

The Nine Maidens Madron Cornwall

Restoration



Historic Environment Service (Projects)

Cornwall County Council

The Nine Maidens, Madron, Cornwall

Restoration

**(scrub clearance, drainage, re-erection of
three fallen stones)**

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The practical work on site was carried out by Adrian Thomas, David Cutting and Geoff Hoad.

Within the Historic Environment Service, Nigel Thomas helped with the survey and the excavation was carried out by Charles Johns and Sean Taylor. Peter Rose read and commented on this report.

Cover illustration

Re-erecting the largest of the fallen stones; Carn Glava is seen on the horizon

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Abbreviations

CAU	Cornwall Archaeological Unit
DEFRA	Department of Food and Rural Affairs
EDM	Electronic Distance Measurer
EH	English Heritage
FMW	Field Monument Warden
ESA	Environmentally Sensitive Area
HER	Cornwall and the Isles of Scilly Historic Environment Record
HES	Historic Environment Service, Cornwall County Council
NGR	National Grid Reference
RCM	Royal Cornwall Museum
PRN	Primary Record Number in Cornwall HER
OS	Ordnance Survey

1 Summary

The Nine Maidens Stone Circle (SM Cornwall 49; Historic Environment Record number 30684) stands at SW 4342 3512 on Nine Maidens Common near the northern boundary of the parish of Madron. Eleven stones of an original twenty two or twenty three survive; the circle has a diameter of 22 metres.

The stone circle is located in an area of fairly flat, peaty heathland which, although it is relatively remote, is well used by walkers, horse riders and regrettably, also by trail bikes. As a result of these various activities, the circle was suffering erosion which was most conspicuous in winter when large puddles and deep mud covered much of the ground. Other parts of the circle were overgrown with tall gorse which had the effect of channelling people along certain paths where erosion developed.

A decision to initiate action on these problems was taken in January 2003 when extremely wet weather, combined with more motor bike activity than usual, lead to particularly unpleasant conditions at and around the circle. After extensive consultation and discussion, a plan was devised to relieve the problems and enhance the condition and appearance of the circle. This work, eventually undertaken in late spring/early summer of 2004, involved scrub clearance, drainage, footpath restoration, and the re-erection of three fallen stones. By the autumn of that year, the effectiveness of these measures could be judged and as a result it was decided that some modification would be needed. Further work, undertaken in June 2005, included additional drainage and footpath work.

Associated archaeological work involved an EDM survey of the site, a watching brief while the drainage trenches were being dug and preliminary excavation of the ground beneath the stones that were being re-erected. The latter successfully located the sockets that the stones had originally stood in, and was used to guide the way they were set upright again.

2 Introduction

The Nine Maidens Stone Circle is set in one of the remoter parts of the West Penwith moors (Figs 1 and 2). Although only eleven stones of an original twenty two or twenty three survive, with several of the surviving stones fallen or leaning, this is nevertheless a fine circle. Over the ten years prior to the work described in this report, however, appreciation of the circle had been hampered by increasing amounts of scrub and by muddiness and erosion, particularly in winter. This report describes work undertaken by the Historic Environment Service (HES) in 2004 and 2005, to improve the condition and appearance of the circle.

2.1 Project background

Following a gradual deterioration in the condition of the Nine Maidens, observed over a number of years, and described in detail below (section 2.2), action to repair and enhance the monument was finally precipitated by the very wet winter of 2002/3, when the monument deteriorated to a state that can only be described as a mud-bath.

Concern about the area in general and the monument in particular was expressed at a meeting of the West Penwith ESA's Liaison Group in 2003 and this was followed by a site meeting of Peter Bowden and Richard Glasson of DEFRA with the English Heritage Field Monument Warden. As a result of this, the first moves were made towards setting up this project, which after consultation with a variety of organisations and individuals, including the Nine Maidens Down Commoners (the owner is not known), the National Trust and Natural England, was undertaken in two phases:

Phase 1: project planning, survey and production of detailed proposals

Phase 2: project implementation – scrub clearance, drainage, path restoration, and the re-erection of standing stone(s)

2.2 The condition of the monument

The Nine Maidens is set now, as it probably always has been, in an area of open rough ground. Although the area would have been used for summer grazing in the past (and continued to be in an *ad hoc* fashion until a few years ago) Nine Maidens Down is now used only for recreation.

Historic accounts of the circle rarely focus on the condition of the monument; but from 1980 onwards, English Heritage's (EH's) Field Monument Wardens (FMWs) began compiling reports which are useful in this respect. In 1980 it was noted that 'the centre of the circle is semi-denuded moorland grass and heather' and just over ten years later, in 1991, it was reported that 'presumably because of the number of visitors, the vegetation within the circle is generally short grass, with clumps of gorse and heather. Paths from several different directions (including the Tinnens' Way long distance footpath) converge at the circle and are bare in places where they cross it....Around most of the stones is a slight hollow, suggesting animal erosion, although this must be old damage, as the hollows are grassed over and no animals (apparently) graze the area now'. At the time it was also noted that the main threat was probably from visitor erosion, and regular monitoring was recommended.

In 1996, signs of modern 'pagan' activity were observed at the circle. The most notable was a thin worn path, weaving its way around the outer edge of the stones, except where the vegetation was very dense. This was not deemed serious, however, compared with the activity at places like the Men an Tol and Boscawen Un stone circle. One stone, leaning so that it was practically recumbent, was found to be slightly loose, but not dangerously

unstable. Since this time, pagan activity has remained relatively stable, but the general problem of ground erosion associated with the popularity of the area has become progressively worse. Figure 6 shows the condition of the monument in 1999, at the time of the Total Eclipse in Cornwall.

In 2001, it was noted that in winter the ground within the circle became very muddy, particularly where people walking in the area were forced along ever-narrower paths, between ever-larger bushes of gorse. At the time, no action was taken because it was considered that this might make an excellent project for a proposed 'Ancient Sites Management Officer': a post then being proposed by West Penwith's Sacred Sites Protection Network. In the event, however, the terminally slow progress of this proposal coupled with appalling weather over the winter of 2002-3 meant that action could be delayed no longer.

2.2.1 Condition and management prior to 2004 management work

Around the Nine Maidens stone circle, the vegetation is mainly low grass, heather and gorse: very thin and fragile, and very vulnerable to erosion. But within and around the circle were areas of taller gorse and heather, so high and dense in places that several of the upright stones were completely overwhelmed and two fallen stones entirely obscured. Footpaths from the NW, S and SE converge close to the circle, and although the modern map does not show any paths going through the circle (Fig 2), several paths nevertheless lead into it and are used habitually by visitors (see the air photos, Figs 4 and 5). An increased growth of gorse causing the paths to narrow had led to the development of erosion along these lines. Although the ground in the area is generally flat, there is a slightly lower-lying hollow just to the north of the circle, within which ground water accumulates whenever there is rain - the puddle extending right into the circle when the rain is particularly heavy. So, it was no surprise that in January 2003, following a period of torrential rain which brought flooding to numerous places in Cornwall (including Pengersick Castle) and caused the Gun Rith Menhir to fall (Preston-Jones 2004, 5), the circle was found to be a 'wet and muddy mess' and the paths 'entirely bare and muddy or covered by standing water' (EH FMW's report). To make matters worse, trail bikes had been riding over the area - although the rapid action of the National Trust in stopping this helped to prevent any serious damage to the monument by bikers. The extent of these problems is indicated in Figs 6 - 9.

