PORTH Y RHAW
COASTAL PROMONTORY FORT
SOLVA, PEMBROKESHIRE
1997
ARCHAEOLOGICAL EXCAVATION
INTERIM REPORT

Project Record No. 30942
SAM PEMB 273
APRIL 1998

Commissioned by: **Cadw**

Report by: **P Crane**
of
Archaeoleg CAMBRIA Archaeology
The Shire Hall
8 Carmarthen Street
Llandeilo
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SA19 6AF

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Summary

Porth y Rhaw is a multivallate promontory fort, which appears to have been densely occupied from at least the later Iron Age and into the mid Roman period. The remains of five probable roundhouses were identified. One amber and two glass beads were found, along with three spindle whorls, two stone counters and a probable jet counter. Radiocarbon and archaeomagnetic samples were taken from a hearth, which appears to be related to an early phase of the defences A pottery sherd indicates that the site was in use into at least the second century AD.

Purpose

There are over 50 coastal promontory forts in Pembrokeshire, with 14 of these sites on or adjacent to St Brides Bay (figure 1). Those nearest to Porth y Rhaw are the Gribin 1.6km to the east and Penpleidiau Camp 2.3km to the west.

No major work has been published on these coastal promontory forts in the last 25 years, since the excavation at Tower Point Rath in 1970 (Wainwright 1971) which was limited to one roundhouse area and a section through the inner defence. Prior to this, area excavation had been started on the fort at Dale in 1996 by Professor W F Grimes and continued until 1983; however, this is unpublished, except for the first interim report (Grimes 1966). Some work was subsequently undertaken at Dale in the late 1980s (Benson and Williams 1987, Ramsey and Williams 1992). A small amount of work on comparable type sites has been undertaken in Cornwall although this has been limited in scale (pers comm. Peter Herring, Cornish Archaeological Unit, Herring 1994, Smith 1988). These sites, by their nature, are very exposed to the elements, and the more complex, presumably higher status, forts, in particular, are being eroded.

It is unlikely that *all* of the coastal promontory forts of Pembrokeshire were occupied at the same time, and were of similar status or function, given that their positions are occasionally quite close, they vary in area of interior, and in the size and form of their defences. The date ranges indicated so far, suggest defences beginning in the Bronze Age (Benson and Williams 1987, Ramsey and Williams 1992), and continuing well into the Roman period if not beyond.

Porth y Rhaw was identified as one of the seven most vulnerable of the 65 coastal promontory forts of Cardiganshire, Pembrokeshire and Carmarthenshire and is the first of these to be evaluated as a result of that assessment.

At Porth y Rhaw the main research objectives were:

1) to date the fort

2) to recover all possible information about the settlement of the fort from the areas most at risk.

Location

Porth y Rhaw (SM 786242) lies on the coast 3.5km east of St David's, 2km west of Solva (figure 1), and 0.8km south of the A487 road at Nine Wells. The fort is situated adjacent to the coastal footpath to the east of the inlet.

Description

The remains of the fort (figure 2; plate 1) lie on the eastern side of a stream running south from Nine Wells. Two promontories occupied by the fort are undoubtedly the eroded remains of a single much larger area, projecting south-westward into St Bride's Bay.

The surviving promontories are on high ground, somewhat separated from the hinterland by a minor stream and steeply sloping valley. The remains of the multiple banks and ditches are still very impressive, especially as the inner defences are on much higher ground than the outer bank.

The promontories comprise 35m high sandstone and mudstone cliffs, the bedding layers of which are to a great extent in near-vertical formation (plates 2 and 3). There are two major sea caves below the fort (figure 4). The western one is at least 40m deep and is situated near the western end of the inner defensive bank of the fort; the eastern cave is at least 50m deep. The backs of both of these caves are blocked by storm pebbles; they are nearly inaccessible and the entrances fill with the tide. The directions and edges of the caves indicated on the plan are only approximate. There is a lesser cave just to the south of the coast path on the western edge of the site.

Both of the promontories are enclosed by the third ditch and fourth bank, and possibly also by an outer counterscarp bank, which has been utilised by a much later hedge bank, along part of which the Pembrokeshire Coast Path now lies. On the western side, between the third ditch and third bank, there are some scoops into the hillside (figure 4).

On the western side the full depth of the defences survive. There are four banks with three ditches between them. The inner bank and inner ditch are very steep and massive (figures 2 and 4). The second bank is far less pronounced and, on the eastern side of the central area of the defences, appears as little more than a counterscarp bank.

The second ditch and third bank are both large and steep-sided, and the western ends appear to butt or turn southwards (figures 2 and 4); however, there is an indication that this third bank, or another minor bank, survives along the eastern side of the western promontory. Near the mid point of the defences the second ditch turns sharply northwards and passes through the third bank. East of this the third bank has no inner slope until near its eastern end close to the entrance (figures 2 and 4). There may be an indication of a filled outer ditch on the eastern side of the entrance; however, this could be a natural feature.

Although the entry through the outer defences appears to have been eroded away on its eastern side, the entrance still survives through the inner bank. There is an in-turn to the western terminal of the inner bank. Indications of former excavation trenches survive around the entrance on the inner and third banks (figure 4).

On the eastern promontory, some 25m inside the entrance, there is a suggestion of a hut circle, noted both by the OS Survey (1973), and Rees (1992) (figures 2 and 4); these indications were confirmed in the 1995 evaluation (Crane 1996). Towards the southern end of the interior, at the highest point, there appears to be a low bank.

There are suggestions of remains of late hedge banks over the eastern end of the third ditch and over the western end of the inner ditch. There is also a small bank in the central area of the inner ditch, which could be a hedge bank (figure 2).

Site History

A number of flint scatters have been recorded from the fields on the inland side of the promontories (Grimes 1932; DAT Sites and Monuments Records, PRN 2717, 2719, 2720, 7758, 12254, 12255). There are also 11 bags of flints

from 'Porth y Rhaw' deposited by Professor Grimes at Scolton Manor Museum, Haverfordwest (accession number PM.A.79.1), which may be those from the reported sites. Although there is no associated paperwork it is considered most likely that they are not from the promontory fort itself, but from the mainland. These flints are probably Mesolithic or Neolithic.

The antiquarian Richard Fenton visited Porth y Rhaw in 1808/9, giving a description of the site as well as undertaking some digging (Fenton 1903, p76-7). It was already recognised by then that much of the site had been eroded away. Fenton excavated within the ramparts on the summit of the cliffs, on what is described as an extensive grassy area, by two large stones, and found charcoal, limpet shells and signs of much fire.

Fenton also noted hut sites between the third and second ramparts. This is probably misleading; he may have been describing the slumps or gouges, noted during the 1994 survey, that can be seen on the north-western side of the promontory between the third bank and the cliff edge (figure 4). These features may be quarrying, and could be associated with post medieval activity in the valley, possibly the mill site, which only ceased working about 1915 (Warburton 1944; Raggett 1990, p36-7).

In the mid-nineteenth century a descriptive text and plan was published (Jones and Freeman 1856) (figure 3). The hut sites noted by Fenton were either not recorded or were no longer apparent. It is difficult to explain the width-to-length ratio of the eastern promontory as shown on their plan, other than it being inaccurate.

A large worked stone found in the third ditch was recorded earlier this century. An attempt had apparently been made to make a sizeable hole through the stone, which then broke. The stone may have been intended for ritual use (RCAHM(W) 1925, No 1168, p411). Its present location is unknown.

There are records of paths descending from the fort to the sea, still to be seen in 1906 (Warburton 1944, p10).

In Warburton's *The History of Solva* (1944), the description of Porth y Rhaw fort (p10) refers to "a shallow circular depression on the summit, 13 feet in diameter, and excavation showed that this was probably a cattle pond". The highest part of the site is now the southern end of the eastern promontory, but this is actively eroding and what was described as the summit may now be lost. Warburton states that about 1800 'charcoal and limpet shells were found near the pond', almost certainly a reference to the investigations by Richard Fenton (although there is no such mention of any feature like this in Fenton's account). The excavation of the 'cattle pond' may have been undertaken by Warburton or may possibly have been carried out by Dr F Oswald, who assisted with the 1944 history. There are local accounts of Dr Oswald having undertaken work on the site, and the possibility of his having pottery from the site at his house in Solva. At present his papers are being archived at Nottingham University, but there appear to be no records of any work on this site (pers comm. Mulholland N 1995). Some drawings and pot sherds from the residue of property from the Oswald family are thought to be at Scolton Manor Museum (pers comm R Kennedy) but to date none can be traced, and they may not be relevant to Porth y Rhaw.

Warburton's association of his 'cattle pond' with Fenton's 'charcoal and shell' discoveries 130 years earlier (see

above) may not necessarily be correct, however; he makes no mention of finding the two large stones referred to by Fenton, or of any finds of his own similar to those recovered in 1808/9. It would seem probable that Fenton's excavation may have disappeared prior to 1944 and that part at least of Warburton's own site may have been lost since then (figure 2).

The banks of the fort were reputed to have been used for small arms practice during the Second World War, and a .303 calibre spent bullet was found in the topsoil of Site 1. It has been reported than the headland was a post for the Home Guard (pers comm. H Thomas).

The Ordnance Survey (OS 1973) gave a brief description of the site and a detailed plan, drawn in 1966 (figure 2). Here the third bank's western end is drawn with a turn to the south to the cliff edge; also of note is the probable hut circle on the inside of the entrance. This hut site has also been independently noted at later dates (Rees 1992, Crane 1994).

There are local eyewitness accounts that corroborate the digging of holes on the site 15 to 20 years ago, possibly to look for treasure. These may relate to the old trenches visible around the entrance on either side of the inner bank and immediately to the west and south of Site 2 (figure 4).

In 1993-4 a reconnaissance of all the coastal promontory forts of Dyfed was commissioned by Cadw and undertaken by Dyfed Archaeological Trust (Crane 1994). This identified Porth y Rhaw as one of the seven most vulnerable of the 65 sites examined. In particular it was noted that a considerable length of the surviving inner bank was now critically close to the cliff edge, along with the exposed south-western end of the inner ditch. Furthermore the western side of the interior appeared to be fissuring parallel to the edge and a cliff fall in this area was probable in the near future. A contour survey of Porth y Rhaw (excluding the southern end of the western promontory) was produced within that report.

Observation of this site has led to the conclusion that a large proportion of the interior had been lost before any records were made, and the later records indicate that the erosion has continued.

The 1995 Excavations (Crane, 1996)

The evaluation took place over four weeks in the summer in extremely dry conditions, during which time four trial trenches were excavated (figure 4). Sites 1 and 4 were further excavated in 1997 and are described in detail later.

Site 1

The inner ditch was not re-examined in 1997.

Site 2

This was positioned to establish whether the surviving end of the third bank on the west side of the entrance (figure 4) was the original end of the bank or if it had been lost to erosion. The main trench was not excavated down to bedrock, for safety and logistic reasons. A lower, voided large stone rubble layer was only partly excavated; it may perhaps represent the upper fill of a (possibly deliberately) backfilled ditch, on the line of the third bank. A post hole was found in the terminal of the third bank, possibly for either a palisade or revetment. The form of the bank makeup layers appeared to indicate that the present shape of the bank end is due to erosion.

The results from this trench suggest that the outer defence around the entrance was remodelled, rather than unfinished, possibly to create a

"fighting platform" over the former second or third ditch.

Site 3

This was excavated to determine if the third bank continued along the surviving western promontory (figures 2 and 4). The results showed a buried soil sealed below a probable small bank; there was no sign of any outer revetting. It is possible that this minor bank is a counterscarp bank for a ditch now lost over the cliff.

The 1997 Excavations: Methodologies and Results

The main excavation took place over four and a half weeks in the later part of the summer; the work force consisted of the project manager, project assistant, six site workers and up to eight students and/or volunteers. A smaller team continued for a further two weeks on the southern end of the interior. Initially the conditions were mainly very dry and clear, and occasionally very windy; this caused problems with soil colour differential, and lack of diffuse light for photography. Due to wind conditions, work was suspended on Site 1 on a few occasions, as this area was most exposed. One full day was lost due to gale force winds and torrential rain. During the two week extension further time was lost through heavy rain, which rendered the site waterlogged and unworkable. The final black and white photographic film is marked due to water penetrating into the camera.

The areas being excavated were adjacent to 30-38m high cliffs, most of which are near-vertical. Theyare also unstable and on the western side of the interior there appeared to be a shearing line running parallel to the cliff. For safety reasons, therefore, no excavation took place within 1m of the edge.

Prior to excavation and after backfilling and re-turfing all areas were photographed.

During the excavation both the open areas and the spoil-tips were frequently scanned by metal detectors; they detected a large number of anomalies, the majority of which later proved to be natural. It is considered that little if any stratified material went undetected.

Soil from the excavations was placed on large plastic silage sheets. Turf was stacked, and on the interior excavation (Site 4) it was possible to build a low turf wall between the excavation and cliff edge; this prevented staff and visitors walking along the edge and gave a feeling of security, as well as providing some protection from the wind.

Site 1

The 1995 trench had discovered evidence for revetment on the inside of the inner bank and the remains of a hearth within this bank. No external facing or revetment for the bank was found *in situ*, but a layer of very large stones partway up the ditch fill was observed and it was considered that this could possibly be part of the remains of an outer face for the inner bank.

The excavation objectives were:

- To complete the excavation of the hearth found towards the western end of the bank in 1995, taking further samples for radiocarbon dating and with the possibility of being able to obtain an archaeomagnetic date.
- Recording the rest of the hearth and trying to ascertain its function. Continuing excavation of the bank adjacent to and below the hearth, to examine the structure of the interior timber revetment.

- Take additional samples of the buried soil below the bank if the results of the 1995 sample indicate pollen survival.
- Landscaping after excavation rather than reinstating to be undertaken as this end of the bank will be lost to erosion in the near future.

Summary

After removal of turf and topsoil over the whole area, the backfill of the 1995 trench was removed, and the inner revetment trenches were re-excavated. The north-east section was drawn (251, figure 6) and another sample (563) was taken from the buried soil below the bank for pollen analysis. As the area on the south-west side of the trench was excavated, the 1995 drawing (222) of that section was slightly amended (figure 7).

The rest of the hearth was excavated; the archaeomagnetic data obtained indicated a date much later than that from radiocarbon samples taken previously. This hearth may have been associated with jewellery manufacture. The inner revetment trenches may indicate an outer stone construction, robbed at a much later date.

Revetment Trenches

In the 1995 evaluation trench no evidence was found for external revetment other than large stones part way up the ditch fill, which may have come from the front face of the bank (figure 7; plate 4). The profile of the bank and ditch was continuous and there was no indication of a level platform for a wall face or berm. This may suggest that it was of glacis form; however, if a platform for a front face had existed, then it may have been lost as the upper edge of the ditch eroded. No evidence for any post holes on the front edge was found, although these could easily have lain to either side of the (relatively narrow) 1995 trench. In 1997 this area was extended and the front edge of the bank material was cleaned but again no evidence for external revetment was found.

There was a geological deposit (47) (figure 6) of yellowish medium buff silt clay with fairly sparse small and large sub-angular stones plus rounded stones, filling a depression or large gully, which was directly below a cut for an inner revetment (21) and an outer trench (20). The deposit was very similar in appearance to the upper geology sealed beneath the buried soil in the bank, and was only investigated by slot trenches.

The edge of the feature filled by deposit (47) lay on the same line as the inner cut (21) (figures 6 and 7); however, it is considered that the most likely explanation of this alignment is that the edge of the inner cut (21) utilised the geological edge for easier excavation. There are a few other geological filled gullies visible in the upper cliff faces to the east of Porth y Rhaw. As serious safety implications were involved in any extension of this trench to the east, uncertainty regarding the interpretation of this feature remains.

Excavation of the internal revetment trenches appeared to indicate that inner cut (21), nearest to the bank, is the earlier, followed by an apparently later cut (20), 350-400mm away from the bank (figure 6; plate 5). The upper edge of the inner cut may be formed by the bank material (11; 37) butting against probable timbers, which either rotted or were robbed and the void filled (15).

