

Trevelgue Head Cliff Castle, Newquay, Cornwall

Management Works 2001-2004



Historic Environment Service (Projects)

Cornwall County Council

A Report for Restormel Borough Council
and English Heritage

**Trevelgue Head Cliff Castle,
Newquay, Cornwall**

Management Works 2001-2004

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Within HES, the report was commented on by Ann Preston Jones and Peter Rose.

Cover illustration

Conservation work on rampart 4 during November 2002.

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Abbreviations

BTCV	British Trust for Conservation Volunteers
CAU	Cornwall Archaeological Unit
CCRA	Cornwall Committee for Rescue Archaeology
EDM	Electronic Distance Measurement
EH	English Heritage
HER	Cornwall and the Isles of Scilly Historic Environment Record
HES	Historic Environment Service
NGR	National Grid Reference
PRN	Primary Record Number in Cornwall HER
RNAS	Royal Naval Air Station

1 Summary

Trevelgue Head is an impressive Iron Age cliff-castle located on the north Cornish coast on the outskirts of Newquay (Fig. 1). The monument has suffered considerable erosion due its exposed position and visitor pressure. In 1999 English Heritage produced a management plan, which identified the various problems and suggested a remedial programme of management works.

Between 2001 and 2004, the Historic Environment Service carried out a range of conservation works as part of its Scheduled Monument Management Programme. This included the infilling of a number of scars and hollows in the ramparts of the cliff castle, repair work to the easternmost of the two Bronze Age barrows on the headland and the construction of new paths and steps.

The works were carried out by the British Trust for Conservation Volunteers and staff from Restormel Borough Council, while shillet and soil were also transported onto Porth Island for work on the Bronze Age barrow by 771 Naval Air Squadron from RNAS Culdrose as part of a training exercise.

This interim report details the works carried out in the first three years of the works, in advance of further works to be carried out on the headland through the Scheduled Monument Management Programme in 2005-2007.

2 Introduction

Trevelgue Head is an impressive cliff-castle located on the north Cornish coast on the outskirts of Newquay (Fig. 1). It is one of the most heavily defended headlands in Cornwall, but as a result of natural erosion and visitor pressure it is probably also one of the most heavily denuded. Natural erosion at the narrow middle point of the promontory, where the majority of the defences are concentrated, has left part of the headland as an island, known as Porth Island. This can now be accessed from the mainland part of the promontory by a footbridge. Paths focussing on this narrow point of access have resulted in very serious wearing away of the ramparts on either side of the bridge. In 1999, English Heritage produced a management plan, which identified the various problems and suggested a remedial programme. It set out a proposed set of management works to be carried out over a total of five seasons.

This interim report details the works carried out in the first three years of the project.

2.1 The monument

Positioned at NGR SW 8050 6300 (Fig. 1), Trevelgue Head is a Scheduled Ancient Monument (Cornwall 88). It is also listed in the Cornwall and Isles of Scilly Historic Environment Record (PRN 4127).

The cliff-castle or promontory fort is defined by a spectacular series of large earth and stone ramparts which cut off the headland and embrace the remains of an extensive Late Iron Age settlement and contemporary field system. It defended an east-west headland 700m long and protects, on its south side, the excellent natural harbour of St Columb Porth. Two Bronze Age barrows also survive on the headland. The archaeological importance of this promontory fort has long been recognised and Jacquetta Hawkes described it as “perhaps the best example of a type of fortification very common round the Cornish coasts” (Hawkes 1951, 163).

2.1.1 Archaeological explorations of Trevelgue Head

The earliest documented archaeological explorations of Trevelgue Head took place at the beginning of the nineteenth century when sections across a number of the prominent barrows in the Newquay area were opened up by Canon Rogers in 1840. This was apparently followed by further antiquarian ventures reported in the local press in the 1870s. A more thorough examination of two barrows was undertaken by William Copeland Borlase also around this time and in 1872, a detailed account of his discoveries was presented in the book *Naenia Cornubiae*.

Interest in the significance of later prehistoric activity on the headland was ignited by the discovery of what was described in the 1890s as a small “prehistoric bronze foundry” (Reid 1891, 133). During one of H. O'Neill Hencken's visits to the cliff castle in the early 1930s a surface scatter of “numerous pieces of Iron Age pottery ... and quantities of flint chips” was collected (Hencken 1932, 124-125). Erosion of midden deposits, containing metallic ores and slags, which appeared, in part, to form the make-up of the extensive defensive ramparts, threatened the stability of these impressive earthworks and provisional arrangements for an archaeological excavation to be directed by Col. F. C. Hirst were made in 1934. Site investigations were delayed however in favour of the excavation of Castle Dore and five years passed by before the Cornwall Excavations Committee (on behalf of the Royal Institution of Cornwall) invited C. K. Croft Andrew to carry out some limited archaeological excavations on the island. Croft Andrew had been C. A. Raleigh Radford's assistant on a number of excavations in Cornwall (e.g. The Hurlers and Castle Dore) as well as being responsible for a number of successful excavations such as The Doniert

Stone, Lammana, Chysauster and Carthamartha. He came highly recommended by members of the Cornwall Excavations Committee as well as by Radford himself who acted as a consultant during the works at Trelvague Head.

Trelvague Head cliff castle proved to be an exceptional site and is the most complex site of its class in the South West. Once underway, it was clear that archaeological excavations at Trelvague would provide significant information contributing to both regional and national research agendas. Evidence for occupation dating from the 3rd century BC to the post-Roman period (c. 5th or 6th centuries AD) was uncovered. Work was halted by the outbreak of war in September 1939 and never recommenced.

Croft Andrew's excavation took place solely on the Island (see Fig. 2). Two trenches (61 and 62) were excavated into rampart 7 and two (71 and 72) into rampart 8. Two further trenches (63 and 64) were recorded in the open area to the west of rampart 7 where there was an open area excavation of a large round house.

2.1.2 Site investigations work since 1939

In 1982 Croft Andrew died and the excavation archive for Trelvague Head was collected from his home in Yorkshire and deposited in the offices of English Heritage in Fortress House, London. In February 1997, the Cornwall Archaeological Unit (now known as the Historic Environment Service) was invited by English Heritage to provide an appraisal of the post excavation analysis which had taken place, to date, on the material excavated during his 1939 excavations. This work was carried out by Jacky Nowakowski who is now coordinating further analysis of the archive and its publication.

Prior to this, the Cornwall Committee for Rescue Archaeology (CCRA) undertook a detailed survey (at 1:500) of the site and this was followed by a programme of geophysical survey and limited soil sampling carried out by staff of the Ancient Monument laboratory on behalf of English Heritage (Fig. 3). A cremation and some Bronze Age pottery were rescued from an exposure across a barrow during this exercise and material for a radiocarbon date was obtained.

2.2 History of management

Trelvague Headland is a public open space owned and maintained by Restormel Borough Council.

Discussions concerning the management of the headland took place in 1998 between officers of the Council and English Heritage. It was agreed that a management plan be prepared to look at problems of erosion and other related issues. This was produced by Alan Cathersides of English Heritage's Gardens and Landscape Team. The draft report was presented to Restormel councillors in June 1999 and the final version published the following month.

Restormel Borough Council and English Heritage agreed the following aims for the long-term management of the site:

- **To ensure the protection of as much of this important monument as possible for as long as possible.** It accepted that damage caused by coastal erosion cannot be prevented without major coastal protection works which were, in this instance, not a realistic consideration.
- **To continue to permit full and safe public access to the site.**
- **To achieve a better public appreciation of the scale and importance of this prehistoric monument.**

In assessing the current management regimes, Alan Cathersides noted a number of management issues.

- “Little management is carried out on the monument area which might be expected to have become overgrown. However, the extremely exposed position, thin soil and salt-laden wind prevent excessive growth and most of the area is covered by a short grass sward, rich in wild flowers ...” (Cathersides 1999, 5).
- “Longer grass, and in some cases scrub has developed in the more sheltered parts of the rampart and there is some problem with invasion by Hogweed ...” (Cathersides 1999, 5).
- “There is erosion either side of the northern path” to the north of ramparts 3-5 (Cathersides 1999, 6).
- “The southern footpath cuts through the middle ramparts between the ramparts and the cliff edge ... at this point the path is very close to the edge of cliff, which is itself being eroded by the sea, making this a possible safety problem” (Cathersides 1999, 6).
- “Rabbits are causing damage in some areas ... a potential threat to archaeology in two ways. Firstly and most obviously the burrows can be quite deep and can disturb archaeological layers and artefacts. Secondly the burrows and feeding scrapes damage the grass sward and can become starting points for erosion” (Cathersides 1999, 8).

The English Heritage report also identified a large number of erosion scars on the ramparts and the large barrow on Porth Island. It suggested these should be repaired over a five-year period for which it set out a suggested programme of works. Areas of erosion caused by walkers were noted away from the archaeological features, namely on Porth Island and to the north-east of the central block of ramparts.

2.3 Proposals from the management plan

Restormel Borough Council and English Heritage agreed a series of 5 objectives to be achieved during the five year life of the management plan, as follows:

- To institute a programme of repairing the scars on the site.
- To manage the site in a way that protects repaired areas and reduces the opportunity for the creation of new scars.
- To establish a new visitor flow pattern which enhances the site management described above.
- To establish a programme for the control of vermin and plants which endanger the public and/or the monument.
- To provide improved interpretation for the area to enhance visitor perception and appreciation of the site.