The overall feeling was not of a fine stone circle, but of greyness, mud, water, a few stones sticking up through the gorse, and a struggle to drag wellies out of the sucking mud.

2.3 Aims

Clearly, then, the overall aim of the project was to improve the condition and presentation of the circle. It was proposed that this should be done by

- Clearance of scrub, to improve access to and presentation of the circle.
- Drainage of excessively wet areas, to help prevent erosion and improve access to the circle at all times of the year.
- Restoration of eroded paths, by re-profiling where necessary and pegging down gorse and heather cuttings.
- The re-erection of three fallen stones.
- Stabilisation of one leaning stone which was slightly loose.

3 Background

3.1 Location and setting

In 1827, Cotton described the Nine Maidens as ‘situated on the waste and bleak downs north-west of Maddern church town, near Ding Dong copper mine’. It has not really changed.

Located 7 kilometres north-west of Penzance and some 3.5 kilometres north-west of Madron parish church, the Nine Maidens stone circle stands over 220 metres above sea level in a slight hollow on a south-east to north-west trending flat-topped ridge terminated abruptly at its northern end by the craggy granite tor of Carn Galva. The bedrock is granite, the soils Stagnopodzols, the vegetation thin heather and gorse and the position exposed. This down is glorious on a summer’s day when the heather is blooming but at times can be uncompromisingly wild.

Although on high ground, the Nine Maidens in fact sits in a slight hollow on the north-west to south-east ridge between Carn Galva and Ding-Dong Mine. But although the view to the north-west and south-east is blocked by this higher ground, the outlook from the circle is nevertheless wide, taking in several notable hills. To the east lie Mulfra Hill, Castle Downs and Zennor Hill, while to the west-north-west and west-south-west can be seen Watch Croft, Chun Downs, Carn Kenidjack and Boswens Common. Significant prehistoric monuments which are visible from the Nine Maidens include Mulfra Quoit, Zennor Quoit(?), cairns and a standing stone on Watch Croft, *not* Chun Quoit, but possibly Lanyon Quoit, the Men an Tol ‘Stone Circle’ (when the vegetation is very low), the Men Scryfys (possibly a ‘converted’ Menhir), as well as the later prehistoric hillforts of Chun Csatle and Castle an Dinas (the latter with a possible ring cairn at the centre).

But most outstanding is the startling sight of Carn Galva (Fig 9). Indeed the tor’s dominating presence must explain why this spot was chosen; and it can be no coincidence that the largest stones are on the circle’s north-west side where they appear designed to draw attention to and frame the view of the tor.

As John Barnatt (1982, 70-71) and others (eg Traffon 2004, 15) have pointed out, the circle in fact appears to be just one element in a ceremonial way, marked also by cairns and a standing stone, leading to Carn Galva, itself possibly the site of an early prehistoric tor enclosure. Approaching the Nine Maidens from the south, the first clear view of the circle is from a small rocky outcrop at SW 4347 3492, the site of a possible cairn. But just beyond and to the right (north-east) of this tor, and crowning this low eminence, is a superb kerbed platform cairn, with the ceremonial landscape laid out magnificently below and beyond. In the arena beneath this cairn is the stone circle, with Carn Galva etching the horizon to the left and Little Galva to the right. In a dip in the horizon between the Galvas is the sea, sparkling on a fine day. From the circle, the ridge which sweeps up to Carn Galva is marked first by a (now broken) standing stone and then by further cairns including another fine kerbed platform on the low hill directly opposite this (at SW 4326 3530). Other less well preserved or destroyed cairns also mark this route.

And as though this were not enough, the outlying (broken) standing stone would have marked the midsummer sunrise when viewed from the circle: presumably Carn Galva itself was too far north to have been able to provide this effect (Traffon 2004, 48).

3.2 The monument

3.2.1 History of the monument

The first plan of the Nine Maidens was made by Borlase in 1754 (Fig II, 198). There is no description, but his drawing, reproduced here as Fig 10, shows nineteen stones, of which six are fallen. The plan is difficult to reconcile with the stones standing on the site now, but it does indicate that there was one stone much larger than the others, and (allowing for artistic license) that the stones were a range of sizes and shapes; there is also a suggestion of uneven spacing. It also hints that there was a stone opposite the prominent and large one which was almost as big, thus indicating a line of sight across the circle.

Just over seventy years later, Cotton (1827) is the first to record the existence of a barrow or cairn adjacent to and overlapping the circle. He records that by this time, there were sixteen stones on the site: 'seven stones standing and nine lying on the ground, half buried...' His plan is reproduced in Fig 11. This usefully confirms the suggestion of Borlase's drawing that there were tall stones on both the north and the south sides of the circle: one on the north-north-west is labelled as 6ft 6in high, while the stone directly opposite on the south-south-east is said to be 6ft. This stone is still there, but no longer so prominent since it is partly buried by the spoil from a prospecting pit. (Hence when the Victoria County History recorded the height of this stone in 1906, it is given as only 3ft 9in: Tregelles 1906, 386-8)

By chance, it seems to have been at about the time of Cotton's visit that the circle was being reduced from the nineteen stones recorded by Borlase:

It appeared as if a stone had been lately removed from the spot, marked with a cross in the plan....'

By the time WC Borlase was writing in 1872 (280-2), seven stones remained standing and four were prostrate. He refers to the earlier Borlase, who mentioned a detached long stone 47 paces to the north-west of the circle, noting that the top of this stone had by then been broken off. He also notes that on the southern side of the circle, immediately opposite the tallest stone, 'stands a flat-faced stone, about four feet high, the base of which is surrounded by the outskirts of a cairn, which thus is made to cut the circumference of the circle at this point.' This cairn is described as so damaged that 'neither its height nor circumference can now be determined'. Nevertheless, Borlase caused a trench to be cut into the cairn and 'the four side-stones of a Cist-Vaen were soon discovered'. He continues: 'this chamber stood in such a position that a line drawn due N. and S. from it to the Menhir on the northern side of the ring would immediately bisect the circle, and cut the flat-faced stone on the southern side, from the latter of which it was distant twenty-two feet....The cover had unfortunately been removed and the chamber rifled'. On widening the trench out in a westerly direction, Borlase's workmen discovered a large quantity of burnt wood, and then an urn of early Bronze Age type, the latter considered to have been previously disturbed and broken.

Lukis and Borlase's plan shows that by the 1870s, the Nine Maidens was in the same state as it was prior to the recent management work, with even the leaning stones leaning as they do now (Lukis and Borlase 1879, Plate IV). The main difference is that the cist and displaced capstone of the cairn are shown on their plan: whereas although the capstone can be seen now, the cist cannot.

3.2.2 Description of the circle

In 1980, John Barnatt described the circle as follows (p 165):

'The stones that remain fall accurately on a true circle of 21.85m diameter. As the spacing appears to be regular the original number of stones must have been twenty-two or twenty-

three. They have flat inner faces and would have stood 1.37-1.07m high; with the exception of stone ten, which is 1.98m, stone nine at its foot is exceptionally bulky and could have been virtually as tall. This arrangement appears to be a variation on the grading theme. The two large stones relate to Carn Galva. Perhaps originally they appeared to flank the hill when stood at the centre of the circle.

