in diameter by 0.1m deep, with a fill [384] which comprised an irregular stone packing, with no trace of an associated post-pipe. Less certainty attaches to a third feature, a slightly larger post-hole [399], *c.* 0.4m in diameter by 0.18m deep, with a fill [340] of brownish black silty clay loam (10 YR 2/2) intermixed with the disturbed remains of its original post-packing. No clear relationship could be established with the overlying occupation horizons [373; 376], so the principal reason for placing it here lies in its interesting spatial positioning, both south of the gully [382] and east of the post-hole [375] forming the south-eastern corner of the main structure.

Overlying occupation horizons: Following the demise of the four-post structure, much of the platform was sealed by two relatively homogenous spreads [373; 376] of brownish black silty clay loam (10 YR 2/2), containing concentrations of charcoal, occasional burnt wattle and fragments of calcined bone (FIG. 3.11). As planned, both were principally concentrated towards the outer, downhill edge of the platform, though this may in part be a result of their being difficult to differentiate from the underlying and overlying horizons, except where specific stone spreads had intervened, prior to the heavy rainfall which occurred late in the 1988 season. Only when this happened was it possible to distinguish clearly between the lower of the two

spreads [376] and the underlying horizon [365] on the uphill side of the platform. More than likely, therefore, they may have been more extensive, though this was not appreciated under the prevailing dry conditions during their removal. Despite their relative homogeneity, it is clear that they had accumulated over a period of time, the lower one [376] apparently respecting the line of the U-shaped gully [382] described above, while the upper [373] had eventually sealed it towards the end of its life.

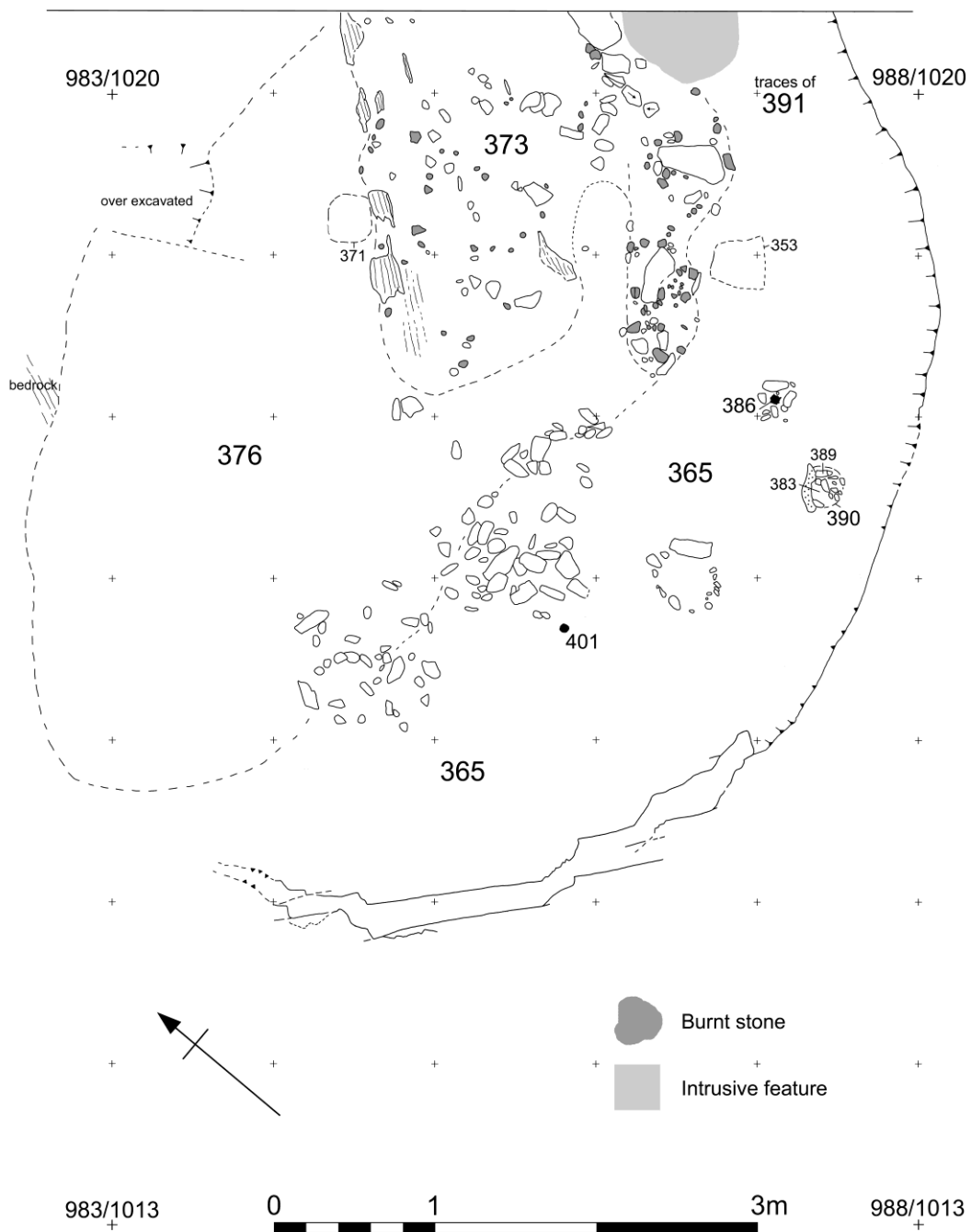


FIGURE 3.11: Occupation horizons overlying the four-post structure

Though difficult to interpret in the absence of any associated finds, the two spreads [373; 376] must derive in part from a phase of extended occupation on the platform. The presence of some burnt material within their makeup, however, might point to a specialised function, for which there is no clear evidence, or to the presence of a possible structure which had burnt down. Just such a building might be represented by the burnt-wattle structure associated with the outermost gully [330], located around the southern and eastern, uphill sides of the platform, but on stratigraphic grounds this is more plausibly associated with the stone spreads [337; 338] discussed in the next section.

Various features cut into layer [365] could plausibly belong in this context. Of particular interest are two stake-holes, one of which [401/402] had simply been driven into the ground, while the other was represented by a shallow hollow, *c.* 0.2m in diameter, containing both the stake and its associated stone packing [386]. Less certain is a post-hole [390], measuring 0.2m in diameter by less than 0.1m deep, which lay just inside the line of gully [369A] associated with House 2, immediately beneath a daub and charcoal spread [377] associated with the demise of House 3. It had been lined with several stone uprights [389], some of which were still in position, surrounding a stone-free fill [383] of brownish black silty clay loam (10 YR 2/3); this retained the profile of the original post. Two further post-holes [353; 371] might belong here; the former was certainly cut through the lower of the two spreads [376], though whether this occurred during its build-up or later remains open to debate. Both features could equally be associated with House 3, where they are discussed in detail.