3 Conservation and repair works

Of the five proposals from the management report, this report deals primarily with the first objective which was “to institute a programme of repairing the scars on the site.”

The problems of such damage are very real and the archaeological resource is being badly affected. The management plan quite rightly stated that “the headland is spectacularly sited just north of Newquay and is a popular walking area for local people and visitors. Unfortunately, this activity has led to some of the worst archaeological erosion of a scheduled monument in Cornwall” (Gathersides 1999, 1).

The document also stated that “scars and eroded areas should be repaired by resoiling to original levels and profiles (as far as possible) and establishing a (species rich) grass sward. It would be preferable in some aspects to complete this in one operation as repair is immediate and no further deterioration might be expected. However, carrying out this work in several operations has two distinct advantages – firstly the cost is spread more evenly over the plan period and secondly it is possible to refine the practical implementation of the work through experience gained in the previous years” (Gathersides 1999, 11).

The management plan came up with a ‘5 year scar repair programme.’ As well as the eroded archaeological remains, the programme included considerable amounts of repair to areas where walkers had created their own paths. The plan formed the basis of works carried out on Trevelgue Head but was found to be too ambitious. Due to financial and other constraints, a revised and less rigid programme of repair works was prepared and a number of works undertaken during its first three seasons.

The management plan also stated “scar repairs on ramparts and barrows require more detailed and extensive work as these are generally deep, requiring substantial importation of top soil, with board or sandbag support and with finished levels needing to be sloped quite steeply” (Gathersides 1999, 11).

This programme of works was supervised by the Historic Environment Service, with the necessary archaeological recording and conservation work funded from their budget for management works to Scheduled Monuments. It was initially envisaged that most of the conservation work would be carried out by a team from the British Trust for Conservation Volunteers.¹ In the event, certain works had to be carried out by Parks staff from Restormel Borough Council and an external contractor employed by the same authority.

For the location of works carried out between 2001 and 2004, see Fig. 4.

3.1 Methodology

3.1.1 Archaeological recording

Archaeological recording of the areas where scar repair took place was carried out in advance of works and a watching brief was maintained while work was in progress.

The specification for the recording work varied, just as the eroded areas varied. The eroded areas or scars were located on the large scale (1:500) plan of the fort produced in 1983 by the CCRA (Fig. 3), while some of the more complex eroded areas were surveyed in greater detail. The length, width and maximum depth of the areas to be repaired were recorded. Where appropriate, areas were lightly trowelled to aid description and a full description of layers exposed by the erosion was also made.

In this first year (2001), an EDM survey of the area comprising ramparts 3, 4 and 5, clustered to the east of the footbridge was undertaken. This was carried out by Nigel

¹ In seasons 1 and 2, BTCV ‘natural break’ teams made up of holidaying volunteers spent two weeks carrying out the works. This did not prove possible in the third season, though some works were done with the Trust’s local volunteers early in 2004.

Thomas with the assistance of Dick Cole. Areas of erosion, grass cover and existing paths were noted. The extent of the above were then contrasted to the 1:500 survey carried out by CAU in 1983 which demonstrated that there was ongoing erosion in this general area, particularly in the area of the footpaths to the north-east of the ramparts (Fig. 6). A similar survey of the barrow was carried out in October 2003, by Dick Cole and Joanna Sturgess (Figs. 8 and 9).

Given the nature of the erosion, the amount of detailed recording work undertaken was limited. A detailed record of the scar in rampart 6 was produced (Fig. 7) and a wide range of photographs of features and areas of work were taken (black and white prints for detail and colour slides for general views). While the work progressed, archaeologists made regular visits to the site to advise and discuss progress of the work. Photographs of the work in progress were also to be taken.

3.1.2 Management works

The scars identified in the management plan were varied in size, but the repair work broadly followed the same specification, set out as follows.

1. Lift any turf growing in the eroded hollow and reserve to use in re-turfing the repaired areas.
2. Insert wooden revetments into scar to help retain filling material (Fig. 5).
3. Lay permeable geotextile fabric or white sand in the base of the scar (where appropriate) to help distinguish between uneroded parts of the rampart and fill material.
4. Fill with extremely well compacted material, rammed hard into all joints.
5. Replace any reserved turf over the repaired areas.
6. Re-seed the remainder of the repaired area with an appropriate seed mix.²
7. Hessian netting was also laid over the repaired to protect them from the elements.

Barriers were also erected, where appropriate, to direct people away from the areas being restored. Notices were erected during works to explain the reasons for this.

The material used in the first two seasons of work consisted of topsoil, previously excavated from a local headland and stockpiled locally by Restormel Borough Council. This material was used as it would be similar in make-up to that on Trevelgue Head containing remnants of the same vegetation. In the third season, a source of shillet was identified from a nearby development (Headland Hotel) and this was the main infill material used. The remains of the topsoil used in the previous seasons was used as a topping layer.

Some topsoil from locations other than nearby coastal ones were also used in the second and third seasons. Where possible, this soil was placed at a lower level than the more appropriate local soil.

² The seed mix used was a mix specially designed for maritime grassland and supplied by Roffey Brothers of Bournemouth. It included 50% Merlin (slender creeping red fescue), 10% Carmen (creeping bent), 10% Triana/Scaldis (hard fescue), 25% Dawson (slender creeping red fescue) and 2% Westerwold

4 The cliff castle

4.1 Ramparts 1 and 2

The westernmost extent of the cliff castle complex is delineated by two closely positioned and parallel ramparts on a south west - north east orientation, with the small golf area to the west (Fig. 3). Rampart 2 extends across the full width of the headland, while the easternmost Rampart 1 is more fragmentary. Erosion of the cliff edge had also meant that a considerable section of the fortifications has been undermined and lost to the sea, though fragments of the two banks survive on an isolated pocket of land further to the north west.

It was also obvious from the 1983 survey that a number of small hollows had been deliberately excavated out of the rampart. Work on three eroded or damaged areas was undertaken as part of this project; one in each of the project's first three years. The three areas identified were:

- A slight eroded area, in the southern part of the rampart, where visitors had walked through the rampart 2.
- A square-like hollow which had clearly been excavated out of rampart 1.
- An eroded gully across the northern part of both ramparts, just to the north of the southern footpath.

It was also noticeable that the rampart was quite bare and stony between the two most southerly damaged areas. Consideration was given to spreading soil over this area to hide the stony core but it was decided that this work could not be prioritised.

4.1.1 Slight eroded area (rampart 2)

This was a small area of erosion, which had a maximum width of 0.5m and a negligible depth. It was, in reality, a bare area of ground worn away by the large number of visitors to the site who had left the southern footpath and took a very slight short-cut towards the main block of ramparts. A small amount of topsoil was used to build up the area and it was sealed beneath Hessian netting during the first season of works. Walkers have continued to traverse this area however and the area is still bare of grass.

4.1.2 Square-like hollow (rampart 1)

The most obvious quarried out hollow in rampart 2 was infilled during the second season of works. This roughly rectangular feature was 3.0m by 2.0m. It had a maximum depth of 1.2m to the north, while to the south the rampart survived as a bank, 1.0m wide with a maximum height of 0.3m. This section of bank also had an eroded gap, which presumably represented the access point for the people who robbed out the rampart for its shillet.

The average height of the quarried face to the north was 1.0 – 1.2m. Analysis of the south-facing section of the hollow demonstrated that the top 0.6m of it was rampart material while the bottom 0.6m was natural rock. The visible rampart material was as follows (top to bottom):

- 0.05m soil layer (humic topsoil layer)
- 0.25m Soil layer (light yellowish brown sandy clay)
- 0.30m Small shillet pieces in a light yellowish brown sandy clay

4.1.3 Eroded gully to north (ramparts 1 and 2)

An eroded channel cutting through both ramparts 1 and 2 to the north was repaired by a team from the British Trust for Conservation Volunteers in March 2004. Lying just to the

north of the northern path around the headland, the damage had been caused by visitors who left the main path and clambered over the ramparts in order to explore closer to the cliff face. In the area of the damage, the survival of the two rampart features was quite different. Rampart 2 had a height of 2.5m while rampart 1 was much less substantial, with a maximum height of 1.0m.

At the central point of rampart 2, the eroded channel was 1.3m wide at its top, sloping down to 0.7m at its base; it was also 0.8m deep. The southern face of this channel was near-vertical, comprising a limited layer of humic soil and vegetation, about 0.1m deep, overlying a deposit of small shillet pieces within a light yellowish brown soil. No distinct archaeological layers were visible in the eroded section. The opposing northern face of the cut was less severe and vegetated.

On the eastern slope of the rampart, the scar varied in size. About half-way down the rampart, it had a maximum depth of 0.6m and a width of about 0.8m, lying within a slight depression within the rampart. The base of the scar was slight, no more than 0.3m deep, although on quite a pronounced slope. On its western end, the slope of the rampart was less severe and the eroded gully was of limited depth.

The damage to rampart 1 was a relatively small scar, which had a maximum depth of 0.4m and a similar width.