Immediately to the SSW of the circle is a barrow which has often been quoted as overlapping the circle. Close inspection shows this to be unlikely; it is mineral working upcast that surrounds stone four.'

His plan (Fig 13) shows a total of eleven stones surviving: seven standing or leaning and four lying on the ground. As well as the mineral working affecting the barrow on the edge of the circle, there is a further prospecting pit within the circle and others in the area.

This description remained valid until the start of work: an updated description is found in section 6.1.

3.2.3 The names of the monument

This stone circle is or has been known by at least three names: the Dancing Stones, the Nine Maidens, and the Boskednan Circle.

According to Barnatt (1982, 68), the circle is referred to in the early eighteenth century as *Dans Maen*, the 'dancing stones', a name which like the Nine Maidens or the Merry Maidens, may give a clue to its original function as a place for festivity and dance, but might also just refer to the resemblance of the stones to people enjoying a circle dance. The number 'nine' in the name is susceptible of a more interesting interpretation. It occurs at several stone circles in Cornwall and as Barnatt (1982, 69) points out, cannot always be referring to the number of stones present. According to Brewer's (Evans 1981, 786-7), nine is a magical, mystical number. This connotation dates back to ancient Greek times and in Christian times it had a special significance because of its association with the Trinity (nine = three times three). In folklore, the number nine appears frequently. The dictionary gives numerous examples, including a tradition that in order to see the fairies, a person was advised to place nine grains of wheat on a four-leaved clover. Cats are said to have nine lives; and locally, a cure for the 'ague' (fever) was to crawl through the hole in the Men an Tol nine times widdershins (against the sun). In the final name, the Boskednan Circle, which is the name by which Borlase refers to it (1754, 198), 'Boskednan' is simply the name of the nearest settlement.

3.2.4 Modern significance

Nowadays the Nine Maidens, along with other stone circles and megalithic sites in West Penwith, has become a focus of modern pagan activity, revealing further interesting but hitherto unsuspected mysteries. For example, the circle is said to have anomalous levels of radioactivity compared to the surroundings, while dowsing here has revealed six curving underground water lines, meeting at a point just off from the geometric centre of the circle (Straffon 2004, 11, 19). Perhaps this helps to explain why the area is so boggy!

4 Archaeological recording

The proposed management work at the Nine Maidens had the potential to impact upon the archaeology of the site since ground disturbance was involved in the trenching for drainage, and in the re-erection of three of the fallen stones. Accordingly, archaeological recording and monitoring was undertaken for all such work. In addition, the project began with a basic ground survey for use in helping to plan the project, and all management work was carefully monitored and recorded photographically.

The results of the archaeological recording work are described below.

4.1 Aims and objectives

In summary, the aims and objectives of the recording were:

- To record the progress and methods of the restoration work.
- To establish whether any stratigraphy and features associated with the circle survived around the stones which were to be re-erected. In particular:
- To investigate for any surviving evidence of the original stone sockets.
- To record all archaeological features and finds affected by the drainage trenches.
- To record any additional features of the circle revealed by scrub clearance.

4.2 The survey

Initial recording at The Nine Maidens involved a survey of the circle and its surroundings, for the purposes of recording and locating the proposed management work. The measured survey, which was carried out by Nigel Thomas with the help of Ann Preston-Jones, was carried out using a Leica TCR307 total station. Data from the survey instrument was recorded in real time as a 3-dimensional model using Leica TPS-CAD and AutoCAD software, running on an outdoor laptop computer.

As this was for the purpose of planning management work, it included the following:

- All stones in the circle (indicating whether they were upright, recumbent, or leaning)
- Any eroded hollows around the stones
- Hollows indicating the sites of missing stones
- The barrow which adjoins the circle
- Any prospecting pits and spoil heaps in the immediate area
- The menhir which lies to the NW of the circle
- All footpaths in and out of the circle, up to 30 metres from the circle
- All bare and eroded areas, up to 30 metres from the circle
- Vegetation, distinguishing between predominantly grassy areas, areas with a low heathland cover (ie mixed grass, heather and gorse) and areas of taller gorse
- Any other features considered to have an influence on the management of the circle

When the survey results were processed, a plan of the site was extracted from the data.⁵

The measured survey was then used in planning the management work by, for example, plotting the areas of gorse which should be removed, and the location of the drainage trenches (see Figs 25 and 28).

4.3 The excavation

By Charles Johns

The ideal was that the re-erection of the standing stones would involve their replacement within the original sockets, and so one purpose of the excavation was to reveal these. However, as it was also recognised that for the purpose of securing the stones adequately, this may not be possible, and that deeper new sockets may have to be excavated: and so it was essential that these should be recorded first. (Figs 15 and 16)

4.3.1 Methodology

The preliminary exercise to locate, excavate and record the original holes in which the fallen stones were set was undertaken in early May 2004. Previous to the archaeological work the recumbent stones had been moved aside by Adrian Thomas, leaving menhir-shaped impressions in the ground where they had lain. These areas were cleared of any vegetation and the underlying earth cleaned by trowel in order to define the stone holes. Once defined in plan, the stone-holes were half-sectioned and the sections recorded and drawn at 1:20 scale before complete excavation. Each of the stone-holes was identified by a letter; A, B and C, and their fills assigned context numbers; (1), (2), (3) etc for each stone hole. The stone-holes were each planned at 1:20 scale and located onto a drafting film overlay to the existing HES EDM survey at 1:50 scale using hand measurements. See Figs 17 and 18.

The stone-hole fills were sampled although these were of limited potential for further analysis, being soil that had accumulated in the holes since the stones had fallen, and were subsequently discarded.

No finds were recovered from any of the stone-holes.

4.3.2 Stone-hole A

Stone-hole A, irregularly shaped in plan with convex sides and a flattish base, measured 0.95m long by 0.75m wide by 0.26m deep (Figs 18, 19, 20). The cut for the stone-hole was well defined in plan with clear upper edges, which were undercut further down. The undercutting may be due to the stone gradually leaning over in the socket.

The hole contained the following layers of fill:

- (1) Dark greyish brown soft clay, 26mm deep, with many roots and occasional medium stones over...
- (2) Greyish brown soft gritty clay, also 26mm deep.

4.3.3 Stone-hole B

Stone-hole B, irregularly shaped in plan with sloping sides and uneven base, measured 1.05m long by 1.0m wide by 0.38m deep (Figs 18, 20, 21).

This was the most difficult of the stone-holes to locate and excavate as it coincided with the muddy path through the stone circle. To locate the hole an exploratory trench measuring 2.9m by 2.9m was excavated to the west of the stone's impression in the ground. The turf was removed to reveal a layer of very dark grey silt with occasional quartz grit 0.2m deep (1). This was the soft fill of the path depression overlying the top of the stone-hole. The edges of the hole were formed by mottled dark yellowish brown (orange)

and leached grey sandy clay (rab). The hole was not fully excavated as the southern edge was lined with granite packing/trig stones which were left *in situ*; the northern edge was disturbed by an animal burrow.