House 3: This was located at an early stage in the excavation, during the clearance of the overlying layers [311; 327], when too few of the actual deposits in the platform had been exposed and when the extra dry conditions made it difficult to recognize the extent of the different infills and their precise inter-relationships. Despite this, the essential elements were nevertheless clear (FIGS 3.12.and 3.13). Its outer edge [330] was best preserved on the south, where it ran across the grain of the bedrock, but it

became progressively more broken and difficult to define on the east, where it had been cut along the grain into the steeper part of the slope below the line of the inner partition wall. Where it converged with the line of the gully [369B] associated with House 2, there was some initial confusion in 1989, when it was thought that it had been truncated in the process; while this remains a possibility, the interpretation presented here, however, favours the view that it represents the original outer wall of another House (3), c. 7.6m in diameter, the platform of which had been extended a further 1m south-east into the hillslope, slightly off-centre from House 2.



FIGURE 3.12: *House 3 under excavation*

In places, just inside the edge of this new platform, the overlying deposits had preserved several very fragmentary sections of burnt wattle [349] both still *in situ* and as general scatter (FIG. 3.14). In addition, on the steepest part of the slope to the east, a marked concentration of burnt daub and charcoal was noted [377], intermixed with a brownish black sandy clay loam (10 YR 3/2). Much of this had spilled downhill, to overlie both the fill [387] of the gully [369B] forming the backwall of the House 2 structure and the spread [365] across the base of its associated platform [369]. It

produced a fragment of pottery rim or briquetage, with a possible applied band (655). Further, wattle fragments were also incorporated within an infill horizon [327], which most probably represents later erosion downslope onto the uphill side of the unoccupied platform.

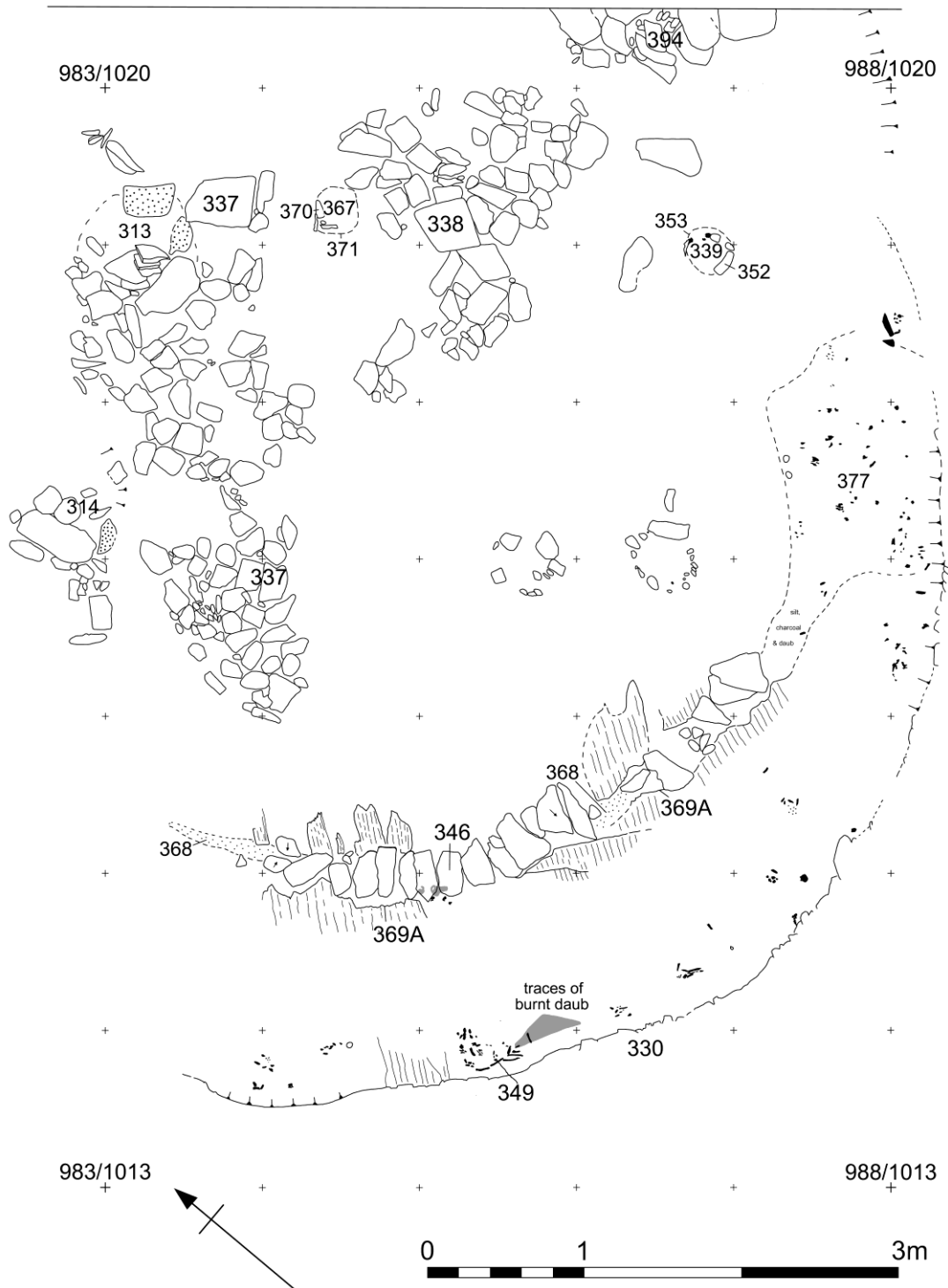


FIGURE 3.13: *House 3 on main platform*



FIGURE 3.14: *Burnt wattle associated with House 3*

Associated with this were two discrete spreads of stone, which were now laid on the platform, effectively sealing the two earlier horizons [373; 376]. One [337], composed of medium to large rounded stones, lay across its front edge, above the break of slope; one of the stones proved to be a quern fragment (FIG. 5, 661). Within it, and on the downhill break of slope, were the traces of two possible post emplacements [313; 314], each *c.* 0.6m in diameter and little more than 0.1m deep, which were defined by slightly larger stones than the norm. Their fills included several upright stones, the possible remnants of the original post-packing. The other spread [338] lay more centrally towards the northern end of the platform. It comprised generally flatter and larger stones, many of which seemed to have been carefully laid to form a patch of flooring or some sort of ‘hearth-base’.

Two features should be associated with this structure. The first is a short length of drain [369A], running *c.* 1m inside the line of its outer wall along the southern side of the platform. This had conveniently reused part of the earlier shale-filled gully [369B], the original packing of which had been removed, to be replaced by

a series of close-fitting shale capstones [346], so reminiscent of the drain covers identified on other prehistoric/ early historic settlements. Some of these stones were sealed, in places, by traces of burnt daub and wattle fragments, presumably derived from the structure's external wall. Inside the drain a thin lens [368] of dark brown silty clay loam (10 YR 3/3) had accumulated. No doubt it was intended to catch water percolating down the bedrock from the uphill side of the platform. The second feature lay right on the edge of the north section, so only a very small part was available for excavation. It proved to be a post-hole [398], with evidence for several substantial packing stones [394], which might perhaps represent part of an entrance into House 3; if so, it would have lain on its eastern, uphill side, out of the prevailing wind.