The scars were repaired following the methodology set out in Section 3.1.2. Figures 10-15 show these conservation works being carried out with the various photographs illustrating the eroded scar prior to the works starting and following the removal of vegetation from within the scar, the construction of the wooden revetments, the infilling of the rampart in progress and the finished job, with the rampart covered with protective hessian netting.

4.2 Rampart 4

Rampart 4 is the largest of the eight ramparts on the headland. It is positioned centrally within the four closely-spaced ramparts at the neck of the headland, three of which lie on the landward side of the footbridge. Of the other two ramparts, rampart 3 is limited in height and well covered with a grassy vegetation, while only a small section of rampart 5 survives. To the north, where the banks and topsoil have been lost to erosion from the sea, short sections of three rock-cut ditches are visible.

This central rampart area had been badly affected by both natural erosion and the position of the two footpaths. One footpath runs over the northern edge of ramparts 3 and 4, and then extends down through the western part of rampart 4 where it was a considerable gully of natural shillet. The second footpath is much flatter and runs along the cliff edge on the southern side of ramparts 3 and 4. This also cuts into the natural rock and a cut section of rampart 4 is exposed at this point. It demonstrates that the rampart stands 3.0m above the level of the natural shillet, which is 1.0m high.

The two paths merge together in the ditch area between ramparts 4 and 5, before continuing though rampart 5 and over the footbridge onto Porth Island.

Health and safety concerns were raised about the amount of bank material which had eroded from the southern end of rampart 4 which, it was considered, had raised the level of the path to the south. The recording brief noted “that the height of the safety rail along the cliff edge has [been] simultaneously lowered and is therefore no longer providing an effective barrier. Given the number of people who use this path, especially during the summer, this is of considerable concern.” It turned out however, there was a negligible amount of shillet which had built up on the southern path and that the barrier had never been of the necessary height for modern health and safety regulations.

There were three areas of erosion which it was decided to repair:-

- A gully extending NW-SE path over the southern part of rampart 4, which had been used as a habitual route for mountain bikers.
- A levelled area at the northern end of the rampart, which had been created by Restormel Borough Council in 1988. This was still bare, over 13 years later, and in places had been further eroded by visitors.
- A large quarried-out section of the east-facing side of the rampart, in which a huer's hut had been recorded on the 1907 OS map. This was positioned to the immediate north of the eroded gully noted above.

These works were prioritised for and carried out during the 2001 and 2002 seasons. There were also concerns about the footpath to the north and here, improvement work was also carried out early in 2003 (see section 5.1).

4.2.1 Eroded channel

The diagonal eroded channel running across rampart 4 was the first damaged area to be repaired in November 2001.

On the eastern face of the rampart (Figs. 16 and 18), the width of the scar varied between 0.45m and, towards the summit, 0.9m, with a depth of about 0.4m. Near the top, the scar was also deeper - up to 0.6m deep. At the very top, the gully was 0.7m deep and 1.0m wide, sloping down to a 0.4m base. At its western end (Fig. 17), this gully was split into two channels dividing by a residual clump of rampart. The northern gully was 0.7m deep and the southern one was 0.4m deep. A typical section of the eroded scar was as follows (top to bottom):-

0.12m soil layer (light yellowish brown sandy clay)

0.06m slight lens of small shillet pieces within a light yellowish brown sandy clay

0.07m soil layer (light yellowish brown sandy clay)

The remainder of the exposed area comprised the shillet fragments which made up the basis of the rampart fill.

4.2.2 North end of rampart

The hollowed-out area at the northern end of the rampart had a maximum depth of 0.8m. A detailed drawing was not undertaken because of the haphazard nature of the extant rampart and the low slope of the rampart into the eroded area. It was clear however, that there was a layer of *c.* 0.25m of topsoil/turf over a deposit of small shillet pieces which included pockets or slight layers of a yellowish brown soil. The conservation works followed the same methodology as works on other parts of rampart 4 (Fig. 19).

There was considerable footpath erosion to the north of the hollowed-out area. In many places, visitors to the site were walking on natural stone and the profile of the land meant that water was feeding into the ditch to the east of rampart 4. People were also walking along the base of the ditch and, as a result, it was bare. As a consequence of this, the area to the north of the ditch was built up with boarding and soil in order to divert water away to the north.

4.2.3 The quarried-out area

The quarried-out area formed the main part of works for the second season. A large hollow, it was 6.0m by 5.0m and had a maximum depth of 4.0m. There were vertical sides near its top, while at the bottom of the hollow, there was evidence of a considerable build-

up of collapsed material which had become covered by vegetation. It is known that the hollow was excavated out in the late 19th century for the positioning of huer's hut (lookout for shoals of pilchards) (Nowakowski *pers comm.*), which was still recorded in this location on the 1907 OS map

A detailed drawing of this hollow was not undertaken because of the amount of vegetation which needed to be removed and the large amount of work that would be necessary to clean up and draw the section. This was further felt to be an inappropriate use of time because immediately to the south an eroded section of the rampart was still visible, parallel to the southern footpath leading through the ramparts.

Once again, the conservation works followed the same methodology as other works on the cliff castle's ramparts (Figs. 20-22 and front cover). Much of the infill material was temporarily dumped to the north of rampart 4, near the (formerly) hollowed-out area. It was then transported along the ridge of the rampart to the main hollow in wheel barrows. The considerable vegetation within this feature was removed by the team from the British Trust for Conservation Volunteers and stockpiled close to the feature. This was used to re-profile the completed feature, following its infilling.

4.3 Rampart 6

Rampart 6 is the most easterly of the three ramparts on the actual island. It lies on the immediate western side of the footbridge and has been breached by the footpath which, at this point, comprises a series of concrete steps.

The management plan recommended conservation work on the eroded rampart on both sides of the footpath. The rampart on the southern side of the footpath stands to a height of 3.0m above natural shillet of which a maximum of 1.0m is visible where it had been worn away. It represents a useful section showing various tip layers from the construction of the feature. This face is however near-vertical and it simply would not have been possible to cover the feature with a protective layer of soil without cutting away a large part of the rampart to deliver a less severe surface on which to work. It was considered that such an action would be counter-productive as well as resulting in the loss of an interesting cross-section.

It was decided to concentrate works on the scar to the north of the footpath, initially caused by people who had clambered along the length of the rampart from the footpath and worsened by normal processes of erosion. Some 5.0m long, it had a maximum depth of 1.5m (Figs. 23 and 24). This feature was recorded in some detail prior to works, as it presented a good opportunity to consider the interior of the feature.

A plan was produced of the eroded area and the east facing section was drawn (Fig. 7). Study of the east-facing section shows that there were a total of 13 different contexts, as below:

The Contexts

1. Layer of vegetation, incorporating various grasses and plant species appropriate to the headland.
2. Light yellowish brown soil; quite sandy and friable, with very few inclusions.
3. Thin lens of small shillet pieces within a matrix of a mid brown soil (30%).
4. Light yellowish brown soil; quite sandy and friable, it appeared reddish in places..
5. Yellowish brown soil; comprising 50% shillet and odd inclusions of small quartz

pieces.

6. Yellowish brown soil; comprising 25% shillet and odd inclusions of small quartz pieces.
7. Brownish yellow soil; quite sandy and friable.
8. Light yellowish brown soil; quite sandy with a small amount of shillet pieces.
9. Thin lens of light yellowish brown soil; quite sandy with 10% shillet pieces.
10. A very thin lens of shillet (0.02-0.03m deep), positioned between layers [8] and [9].
11. Brownish yellow shillet; it was mottled in places and there was evidence for some soil within the deposit.
12. Brownish yellow shillet. There was no evidence of tip lines.
13. Yellowish brown soil; comprising 35% shillet and odd inclusions of small quartz pieces.

The lower contexts were largely made up of shillet, with the different contexts representing episodes of construction which are likely to have been broadly contemporary. The deposits nearer the top of the surviving bank contain a greater admixture of soil and numerous stones which probably represent evidence of defensive structures. The fact that the erosion was along the line of the bank, meant however that the section drawing was less useful than a straightforward cross-section across this linear feature.

This hollow was infilled in the same way as the other eroded areas on ramparts 1, 2 and 4. The infilling was carried out to replicate the angle of the eroded face and profiled well. Indeed, the conservation work in this area was very successful and a healthy sward of vegetation quickly became established and continues to flourish. A south-facing section, it did not have to withstand the harsh north wind and salty sea blow, which has done such damage to those re-turfed or seeded areas around the new footpaths and steps (see Section 6).

5 Bronze Age barrow

The main part of the programme undertaken during the third season comprised the infilling of an eroded barrow on Porth Island. The barrow had a large hollow on its northern side, which had probably been created through an antiquarian excavation in the 19th century, though there is no soil nearby as this was probably thrown over the cliff. A heavily eroded path also extends all the way from the footbridge right up to and over the barrow itself.

The barrow itself is circular, approximately 24m in diameter (see Figs. 25 and 26). It is flat-topped, with a slight depression in the centre, and has a height of approximately 3.0m above the natural headland.

The footpath which leads over the barrow has an average width of 1.0m, though it is wider in places. At the western edge of the barrow, this footpath scar was only 0.05m deep, but on the top of the barrow the depth of erosion was 0.5m. Where the footpath winds down the longer eastern slope of the barrow, the scar was 0.7m deep near the top where the erosion was at its worse, while it was 0.4m near the base of the slope. The footpath itself was 0.2m deep where it continued to the east, coming down straight onto natural shillet.