The hole contained the following layers of fill:

- (2) A deposit of mottled light brown grey gritty sandy clay 0.2m deep. This was a layer of redeposited rab, presumably used to level or infill the hollow in the path and overlying...
- (3) A layer of mottled brownish grey silty clay with moderate quartz grit up to 0.2m deep.

4.3.4 Stone-hole C

Stone-hole C, sub-circular in plan with regular sloping sides and flattish base, measured 0.65m long by 0.55m wide by 0.23m deep (Figs 18, 23, 24).

This was quite a small hole, at the western end of the imprint of the fallen stone. The stone itself is markedly larger at one end and it would seem that the smaller end was the one set in the stone-hole. This might seem rather incongruous as the stone would be more stable with the larger end placed in the ground. But this hole was the best defined of the three stone-holes, with clear edges cut into the rab, and the reason that the stone toppled over may have been because it was set with the heavier end uppermost.

The hole contained the following fills:

- (1) Loose dark brown silty clay 0.08m deep, over...
- (2) Sticky greyish brown silty clay 0.07m deep, over...
- (3) Sticky very dark greyish brown silty clay 0.11m deep, over...
- (4) Sticky greyish brown silty clay 0.04m deep, similar to (2).

4.4 Drainage trenches

The sections of drainage trench closest to the stone circle were dug through ground along the line of a footpath which was waterlogged, deeply trampled and disturbed. However, the 50 metre section of the trench which ran downhill in a westerly direction from the circle was cut through apparently undisturbed heathland, and so there was a remote possibility that this trench might contain archaeological features such as pits or ditches.

However, following excavation, the sides of all the drainage trenches were examined, but no finds or features were noted. The trenches revealed a peaty turf layer 10-15cm thick coming down immediately onto the bright yellow-brown granitic subsoil (rab).

5 The conservation work

The conservation work, eventually undertaken in late spring/early summer of 2004, involved scrub clearance, drainage, footpath restoration, and the re-erection of three fallen stones. By the autumn of that year, the effectiveness of these measures could be judged and as a result it was decided that some modification would be needed. Further work, undertaken in June 2005 involved additional drainage and footpath work.

5.1 Scrub clearance

Figs 4 to 7 demonstrate the way that scrub had grown up on the site, diminishing the impact of the monument and causing erosion where visitors were forced onto ever narrower paths between the stones.

Scrub was cleared from in and around both the stone circle and the associated barrow, in an operation that took almost two days to complete. Vegetation cleared from the monument comprised mainly tall-growing European gorse, with some western gorse and heather. This had developed to such an extent that it coalesced around the stones, some of which were almost inaccessible. The work was carried out by machine, with hand-cutting around the individual stones. Cuttings were reserved to peg down onto the eroded paths through the circle (see below, section 5.3.). (Figs 25, 26)

5.2 Drainage

See Figs 27 and 28.

The purpose of the drainage work was to make the circle more accessible, by attempting to relieve flooding and muddiness on the north-west side of the circle and along paths to the west. This was carried out exactly as specified in the original project proposal, ie

- Trenches of a total length of 85 metres long and 0.5 metres deep by 0.3 metres wide were cut. These ran for 8 metres to take water away from the puddle to the north of the circle, 25 metres to drain water from an existing, badly drained path, and then for a 50-metre run over heathland, downhill from the circle.
- In any places where these ran through heathland, the vegetation was carefully lifted and set aside on matting, to be re-laid as soon as the trench had been back-filled.
- The spoil from the trench was similarly reserved, to use in back-filling the eroded paths through the circle and for backfilling the top part of the trench where it ran along the line of a path..
- 4 inch convoluted pipe was used for the drainage work, and covered with a geotextile to prevent silt from getting in and clogging the pipe up .
- In the trenches along the path and leading to the puddle, where there was no vegetation present, the pipe was laid at the bottom of the trench, then backfilled with chippings to within 0.2 metres of the surface and topped up with rab excavated from the trench, to provide a robust but free-draining surface.
- In the trenches over heathland, the same procedure was used, except that the trench was directly back-filled with rab, and chippings used only at the pipe's exit, to allow water to drain out freely. The heathland vegetation was replaced over the back-filled spoil, and any loose rab left on the ground was raked, to restore the surface.

- The work took only a couple of days and because ground conditions were dry at the time, minimal damage was caused to the heathland.
- As this work proved effective in helping to keep the monument free of water, but not as effective as had been hoped, a second phase of drainage was carried out in June 2005. In this instance, an extra line of pipe was laid along the line of the path to the west of the one drained previously, and this was connected into the 50 metre pipe taking water downhill over heathland.

5.3 Path restoration

Badly eroded paths leading to and through the stone circle were restored using the following method:

- Where it was highly compacted, the ground was first raked.
- Deeply rutted and eroded areas were infilled with unwanted rab from the drainage trenches.
- Any heathy turf saved from the drainage trenches was placed over the worst of the eroded paths.
- The restored areas were then protected by pegging down gorse and heather trimmings (from scrub clearance).

In June 2005, when the additional drainage work was undertaken, further gorse was pegged down to replace the original which had rotted, blown away, or been kicked aside.

See Figs 28 and 29.

5.4 Restoration of three stones

The three stones that were restored are indicated in Fig 25.

The work took place in a number of stages:

May 4th 2004: The three stones that were to be restored were moved to one side to allow excavation of their sockets to be undertaken.

May 13th and 20th 2004: Excavation of the stones' sockets.

May 25th 2004: Restoration of the stones.

The final restoration was carried out by Adrian Thomas and David Cutting, with Geoff Hoad lifting the stones with his digger. The occasion was witnessed by Ann Preston-Jones, Peter Bowden and Richard Glasson of DEFRA, Cheryl Traffon of the Cornwall Ancient Sites Protection Network, and one or two other passers-by. All the stones were re-erected on exactly the spot and in exactly the orientation indicated by the preceding excavation. Following back-filling, the ground around the stones was re-turfed with heathland turf.

5.4.1 Stone 1

(This stone corresponds with Barnatt's 9 and stone-hole B)

This stone, immediately to the west of the largest stone in the circle, was the first to be re-erected. It took a certain amount of manipulation to get it set correctly, because of its size and because it was not flat on the bottom. Regrettably, the original socket had to be deepened, to ensure stability and safety. There was also some debate on its orientation. Stone circles are normally constructed with the stones all presenting their smoothest,

cleanest surface to the inside of the circle (see Barnatt 1982, 62); but in this instance, the evidence of excavation and the lie of the stone on the ground suggested that this stone's 'best' face should be facing out (ie towards Carn Galva): and so that was how it was done, with the inside face set vertically, to match that of the adjacent stone. The stone was triggered at the base with smaller stones to make it stable, the hole packed with well-rammed rab, topped with earth and finally re-turfed. Finally, the whole of the re-turfed area was covered in gorse cuttings, to stop people from walking on it. (Figs 30 and 33)

5.4.2 Stone 2

(This stone corresponds with Barnatt's 11 and stone-hole C)

This stone, immediately to the east of the largest stone in the circle, was a long, tapering and rather irregularly shaped slab, with one end wedge-shaped and the other pointed. As noted above, logic suggested that it should go into the ground with the heaviest, wedge-shaped end down. However, as excavation had very clearly shown that it was the pointed end that had been in the ground originally, that was how it was restored, even though that felt wrong! Unfortunately, however, after an initial attempt using the original socket, the hole had to be deepened by about six inches, because the stone looked extremely unstable (see Figs 31 and 33). The hole was packed with a rab/lime mix, the lime being added to give additional strength and security.