Two further post-holes [353; 371], both *c.* 0.3m in diameter by 0.1m deep, might also be associated with this structure, though they could equally belong with the earlier spreads [373; 376] already described. One [353], which lay east of the linear gully [382] and its associated infill [373], had been cut into the makeup [365] across the uphill side of the platform. The other [371], which lay *c.* 2.1m to the west, appeared to have been cut into one of the earlier spreads [376] pre-dating House 3. Both contained a distinctive set of packing stones [352 and 370 respectively], most of which were found upright around the edge, as if still *in situ*. Inside these was an equally distinctive stone-free fill [339 and 367 respectively] of brownish black silty clay loam (10 YR 2/2), admixed with quantities of charcoal; this might well represent the base of a timber post which had rotted *in situ*, following the destruction of the associated structure by fire.

These stone spreads had been sealed by an extensive layer [310] of brownish black sandy clay loam (10 YR 3/2), containing large quantities of burnt sandstone and charcoal; unlike earlier horizons it also produced a stone rubber (FIG. 5, 548), a stone lamp or mortar (FIG. 5, 554), a possible loom-weight (FIG. 5, 599) and a possible strip of iron (714). It was thickest on the downhill side of the platform, where it stopped abruptly on the break of slope. On the uphill side, however, its full extent may not have been appreciated during the excavation of the overlying infill deposits

due to the dry conditions prevailing at the time; certainly, what may have been removed as the last remnant of layer [327/311] in 1988 had the same matrix of brownish black sandy clay loam (10 YR 3/2), though without the admixture of burnt sandstone. It is unclear whether this horizon represents occupation associated with the underlying stone spreads, or an entirely separate phase of activity. In stratigraphic terms this represents the last phase of human activity on the platform, above which lay the successive infills of natural origin [327; 311; 302] described at the outset.

Summary: The most interesting conclusion to emerge from this part of the site is the clear evidence for several successive phases of human activity and for the reuse of the platform over time. What remains difficult to define, however, is whether this represents intermittent usage over a long period of time, frequent rebuilding over a short period, or a mixture of both. The relative lack of finds from the related archaeological levels does little to help resolve this issue.

(4) The platform on the downhill slope

Immediately downslope from the main platform an extensive spread [305] of brown sandy clay loam (7.5 YR 4/3) was initially encountered in 1987, sealed beneath the turf horizon. This was initially thought to represent the natural subsoil, on analogy with similar contexts to the east of the internal partition and immediately south of the main platform [304 and 331 respectively]. Further investigation in 1988, however, demonstrated that it was not an homogenous horizon, for in the central part of the slope it had totally obscured a third platform, the existence of which only became evident after extensive trowelling had revealed two large stones clearly protruding horizontally from its outer lip.

The platform itself [329] proved to be broadly D-shaped, c. 5 by 3m in size (FIGS 3.1 and 3.15). It had been excavated through the natural subsoil [331] into the underlying bedrock, to provide a reasonably level surface, with a steep back wall which reached a maximum height of 0.3m. The only structural feature clearly

associated with this platform was a possible hearth [379], lying towards its front edge, immediately above the break of slope. It was made up of several large stones, laid horizontally, together with a black matrix containing traces of charcoal. No occupation levels were identified. Instead the platform was sealed by three successive fills, all apparently derived from upslope, whether as the result of natural processes or deliberate human action. The earliest [366] comprised a spread of dull yellowish brown sandy clay loam (10 YR 4/3), containing a high admixture of small bedrock chips, which was especially thick towards the southern end of the platform, but became increasingly thin across the bedrock to the north. Nothing was found within this horizon, suggesting that it may have originated in part as frost shatter from the back wall of the structure and in part as inwash from upslope.



FIGURE 3.15: *The platform on the downhill slope under excavation*

The two later fills were somewhat different. The lower of the two [335] proved to be a dark brown silty loam (10 YR 3/3), somewhat greyer and grittier than its successor, with an admixture of angular and worn bedrock chips and several fragments of charcoal. Unlike its predecessor it produced a water-worn pebble (FIG.

5, 663), a corroded fragment of a possible iron nail, pin or bar (715), some burnt bone and a possible piece of fuel ash slag which was recovered during wet sieving. The uppermost fill [328] comprised a dark brown silty clay loam (7.5 YR 3/3), containing a much higher percentage of bedrock chips and stones, many of which appeared to have been burnt. It too produced a range of finds, including a stone spindle whorl (FIG. 5, 610), a water-worn pebble (FIG. 5, 612) and several pieces of burnt bone and charcoal. Both horizons would seem to represent the result of natural erosion from upslope, intermixed with some deliberate human dumping. As such none of the finds can be certainly associated with the underlying platform, nor can they provide any indication as to its function, as they are likely to be derived from activities higher up the slope, no doubt connected with one or more of the phases on the main platform.

(5) The deposits on the slope behind the main rampart (FIG. 3.16)

Across the lowest part of the site on the west a considerable depth of material had built up behind the inner enclosure rampart. This initially proved difficult to excavate, in part because the stones from the rampart had collapsed irregularly, making it hard to establish the precise line of its inner face, in part because of the very dry conditions prevailing at the time. Some indication of the likely complexity was provided, however, by a small test pit, 1m square, which was dug in 1987 at the base of the slope immediately south of the trench; the pit also produced a stone spindle whorl (FIG. 5, 556). In 1988 the decision was taken to excavate a trench, 1m wide, along the northern edge of the trench, in an effort to identify the depositional sequence. Once this had been achieved it proved possible to strip the northern half of the existing trench in plan, down to the underlying natural.

Prior to the construction of the defences at this point, the original ground surface [represented by 364 and 361] seems to have had dropped away slightly more steeply than its modern counterpart. Once the stone rampart was in place, however, effectively creating an artificial barrier across the slope, a complex sequence of deposits had accumulated behind it, in part natural in origin, in part apparently derived

from activities higher up the hill. Initially, a layer [363] of yellowish brown silty loam (10 YR 5/6) had built up against the rampart face, containing varying quantities of angular bedrock fragments, some charcoal flecks and a crucible fragment (1171). At one point this had clearly incorporated a mixed lens [362] of brownish black silty clay loam (10 YR 2/2), burnt material and charcoal, suggesting that it may not be as homogenous in origin as was originally thought; from it came two crucible fragments (1172; 1175), one part of a rim.