Some of the lower fill (18) of the outer trench (20) was of compact light brown clay patches, and initially this was considered to be packing for uprights. However excavation showed that, if

this was clay packing, it was longer *in situ*, and apparently mixed (although not conclusively) between the lower parts of both the inner cut (21) and the outer trench (20).

A possible interpretation for these cuts is that the outer one may be for stone uprights, supporting a timber revetment in the inner cut. There are two upright stones (plate 6) on the inside of the bank 35m to the west of the fort's entrance which may be the remains of such an outer support, and probably remain *in situ* because of their inaccessibility. Any such stones within the area of Site 1 would have been easily removed and the relatively soft nature of some of the fills within these cuts (compared to the very hard material in the bank) may indicate very late post-medieval robbing.

Bank Structure

The upper geological deposit consisted of a layer (13) with upper lenses (43-45), below a buried soil (12) (figures 6 and 7). The buried soil was approximately 180mm thick and sloped slightly towards the exterior edge of the bank. No further investigation was undertaken in 1997 other than further pollen sampling. This soil could just be seen continuing along the face of the inner cut (21).

In the north-eastern section (figure 6), there was a lens of iron panning (42) immediately above the buried soil (12), and at the base of the possible remains of a buried turf (41). Neither the panning nor the buried turf were visible in the section opposite.

Above the natural layers (12; 41; 42), the lowest bank deposit (11), as seen in the south-west side of the trench (figure 7), was fairly uniform and probably derived from the initial cutting of the ditch, and/or the internal revetment features. However on the other, north-east, side of this trench, the stratification was more complex, with two or three separate layers (11; 39; 40) forming the lower part of the bank (figure 6); this *could* be a primary bank but it is very low (less than 500mm). All of these layers were relatively stone free.

Layer (48), above the lower bank deposits, contained a large amount of shattered stone, probably derived from the cutting of the bedrock for the ditch. Above this was a layer of medium brown silty clay (37), containing large angular stones, again probably produced from cutting the bedrock. (These large stones appeared to form a linear deposit on the inner half of the bank, but in the south-west section (figure 7), they do not appear to have been in a discernibly separate layer.) Above the silty clay (37) there was a thin lens of silty clay with sparse small stones (38), deposited at the back of the bank. Again this layer was only seen in the north-east section (figure 6).

At this level a hearth (9) (figure 7) had been made on the bank, resulting in fire-reddening of the underlying deposits. The 1995 evaluation trench found a post hole (5) apparently associated with this hearth (figure 5). The post hole packing (6), the upper part of which was also fire-reddened, was within the main section (figure 7) and the post pipe (7) and fill (8) were within the evaluation trench. The post pipe (7) was 100mm in diameter and at least 580mm deep.

The fill of the post pipe (8), partly voided, contained a large amount of charcoal and a flint flake. The charcoal and soil appeared to have fallen into the post pipe from the hearth use material (4).

The remainder of the hearth area was uncovered during 1997, and it appears to have been in a slight hollow (plates 7, 8 and 9). Near the centre of the

burning there was a large stone, with slight signs of being affected by heat on the top, but diminishing rapidly down the side. This lack of burning on the stone did not appear consistent with the fire reddened clay from which this stone protruded. (It would not have been possible for the stone to have been pushed down from above through the hearth material.) Archaeomagnetic sampling undertaken on the hearth (9) indicated differential movement of the hearth deposit; this, along with the lack of burning on the large stone within the hearth, appeared to suggest that at the time of burning the ground below was not compacted and the hearth had subsequently settled around the stone, which was not therefore an intentional feature of its construction. The variations in archaeomagnetic results were no more pronounced near the stone than from further away; this seems to confirm the originally uncompacted nature of the bank material below, which on excavation was found to be very compacted.

The results of the archaeomagnetic sampling, however, are not consistent with the radiocarbon dating of a sample from the fire use deposit (4) immediately above the hearth. The results of the radiocarbon sample (SWAN-101 Porth y Rhaw) gave a date of 2470 ± 70 BP. The archaeomagnetic data, on the other hand, indicate a 2nd century BC-1st century AD date, no greater precision being possible due to the movement of the hearth material (Tarling 1998). Other samples had been taken from around the hearth for radiocarbon dating during both the 1995 evaluation and the 1997 excavation; due to the inconsistency between the dating methods it is now proposed to send these for analysis.

Part of a blue glass bead (431), (figure 11) was recovered from the charcoal-rich fire use deposit (4) by sieving. The charcoal from the hearth spread for some distance, becoming less dense, although with more in the lower part of layer (36), not directly above the hearth (9); there were also some charcoal flecks in the layer above (10), which directly overlay the hearth (figures 6 and 7).

The upper layers of the bank (10) and (2) appeared to have been eroded after any facing materials had gone and before the build-up of topsoil and turf (1; 35).

No additional excavation of the lower bank material below the hearth took place nor any investigation of the ditch on the outside of the inner bank.

Site 4

The 1995 trial trench lay entirely within the area excavated in 1997, and had already confirmed the existence of part of a stone footed roundhouse wall and a few postholes to the south.

The excavation objectives were:

- To undertake area excavation of the southern end and extend this as a wide trench or area down the threatened (western) edge to the inner bank.
- To excavate the hut circle, or its western side, resources permitting.

Summary

Parts of at least five roundhouses were located along with a number of substantial post holes. The remains of a metalled surface were also found which would appear to extend into the fort's entrance.

The interior

Site 4 is on the western side and end of the interior promontory. The total length of the trench was just over 61m, the width varying from 3m to 5.5m,

with a wider area at the southern end of the promontory and another broad area to the north, incorporating the 1995 evaluation trench. (A baulk of 1m or more was left between the excavation and the cliff edge for safety.)

The upper geological horizons, where visible, appear to have some variation and have only been seen to any extent where full excavation has taken place on the end of the headland (the area covered by figure 9). This consists mostly of very light brown silty clay loam with a varying quantity of angular shattered stone; within this there are virtually stone free areas and also patches of clay soil. Some of this clay soil may prove to be buried turf or possibly spread turf walls (yet to be examined). There was evidence of a number of animal burrows or disturbances. A small test trench was excavated into the far southern end of the area (figure 9), in order to confirm the geological nature of the deposits.

The earliest identified archaeological material consisted of a scatter of flints, probably of late Mesolithic date (see flint assessment below). The distribution of these flints has a concentration towards the end of the headland, probably partly as a result of this area being excavated down to the geology, a large number of flints lying just above this level. However there were a greater number of flints recovered on the eastern side, adjacent to two possible hearths or burnt areas (1740) and (1741) both of which extended into the sections (figure 9).

The southern end of the headland (figure 9; plate 10)

One of the earliest features was a gully of a probable roundhouse ((677), overall diameter 8.6m). It is possible that some of the post holes nearby could be associated, although this could not be established and they possibly respect a later roundhouse (gullies 637/1738). The earlier gully (677) was cut by the later roundhouse (637/1738). There were no indications of packing stones in the fill (676) of the earlier gully (677). The interior of the later roundhouse appeared to have been eroded by use and the earlier gully could not be traced any further.

Within the entrance way between the later roundhouse gullies (637/1738), (overall diameter 9.25m), there appeared to be the remains of an earlier phase or entrance on the same circumference. These consisted of a gully (1745) and at least one post hole (1743), and the possibility of another post hole or holes (1744). Due to the wet conditions these possible entrance features could not be successfully excavated, but it is hoped that they may be examined in the future. The gully (1745) within the entrance could be the laying out for the whole of the later roundhouse (637/1738), but never utilised, or the remains of an earlier roundhouse in the same location. These features definitely pre-dated the two entrance post holes (1734; 1736) and the worn hollow (685) between them.

The fills (636/1737) of the roundhouse gullies (637/1738) (figure 9) contained a large number of packing stones, probably for slightly irregular timber uprights (plate 11); there was no evidence for continuous wall planks extending into the ground. A very large quantity of these packing stones were fire reddened, and would appear to have been burnt prior to this later use. The fill of the northern gully (1737) probably contained a stone shale disc (433), although this was found prior to the feature being defined. The northern gully of the roundhouse appeared to be related to a clay deposit (1739), which ran adjacent to and was cut by it; the clay could be the spread from a turf bank. It is also possible that the clay

deposit (1739) was the remains of a turf layer, protected by the roundhouse wall. It is anticipated that this clay deposit will be examined in the future.

There was no evidence for internal structural post holes. The stake holes within the later roundhouse (637/1738) do not appear to form any meaningful pattern and may not relate to it. The interior of this roundhouse may have contained a thin occupation layer or floor although, if so, it was very disturbed or very fragmentary. Two hearths or areas of burning (1740; 1741) were located running into the main sections.

There were a number of post holes on the end of the headland (figure 9). However due to the small area under investigation, the form of any post-built structure could not be recognised.

There was apparent similarity in some post hole sizes. Some post holes still had stone packing (1703; 633; 689; 641; 691) and would have contained substantial posts, well set and up to 300mm diameter. Lack of stone post packing is not necessarily an original construction feature; the holes may never have had such packing, but, equally, they could have been robbed of stone. Removal of stone packing may have occurred in those probable earlier post holes (660; 678; 680).

Post hole (1703) may have been paired with an earlier one (689) ora later hole (641); these last two post holes could, however, have co-existed, as the post pipes did not cut each other. Two post holes (660) and (633), which were similar in depth to those mentioned above, may have formed part of a structure or structures.

A post pit (695) may have contained two posts, or a replacement post in the same packing (492; 494); it is possible that this feature may be associated with post hole (1703) and/or another possible post hole (691), in the western section.

There were three other features within this part of the western section: (622) a possible post hole; (626) a terminus of a possible shallow gully, the fill of which (625) contained charcoal flecks and some calcified bone(?) fragments; (624) appeared to be a rounded shallow pit, cutting the post hole (660), which in turn appeared to have cut the roundhouse gully (677).

There were a few other features south of roundhouse (637/1738): at least three stake holes (671; 673; 1705) (prevailing site conditions may mean that some stake holes could have been missed); and a very small pit, gully or depression (675) which could possibly have been animal disturbance.

On the north side of the roundhouse (637/1738) there were 3 shallow pits (662; 664; 666) (plate 12), located on a natural rise and the highest point of the present-day promontory fort. These pits were cut 170-180mm deep into an apparent geologically deposited clay. All were approximately circular, 500mm, 850mm and 700mm in diameter respectively; all contained burnt stone and charcoal. Samples were taken of apparently burnt material from two of the pits (664; 666) for analysis (566; 567; 570). There were signs of fire reddening of the clay around the central pit, which also appeared to have associated stake holes adjacent to its edge. Just north of the southern pit (662), there was an apparent structure (1747), possibly associated with it, consisting of a semi-circle of 5 stake holes and a small post hole. All of these pits were cut into geological clay and all held water. The post holes and cooking pits in the headland area appear to respect the later roundhouse (637/1738). They were sealed by a

shaly/shattered stone and soil layer (602/604) that extends over most of the site.

This layer (602/604) possibly represented occupation buildup or distubance. However, most archaeological features could only be defined after this layer had been removed, except in a few places where some stones from features below appeared through it. There were a number of animal disturbances into this layer. Above this "occupation" layer was a nearly stone free layer (601/603) which appears to be a natural build up after the site was abandoned.

Post-dating the roundhouse (637/1738) there was a layer of "metalling" (627) of shattered shaly stone, filling a hollow (possibly worn). This layer sealed the southern gully (637) of the roundhouse and the latest post hole below (633). This "metalling" was clearly distinctive from the shaly/shattered stone and soil layer (602/604) immediately above.

In the area of what was thought to be a possible low bank (shown on figure 9, outside excavation area), and above the stone/soil layer (602/604) there were traces of a curving stone wall footing (607) (figure 10; plate 13), standing one course high. Only a part of the outer facing of large angular stones remained, together with some of the core of shattered grey shale, set on edge the estimation of diameter, therefore, is far from certain, although it appears to be in the region of 3-4 metres. This could be the remains of the 13 foot cattle pond (*pound*?) reported on the summit by Warburton (1944); however, there was no indication of any recent excavation around it. This feature must be much later than most of those on the site as it is above the shaly stone/soil layer (602/604), and may belong to a period after the abandonment of the fort.

However, there was no evidence that this wall footing stood much higher than its excavated remains and its northern part appeared to have been robbed.

Butted against the southern side of the small wall (607) there was a linear feature of stones (606), with a small section of possible wall facing. This feature may be the remains of a straight wall footing, but it could simply be a spread of wall tumble. The lack of substantial remains prevented more conclusive interpretation.

Above the linear feature (606), the small wall (607) and sealing the shaly/shattered stone/soil layer (602/604), there was a layer (601/603) of almost stone free, brownish grey, fine silty loam. This layer was seen all over the interior of the promontory except where disturbed by animals, and appears to be post occupation build-up with no man made activity. The turf (501) above the stone free soil (601/603) is very thick in all areas except for the southern part of the headland, and at its far end is non-existent, where it is being eroded away and possibly suppressed by salt spray.

The slight bank appears to be a natural geological feature, perhaps with slightly more build-up of archaeological deposits over it.

Area north of the bank on the headland (figure 8)

This area has not been fully excavated and as yet probably only the later features have been revealed and partly investigated.

In the area immediately to the north of that covered by figure 9 (see figure 8) there were the remains of a well preserved roundhouse. Only the northern gully (635) and the interior features were investigated. The diameter of the roundhouse gully was

approximately 10.4m external and 9m internal.

There were a number of post holes within the roundhouse, all of similar dimensions, with little indication of any post packing. One double post hole (645; 647) re-used a probable worked stone (plate 14). The majority of these post holes formed part of an inner ring (608; 610; 619; 643; 645; 647; 655; 657). Only one post hole (608) had an observable post pipe or possible later stake hole (649).

Just outside this post hole ring there was a very shallow, curving, but discontinuous, slot (615/1751); only the northern segment (615) was excavated. The slot was up to 200mm wide, 100mm deep and 7.1m in diameter and a small spindle whorl (438) was recovered from its fill (614).

The southern section of the roundhouse gully (1749) was not excavated. The fill of this (1748) appeared to be cut by a probable late post hole (629) and another possible unexcavated post hole (1753).The excavated northern section of the roundhouse gully (635) appeared to be a continuation of the unexcavated southern section (1749). There were no indications of settings for posts or wall planks. This larger gully may relate to a smaller cut (1756) joining on its north-west side which extended for a short distance into the section. No definite relationship could be ascertained between these two features, but it would seem that the smaller cut (1756) is earlier or, possibly, contemporary with the larger gully (635). The upper part of the fill (634) of the roundhouse gully (635) contained a quantity of angular stone, some showing signs of burning; no relationship was noted between the gullies.

To the south of the roundhouse there was an irregular, possible linear, layer of clay (1752); this may have been formed from wash-down from the slope to the south. The feature was not excavated and its relationship with the roundhouse gully (1749) is uncertain.

All of the roundhouse features and fills appeared to be sealed by the shaly/ shattered stone/soil layer (604).

North of the roundhouse gully (635) the shaly/shattered stone/soil layer (604) was removed. A fire reddened area (1760) was revealed, which may be the remains of a hearth. Adjacent to this, and possibly associated with this feature, a blue glass bead (432) was found.

East of the hearth (1760), within the southern end of the 1995 evaluation trench, there were two stone packed post holes. One of these (516) was quite substantial, 400mm in diameter, and cut to about the same depth, with the remains of stone packing. The other post hole (518) was much smaller and had neat stone packing (519) in place.

North of the hearth (1760) and post holes (516; 518) there were indications that a number of features would appear when further excavation takes place. Three objects, (an amber bead (435), an iron object (436), and pottery base(?) (437)), probably came from features yet to be defined, rather than the shaly/shattered stone/soil layer (604) above them.

Further north, lay the remains of a roundhouse wall (505) (plate 15), constructed from stones of varied sizes, many burnt, the larger stones forming the face. This wall appeared to be the remains of a stone footing, only one or two courses high, probably for a turf wall. The small amount of tumble around it suggested that this stone footing had not originally stood much higher.

The interior of the stone footed roundhouse (505) may contain an

occupation layer or floor surface, although it was not excavated. This surface lay below a small amount of interior stone tumble.