5.4.3 Stone 3

(This stone corresponds with Barnatt's 7 and stone-hole A)

The third stone to be set up was a small, rather triangular-shaped stone on the west side of the circle. This stone went back with the thickest and heaviest end down, without any need to over-deepen the original socket. Lime was used to add security when the hole was back-filled however, as the hole had become undercut and distorted on the west side, presumably as a result of the stone leaning before it had finally fallen. (Fig 32)

5.5 June 2005: further work

The site was visited at the end of the week in August 2004 in which Boscastle was devastated by flooding and which saw torrential flooding throughout Cornwall generally. There were plenty of puddles, wetness and mud on the common as a whole and at the Nine Maidens, the area that has always been prone to flooding had a large puddle in it. The path along which the drain had been laid was bone dry, although the other (further to the west) was wet. On the whole, though, the site was in better condition than would have been the case previously.

Other problems noted at the same time included the fact that the ground around all the replaced stones had shrunk back, particularly around the biggest stone where the hole was not just sunken but water-filled. In addition, some of the gorse and heather cuttings laid on the path across the site had been disturbed. For all these reasons, it was decided that the site should be re-visited, to sort all this out, and this took place in June 2005.

Work this time included:

- Enhanced drainage along the line of the path and parallel with it to the west of that where the first N-S drain was laid. This was done in exactly the same way as previously, the pipe being connected into the main pipe taking water away from the circle and downhill to the west.
- Where the ground had sunk around the two restored stones on the north, this was infilled and the ground turfed over again.

- The turf laid on the path just outside the circle, on the south and in the centre of the circle, showed poor regeneration, because people had walked on it, so gorse was pegged down here, again, to protect the turf.

6 Discussion

If we had done nothing else, the scrub clearance alone have been a major improvement, in increasing access, enhancing the appearance of the site and probably also in diluting the effects of erosion by allowing people to spread out more. As it was, the addition of the other work has resulted in a major enhancement. The drainage work has, like the scrub clearance, made access very much easier and by decreasing muddiness, has helped in preventing erosion. The tendency to wetness has not been entirely controlled, but given the topography this could only be achieved through a major intervention within the circle, which would not be acceptable on the Scheduled Monument. Finally, the re-erection of the three stones has inevitably proved the crowning glory, in helping to restore the presence of the circle and its significance in the landscape.

The tall stone on the north side of the circle was always a dominant feature of the circle, particularly striking in its orientation towards Carn Galva. But the restoration of two further tall stones to either side of it has given this view an added emphasis. The two biggest stones can now be seen to frame the hill, while that to the east of the great stone draws the eye towards Little Galver, just visible above the horizon from the circle, looking rather like a prominent cairn.

This third restored stone, by contrast, is probably the smallest in the circle, and noticeably on the side of the circle, at 90 degrees to the largest. Its size and position help again to emphasise the grading of the stones towards the view which defines the monument.

6.1 New description

Following the work outlined in this report, it seems appropriate to conclude with a new description of the site. The brief description given below merely updates that given by Barnatt in 1982 (165-7 and above, page 13); unfortunately the project did not include scope for a new survey on which an entirely new description could have been based, though obviously this is now desirable. Where stones are referred to by number, the numbers are those used by Barnatt (Fig 14).

The stones fall accurately on a true circle of 21.85m diameter. As the spacing between the stones appears to be regular the original number of stones must have been twenty-two or twenty-three. Of these, eleven stones now survive, either standing, leaning or near-recumbent.

The stones vary in height between stone 7 which is just under one metre high (0.95) and stone 9, which is nearly two metres and at 1.98m is twice the height of the smallest. The latter is flanked by two other stones of almost similar height. This arrangement appears to be a variation on the grading theme, more noticeable and dramatic than at some circles, and evidently intended to focus attention on the Galvas to the north. Unlike most regular stone circles, however, which generally have carefully chosen stones, possibly dressed to shape, subtly grading so that they are slightly higher on one side of the circle (as at the Merry Maidens) the grading here is far from subtle! Moreover it affects two sides of the circle since there was at least one tall stone on the south as well (noted by Borlase and Cotton: above, page12) but not now obvious because it has been part-buried by the upcast from two 19th century prospecting pits. Unfortunately there are not enough stones surviving in the circle to say whether this grading was carefully arranged to sweep gradually

up to the largest stones on both north and south and down to the smaller ones on the sides. The stones are a bit of a mixed bag in terms of size and shape, with some of rather irregular outline: as we have seen, the three stones that were re-erected on this occasion were all very different. Dressing of the stones is not apparent, with the exception of the two largest 'portal' stones on the north-east, which are distinctively squared. Most do, however, seem to present their smoothest face to the centre of the circle.

The fact that much of the destruction of the circle appears to have occurred in the 19th century has been noted above (page 12). Apart from the loss of over half of the circle's stones, evidence of this can also be seen in drill marks on stones 8 and 9, although the fact that the drill marks visible on stone 9 are of wedge-type indicates that some of the damage occurred before 1800 (Herring and Thomas 1988, 131). The latter would have been very much more impressive than it already is, before it was split up. Immediately to the south-south-west of the circle is a barrow with cist which has often been quoted as overlapping the circle. Close inspection shows this to be unlikely: it is the spoil from two prospecting pits dug between the barrow and the circle that surrounds stone four. A further prospecting pit is a conspicuous feature near the centre of the circle. The excavation of these prospecting pits presumably forms the context for the damage to the circle.

Within the circle, the ground is a little uneven, particularly on the west, where shallow linear hollows can be seen between some of the stones. However, these seem to represent no more than the lines of former paths and tracks into the circle, some no doubt of quite recent origin.

6.2 Observations made in the course of carrying out this work

With the exception of the biggest stone (stone 1), no packing stones were found either in the excavation or in the restoration process. The hole for the long thin stone (stone 2) was very narrow, and cut into the rab. The absence of any packing stones seemed a little unexpected and provoked a discussion on why this should have been: surely it would have been more secure to pack the holes with stones, rather than earth. It was Adrian Thomas and David Cutting, accustomed to working with stone, who supplied the answer. They pointed out that the stones in the circle are in effect extra-large gateposts, and the best gatepost sockets are those that have been cut by hand, rather than with a digger (all too common nowadays). That way, the holes can be carefully dug so that the stones fit exactly into the holes, with little need to manoeuvre them once they are in place, or indeed, pack much material back in around them. Tight, close-fitting post holes have greater stability; and a little rammed earth will probably be all that is needed to back-fill them: there may not even be space to put in packing stones. On the other hand, posts dug with a digger will probably need to be packed with concrete to give them stability. With a digger, we can lift a stone in and out a good many times in order to get its positioning right, but people in prehistoric times would not have had that luxury. They had to get it right first time. There may have been some minor manipulation, perhaps to get the orientation right but there could be no major changes once the stone was in place. A further implication of this is that a good deal of planning would have had to go into the erection of every single stone, so that each would be just right. So if some of our stones look as though they are the wrong way up or the wrong way round, this is how they were intended!