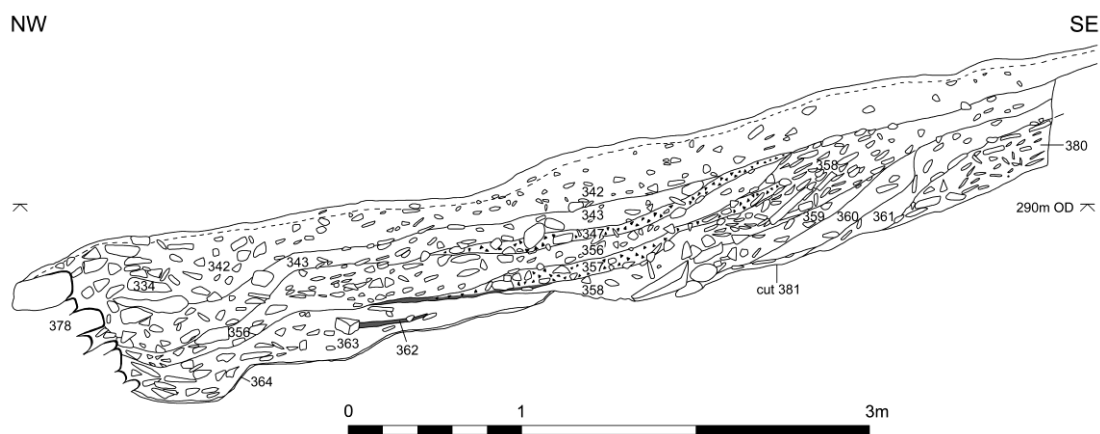


FIGURE 3.16: *North section through the deposits behind the main rampart*

This initial horizon had then been truncated by the cutting of a linear feature [381], c. 1m wide, running roughly south-west to north-east, obliquely to the line of the rampart. Within this cut, and spreading downhill to the west, were a series of layers [357 to 360], which were all to a degree intermixed, as if they were the result of a single depositional episode, of whatever duration. At the base of the cut was a layer [360] of yellowish brown sandy loam (2.5 Y 5/4), containing some loose rubble and stones, but no finds. This was sealed in turn by three further fills: first a lens [359] of dull yellowish brown (10 YR 5/3) silty clay loam, containing an admixture of charcoal and small bedrock fragments; second a layer [358] of sterile brown sandy clay loam (10 YR 4/6), not unlike the lowest horizon, but with a much higher mix of frost shatter and bedrock chips; and finally another lens [357] of dark brown silty clay loam (7.5 YR 3/3), with a high charcoal content and a more obviously concentrated area of

burnt red material towards the base. The excavator wondered if this latter might be the result of *in-situ* burning, or even the remains of a possible hearth, which originally extended beyond the edge of the excavation. Though difficult to substantiate at this juncture, such an interpretation would be significant, given the nature of the finds from the overlying horizons.

Above these distinctive fills was a further series of three layers, two of which had clearly been altered by the water action, presumably as a consequence of impeded drainage in the area behind the rampart. The lowest proved to be an extensive spread [356] of grayish brown silty clay loam (7.5 YR 6/2), with characteristic charcoal flecking, which became increasingly gleyed towards its base, where there was a pronounced iron pan. Unlike its predecessors it produced a rich assemblage of finds, including several crucible fragments (685; 720; 735; 744), some slag and fuel ash (683), a cone-shaped piece of fired clay mould (FIG. 5, 688) and two stone objects, one a rubbing stone, the other perforated (FIG. 5, 687; FIG. 5, 713). Across its uphill side, and immediately above the area of burning [356] already discussed, lay a lens [347] of ashy silt, of very varied colour and composition, containing much charcoal and burnt stone. Sieve sampling produced a significant collection of metalworking residues, which included: some 45 crucible fragments, including 6 rim pieces (739; 741; 743), all apparently derived from small triangular crucibles of the usual Iron Age type; a fragment of sprue cup (FIG. 5, 740); a possible fragment of mould (FIG. 5, 742); fragments of hearth lining (737) and amorphous slag (736); numerous slag spheres and prills (738; 741); and some possible hammerscale (741). All this reinforces the evidence retrieved from the underlying horizon. All this had been sealed by a second extensive layer [343] of brownish grey silty loam (10 YR 5/1), containing several fragments of charcoal and burnt bone and a piece of fuel ash slag (746); this proved to be the last significant horizon before the rampart had collapsed [334] onto its surface.

While there is some suggestion that the two gleyed layers [343 and 356] could represent natural erosion or dumping against the back of the rampart, the origin of the

intervening burnt horizon [343] remains more problematical. One possibility is that it represents industrial activity, either *in situ* or in the immediate vicinity; the alternative is that it derives from industrial activities higher up the slope, possibly concentrated on one of the known house platforms. Either way the presence of metalworking wastes represents a significant addition to our understanding of the functions of this site during the lifetime of the hillfort.

Following the collapse of the rampart [334] the whole of the slope was covered by an extensive spread [333 and 342] of dark brown silty clay loam (10 YR 3/4), containing a mixture of small bedrock fragments and numerous pieces of charcoal and burnt bone; layer [333] also produced a possible blade-shaped object (618), a slag cake (747) and some fuel ash slag (633). This probably represents a prolonged period of natural erosion, very similar in character to that identified higher up the slope [305], where it sealed the infill of the D-shaped platform [329].

(6) The stone rampart of the inner enclosure (FIG. 3.17)



FIGURE 3.17: *Inner face of main rampart [378]*

Only the inner face of the main rampart [378] was actually exposed in Trench B, following the removal of the layers which had accumulated against it. It proved surprisingly well preserved, despite the steep slope on which it had been constructed. While the upper courses had become weathered and disturbed, the lower part remained intact, standing to a height of over 0.3m. It was composed of closely set boulders and hewn fragments of local stone, not unlike those encountered in Trench A. It had been built upon the natural land surface [364], though whether this had been leveled in any way to accommodate its construction on so steep a slope could not be ascertained within the area available for excavation. A possible rubbing stone or mortar (FIG. 5, 1178) is said to have come from the rampart wall in this part of the site.

(4) EXCAVATIONS IN TRENCHES E AND F

TRENCH E, 1984

Work in Trench E was carried out in 1984 under the direction of Rob Young, on whose interim this report is based. Measuring 4 by 2m, it was designed to examine one of three low linear earthworks, which radiate out from the main enclosure into the surrounding landscape (FIG. 1.3). This example (boundary 2) extends eastwards, downslope, from a point just to the south of its north-eastern corner, before crossing the degraded remains of the outer enclosure bank. Beyond this it merges with the line of one of the more recent field walls.