Around the erosion at the top of the barrow, there were two grass-covered hummocks of soil, with the eroded footpath to the south and the main eroded hollow to the north. There was also a considerable amount of stone visible around the eastern part of the top of the barrow and halfway down the eastern slope of the monument. This no doubt represents evidence of the stone core of the structure, through the visible stonework did not lend itself to detailed interpretation

The hollow had a maximum depth of 1.8m, with quite severe slopes on the southern, western and eastern sides. There were also a few odd pieces of stone in the southern face of the eroded area. Large parts of the hollow were bare earth, although to the north there were two wings of earth which were grass-covered and sloped into the eroded area.

On the southern and western flanks of the barrow, there were numerous small hollows and irregularities caused by rabbit activity. There were also two further eroded scars on the edges of the barrows where a lot of people had walked, and it was also very interesting to note areas of short vegetation where there had been considerable numbers of walkers.

5.1 Archaeological recording

An EDM survey of the barrow was carried out in October 2003, in advance of the conservation works. The main areas of erosion within and over the barrow were recorded, as well as the areas of eroded path. Existing areas of grass cover and existing paths were also noted (Fig. 8) and a profile of the barrow was also constructed (Fig. 9). In comparison with the earlier 1983 survey, it showed that the surviving clumps of turf to the north of rampart 4 and to south of rampart 5 had been further eroded.

Vanessa Straker (English Heritage Regional Archaeological Science Adviser) and her colleague Giana Ayala visited the site to undertake a geoarchaeological assessment to see whether there was potential for pollen and plant macrofossils or buried soils. In the centre of the eroded hollow, a small square pit, 0.5m by 0.5m was excavated to investigate the condition of the deposits. The excavation was curtailed when a spread of stones was encountered and both Vanessa Straker and Giana Ayala considered it not worthwhile to take any samples for analysis from the dark yellowish brown soil encountered in the hollow.

5.2 The airlift

Due to its position within the western portion of Porth Island, access to the barrow is across the footbridge which leads from the mainland. Because of this, it was not possible to use traditional methods to deliver the necessary materials to carry out the work.

771 Naval Air Squadron from RNAS Culdrose at Helston were contacted and agreed to transport loose shillet and soil on to the headland as part of a training exercise.

Staff from Restormel Borough Council filled 48 'builders' bags' with shillet or soil, in advance of the airlift, each weighing just under one tonne. On the day, local contractor Rob Morcom lifted the bags into sixteen individual cargo nets and these were flown one by one onto the headland (Fig. 27). After each round of deliveries (16 bags), the bags were manhandled out of the cargo nets and the nets returned to the mainland for the next lift.

The airlift took place on the 29th October 2003, in conditions that could only be described as appalling. As well as a sizeable ground crew from RNAS Culdrose, over twenty staff from Restormel Borough Council were on site to assist with the airlift and, for health and safety reasons, to keep members of the public away from the headland for the duration of the day.

The material transported onto the Island was enough to fill the main eroded hollow, but there was not enough material to undertake further works to the actual eroded footpath. This remains an objective for the future.

6 Footpaths

During the repair works to ramparts 3-5, considerable discussion ensued as to the condition of the northern path through the fortifications. As noted previously, where the path led through rampart 4, the surface of the path was eroded natural shillet, which had been worn away by the feet of walkers and rain. A tricky slope for less agile walkers, particularly in wet conditions, it was decided to build steps through this actual rampart. To the east of this grouping of ramparts, walkers between the two paths had created a further permissive path which had become an eroded hollow. It was decided to formalise this desire-line and control further erosion by constructing a 1.0m wide footpath in this location.

6.1 Footpath and steps to north of ramparts 3-5

Rob Morcom was hired by Restormel Borough Council's Parks Department to construct a properly surfaced path and a set of steps to give access around the northern end of ramparts 3-5 and down to the bridge which links the mainland part of the site with the island.

This construction work did not include excavation but involved laying materials onto the existing surface which was largely eroded bedrock. The peg and rail timber steps, laid through the rampart's eroded path were approximately 1.0m wide (Fig. 28). The edge of the steps and associated path, which extended to eastern side of rampart 3, were created by laying boards and infilled with hardcore (Fig. 30). After the initial stages of work, volunteers from BTCV infilled soil along either side of the path to create a vegetated protective buffer for the path and the archaeological remains to the south. On the southern side of the steps, there was a large eroded area with a depth greater than a metre. This was infilled using the same methodology as used elsewhere, with wooden revetments, though the profiled edge was quite severe (Fig. 29). Following the work of the conservation volunteers Mr Morcom revisited the site and laid the final top covering over the path.

To the north of the steps, there was single area that was more eroded than the ground around it. In order to protect walkers, a short section of a timber guard fence was erected along the path.

Given the terrible salty winds experienced in this area, vegetation along the side of the path did not take and the severe slope on the made-up ground next to the steps was adversely affected by the burrowing of domestic dogs. These works were undertaken in the Spring of 2003, but revisited by HES in 2004 (see Section 6.2 below), when turf lifted from that area was used to reconstruct the area of slump in rampart 4.

Prior to the construction of the path, it was noted that pieces of tarmac had been dumped in one of the visible ditch cuts to the north. In order to improve the amenity of the site, this material was cleaned up and used as fill in infilling works.

6.2 Footpath to east of rampart 3

The footpath to the east of rampart 3 was created in March 2004. Turf was excavated from the line of the existing 'permissive' path to a depth of 0.1m. Carried out under

archaeological supervision (Fig. 31), only the top soil was disturbed and no archaeological deposits of consequence were uncovered. The width of the path was 1.0m and constructed using the same methodology as the path to the north.

To the south east of rampart 3, there was also evidence of cliff instability which was undermining the existing fencing and posed a severe health and safety risk. Restormel Borough Council therefore decided to bring the line of the fence in from the cliff by about a metre. This entailed further works which included widening the path to the east by a similar width. A wooden seat, placed in a concrete plinth, was also moved (Fig. 32). The topsoil to the east of the base of the seat was removed and the mini-digger on site pushed the seat into its new position.

Turf removed from the line of the path was used to resurface the hollow infilled in rampart 4, to the south of the steps, and to cover a barren area close to where the new path met the northern path constructed twelve months previously. As noted above, the winds and salty sea blow from the north largely prevented the growth of any meaningful level of vegetation, which was not helped by the extent of visitors to the site who walked over some of the affected area.

7 Discussion

By the spring of 2004, all the damaged areas identified by the management plan on the mainland part of Trevelgue Head, as well as rampart 6, had been dealt with. Two new footpaths, one with a set of steps, had also been created in the vicinity of ramparts 3-5.

No further conservation works were carried out during 2004-2005, although a watchful eye was kept on those areas where hollows and scars had been infilled. The quarried-out hollow in rampart 2, the large hollow in rampart 3 and the repaired damage to rampart 6 were particularly successful. Each of these areas is now well-vegetated and the ongoing erosion has been halted.

The repair work to the linear scars over ramparts 1, 2 and 4 were also successful in reprofiling parts of the monuments. However, members of the public have continued to walk/climb in these particular areas, either preventing new vegetation from growing or damaging that which has grown. In particular, the diagonal scar across rampart 4 has suffered considerable damage by visitors using it as a slide.

Restormel Borough Council has instituted a more proactive signage policy in these areas to prevent further damage. These signs continue to have a short lifespan and are regularly vandalised and removed.

The inability of new vegetation to prosper in exposed areas around the new paths and steps has also proven to be a considerable problem. This situation is continuing to be monitored by representatives of both the Historic Environment Service and Restormel Borough Council, and further work may be undertaken in an attempt to encourage better vegetation growth. There may also be a need to consider turfing rather than re-seeding in the future.

A range of conservation works, identified by the management plan produced by English Heritage, have yet to be completed. These include:

- Repair of erosion scars on Ramparts 7 and 8.
- Infilling of footpath over the Bronze Age barrow.

All areas of outstanding works are on the actual Island, which still has the obvious problem of transporting the raw materials to the eroded areas.

The Scheduled Monument Management Programme has agreed on two further pieces of work for its 2005-2007 programme of works. The main proposal envisages further conservation work on the monument, while the second will erect a series of three interpretation boards on the headland thus helping to fulfil another of the objectives in the English Heritage Management Plan.

The remaining objectives which are concerned with visitor management, control of further erosion, control of vermin and undesirable plants have yet to be addressed, but the designation of Trevelgue Head as a Local Nature Reserve may provide a context for the introduction of measures to tackle these issues.

8 References

8.1 Primary sources

1880 OS 25 inch map

1907 OS 25 inch map

8.2 Publications

Cathersides, A, 1999. *Trevelgue Head Management Plan*, English Heritage

Hawkes, J, 1951. *A Guide to the Prehistoric and Roman monuments in England and Wales*, Chatto & Windus, London.

Hencken, O'Neill, H, 1932. *The Archaeology of Cornwall and Scilly*, London

Nowakowski, J, 1998. *Trevelgue Head, Newquay, Cornwall. A Review of the 1939 C. K. Croft Andrew Excavations and the CCRA, CEU 1983 Site Investigations with a Proposal for Post-Excavation Analysis leading to Publication - Project Design*, CAU, Truro.