A further suggestion to emerge was that given the implied level of effort in setting up even one stone, which had to be first selected, then brought to the site, and then set up, could it have been that a circle could have been designed and set up first in wood, followed by the erection of one or more stones per year, at the time of an annual ceremony? A wooden

prototype would have allowed the possibility of consideration of the design and modification if needed when stone replaced the wood, and would have allowed the site to be used right from the start.

Visually, the two large stones very much dominate the site but the third stone on the north side, though slighter, is still impressive compared to some of the others in the circle. John Barnatt's suggestion (1982, 70, 165) that the stones are graded with the two largest framing Carn Galva is certainly confirmed. In fact, the two larger stones appear to form a portal facing the tor, inviting the suggestion that processions could have led in and out of the circle in that direction. Perhaps also all the stones in the circle, when entire, tapered down from/up to these stones, but there are now too many stones missing to be confident of this.

7 References

7.1 Primary sources

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7.2 Publications

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8 Project archive

The HES project number is **200400604**

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 and copies of documentary/cartographic source material (file no 200400604)
2. Field plans and copies of historic maps stored in an A2-size plastic envelope (GRE 636)
3. Electronic drawings stored in the directory ..\CAD ARCHIVE\SITES N-O\NINE MAIDENS
4. Black and white photographs archived under the following index numbers: GBP1676/8-14
5. Colour slides archived under the following index numbers: GCS 34331-34335
6. Digital photographs stored in the directory ..R\Images\HES Images\Sites\M-P\Nine Maidens Madron 200400604; also in R\Images\HES Images\Scheduled Monument Management\Nine Maidens, 2003-5
7. This report held in digital form as: G:\CAU\HE PROJECTS\SITES\SITES N\NINE MAIDENS, MADRON, PR400604\REPORT ON 9 MAIDENS MAY 2006.DOC