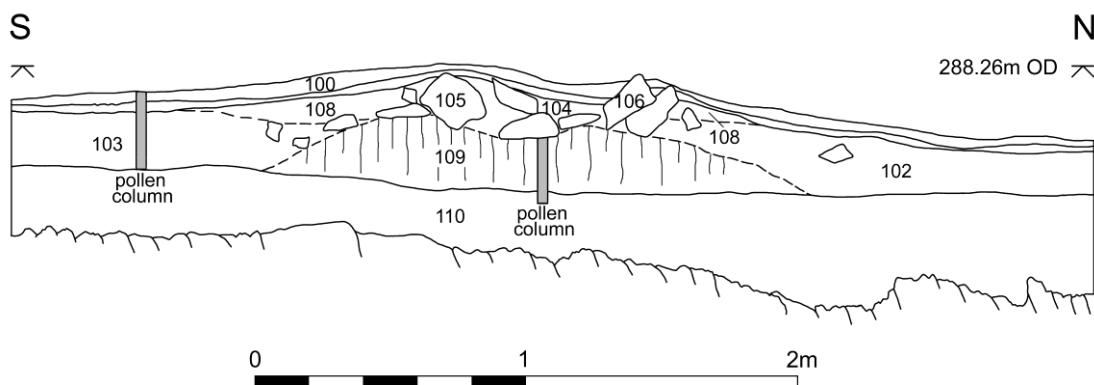


FIGURE 4.1: *West, uphill section*

Removal of the turf revealed a spread of medium to large angular stones [101], up to 2m wide, which extended east to west across the trench and clearly represented the collapsed remains of the original field boundary (not visible on the section, FIG. 4.1). In its turn this spread was shown to overlie a core [104] of stone-free dark brown silt loam (7.5 YR 3/4), faced by two parallel drystone walls [105 and 106], up to 1m wide, which survived no more than one course high (FIG. 4.2). In the western section two tapering lenses [108] of a brown silt loam (7.5 YR 4/3), containing a high proportion of small bedrock fragments, were found to either side of the wall line. These are likely to represent the eroded remains of the internal core, post-dating the

reworked soil horizons [102 and 103] in the original fields to either side. The excavation also showed that the wall had been built on a low mound [109], 2m wide, which was made up of mixed bedrock fragments and a brown sandy clay loam (7.5 YR 4/3). This is best interpreted as a marker bank, scraped together either from the surrounding land or from a ditch, as was the case in Trench F. Pollen samples were taken at two points, through the modern soil profile [103] and the buried soil profile [109] (see below for discussion). No finds were recovered from this trench.



FIGURE 4.2: *Detail of drystone wall faces [105 and 106]*

SOIL POLLEN ANALYSES (By M.J.C. Walker)

Procedures

Samples for pollen analysis were taken at two points in Trench E (FIG. 4.1): (a) 10 from the modern soil profile [103] adjacent to the linear earthwork; (b) and a further 10 from the buried soil profile [109] into the underlying natural subsoil [110].

Standard laboratory procedures were employed to extract the fossil pollen (Moore *et al.* 1991) and a sum of 300 land pollen was achieved in all levels sufficient for pollen

counting. In the case of the buried soil profile, however, the pollen and spores were in a poor state of preservation; thus, while traces of pollen were found in the lower two levels, these grains proved to be too deteriorated to identify and count. By contrast, the state of the pollen and spore preservation in the modern soil profile was relatively good, with fewer than 5% of the total land pollen being classified as indeterminate or unknown in most levels. Pollen data from both profiles is shown in FIG. 4.3.

Modern soil profile [103]

Poaceae (grasses), typically in excess of 50% TLP, dominate the spectra at all levels, though there is also a significant representation of *Galium*-type (bedstraws), *Plantago* spp. (plantains), *Plantago lanceolata* (ribwort plantain) and Cyperaceae (sedges).

Other herbaceous taxa recorded in consistent frequencies include *Taraxacum*-type (dandelions), Caryophyllaceae (pinks), Compositae-Tubuliflorae (daisies), *Ranunculus* (buttercups) and *Rumex* (sorrels). Low counts for *Cerealia*-type pollens (cereals) are recorded in the lower part of the profile. Fern spores (Filicales, *Polypodium*) are present throughout, along with *Pteridium* (bracken). Counts of woody plants are low, but *Alnus* (alder), *Corylus* (hazel) and occasional grains of *Betula* (birch), *Quercus* (oak) and *Pinus* (pine) are recorded. Of the heathland plants only Ericaceae (heather family) occur in consistent frequencies.

Buried soil profile [109]

In general terms the pollen spectra here are very similar to those recorded in the modern soil profile, in that the principal elements are herbaceous taxa, again dominated by Poaceae, with low representation of pollen derived from heathland and woodland plants. Differences between the two profiles are subtle, but include the more sporadic occurrence of Ericaceae pollen in context [109] by contrast with [103]; slightly lower counts for *Taraxacum*, Caryophyllaceae and Compositae-Tubuliflorae in the buried profile; a more consistent representation of *Cerealia*-type pollen throughout the buried profile, though numbers remain low; higher counts for fern and

bracken spores in several levels in the buried profile; and generally lower frequencies of *Galium* and *Plantago lanceolata* pollen in the buried profile when compared with the modern soil profile.

In the absence of a secure dating framework, the stratigraphic relationship between the two profiles cannot be established unequivocally. However, as the buried soil profile appears to be truncated by the construction of the linear earthwork, some degree of overlap between the two profiles might be expected. Indeed, a tentative correlation may be advanced on the basis of the records for *Galium* and *Plantago lanceolata* in the two profiles, in association with the appearance of Ericaceae in the upper levels of the buried profile and the virtual elimination of Cerealia-type pollen from the spectra; collectively, these might suggest that the upper section of the buried soil is the correlative of the lower 8-10cm or so of the modern soil profile. If this interpretation is correct, the upper 10cm or so of the modern profile may reflect soil development following the construction of the field boundary.

Discussion

Though the interpretation of soil pollen data is frequently complicated by problems of differential pollen preservation, the relatively high proportions of deteriorated grains that are often encountered, and by the homogenization of pollen spectra throughout a soil profile as a consequence of pedogenic and faunal processes (see e.g. Havinga 1974; Anderson 1979; 1986; Davidson *et al.* 1999), cautious inferences about former landscape processes and vegetation patterns may still be possible. The data from Caer Cadwgan indicate quite clearly that an open grassland landscape existed during the period in the two pollen diagrams. In other words, the field boundary was constructed across a landscape very similar to that around the site at the present day. However, within this very general palaeoenvironmental reconstruction, some landscape changes may be discernible.

Throughout the buried soil profile and in the lower levels of the modern soil profile, for example, cereal-type grains are present in low frequencies and, in

association with other taxa indicative of bare/open ground (e.g. Caryophyllaceae, *Ranunculus*, *Plantago media/major*) suggest some arable farming in the vicinity of the site. In the modern soil profile, however, the rising curve for *gallium* and the higher counts for *Plantago lanceolata*, *Potentilla* (tormentil) and Ericaceae (*Vaccinium* – bilberry?) above c. 12cm, in association with the decline in Cerealia, Caryophyllaceae and *Ranunculus*, could be indicative of an increase in stock grazing and a reduction in what limited arable activity had formerly been practised in the area. Hence a change from a pastoral economy with some arable cultivation to a pastoral monoculture may be reflected in the pollen data. In this context, it is interesting to note that if the correlation between the upper and buried soil profiles outlined above is correct, then the construction of the earthwork or field boundary broadly coincides with this change in farming practice. Hence, the increasing importance of pastoral activity may be reflected in both the archaeological and pollen stratigraphic evidence.