Reid, W F, 1891. Note on a prehistoric bronze foundry at St Columb Porth, *Jour. Brit. Arch. Soc.* **147**, 133

9 Project archive

This project has been undertaken within three different financial years. Each year there has been a different CAU/HES project number, as follows, 2001022, 2002003, 2003016 and 2004006.

The project's documentary, photographic and drawn archive is housed at the offices of the Historic Environment Service, Cornwall County Council, Kennall Building, Old County Hall, Station Road, Truro, TR1 3AY. The contents of this archive are as listed below:

1. A project file containing site records and notes, project correspondence and administration.
2. Field plans and copies of historic maps stored in an A2-size plastic envelope (GRE 208).
3. EDM survey drawings are held in digital form as: G:\CAU\DRAWINGS\CAD ARCHIVE\SITES \T\tREVELGUE HEAD
4. Black and white photographs archived under the following index numbers: 2001 season GBP 1415 9-24, GBP 1416 1-12, 21-35; GBP 1432 22-29; 2002 season GBP 1455; 1545; 1546; steps in rampart 3 (2003) GBP 1546 ; 2003 season GBP 1601 1-27; GBP 1602 1-15; 1603 2-5, 19-32; repair to rampart 1 (2004) GBP 1638.
5. Colour slides archived under the following index numbers: 2001 season GCS 32340-32352; 2002 season 34409-24416; 2003 season 34443-34468.
6. This report held in digital form as: G:\CAU\HE PROJECTS\SITES\SITES \T\tREVELGUE PROMONTORY CAMP\tREVELGUE MANAGEMENT WORKS REPORT-MAPS.DOC

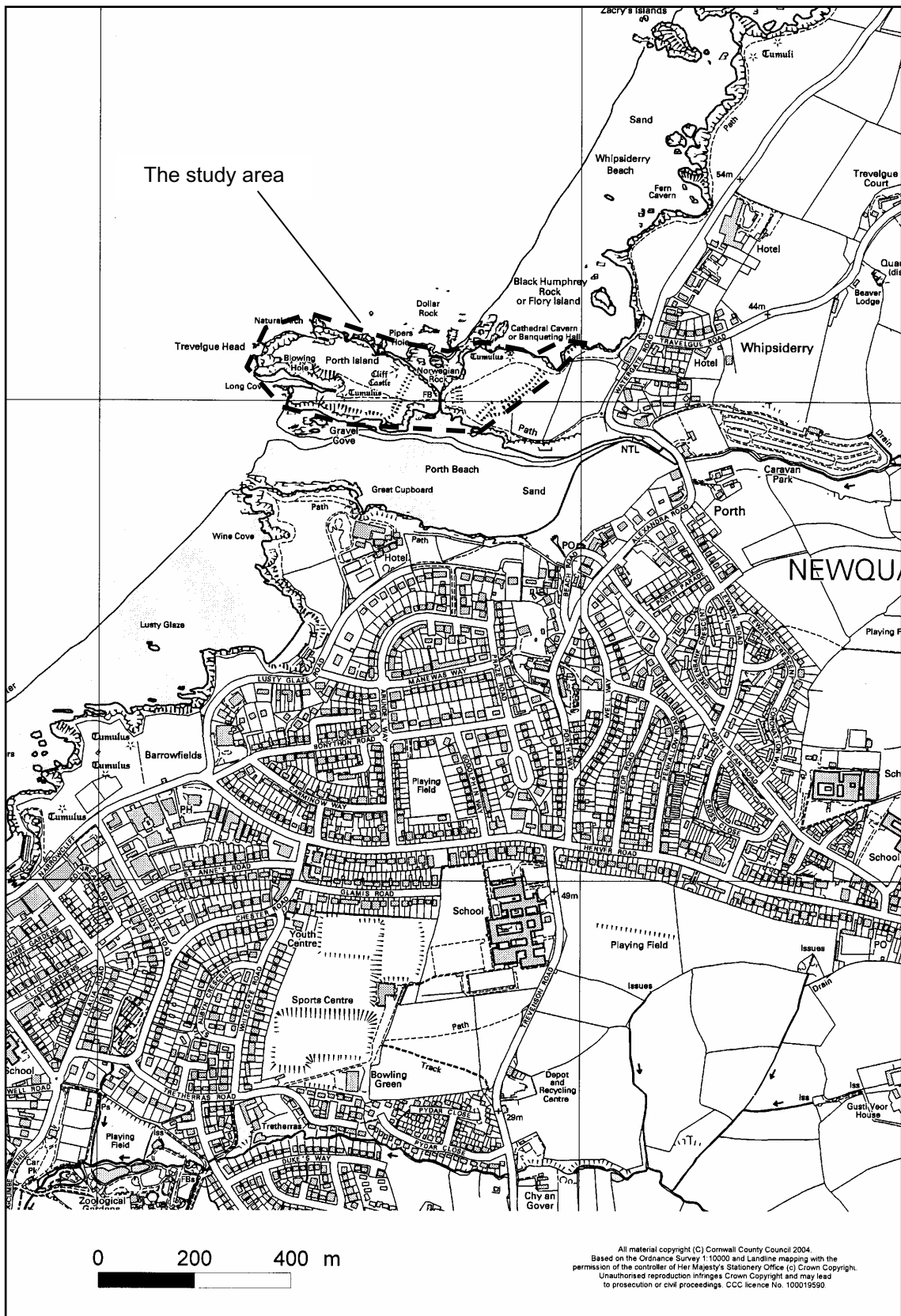


Fig. 1 Location of Trevelgue Head in relation to Newquay.

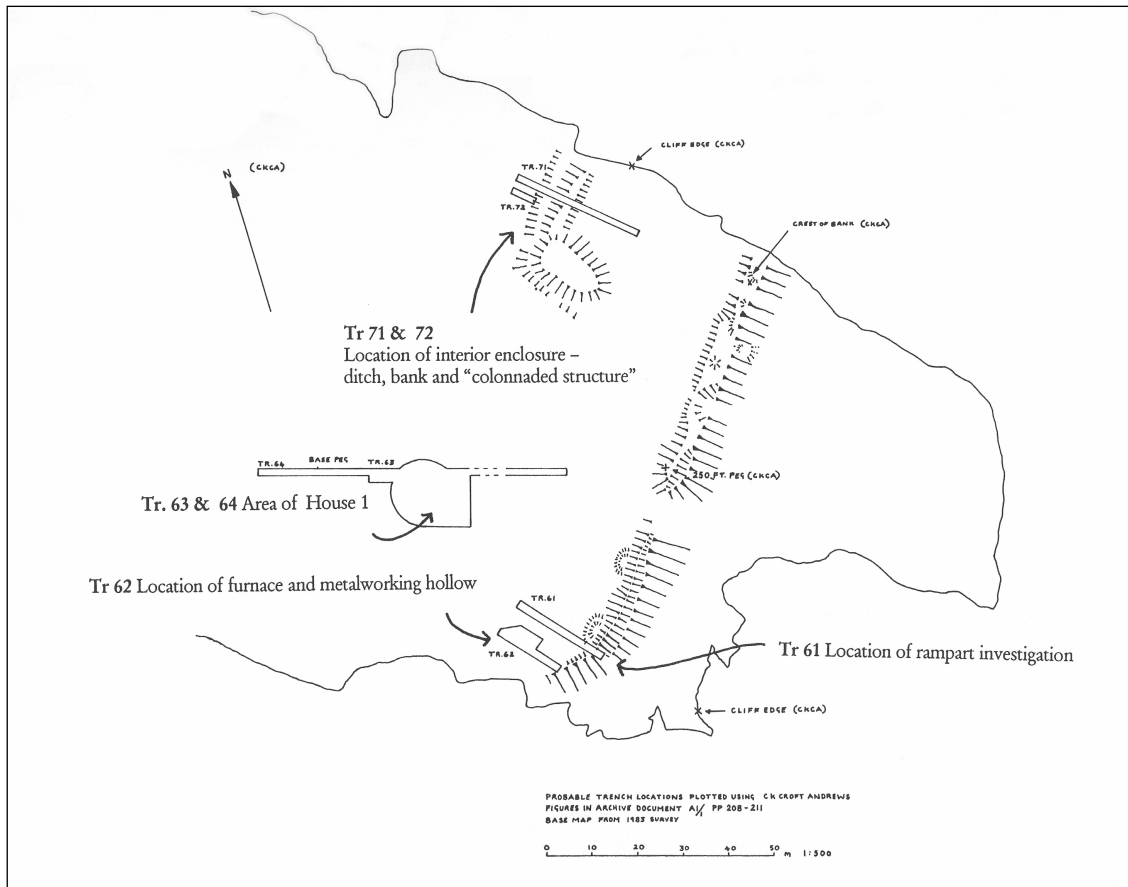


Fig. 2 C. K. C. Andrew's excavation on Porth Island in 1939 (probable trench locations plotted on 1983 survey base)