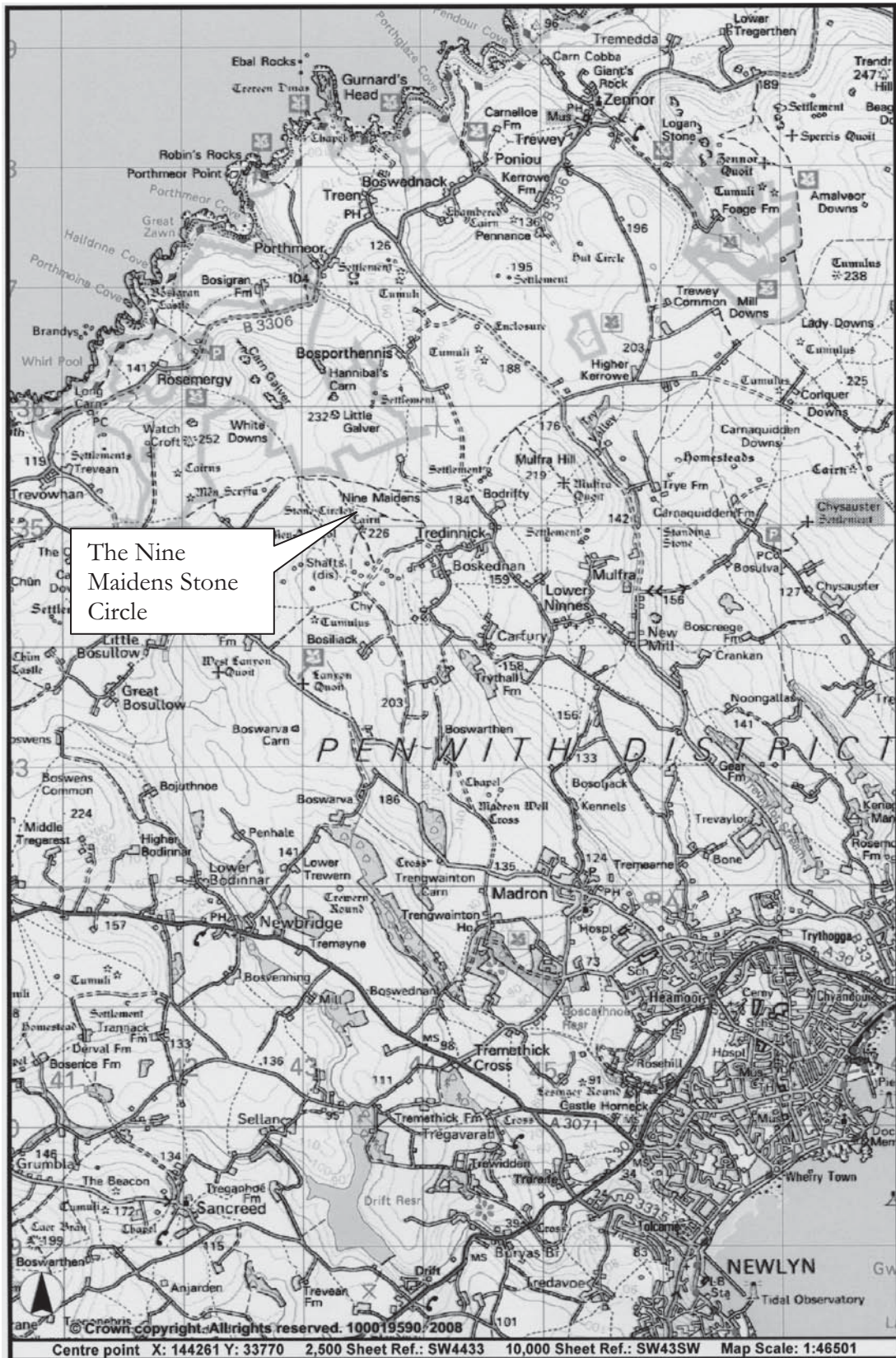


Fig 1 Location map

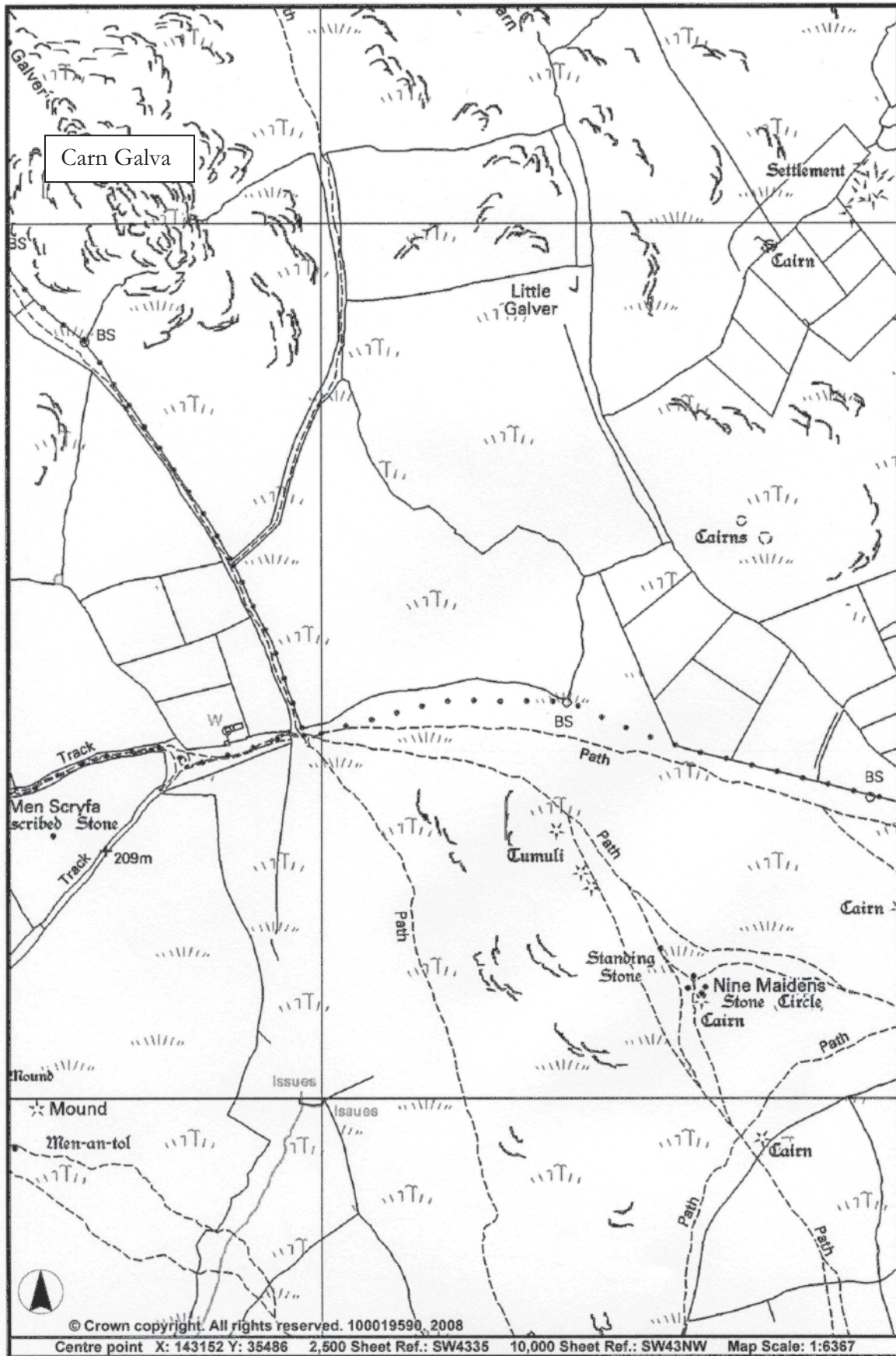


Fig 2 Ordnance Survey digital mapping showing the site and its environs

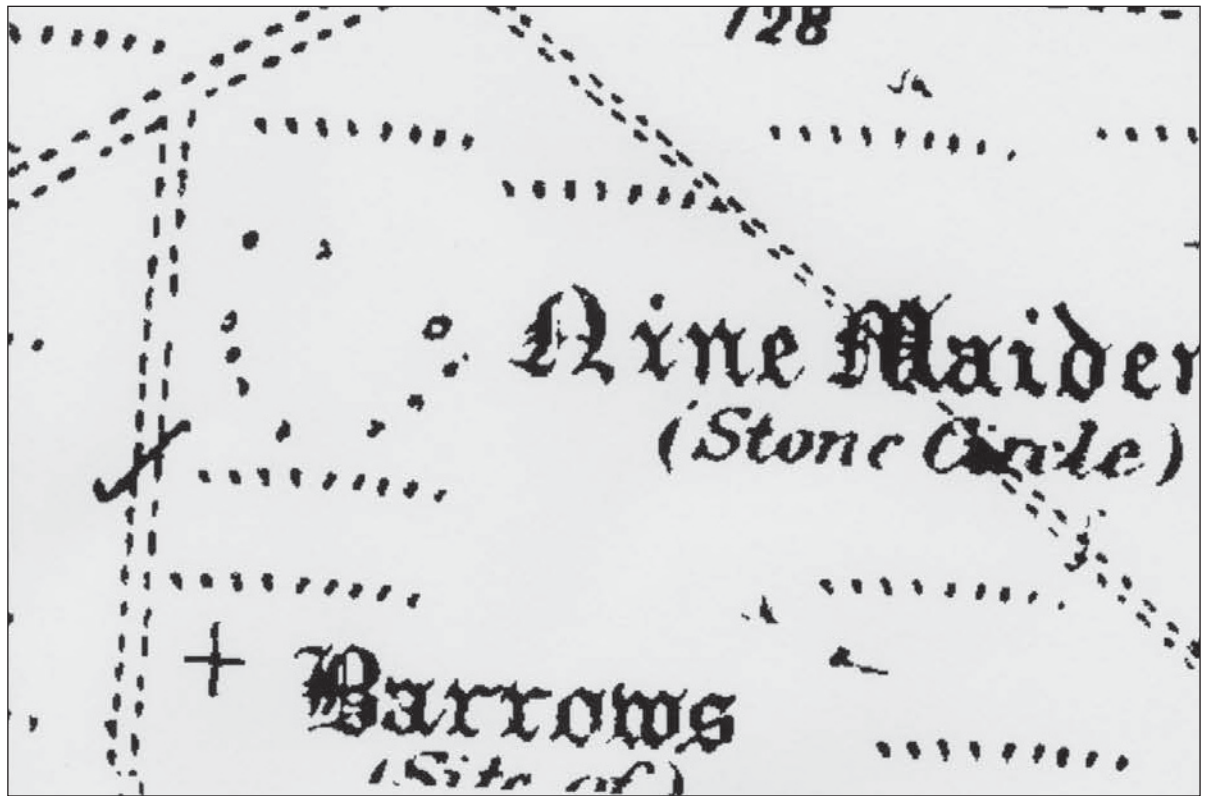


Fig 3 First Edition of the Ordnance Survey 25 Inch Map, 1880



Fig 4 Second Edition of the Ordnance Survey 25 Inch Map, 1907



Fig 5 The Nine Maidens from the air in 1992 (CAU air photo F34/36/434 351)



Fig 6 The Nine Maidens from the air in 1999 (English Heritage air photo NMR 18469, frame 20).



Fig 7 The centre of the Nine Maidens in the winter of 2003. Note the extremely muddy ground and gorse growth around stones.



Fig 8 The Nine Maidens in the winter of 2003 from the south, with Carn Galva visible on the horizon (right side of photo). Note the gorse growth around the stones.



Fig 9 The largest stone and its fallen partner, with a view towards Carn Galva. Note also the extremely muddy ground.