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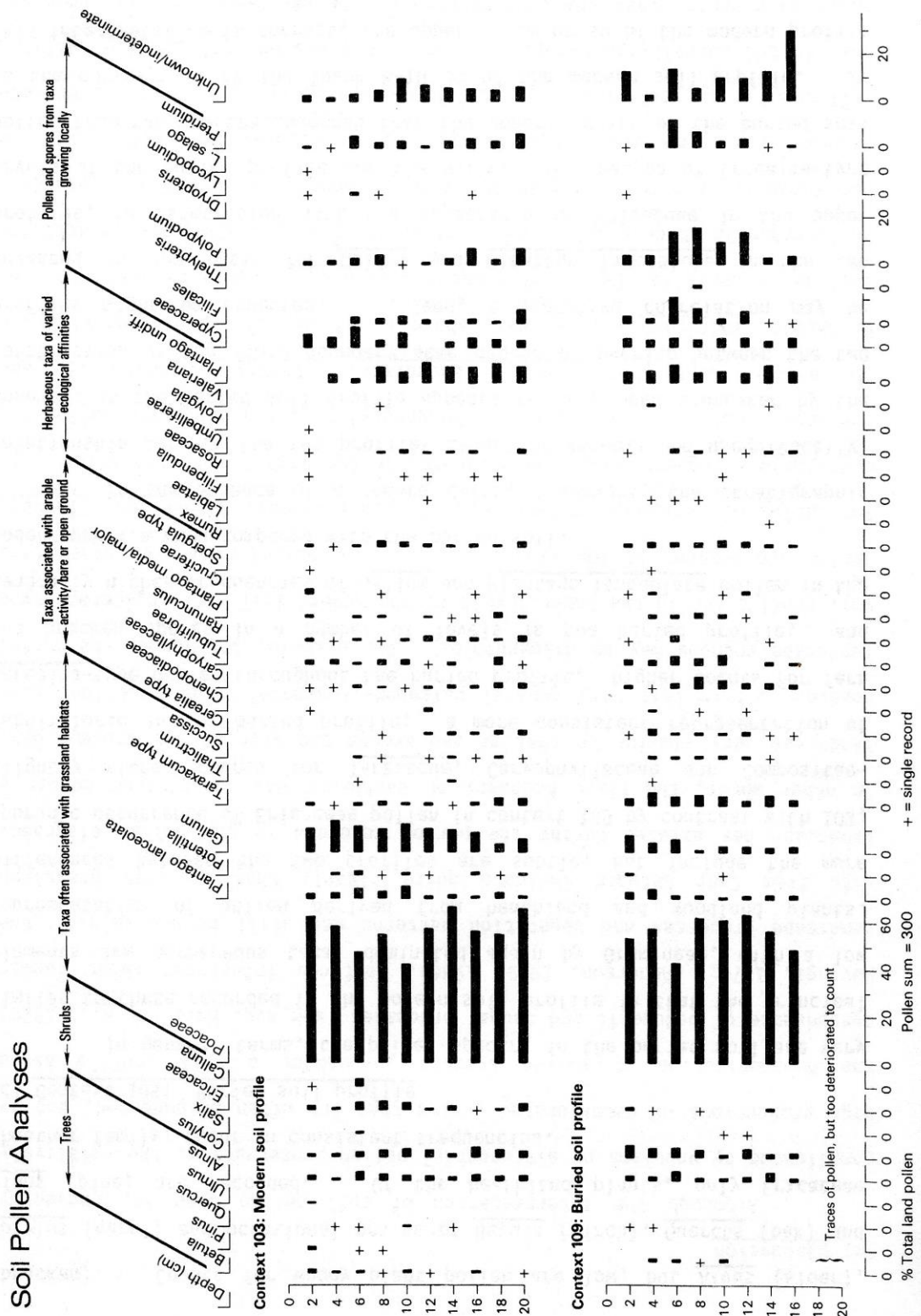


FIGURE 4.3: Trench E - results of soil pollen analyses

TRENCH F, 1986

Work in Trench F was carried out in 1986 under the direction of Rob Young, on whose interim this report is based. Measuring 3.5 by 2m, it was designed to examine one of three low linear earthworks, which radiate out from the main enclosure into the surrounding landscape (FIG. 1.3). This example (boundary 1) extends northwards, steeply downslope, from the vicinity of the main rubble spread. Prior to the excavation the line of a shallow ditch could be seen in the surface remains, extending along its eastern side.

While the sequence within the trench appeared to be broadly similar to that already described for Trench E, some difficulty was experienced during the post-excavation work in correlating the planned contexts with the main section as it was drawn and photographed on-site, hence the decision not to reproduce a section here. Removal of the turf revealed a scatter of medium to large angular stones [202], *c.* 2m wide, intermixed with a dull brown silt loam (7.5 YR 5/4), which clearly represented collapsed tumble from the original field boundary. This overlay a concentrated spread of medium to large stones (FIG. 4.4), the eastern part of which [205] proved to be the fill of a shallow ditch [207], *c.* 1m wide, while the rest incorporated the two drystone wall faces [204 and 206] of the boundary, only the lowest one or two courses of which remained *in situ*, up to 1m wide overall [FIG. 4.5]. There was very little evidence for any internal core between these faces, the remains of which must therefore be largely represented by the silt loam forming the matrix around the collapsed tumble [202]; it is possible, however, that a thin lens [209] of yellowish brown silt loam (10 YR 5/6), recorded only in the main section, might represent a surviving *in-situ* remnant. The material excavated from the ditch [207] had clearly been used to form a low mound [208], composed of mixed bedrock fragments and a brown silt loam (10 YR 4/6), *c.* 1.1m wide, which had been laid out across the underlying natural soil; this is best interpreted as a shallow marker bank upon which the boundary was constructed. While pollen samples were taken through this bank, in the event it was decided that further analysis would probably add little to the palaeoecological record already

obtained from the Trench E, given the stratigraphic similarities between the two trenches. No finds were recovered from Trench F.



FIGURE 4.4: *Stone scatter incorporating the fill [205] of gully [207] and the visible west drystone wall face [204] of the field boundary, looking south*



FIGURE 4.5: *Detail of drystone wall faces [204 and 206], looking south*

(5) FINDS AND SPECIALIST REPORTS

(1) Beads

6 Half of a deep-blue annular glass bead, with a D-shaped section, originally *c.* 6.5mm in diameter. Context [32].



15 Clear glass bead, roughly 14mm in diameter, decorated with a wavy blue line. Context [40]. cf. no. 503 from context [28] and no. 518 from context [127].



22 Small opaque yellow glass bead, roughly 4.5mm in diameter. Context [25].



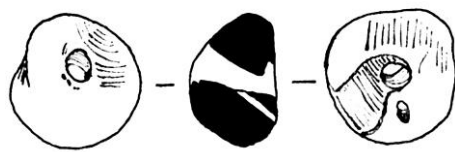
24 Blue glass button, 10mm in diameter, with textured decoration and a metal loop on base. Context [30].