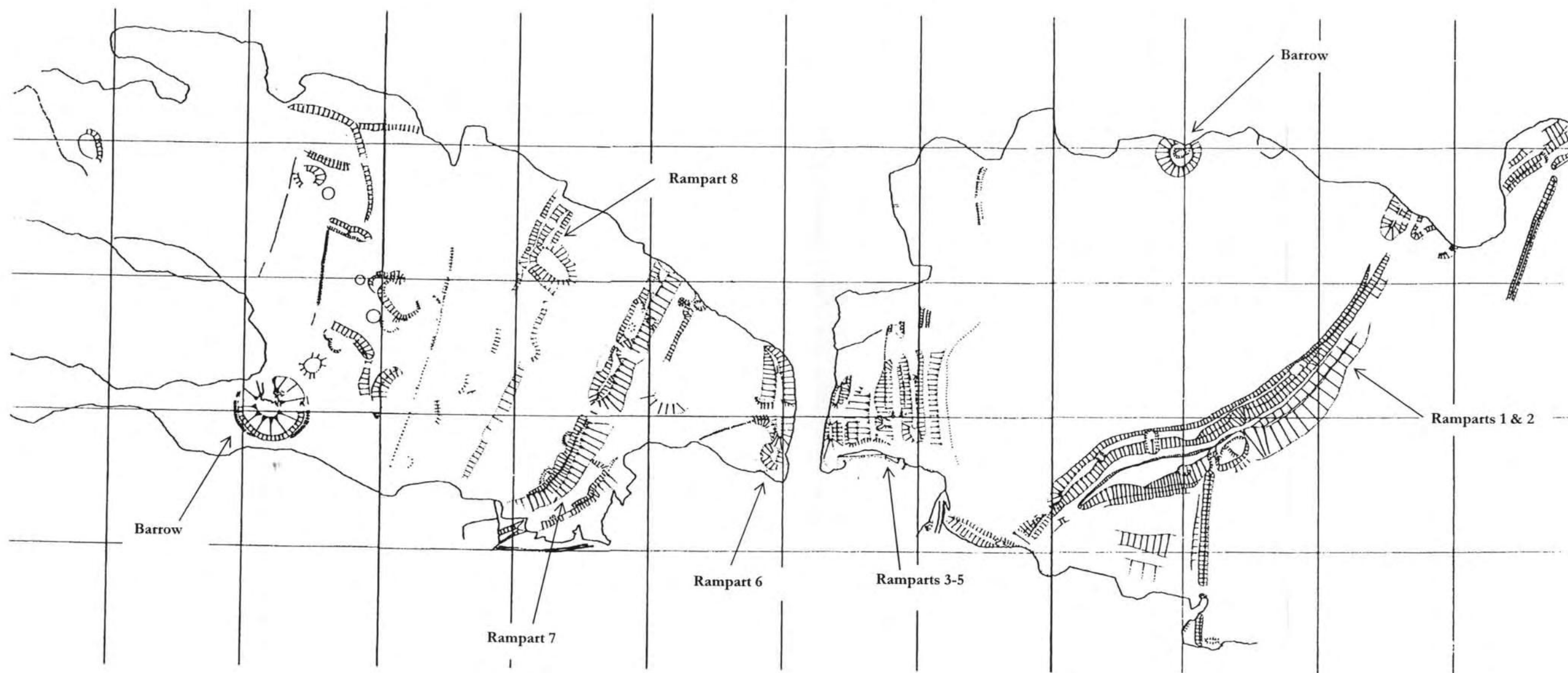
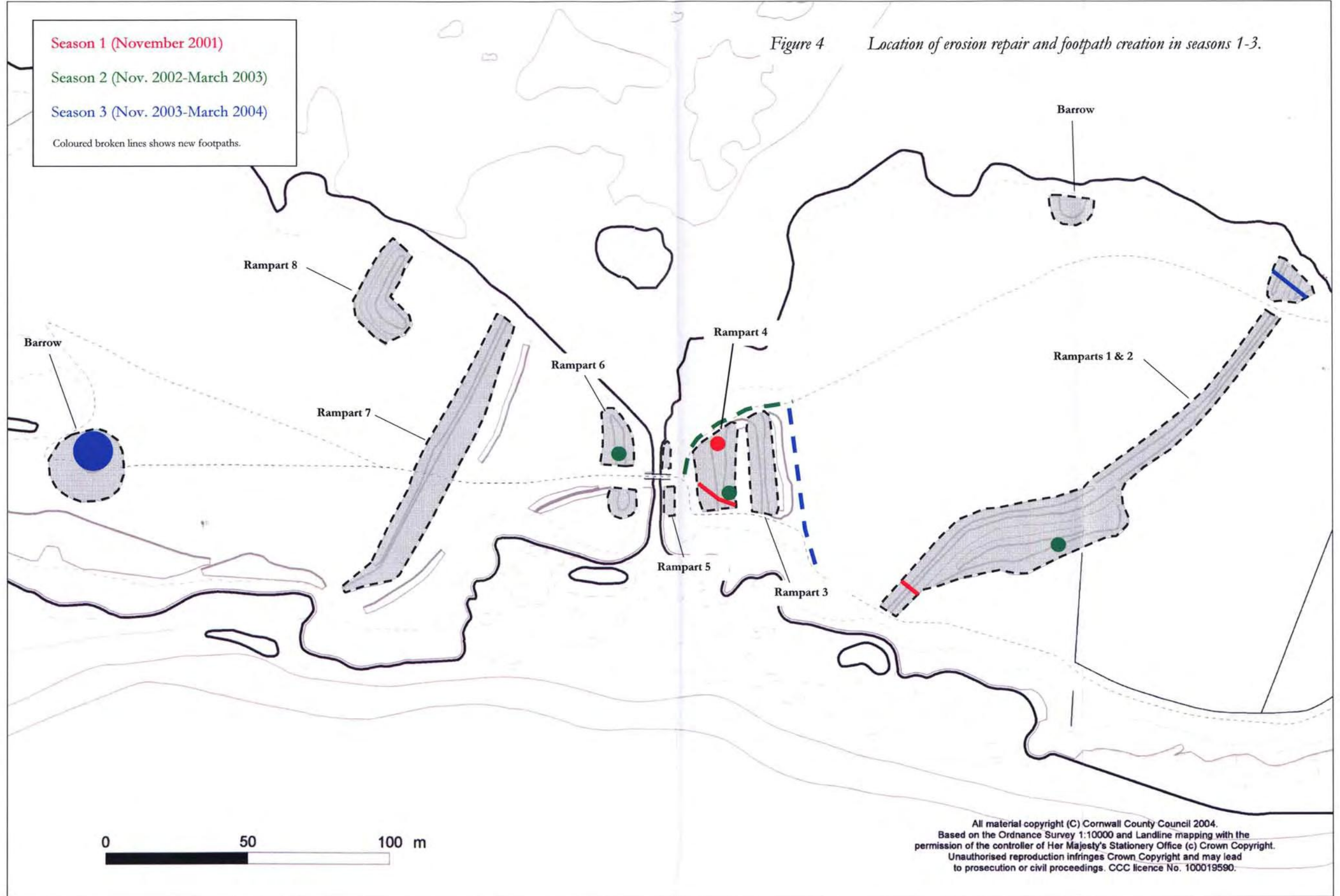


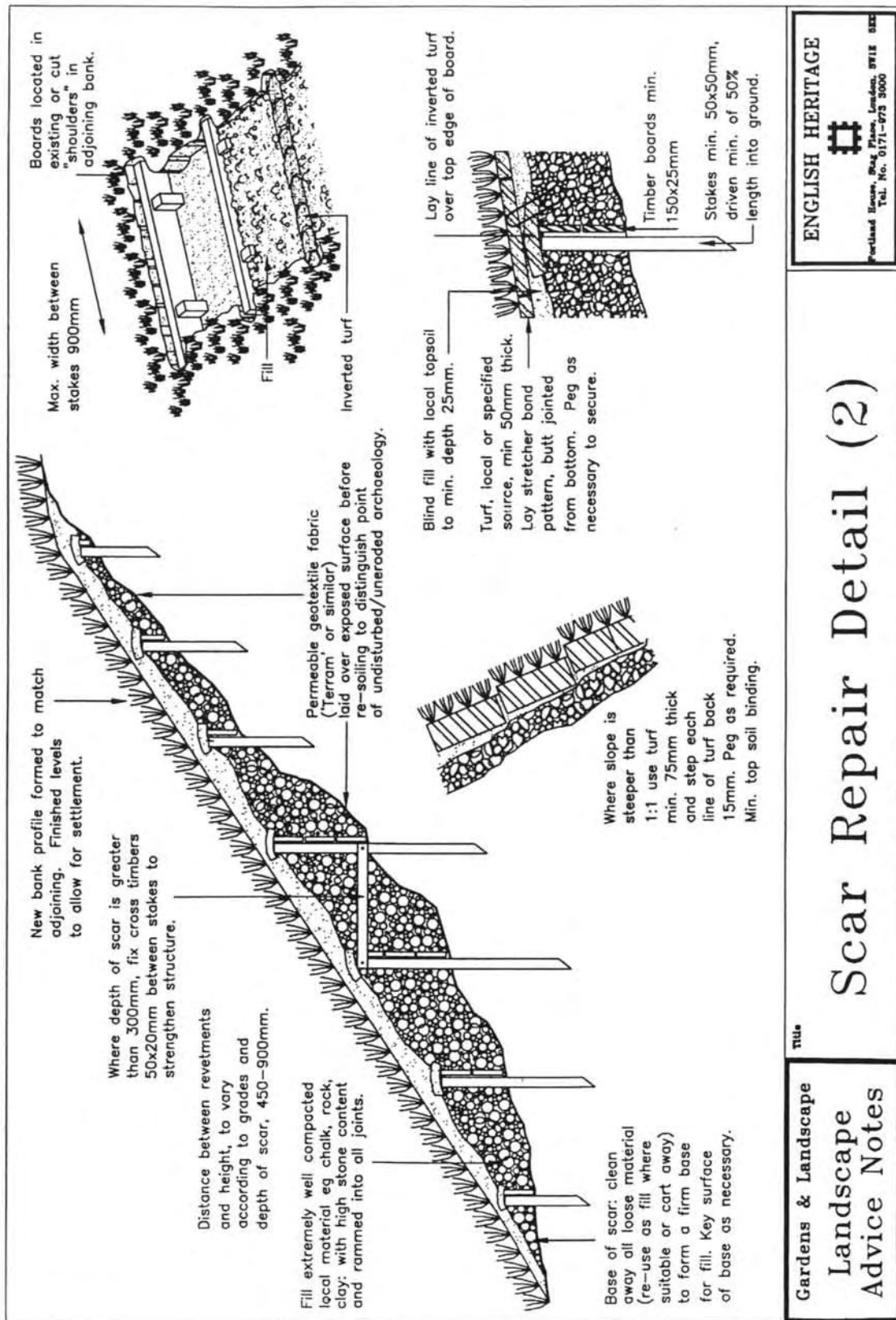
Figure 3 Extant ramparts and barrows on Trelvelge Head as surveyed in 1983. Each box equates to 50 square metres.