Adjacent to the exterior of the roundhouse wall (505) there was more substantial stone tumble than on the interior. On the northern side, below the tumble, and possibly extending to the western side, of the roundhouse wall there was a substantial area of metalling (620), mostly comprised of beach pebbles. The relationship between the roundhouse wall and the metalling is yet to be established, but it would appear likely that it may butt the stone wall of the roundhouse. The metalling may, however, be respecting an earlier building in the same location This metalling probably extends through the inner entrance of the fort.. The relationship between the roundhouse wall and the shaly/shattered stone/soil layer (604) was not established, but (604) may have overlain the tumble from the roundhouse wall, with the wall protruding through it.

A small area, at the northern end of the 1995 trench, was excavated into the assumed geological deposits. The metalling here was fairly sparse and appears to lie immediately above the geological deposit at this point, although there were suggestions of either some depth to this metalling or the remains an earlier metalling layer.

At the far north of the excavation area there was another apparent layer of metalling (1759), containing a number of large flat stones; this layer, however, could be tumble from the inner defence. This feature was overlain by the shaly/shattered stone/soil layer (604).

The upper stratification was again similar to the rest of the excavation area with an almost stone free layer (603) covering the shaly/shattered stone/soil layer (604). The whole of this area was covered with very thick turf (501).

Finds

Glass

Bead (431; figure 11): Half of a bead of dark blue glass, sub-circular with a large central hole. Diameter c. 7mm; thickness 4mm; central hole 3mm . There appeared to be pieces of sand fused to the inside of the glass bead. Context: Site 1 (004), hearth.

Bead (432; figure 11): A complete bead of slightly translucent dark blue glass. Diameter 9.5mm; thickness 4-5mm; central hole 3.5mm diameter and in. There appeared to be pieces of sand fused to the inside of the glass bead. Context: Site 4 (604), adjacent to possible hearth (1760).

Amber

Bead (435; figure 11): A bead, reddish-orange in colour, flattened profile and the central hole having angular edges to slope. External diameter 19mm; thickness 4mm. This object was found complete but fragmented immediately after excavation. Context: Site 4 (604).

Iron

A number of stratified fragments were found, some of which appeared to be pieces of slag; these will be sent for analysis at the completion of the project.

The three iron objects were sent for conservation to Contract Conservator Phil Parks at the Department of Archaeology, University College, Cardiff. All were x-rayed and cleaned. One piece (443) appeared to be slag. The other two pieces appeared to be pins from buckles or brooches: one (434; figure 11) is complete (Context: Site 4 (604?/634?), above roundhouse gully); the other (436; figure 11) is incomplete (Context: Site 4 (604)).

Stone

Spindle whorl (438; figure 11): Probably made from local stone. Diameter 25mm; thickness 4mm. The upper surface is smooth, either trimmed or polished; the underside is rough and uneven, suggesting that the disc has broken laterally and is incomplete. The upper edges were rounded and the sides of the perforation slope inwards from 7mm to 4mm. The dimensions of this object, even at the probable original thickness, indicate that it must have been used for the production of very fine thread. Context: Site 4, (614) fill of gully 615.

Spindle whorl (441; figure 11): Slate. Irregular in shape, with one roughly curved side, two tapering straight sides and one smaller uneven side. Diameter 45-50mm; thickness 3mm. Perforation semi-oval, 6 x 10mm with smooth, curved upper and lower edges, indicating that this hole was probably drilled, rather than punched. On one face there were slight traces of three to five radial lines, possibly intentional. Context: Site 4 (604).

Spindle whorl (444; figure 11): Manufactured from a fine grained buff stone, slightly reddened, probably by fire. Diameter 43mm; thickness 15mm. Perforation 6-7mm in diameter, slightly inclined and off centre. The outer edges are rounded and the object appeared to be well made. There was one chip out of the outer part of one face. Context: Site 4 (696) post hole packing.

Disc or counter (433; figure 11): Shale, possibly a fragment of mudstone, light brown colour with a few natural grey lines; approximately circular. Diameter 19mm; thickness tapered up to 3mm. This object is more likely to have been a counter than an incomplete bead. Context: Site 4 (604?), possibly from fill (1737) of roundhouse gully (1738)

Disc or counter (445; figure 11): Local dark shale, possibly from the beach. Appears to have been deliberately rounded and on later close inspection

has a lightly scratched "flower" motif. Approximately circular, diameter 25mm; thickness tapered up to 2.5mm. Further magnified observation will be undertaken at a later date. Context: Site 4 (669) From general cleaning of the headland area and probably from within roundhouse (637;1738).

Jet?

Counter (442; figure 11): Possibly jet. Visual examination by high powered microscope showed that there are small cracks where part of the counter has been broken off. Further analysis will be required to establish material. Context: Site 4, unstratified (spoil tip).

Other stone objects

There are a number of beach pebbles of varied sizes on the site, but of indeterminate purpose; these could be possible slingshots or pot boilers and the larger ones used as tools. One fragment of mudstone (444) may have a deliberate notch cut in it (not illustrated).

Flint: assessment by Dr Andrew David

These were recovered as scattered residual finds, except for a concentrated area towards the southern end of the headland.

There are 160 lithic items altogether, all but 4 of which are flint. Of the flints 10 seem to be unworked natural pieces and these, along with 24 flints smaller than 10mm, are not included in the following commentary.

Of the 122 remaining worked flints, most, 102, are undiagnostic flakes or fragments of flakes. In addition there are 3 blades, 2 bladed cores, 4 core fragments, 3 flaked lumps, and 1 miscellaneous fragment. Two pieces have coarse retouching.

There are 6 tools. 4 of these are 'denticulates', 1 'end-tool' and one microlith fragment. All these fall within the suite of tool types familiar from surface lithic scatters along the western Welsh cast, and in the Solva area in particular. By analogy with material from other sites, and especially with the collection from the Nab Head Site II, these are likely to be late Mesolithic and are probably residual on the promontory fort. There are no items of distinctively earlier or later appearance.

The non-flint pieces may all be natural and unworked. However, one piece from the "occupation" layer (604) on site 4, although unworked, could be a fragment from a 'bevelled pebble', another common tool in late Mesolithic coastal assemblages.

Pottery assessment: Heather James

Object (439)(found above remains of roundhouse wall (505) to south of entrance) Black Burnished Ware 1. Rim and upper part of body of flanged bowl, with a slightly down-turned rim: decoration of incised inverted chevrons, acute angled; diameter c.900mm. Dated mid to late second century. No Gillam form is given because his classification is based on the comparative size of the basal chamfer. See therefore Usk Type 25.2 (Webster 1993 pp 276-277 fig 25.2, there compared to Gillam 1976 no. 36).

Object (437) (found to south of roundhouse wall (505;507)) Possible small base fragment from a Black Burnished jar.

Other fragments not identifiable.

Discussion

Promontories, whether coastal or inland, lend themselves to defence without the necessity for building complete enclosures (Harding 1974, p55). The evidence suggests that promontory forts, like all other types of defended enclosures, are utilised from the late Bronze Age though the Roman period and into the Dark Ages; a few have a defensive use again in the medieval period (e.g. Llanstephan Castle (Guilbert 1974)) and even into the relatively modern period.

Porth y Rhaw is a somewhat unusual promontory fort, in that it is separated from the mainland by a short valley. This natural defensive feature has been heavily enhanced by the several banks and ditches of the promontory fort and the distance from the innermost defence to the top of the valley slope opposite is approximately 75m. It is impossible to overlook the site from less than 120m distance to the east and 220m to the west; given that the effective range for a sling shot is 60m (Cunliffe 1983, p77), its defensive strength is clear. The outer defence lies below the level of the land to the north, although to a lesser degree near the entrance; with the apparent remodelling of this area, the outer defence near the gateway may have been intended to be occupied in an attack. The original appearance of the defences and interior would have been an imposing sight, both impressing outsiders with its status, and intimidating potentially hostile groups.

It is probable that the outer fourth bank and ditch, cutting off the (present-day) western promontory, was a later addition. The 1997 excavations have highlighted the density of occupation within the interior of the eastern promontory, and it must be considered that the more level part of the western promontory could have formed an occupied annex as well as denying a strategic platform to attackers.

Only a small portion of the remains of what must have been a much larger interior has been investigated, and no continuous section through the defences has been excavated. The surviving banks and ditches may well overlie earlier ones and, as at Dale, an earlier phase of defences cannot be ruled out.

Site 1

The profile of the bank and ditch was continuous and no evidence for a revetment was found on the outer side of the bank, suggesting a glacis form was possibly used for this part of the defences. However, the apparent substantial internal revetment indicates that this bank could have taken the form of a box rampart.

While no direct evidence for a revetment on the outer face of the bank was seen, this may have been lost due to erosion; furthermore, features (i.e spaced post holes) lying outside the relatively narrow excavation area may have been missed. There was also a layer of very large stones within the fill of the ditch, seen in both the exposed ditch section in the cliff edge and within the section cut into the ditch fill in 1995 (figure 7; plate 4), which may represent collapse or slighting of an outer face. An external face would probably have been built, at least partially, in stone, due to its local availability and durability.

It is probable that any evidence for the type of outer bank face has eroded due to the nature of the very steep, almost vertical, cut of the inner ditch face and the character of the rock formation. Any surviving evidence for the outer face construction is most likely to be found near the entrance to the fort.

It would appear likely that the inner revetment was possibly partly constructed with stone uprights, but at the location of Site 1 these may well have been robbed comparatively recently, as the internal face is still accessible here. Further along, where the inner face of the bank is now on the cliff edge, stone uprights are visible within the eroding bank (plate 6). There was no surviving evidence of individual settings for uprights within the internal revetment trenches, although there was a possible clay packing, apparently mixed between the inner and outer cuts, suggesting some disturbance has taken place.

The hearth within the bank material was apparently in use while the bank was being constructed, and before the lower fill of the bank had compacted. There was no evidence either for a cut to insert the hearth into the bank top or for levelling of the bank and a rebuild subsequent to the hearth being used. There does not at present appear to be any reason for levelling the bank to a height of less than 500mm, and the hearth would appear to be an early feature.

The hearth was considered to have been a temporary early feature, in use during bank construction. This would explain the movement of the "unconsolidated" bank below, the presence of the mostly unburnt stone protruding through the hearth and the range of the archaeomagnetic data.

Although their presence within this context may be coincidental, the fragment of blue glass bead recovered from above the hearth, together with the two small fragments of copper alloy found during the 1995 evaluation, suggest that this hearth may possibly have been utilised for jewellery repair or manufacture; some fragments of calcified bone were also found, implying some cooking functions were undertaken.

The disparity of the dates between radiocarbon and archaeomagnetic methods is problematic.

The radiocarbon sample (SWAN-101 Porth y Rhaw), calibrated using the CALIB Rev 3.0 programme, gave the following results: calibrated ranges from intercepts 1 Sigma 785-402 BC, 2 Sigma 806-378 BC and calibrated ranges obtained from using the probability method 1Sigma 759-412 BC, 2 Sigma 792-394. This result is based on only one sample,and the radiocarbon calibration curve does not provide precise results for the Iron Age. Analysis of further radiocarbon samples may help to resolve this.

The archaeomagnetic analysis could not be more precise than 2nd century BC-1st century AD. This is apparently due to settlement of the hearth after its use, causing anomalies in the samples which do not allow more accurate dating.

Site 4

The flint assemblage indicates that the promontory was used in the late Mesolithic period as a flintworking site. This material would appear to be consistent with evidence from the immediate inland area.

There were the partial remains of at least five roundhouses within the excavated area. The earliest recognisable occupation structure (to date) is a gully of a roundhouse on the western side of the southern headland. This early roundhouse is partly cut by a later one, of similar size, both in diameter and dimensions of gully. There was no evidence for contemporary internal structures within either of these roundhouses. Both these roundhouses appear very similar in form and distinct from the rest.

There were a number of substantial post holes in the area of the two roundhouses. However there is an

insufficient area available and too few post holes to recognise any structures (such as four posters etc); it should be considered that these post holes could be for roundhouses without below-ground wall features, which are not unknown (Williams 1945, p226).

The three possible cooking pits and the stake hole structure near the roundhouses appeared to respect the perimeter of the later of the two roundhouses. The pits all held water, and could have been used for indirect cooking, using potboilers. The stake hole structure (1747) could possibly be the remains of a clay oven, formed on withies based in the stake holes.

The roundhouse located further to the north (635/1749) was very different in form. It consisted of a substantial gully over 500mm wide, with sloping sides; in comparison, those to the south were smaller, with steeper-sided gullies up to 300mm wide. Within this roundhouse there was a ring of structural post holes and, between this and the outer gully, a small shallow slot. This type of shallow slot would only be found on well preserved sites. It has been suggested that an inner ring of this type may be for an internal wall, to provide insulation (Cunliffe 1983, p98).

The two other roundhouses both have stone footings. The smaller structure (607) (figure 5), which would appear to be too small to be a normal Iron Age roundhouse, is situated on the highest ground and, stratigraphically, must be later than most of the occupation in that area. This feature could represent a late phase, or re-occupation, later than the mid-Roman period, and was possibly a very small roundhouse of cell-like proportions. It may, or may not, be significant that this feature was on the highest surviving point of the fort's interior, *but not necessarily the highest point in the past.* This may indicate that this circular feature could be of post medieval date, possibly an observation tower.

It is thought that the larger roundhouse (505) to the south of the fort entrance is also relatively late, although this cannot be demonstrated at present.

The evidence so far demonstrates three types of roundhouse structures: simple timber ring form, without internal supports; more developed outer ring with slight internal ring and internal supports; and stone-footed ring for the roundhouse wall.

The metalled surface appeared to extend towards the entrance of the fort and is possibly an indication of occupation of a more than intermittent nature; such effort would not appear to be worthwhile for sporadic use (Harding 1974, p68). However, metalled and elaborate entrances may have more to do with status than practicality, and evidence for any substantial surface wear must be observed before firm conclusions can be drawn.

The Finds

The blue glass beads may help to date occupation of the interior and possibly the inner bank. These beads, together with the amber bead, indicate trade, possibly over some distance. Both glass beads appear to be associated with hearths, although this may be coincidental. A number of beads have been found on defended sites of the Iron Age and Roman periods in Wales. A fragment of a glass bead, blue in colour with white whorls, was found at Walesland Rath (Wainwright 1971a), possibly dating to the second or first century BC. Similar beads were recorded from hut 21 at Moel Trigarn hillfort.

Only two pieces of Iron Age amber are known from Wales: a small fragment

from Woodside, Pembrokeshire (A David in Blockley (forthcoming)); and a single bead recovered from Caerau bivallate promontory fort, at Henllan, in Cardiganshire. The latter was found amongst packing stones in a post hole of a hut (Williams 1945, 226-40; Savory 1976, 72-3). However, the amber bead from Porth y Rhaw could date from the Romano-British period.

There are a number of spindle whorls from similar sites and those from Porth y Rhaw would not appear to be particularly diagnostic or distinctive. However, the small spindle whorl (438), while not complete, is very light and must have been used to spin a very slender thread, implying the weaving of fine cloth.

Pottery

The sherd of Black Burnished ware (439), found above the stone wall footings of the roundhouse to the south of the entrance, indicates that the site was occupied at least into the mid to late second century AD. There is now increasing evidence for this type of defended site in West Wales, producing pottery from this period and beyond, i.e. Castell Henllys (Murphy, pers comm.), Llawhaden (Blockley, forthcoming), at Walesland Rath (Wainwright 1971a, p86) and Coygan Camp, Carmarthenshire (Wainwright 1967, p135). Second century pottery was also found on the Pembrokeshire cliff sites at Buckspool and Crocksydam (Grimes 1931 p394-5).

Conclusion

Porth y Rhaw does not appear to fit Hogg's assessment of a "fortified village... random scatters of roundhouses separated by ample space where animals could graze" (Hogg 1972, p14). It would now appear that this site is intensively occupied, and the probability is that other Pembrokeshire promontory forts are equally heavily settled and similar to those inland.

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Archive Deposition

Final deposition of the report and finds is likely to be at Scolton Manor Museum, Haverfordwest. A copy of the archive report and archive list will be lodged with RCAHMW, Aberystwyth.