358 Half of a small opaque yellow glass bead, roughly 6-7mm in diameter.
Context [54].



370 Large bead made from a pebble of amber (scale 1:1). Context [30].
(*Drawn by Jennifer Foster*).



503 Clear glass bead, *c.* 13mm in diameter, decorated with a wavy blue line. Context [28]. cf. no. 518 from just below in context [127] and no. 15 from context [40].



518 Clear glass bead, *c.* 13mm in diameter, decorated with a wavy blue line. Context [127]. cf. no. 503 from just above in context [28] and no. 15 from context [40].



544 Third of a blue glass bead, originally *c.* 22mm in diameter, decorated with a yellow whirl. Context [309].



(2) Bone

764 Fragment of burnt bone with two parallel cut marks (not illustrated). Context [347].

768 Fragment of a smooth bone pin, 14mm long with an oval or round section. Context [63].



(3) Stone objects

172 Stone object with chipped-out depression. Context [32].



226 Stone object with chipped-out depression. Context [32].



327 Perforated shale disc – possible spindle whorl. Context [30].



499 Slate spindle whorl. Context [28].



548 Pebble-stone mortar. Context [310].



554 Stone lamp/mortar? Context [310].



556 Part of shale spindle whorl. Soil Pit C.



580 Quartz hammerstone. Context [321].



581 Quartz hammerstone. Context [321].



599 Loom-weight. Context [310].



610 Red stone spindle whorl. Context [328].

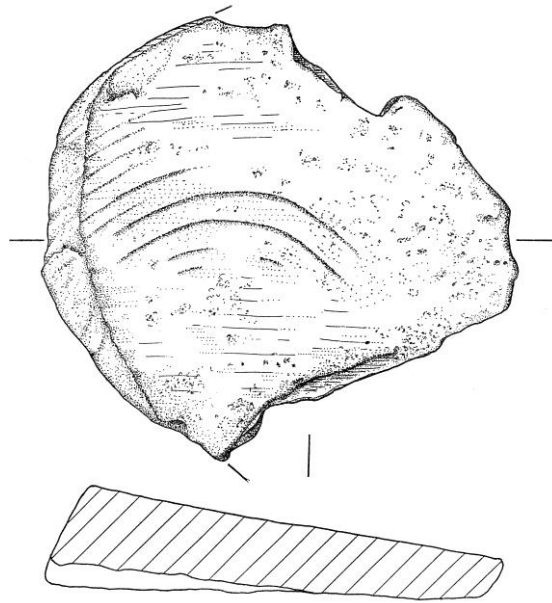


611 Fragment of stone object (not illustrated). Context [327].

621 Fragment of loom-weight. Hut 2 – context uncertain.



661 Quern fragment (scale 1:2). Context [337]. (*Drawn by Jennifer Foster*).



(a) Internal surface



(b) external surface

687 Shale/mudstone rubbing stone. Context [356].



713 Perforated stone object. Context [356].



749 Circular shale/slate object. Context [69].



777 Perforated rectangular shale/slate object. Context [69].

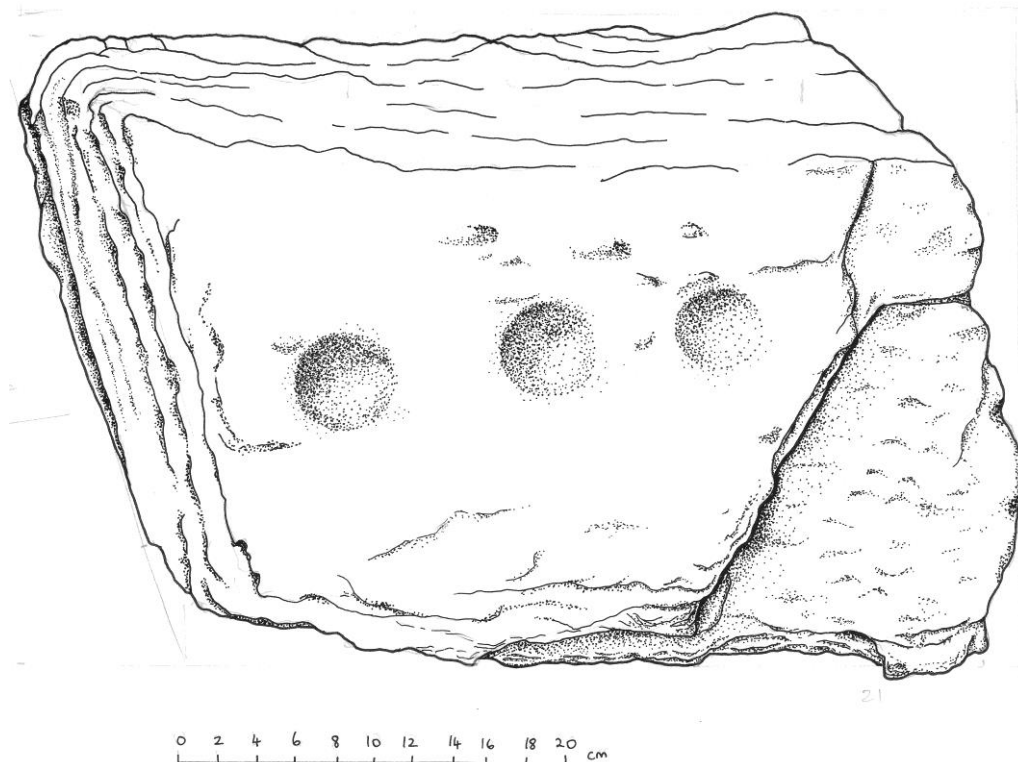


1178 Rubbing stone/mortar from 'rampart wall' in Trench B. Context [378]?



(4) Large stone object

11 Large stone with cup marks. *(Drawn by Jennifer Foster).*



(5) Water-worn, rounded pebbles

105 Two examples. Context [32].



109 Context [32].



141 Context [32].



218 Context [43].



300 Context [43].



319 Context [43].



322 Context [40].



372 Context [6].



549 Context [309].



612 Context [238].



663 Context [335].



694 Context [365].



1012 Rampart wall, Context [378]?



(6) Fe objects, after conservation (not illustrated)

448 Two pieces of a heavily corroded iron object, with a profile suggestive of a possible blade. Context [67].

450 Corroded fragment of small curved object. Context [67].

618 Two large and several smaller pieces of a possible blade-shaped iron object. Context [333].

658 Two pieces of a badly corroded iron object, with a round to square section. Context [356].

714 Four fragments of a corroded iron object. Context [310].

715 Single fragment of a possible corroded nail, pin or bar. Record sheet suggests a possible hobnail?? Context [335].

730 Two fragments of an iron object. Context [67].

751 Several fragments of a possible iron pin or nail. Context [32].

766 Roughly triangular-shaped piece of a possible wooden handle, with traces of corroded iron at widest end. Context [342].

767 Small iron stud or rivet with a round head and a short pointed stalk. Record sheet suggests a possible hobnail?? Context [309].

769 Small iron stud with a domed head and a square/oval and square shank. Context [69].

(7) **Pottery** (not illustrated)

373 Rim fragment. Context [54].

375 ?Base. Context [54].