Season 1 (November 2001)
 Season 2 (Nov. 2002-March 2003)
 Season 3 (Nov. 2003-March 2004)
 Coloured broken lines shows new footpaths.

Figure 4 Location of erosion repair and footpath creation in seasons 1-3.



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Scar Repair Detail (2)

Fig 5 Methodology for scar repair

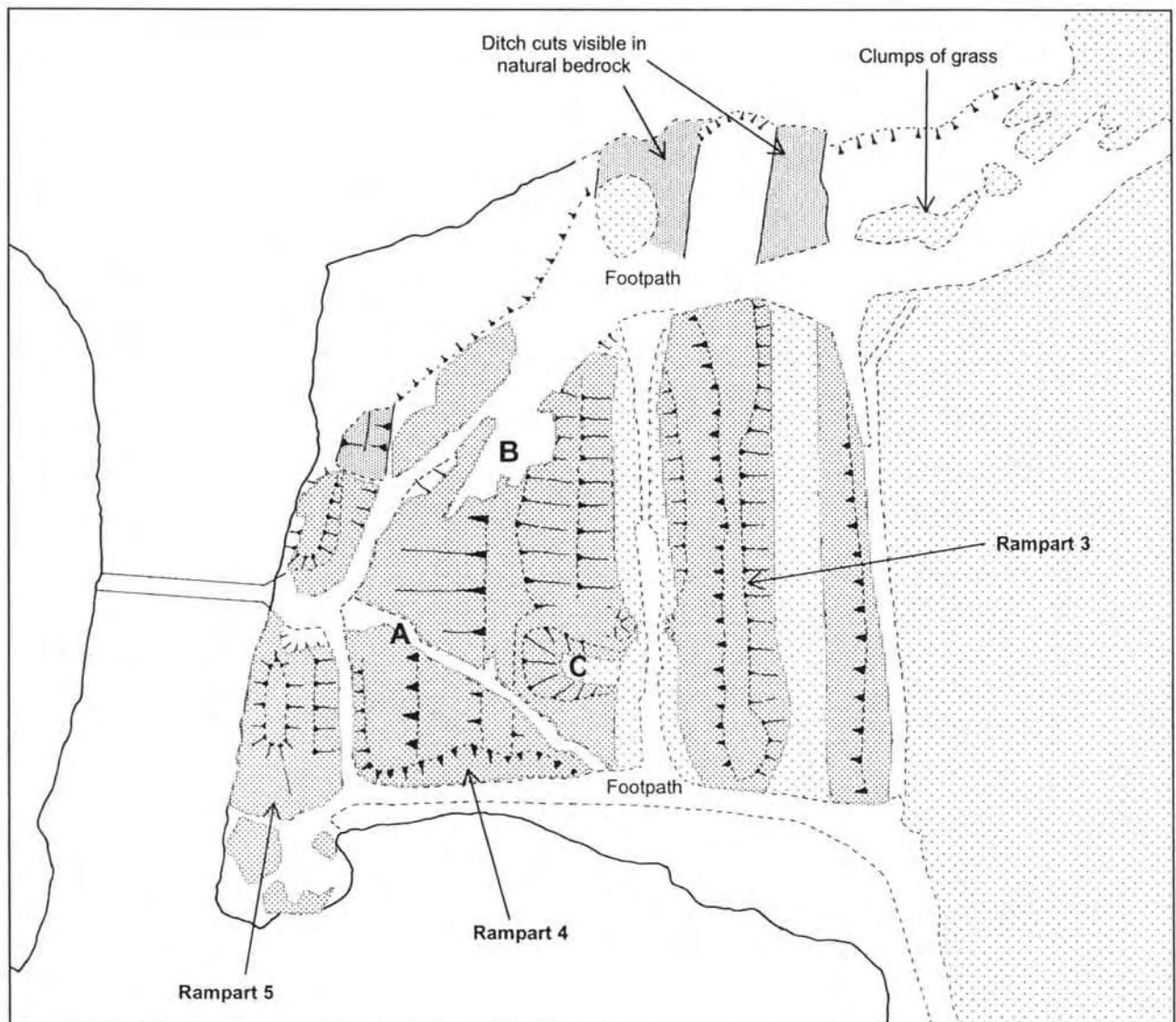


Fig. 6 2001 survey of ramparts 3-5 with annotations.

The above survey shows the two footpaths leading through or around the ramparts, as well as the two 'informal' paths leading between the main paths. It also shows the clumps of surviving turf which are being eroded to the north-east and south-west.

The three damaged area of rampart 4 infilled by this project are:

- A. Diagonal erosion scar across the rampart.
- B. Area damaged in 1980s.
- C. Area quarried out prior to 1907.

N*

S*

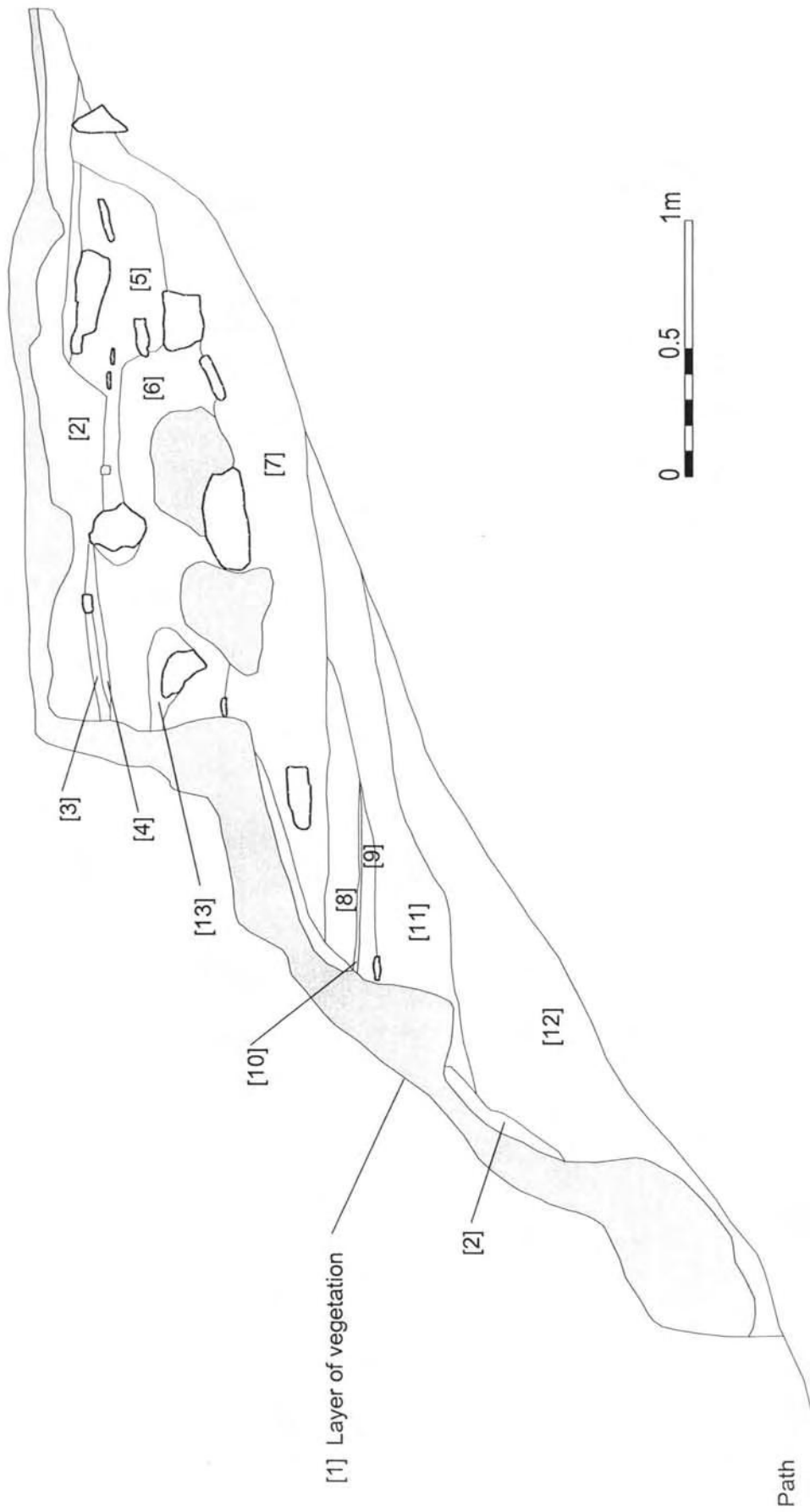


Fig. 7 Section through eroded central portion of rampart 6.