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Appendix

Radiocarbon results 1997

Not yet available

Environmental analysis 1997

Not yet available

Record Numbers Allocated and type

001 - 200	Context
201 - 300	Drawing
301 - 400	Photographic
401 - 500	Object
501 - 550	Context
551 - 600	Sample
601 - 700	Context
701 - 800	Photographic
801 - 900	Drawing
901 - 1000	Photographic
1001 - 1100	Drawing Sheet
1701 - 1800	Context

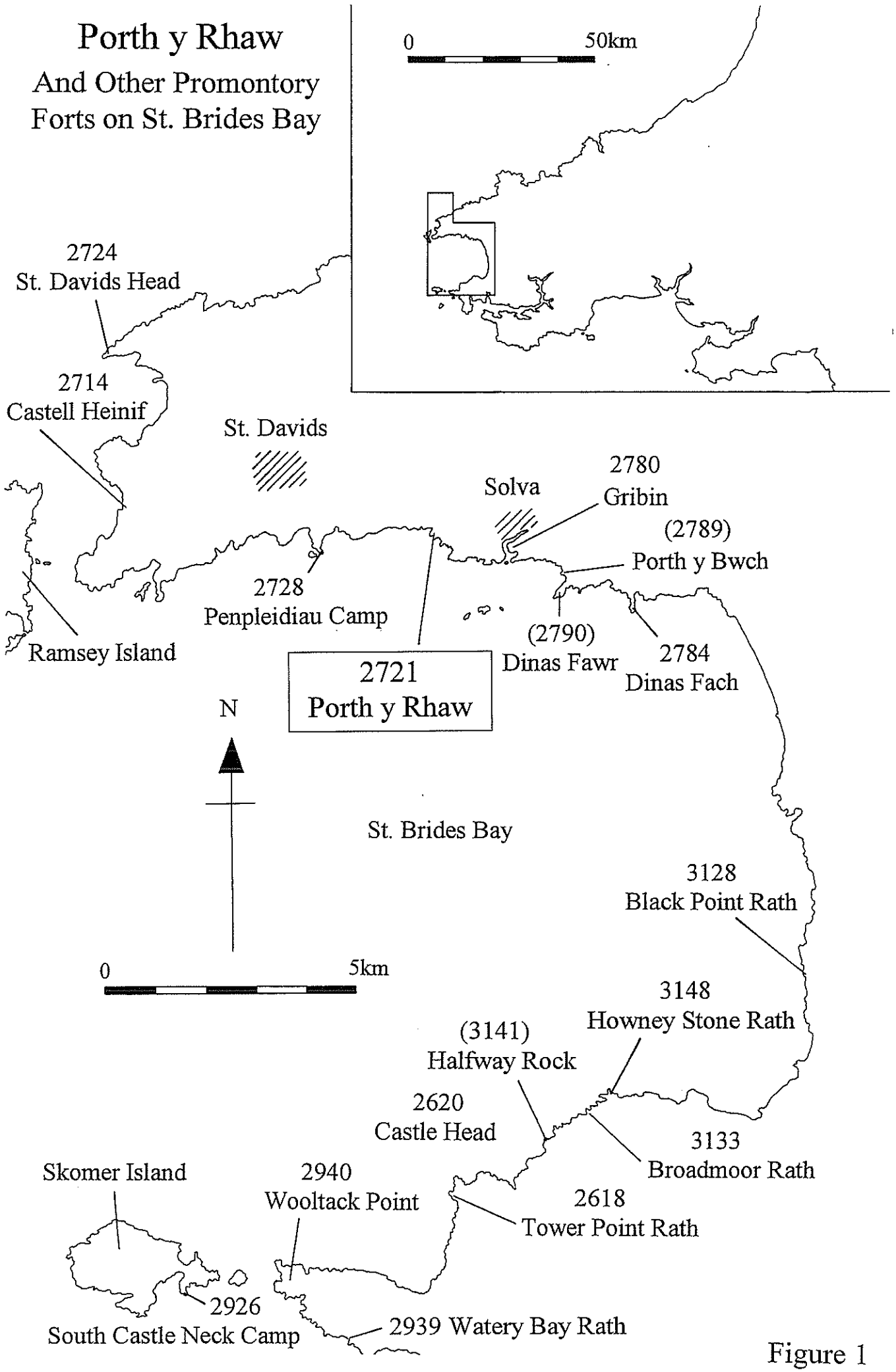

Porth y Rhaw
And Other Promontory
Forts on St. Brides Bay
0
50km
2724
St. Davids Head
2714
Castell Heinif
St. Davids
Solva
2780
Gribin
(2789)
Porth y Bwch
2728
Penpleidiau Camp
Ramsey Island
2721
Porth y Rhaw
(2790)
Dinas Fawr
2784
Dinas Fach
N
St. Brides Bay
0
5km
3128
Black Point Rath
3148
Howney Stone Rath
(3141)
Halfway Rock
2620
Castle Head
3133
Broadmoor Rath
Skomer Island
2940
Wooltack Point
2618
Tower Point Rath
2926
South Castle Neck Camp
2939 Watery Bay Rath

Figure 1

Porth y Rhaw O.S. 1966 Plan and 1995 Edge

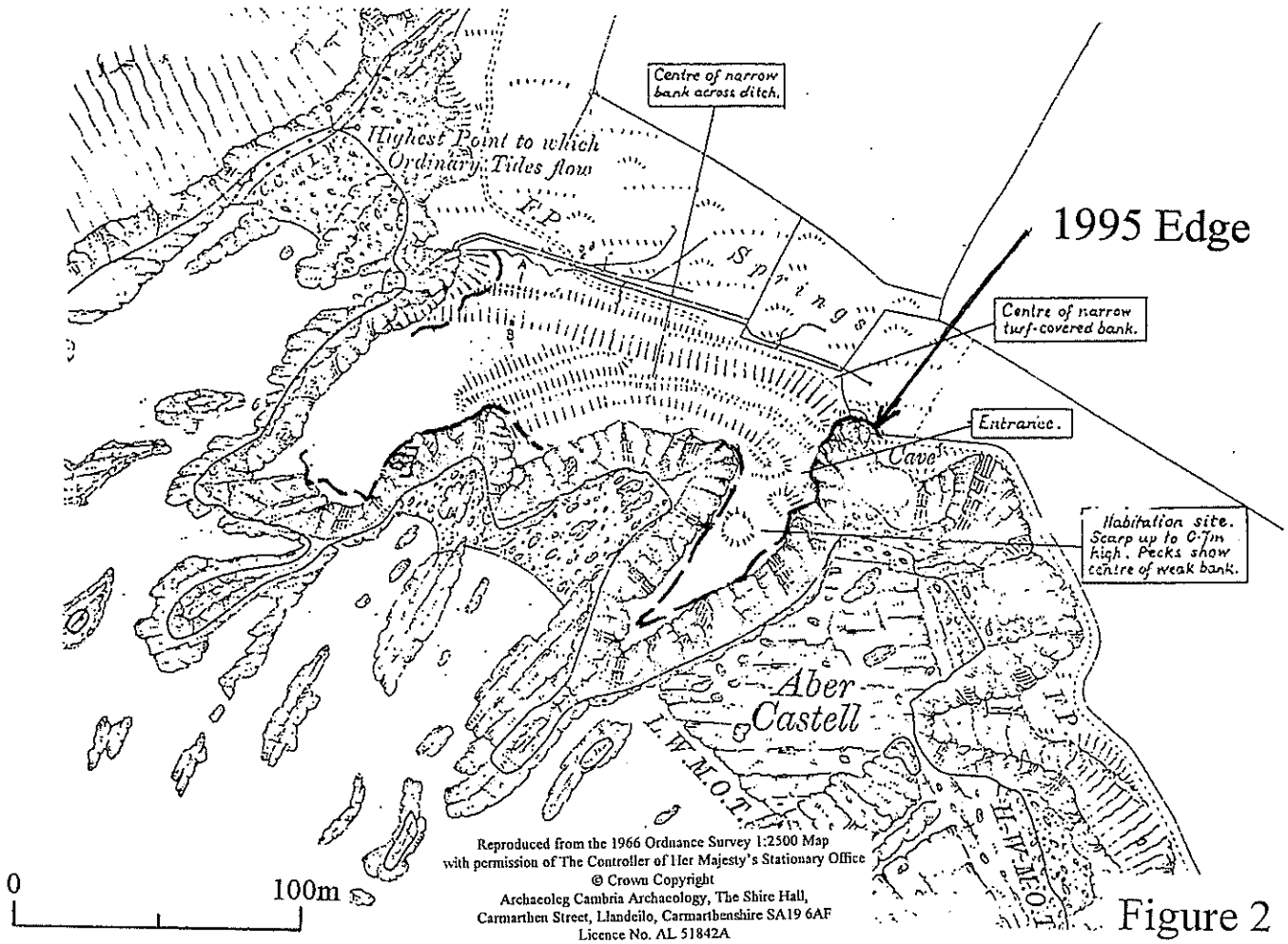


Figure 2

Porth y Rhaw from Jones and Freeman 1856

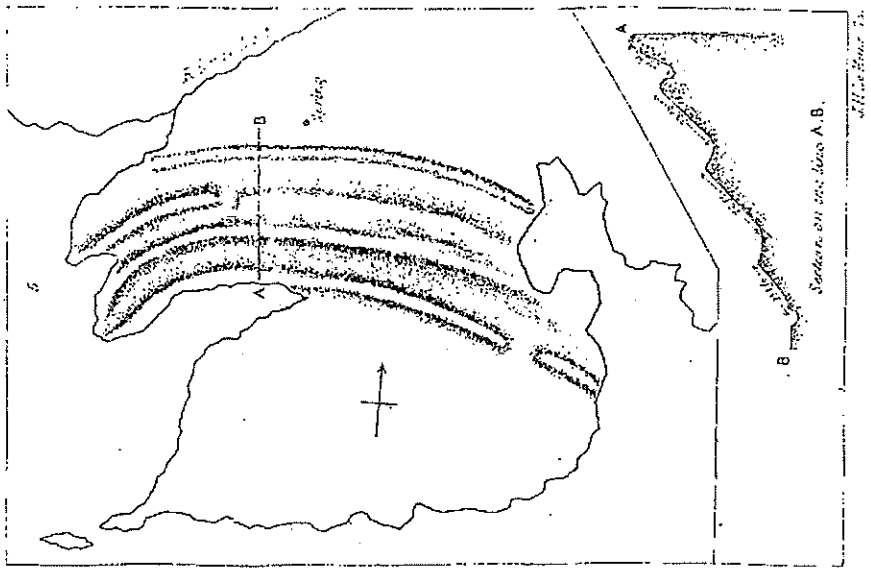


Figure 3

Porth y Rhaw 1997 Interim Overall Plan

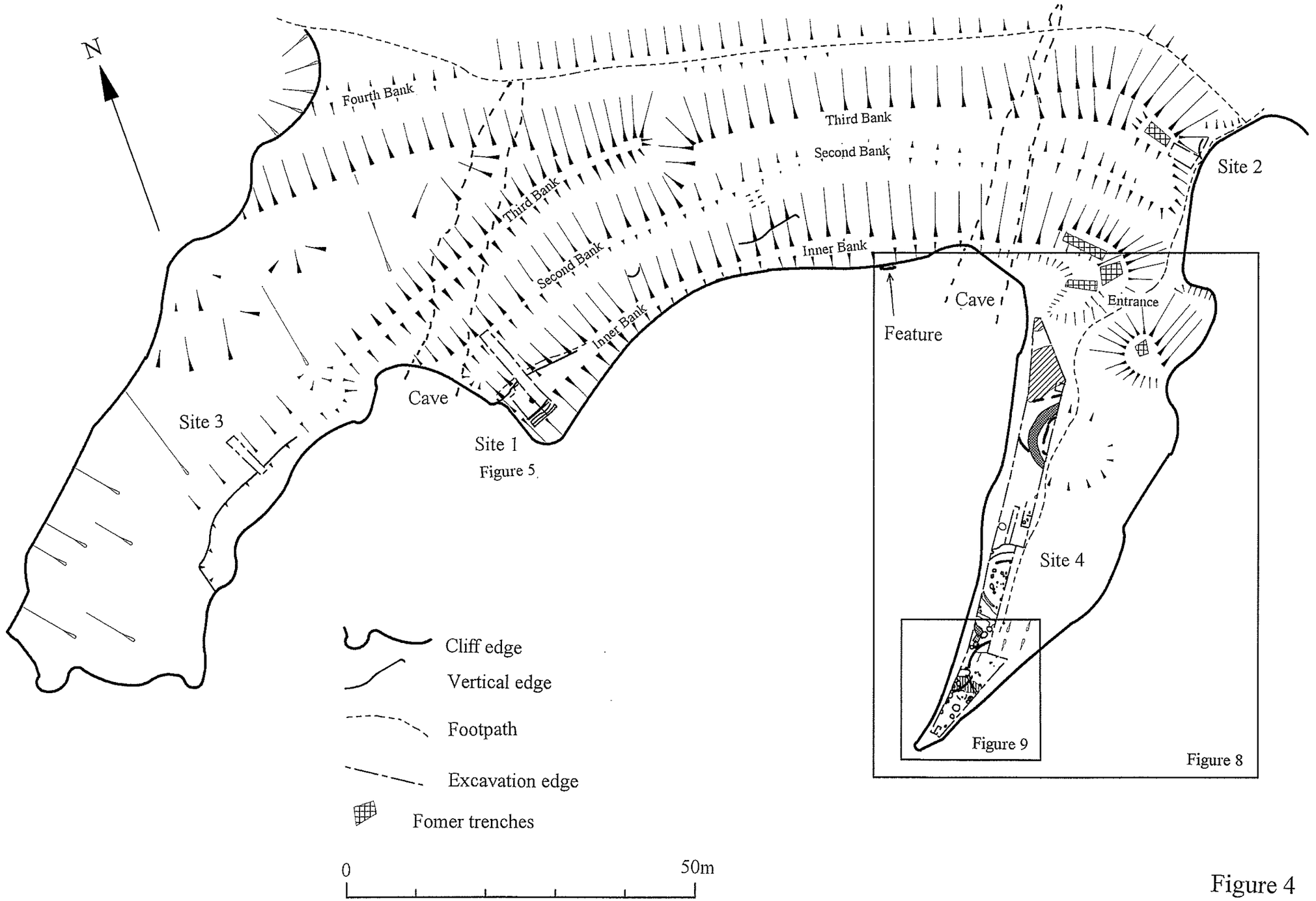


Figure 4

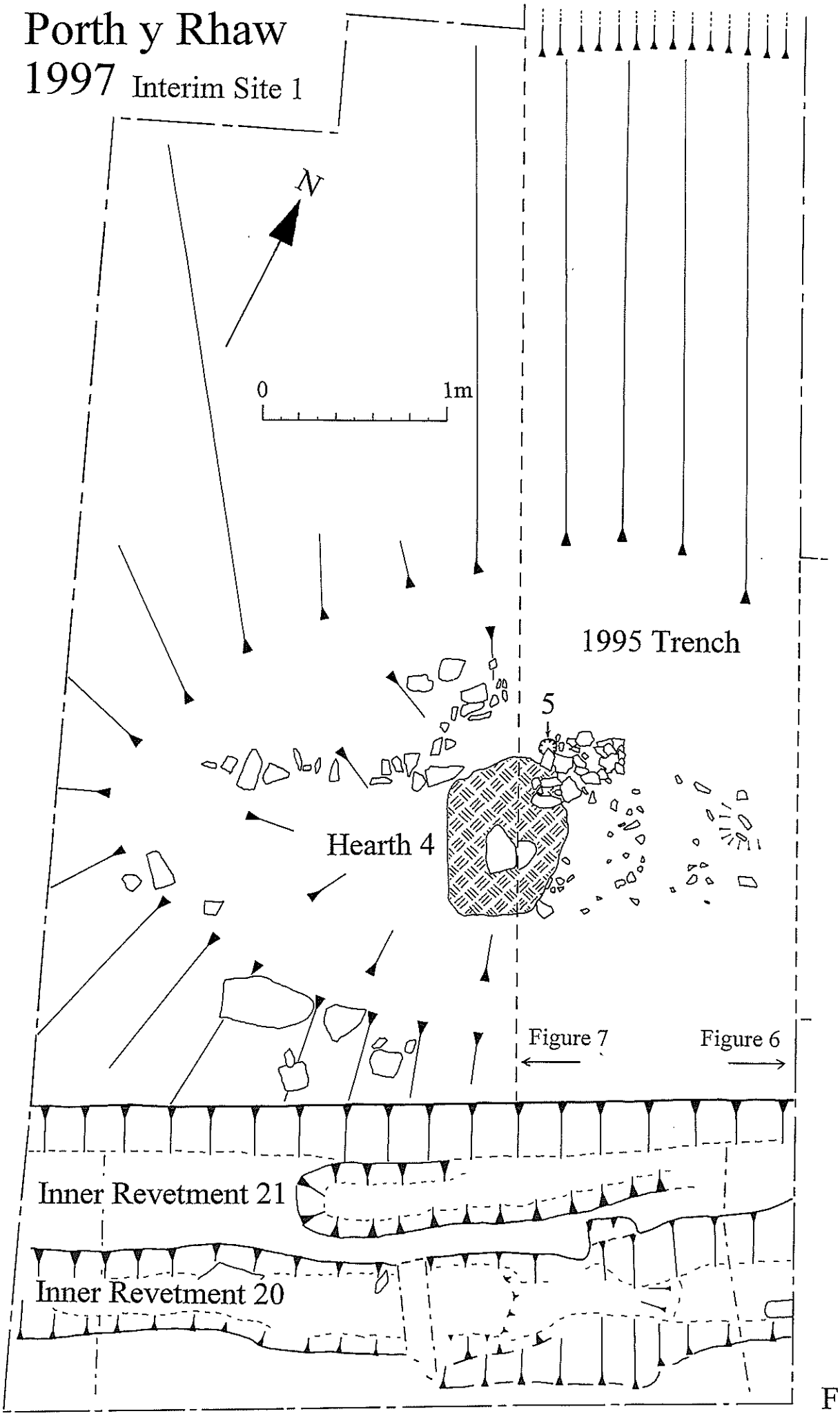

Porth y Rhaw
1997 Interim Site 1
N
0
1m
1995 Trench
5
Hearth 4
Figure 7
Figure 6
Inner Revetment 21
Inner Revetment 20