501 Fragment with decoration(?). Context [32].

655 ?Rim fragment with applied band. Context [377].

765 Fragment. Context [347].

(8) **Moulds**

688 Cone shaped fired clay object. Context [356].



(a) Interior view



(b) Basal view

740 Fragment of sprue cup rim. Context [347].



742 Mould fragment. Context [347].



(9) Metallurgical Residues (By Peter Crew)

A small quantity of metallurgical residues was recovered from the excavations, with a combined weight of *c.* 1,900g. The majority was found in a variety of redeposited contexts and probably only represents part of the total quantity of debris produced at the site.

The residues can be grouped into four main types, as described below. The crucibles (and mould) fragments indicate copper/bronze melting and casting. The dense slags are typical iron-silicate slags, but they are not necessarily indicative of iron-working. The cakes are probably examples of the characteristic plano-convex hearth bottoms which result from iron-smithing, but it is possible that some or all of these slags may be the result of crucible refining or melting. The other dense slags are all typical hearth products and could result from either iron-smithing or non-ferrous metalworking. It is possible, then, that all of this material derives from non-ferrous metalworking, but it is probable that some iron-smithing was also carried out.

The quantity of residues recovered would have resulted from only a small number of secondary metalworking operations. Similar types and quantities of residues have been recovered from the Llawhaden enclosures and Castell Henllys. There is, as yet, no evidence of primary metal production in south-west Wales and it is possible that both the copper/bronze and iron would have been imported from some distance.

Crucibles

A large number of fragments of thin-walled crucibles, total weight *c.* 83g. The body sherds generally have a pale grey-green vitrified outer surface, but some of the rim sherds have black glassy vitrification on both the inner and outer surfaces, with traces of red copper oxide glaze.

| Context | Find number | Number of fragments |
|----------------|--------------------|----------------------------|
| 6 | 457 | 1 |
| 30 | 336 | 2 |
| 43 | 275 | 1 |
| 54 | 360 | 1 |
| 67 | 460 | 1 |
| 305 | Find 1010 | 1 |
| 327 | 745 | 1 |
| 347 | 739 | 25 |
| 347 | 741 | 20 |
| 347 | 743 | 1 |
| 356 | 685 | 1 |
| 356 | 720 | 2 |
| 356 | 735 | 5 |
| 356 | 744 | 1 |

Hearth lining

A few fragments, weighing 40g, of red oxidised clay with one surface vitrified. This material could derive either from a crucible hearth or from an iron-smithing hearth.

| Context | Find number | Number of fragments |
|----------------|--------------------|----------------------------|
| 28 | 497 | 2 |
| 28 | 500 | 1 |
| 28 | 515 | 1 |
| 28 | 727 | 3 |
| 32 | 4 | 1 |
| 32 | 5 | 2 |
| 347 | 737 | 1 |

Fuel ash slags

These are light vitreous slags, amorphous in shape and varying in colour from pale grey to black. Total weight *c.* 36g. Slags of this type are not diagnostic and can derive from a wide range of high temperature processes. Some of the lighter coloured fragments could be from melted crucible fabric. Some of the darker examples are probably from hearth lining fabric, fluxed with fuel ash.

| Context | Find number | Number of fragments |
|----------------|--------------------|----------------------------|
| 32 | 227 | 1 |
| 42 | 191 | 1 |
| 55 | 436 | 1 |
| 83 | 174 | 30 |
| 129 | 186 | 1 |
| 311 | 335 | 1 |
| 333 | 633 | 4 |
| 343 | 745 | 2 |
| 356 | 683 | 2 |

Dense slags

This material, weighing *c.* 1,744g, accounts for *c.* 92% of the metallurgical residues.

There are four main types:

(a) *Slag cakes*, generally of plano-convex shape, up to 30mm thick. There are seven fragments from broken cakes with a mean weight of 115g. The one complete

example is 90mm by 60mm by 32mm and weighs 458g. The total weight of the cakes is 1,264g, accounting for about two-thirds of the residues.

These cakes have upper cooling surfaces, with a variable amount of secondary corrosion products. The lower surfaces have accretions of clay and small fragments of stone from the hearth base. In section the cakes are vesicular, with rare fragments of entrapped charcoal. Two examples have flows of slag on the upper surfaces, which have not fully merged with the main cake. Another example is unusual in that it is very dense, has few secondary corrosion products and, on cutting, was found to be considerably harder than the other examples.

| Context | Find number | Number of fragments | Weight (g) |
|----------|-------------|---------------------|------------|
| Unstrat. | 13 | 1 | 90 |
| Unstrat. | 725 | 1 | 92 |
| 30 | 427 | 1 | 158 |
| 32 | 204 | 1 | 120 |
| 32 | 271 | 1 | 174 |
| 67 | 452 | 1 | 74 |
| 67 | 454 | 1 | 98 |
| 332(3) | 608 | 1 | 458 |

(b) *Amorphous pieces*, several fragments with a total weight of 436g. These are mostly small, irregular or broken pieces of dense slag, which would have formed in a hearth. Two pieces (293 and 309), with a combined weight of 95g, are coated with clay and small stones, which are probably a result of secondary corrosion and concretion.

| Context | Find number | Number of fragments |
|----------|-------------|---------------------|
| Unstrat. | 537 | 1 |
| 30 | 36 | 1 |
| 32 | 309 | 1 |
| 43 | 223 | 1 |
| 43 | 293 | 1 |
| 44 | 335 | 1 |
| 50 | 352 | 4 |
| 347 | 736 | 1 |
| 356 | 683 | 1 |

(c) *Prills*, total weight 31g. Small flows of slag with cooling surfaces, which would have cooled in the charcoal bed of the hearth.

| Context | Find number | Number of fragments |
|---------|-------------|---------------------|
| 25 | 46 | 1 |
| 30 | 54 | 1 |
| 32 | 724 | 2 |
| 67 | 458 | 1 |
| 77 | 449 | 1 |
| 129 | 186 | 6 |
| 347 | 738 | 1 |
| 347 | 741 | ? |
| 356 | 735 | 1 |

(d) *Spheres*, some distorted and some multiple, total weight 13g. Such material can form as a result of bloom smithing or welding operations, but are usually smaller than the examples from Caer Cadwgan. It is possible that these are small droplets of slag which have cooled in the charcoal bed of the hearth.

| Context | Find number | Number of fragments |
|---------|-------------|---------------------|
| 32 | 147 | 3 |
| 54 | 366 | 1 |
| 81 | 726 | 1 |
| 83 | 174 | c. 30 |
| 91 | 732 | 1 |
| 347 | 738 | 11 |
| 347 | 741 | 6 |

Hammer scale

There is a very small quantity of thin flakes of magnetic slag, some with curved surfaces from Trench B, context [347]. This might be hammer scale from iron smithing, but it is not entirely typical. Similar material can derive from broken skins of vesicular slag.

Haematite

There is also a single broken piece of stone, with small veinlets of haematite, but this would not be suitable material for iron-smelting (unstratified find (734)).