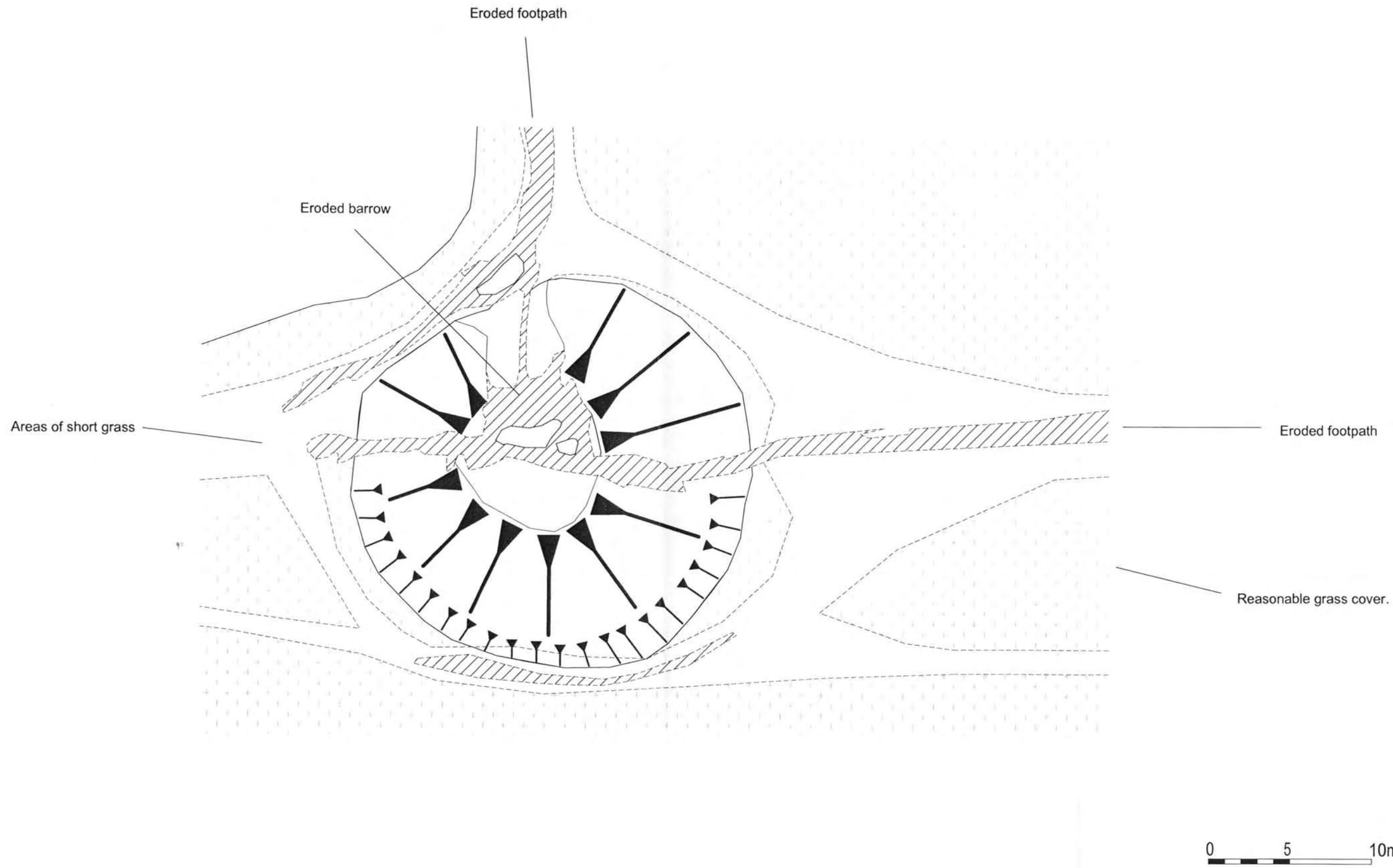


Fig. 8 Plan of Bronze Age barrow showing extent of scar damage.

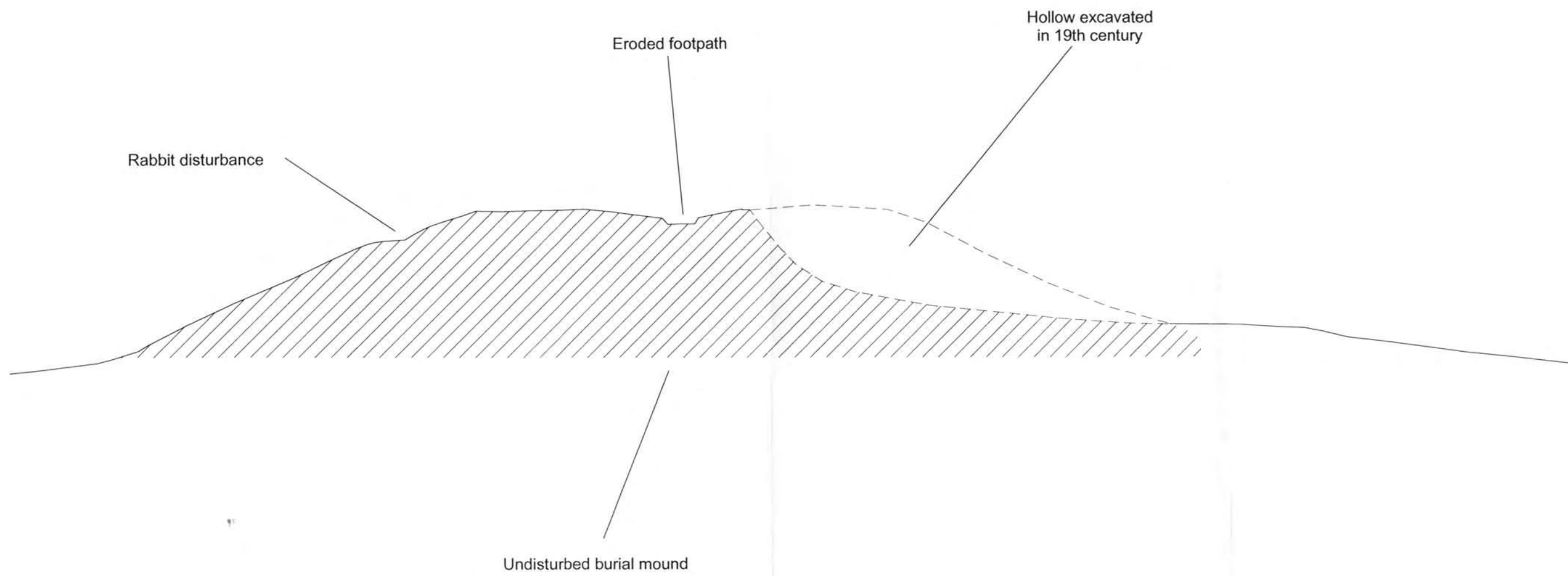


Fig. 9 Schematic east-facing section of Bronze Age barrow.



Figs. 10 and 11 Eroded scar on rampart 2 prior to works commencing and following the removal of vegetation.



Fig. 12 Construction of wooden revetments into scar on rampart 2.



Figs. 13 and 14 Infilling of the rampart 2 in progress. Note how vegetation removed from the hollow has been replaced at the base of the scar.



Fig. 15 Eroded scar following conservation, covered with bessian matting.



Figs. 16 Eroded scar across rampart 4, prior to works commencing. Photograph taken from the east.



Figs. 17 Eroded scar across rampart 4, prior to works commencing. Photograph taken from the west.



Figs. 18 *Infilling of scar across rampart 4. Photograph taken from the east.*



Fig. 19 *Infilling of eroded northern end of rampart 4.*



Figs. 20 and 21 An early stage of the infilling of the large hollow in rampart 4 and following its completion.



Fig. 22 The infilling of the large hollow in rampart 4.



Fig. 23
The extent of erosion in rampart 6.



Fig. 24 *The extent of erosion in rampart 6.*



Fig. 25 *Eroded barrow from the north.*



Fig. 26 *Eroded barrow from the east.*



Fig. 27 Sea King helicopter from RNAS Culdrose carrying out airlift of materials to Porth Island.



Fig. 28 Construction of steps through rampart 4.



Fig. 29 Steps through rampart 4. Note infilled hollow to the left and safety fence to right of path.



Fig. 30 Footpath through ramparts 3 and 4.



Fig. 31 Construction of new path to east of ramparts 3-5.



Fig. 32 Modified footpath to east of ramparts 3-5.