Figure 5

Porth y Rhaw 1997 Interim Site 1
North-Eastern Section

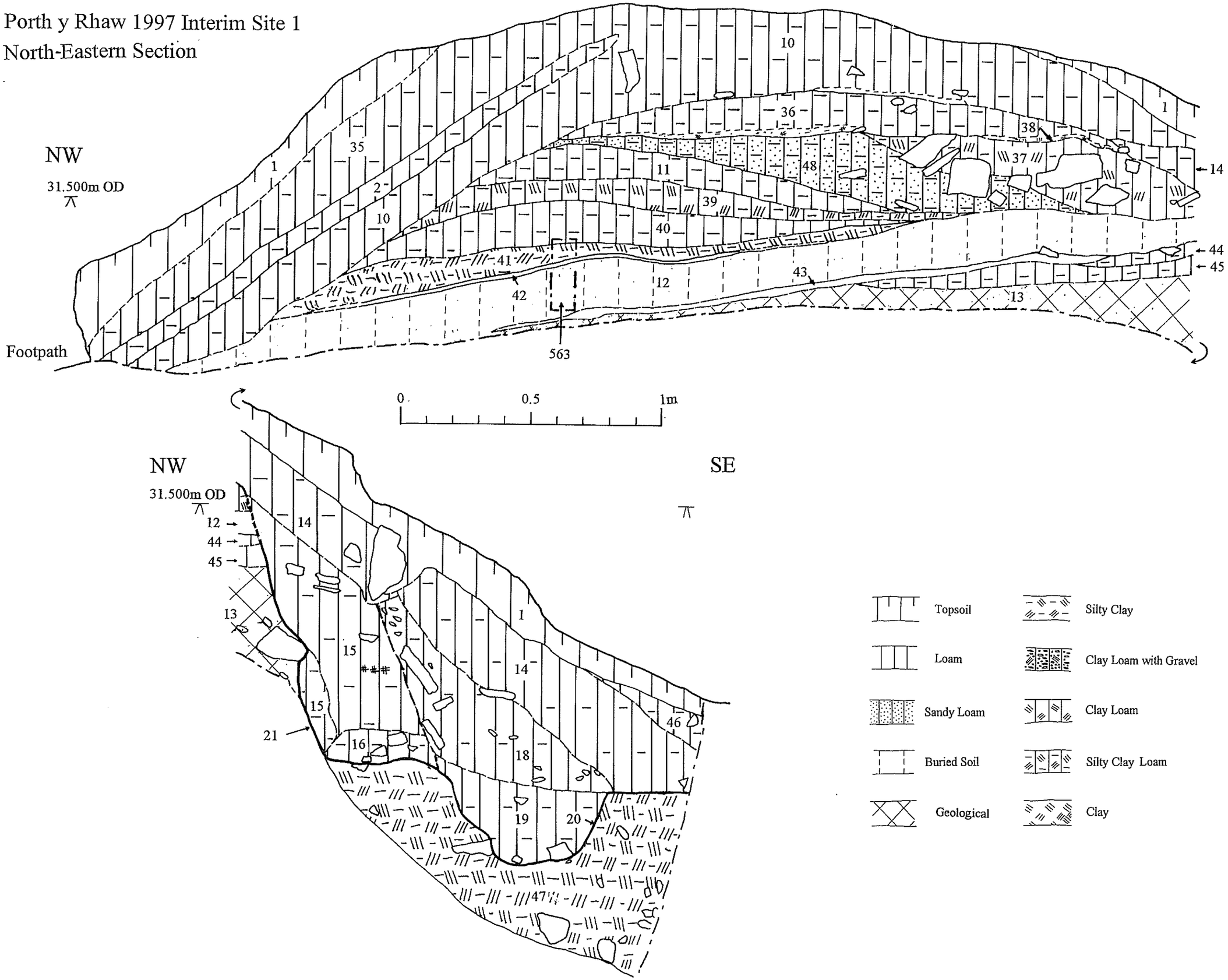


Figure 6

Porth y Rhaw 1995/7 Interim Site 1
South-Western Section (Drawn Reversed)

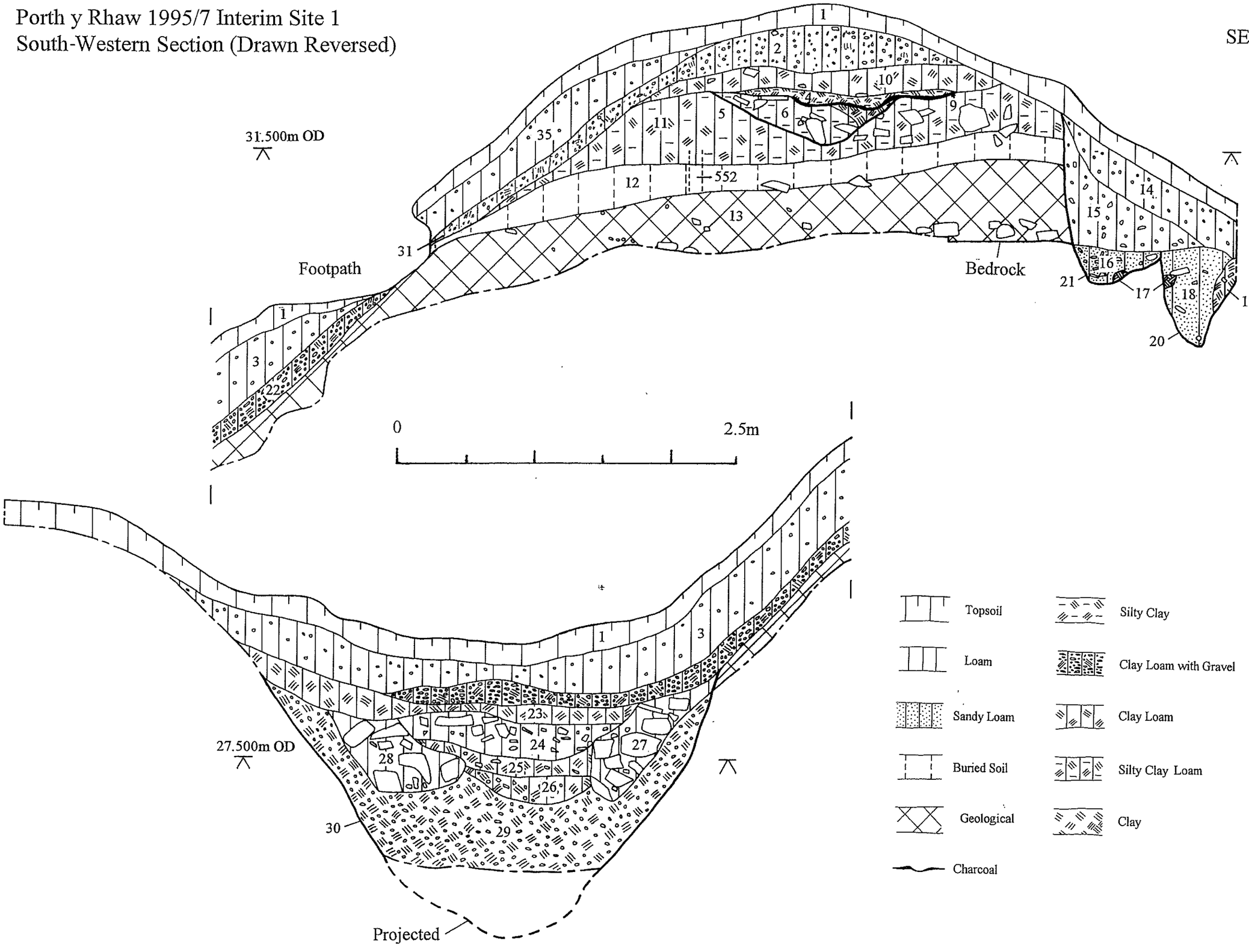


Figure 7

Porth y Rhaw 1997 Interim Site 4 Plan

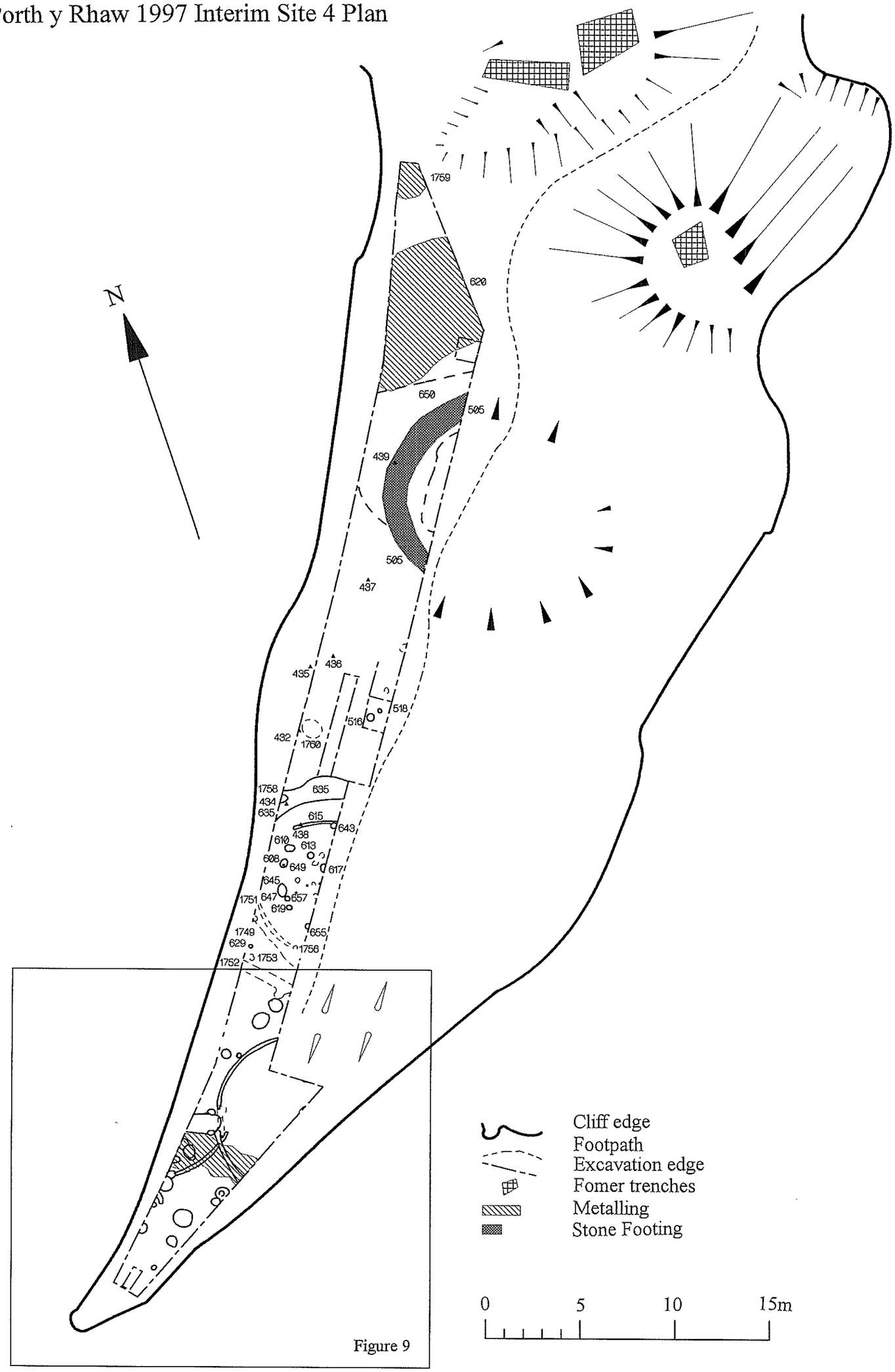
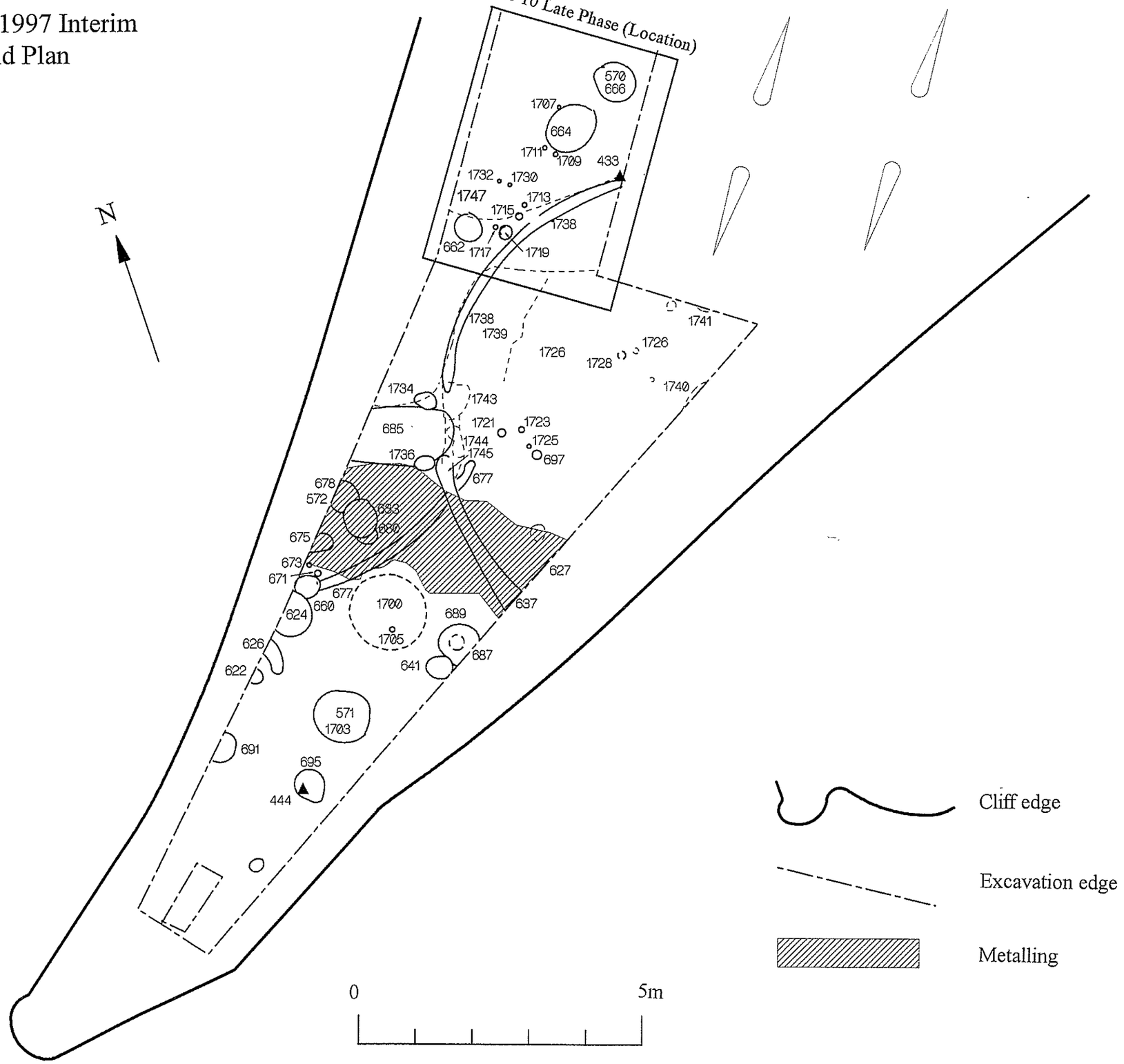


Figure 8

Porth y Rhaw 1997 Interim
Site 4 Headland Plan

Figure 10 Late Phase (Location)



Cliff edge

Excavation edge

Metalling

Figure 9

Porth y Rhaw 1997 Interim
Site 4 Late Phase Plan (Detail)

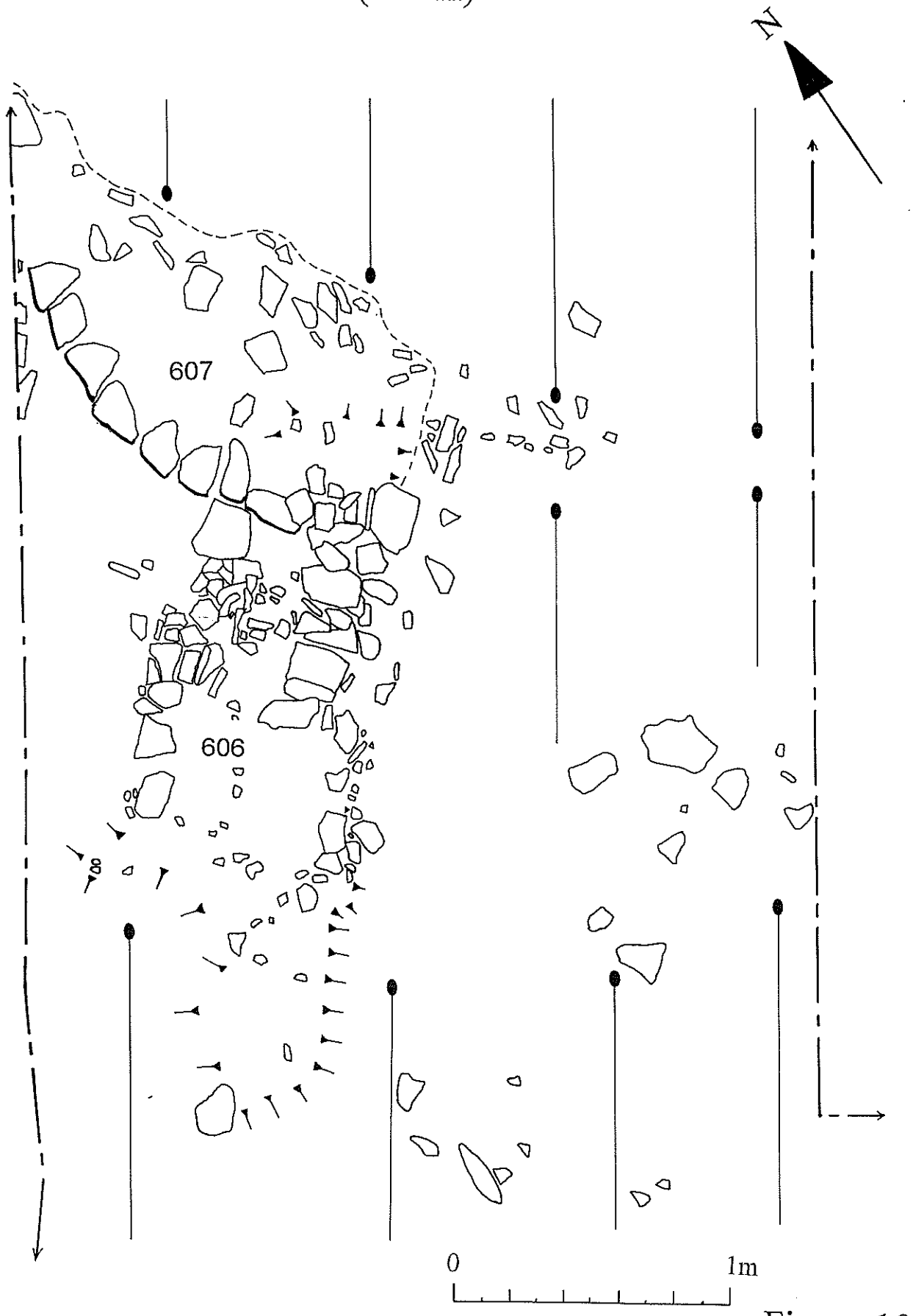
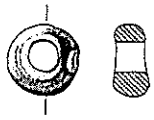


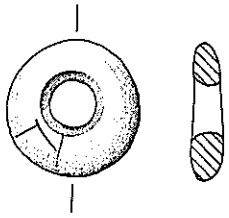
Figure 10

Porth y Rhaw 1997 Finds

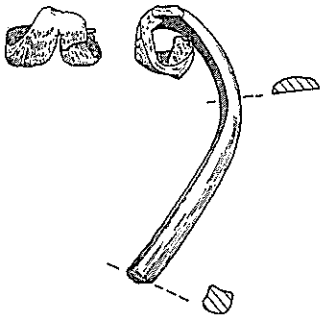
Glass blue bead
(431)



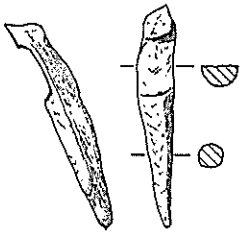
Glass blue bead
(432)



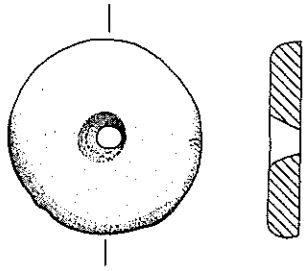
Amber bead
(435)



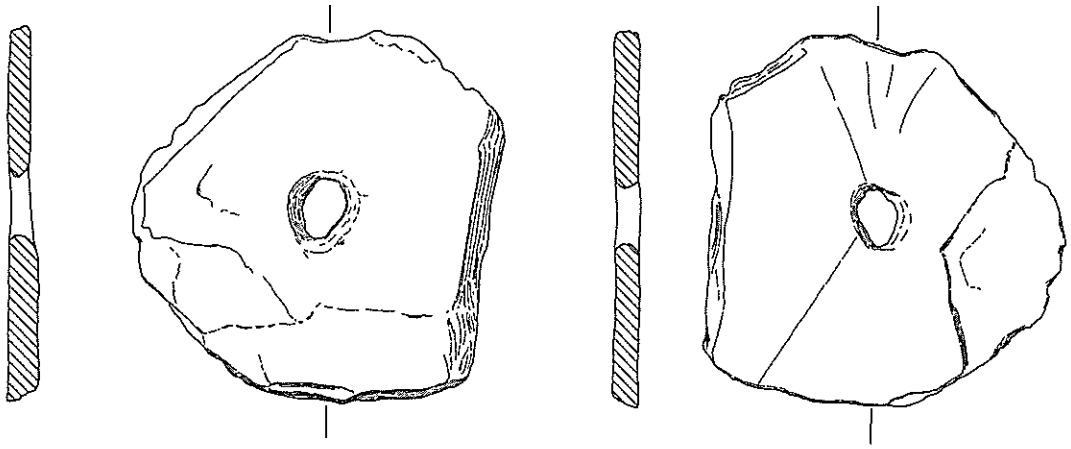
Iron pin (434)



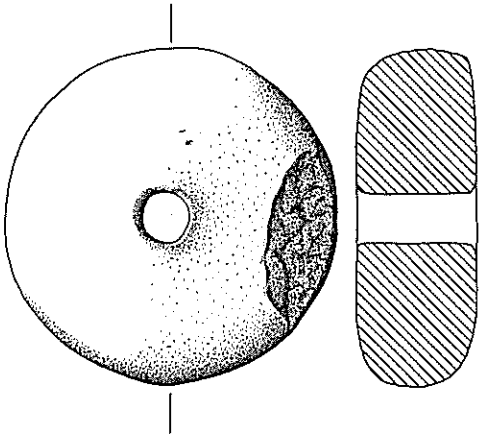
Iron pin (436)



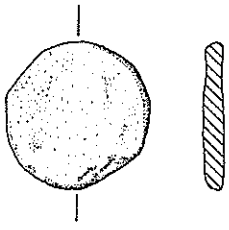
Stone spindle whorl (438)



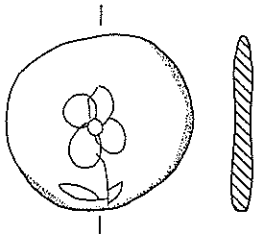
Slate spindle whorl? (441)



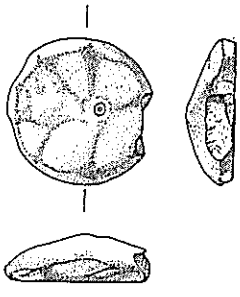
Stone spindle whorl (444)



Stone counter (433)



Stone counter (445)



Jet? counter (442)

Scale 1:1

Figure 11

Plate 1 View SE

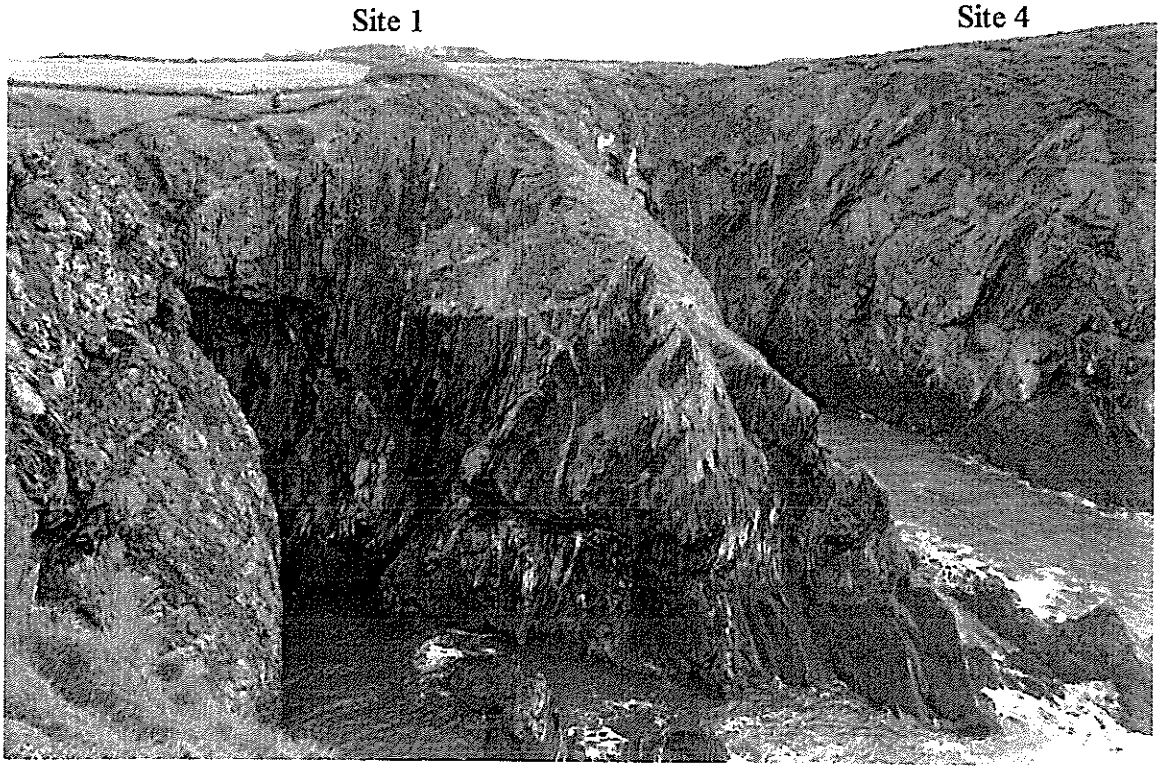


Plate 2 West Promontory View NE

Site 1

Plate 3 West Promontory, Site 1 View NW

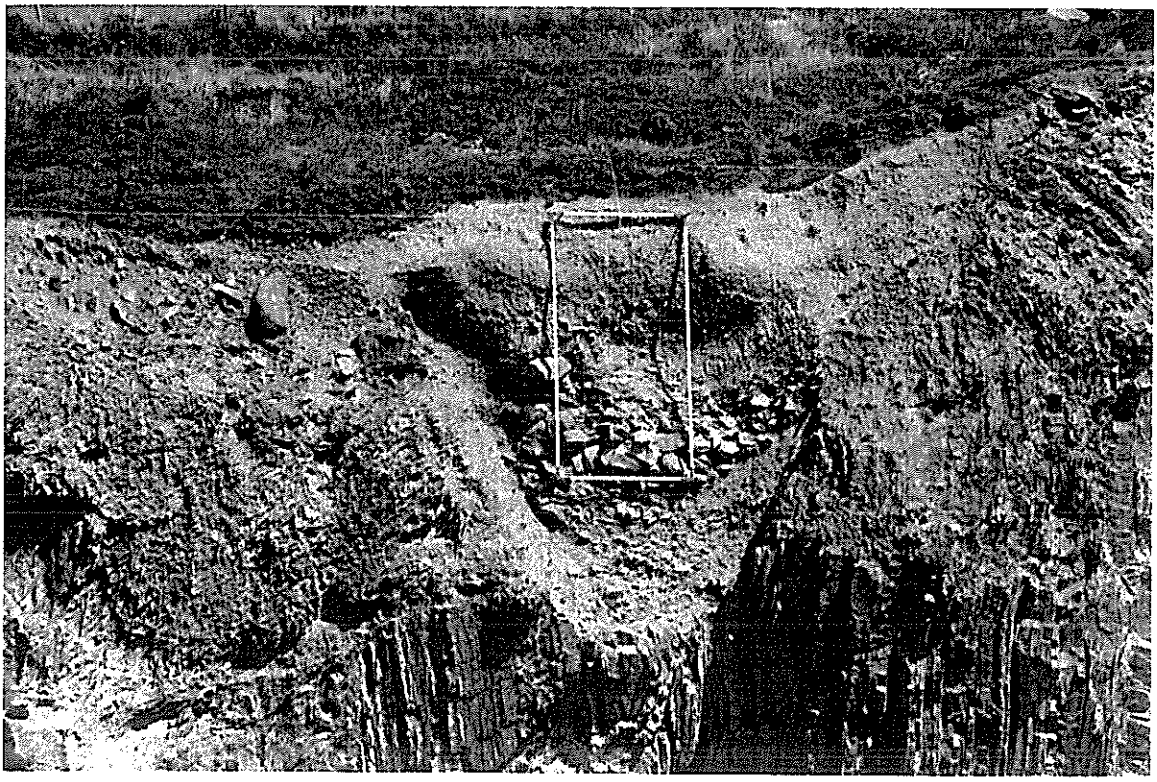


Plate 4 West Promontory, exposed ditch section View NE. Frame 2 x1m

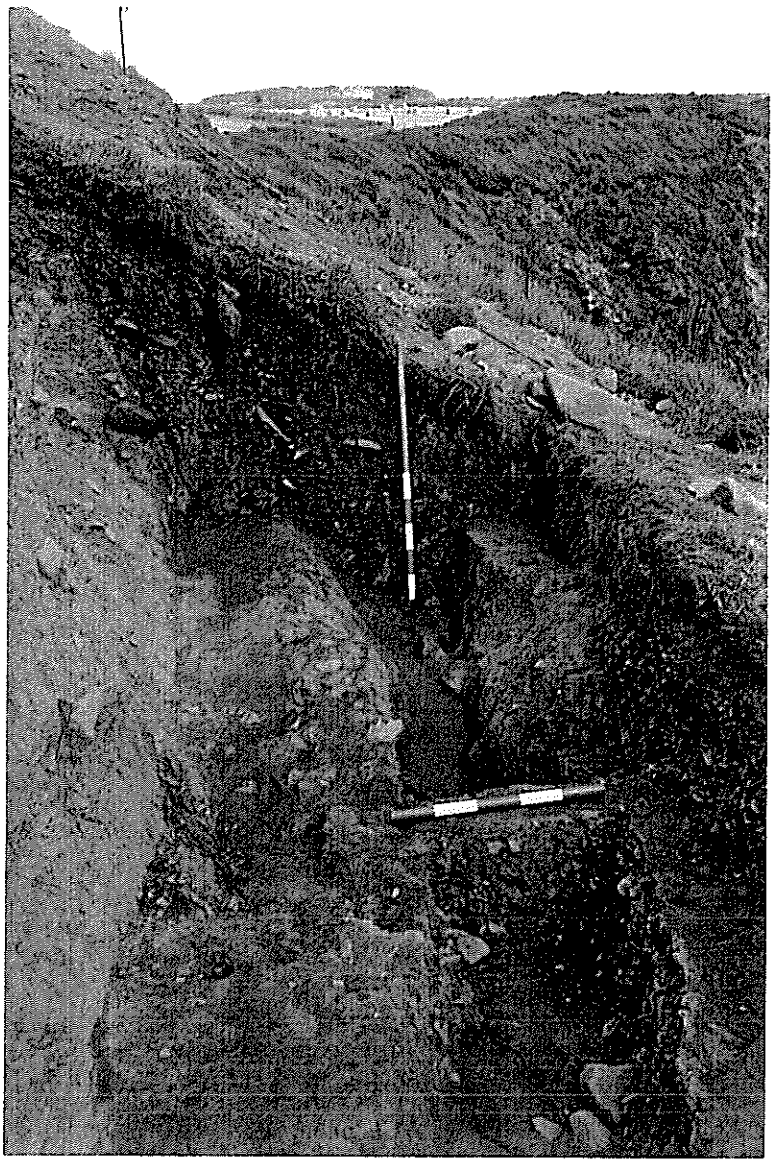


Plate 5
Site 1
Inner revetment trenches
View NE
Scale 0.5m and 1m

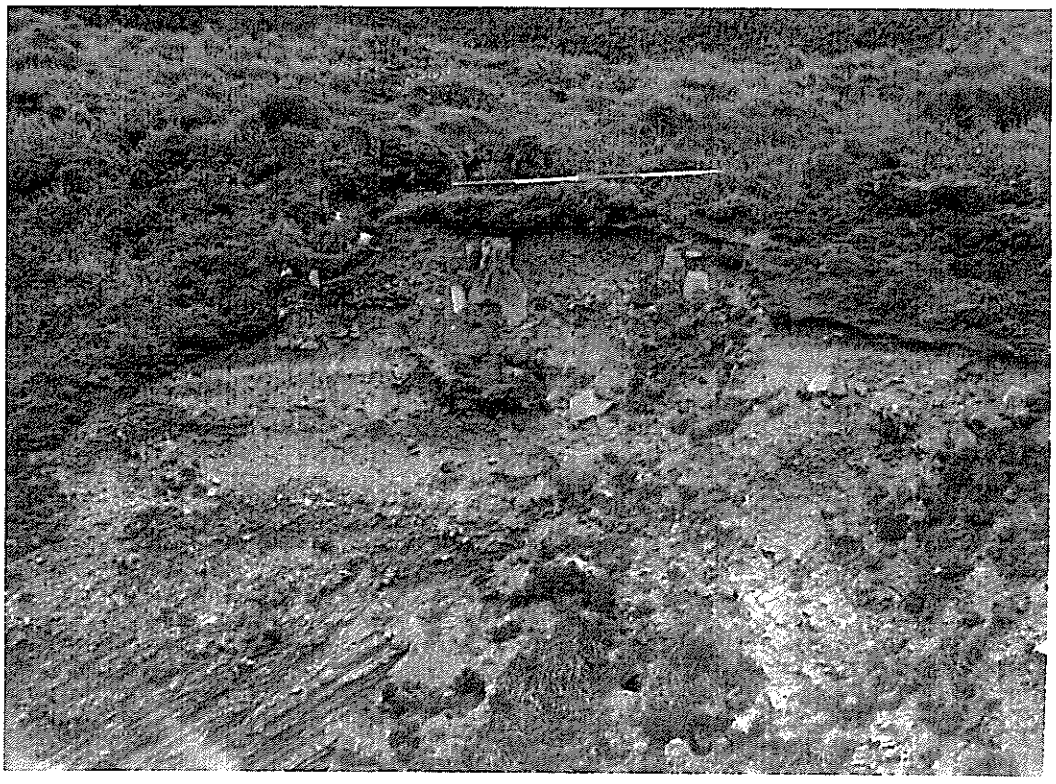


Plate 6
Exposed feature
View N
Scale 2m

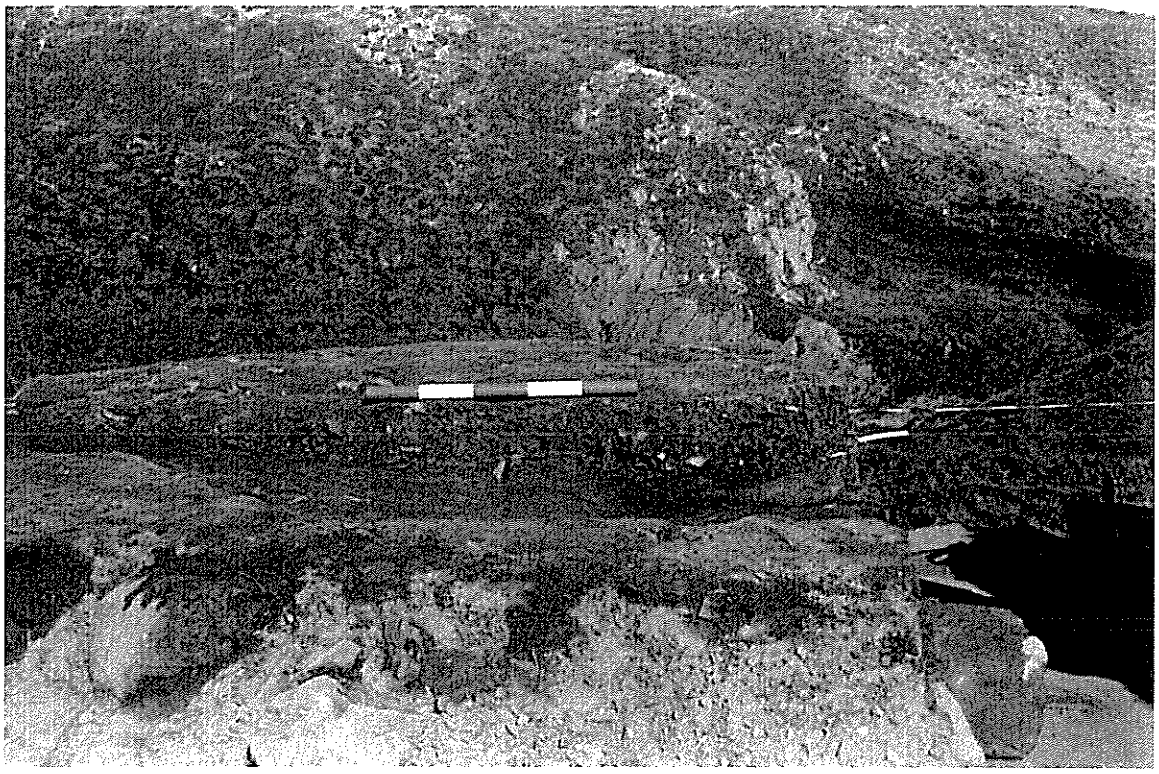


Plate 7 Site 1 Hearth (9), part excavated View NW. Scale 0.5m

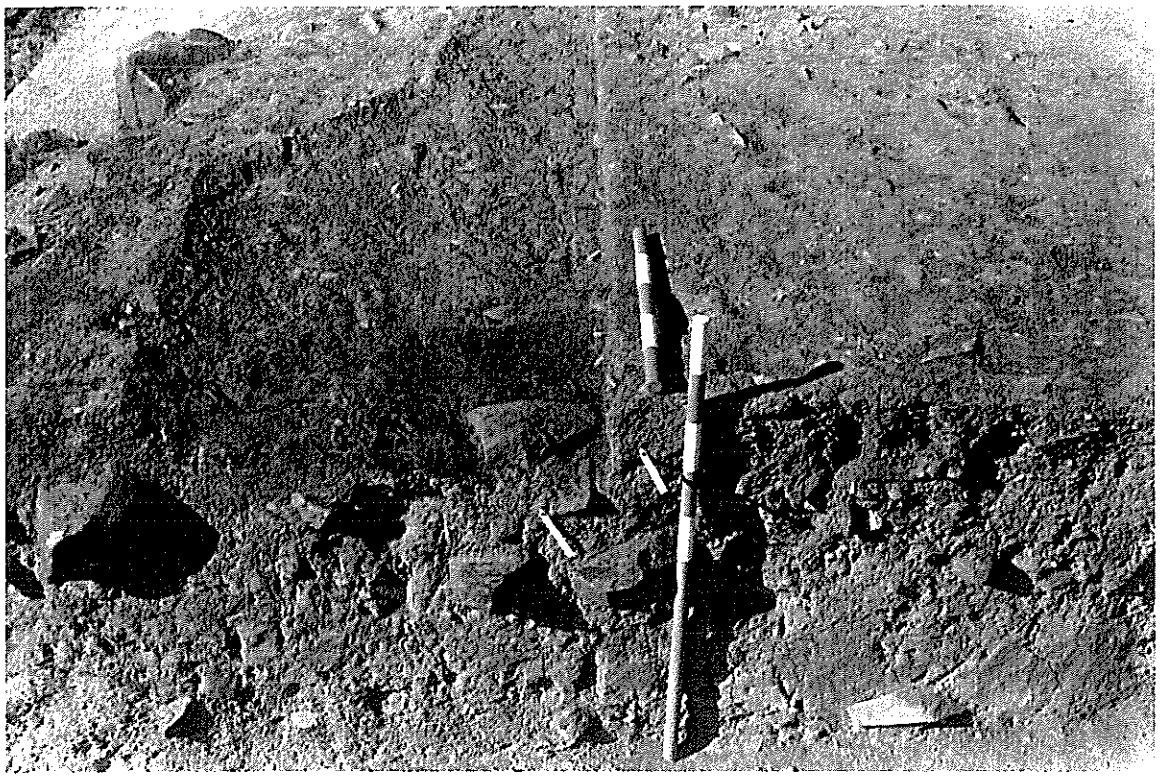


Plate 8 Site 1 Hearth (9), part excavated View SW. Scale 0.5 and 1m

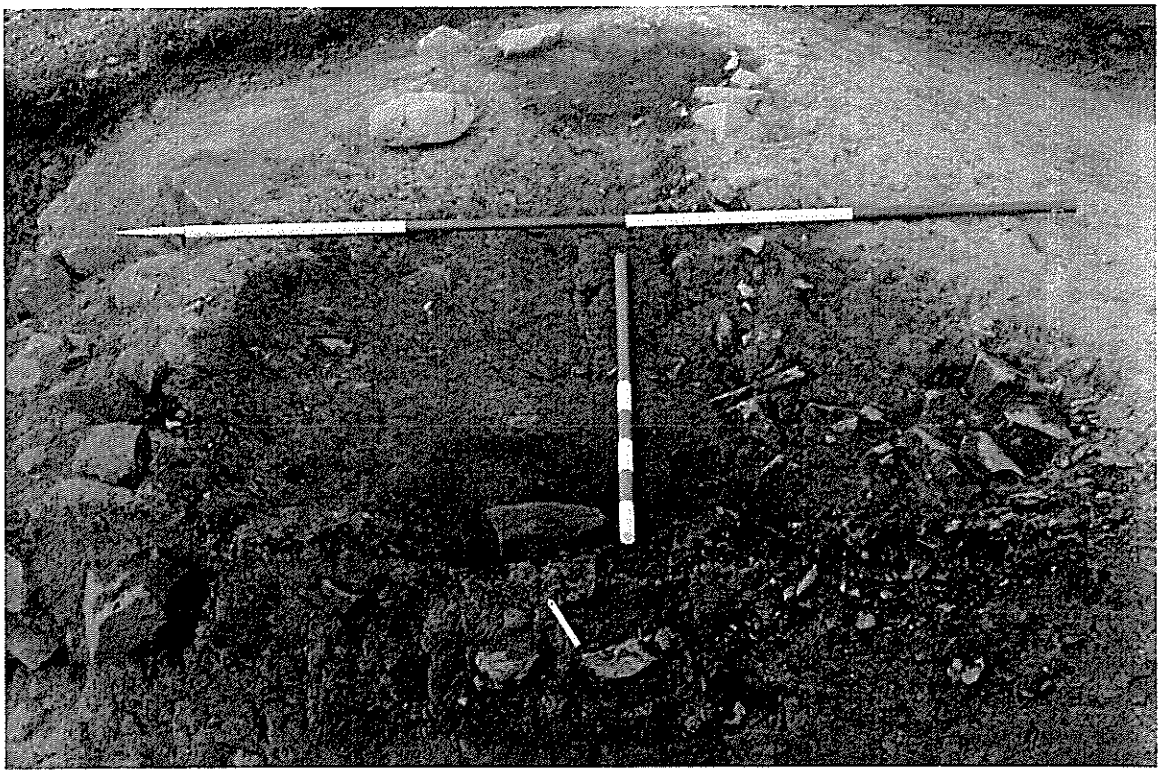


Plate 9 Site 1 Hearth (9), excavated View SW. Scale 1m and 2m

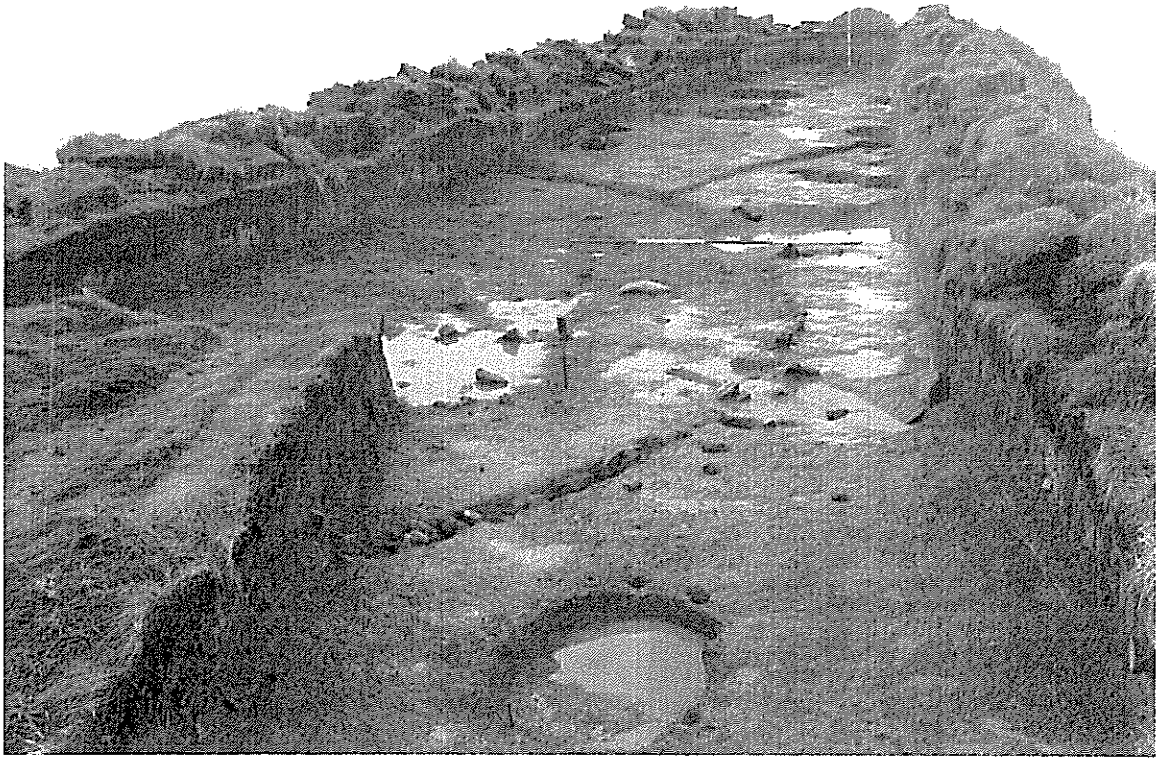


Plate 10 Site 4, Headland View SW. Scale 1 and 2m

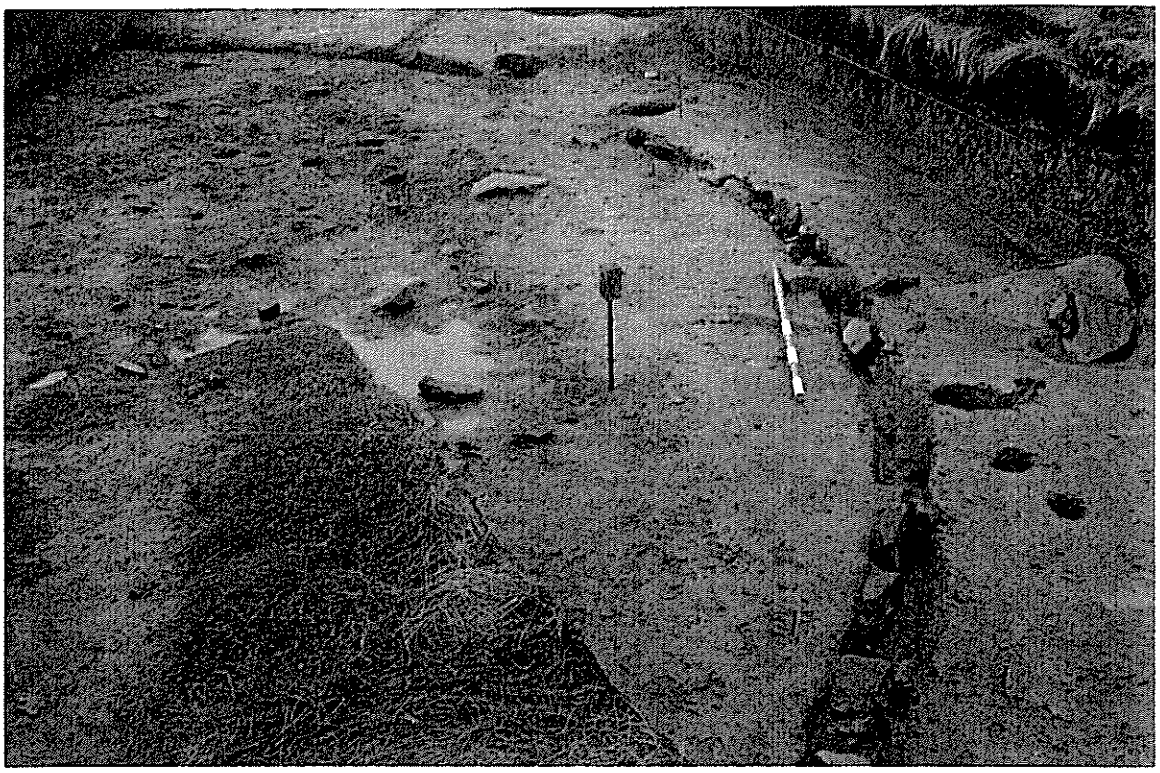


Plate 11 Site 4, Headland: Roundhouse (637;1738) View W. Scale 1m

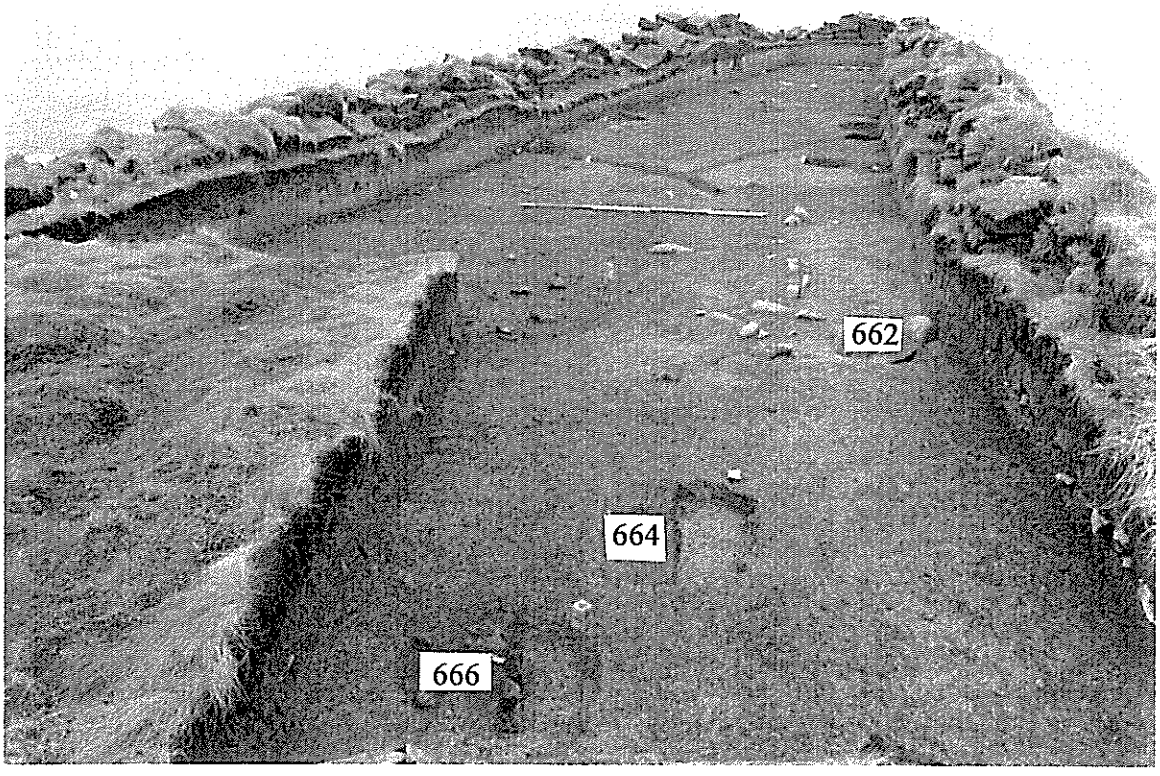


Plate 12 Site 4, Headland: "Cooking" pits View SW. Scale 1 and 2m

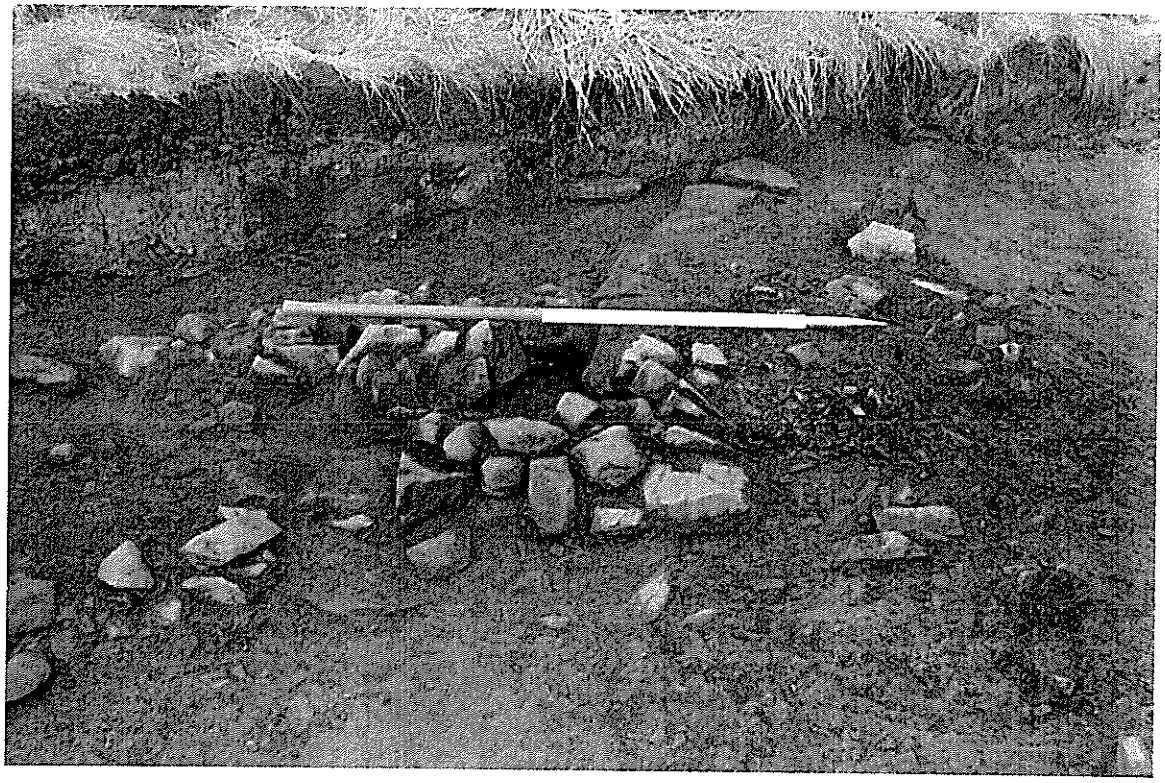


Plate 13 Site 4, Headland: Roundhouse (607), wall?(606) View SW. Scale 1m

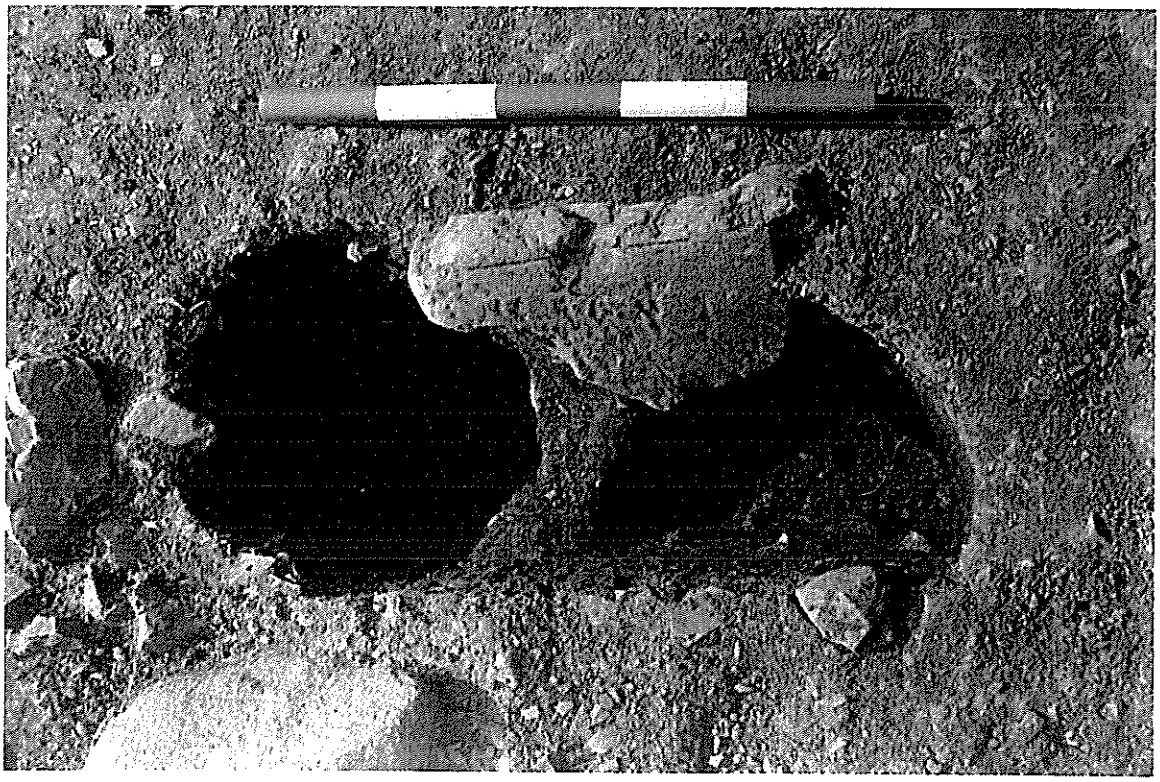


Plate 14 Site 4, Headland: Post Holes (645;647) with tooled stone
View NW. Scale 0.5m

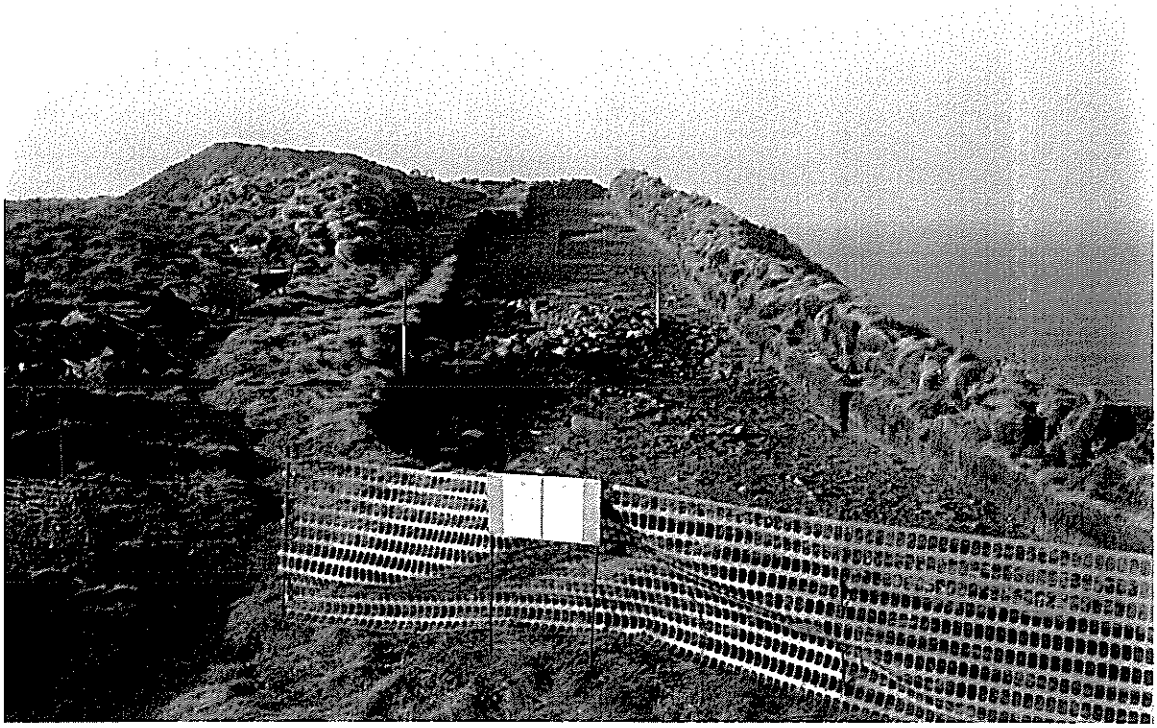


Plate 15 Site 4, Headland: Roundhouse (505) View SW. Scale 1m, 1m and 2m