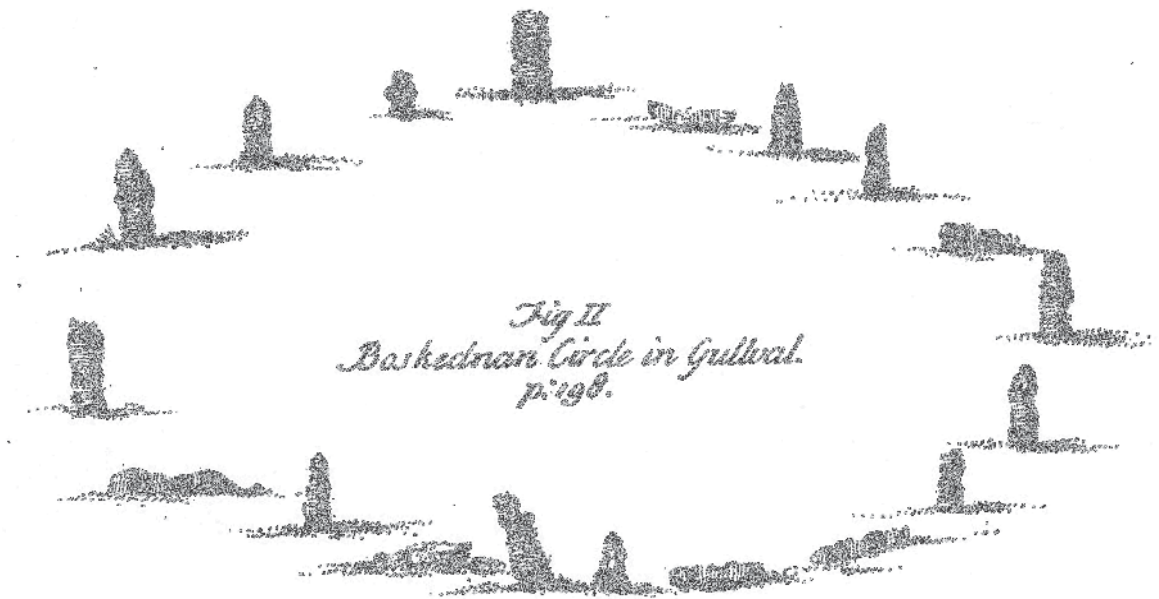
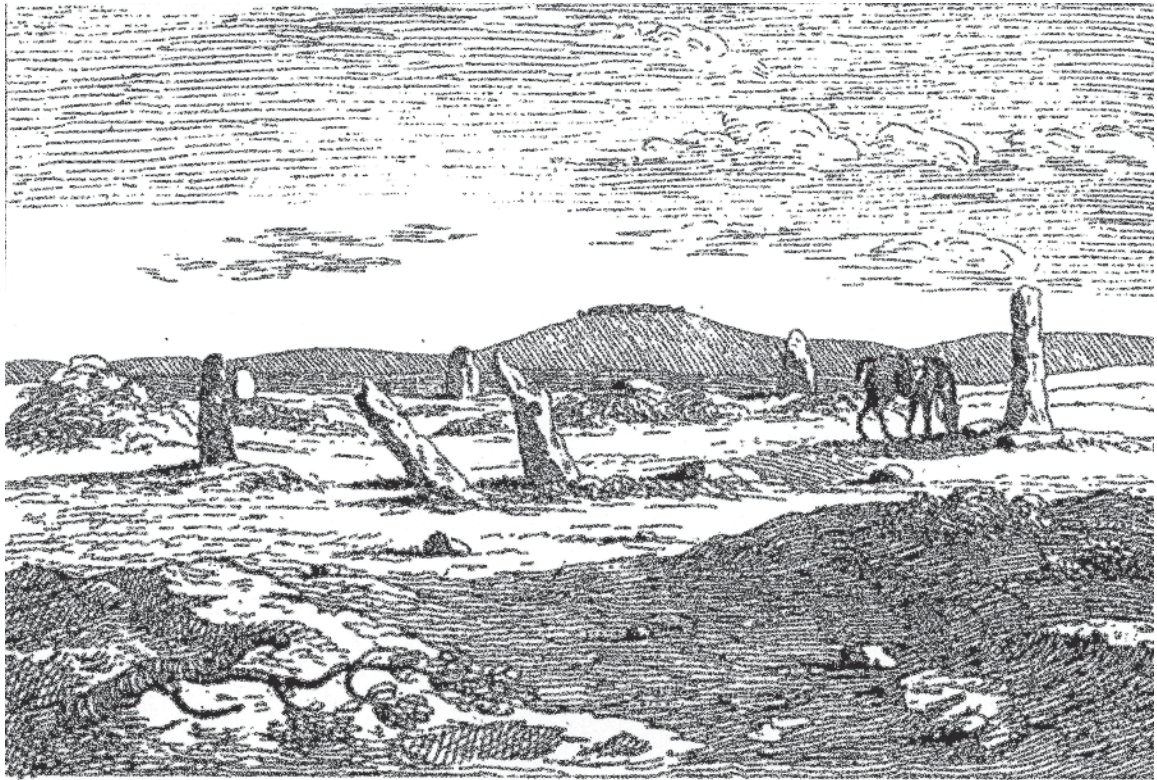


Fig 10 Mid 18th century plan of the Nine Maidens by William Borlase (1754, Fig II)



Circle in the Parish of Muddern

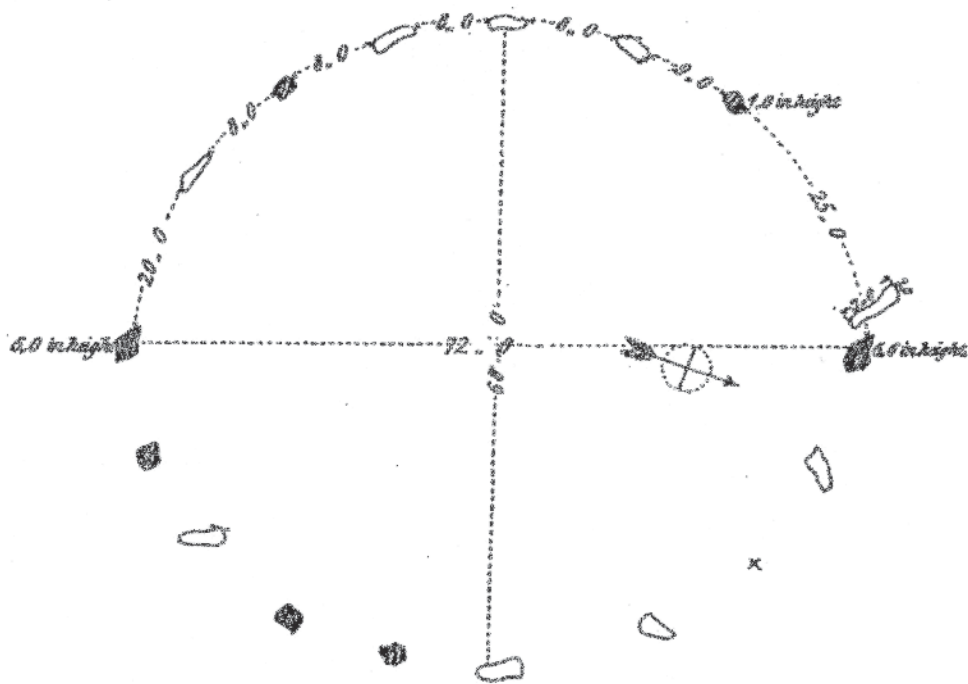


Fig 11 Plan and drawing of the Nine Maidens by William Cotton (1827)



BOSKEDNAN CIRCLE AND BARROW.

From a Sketch by the Author.

Fig 12 Drawing of the Nine Maidens by WC Borlase (1872, 280). Looking south, this shows the barrow behind the stones on the far side of the circle.

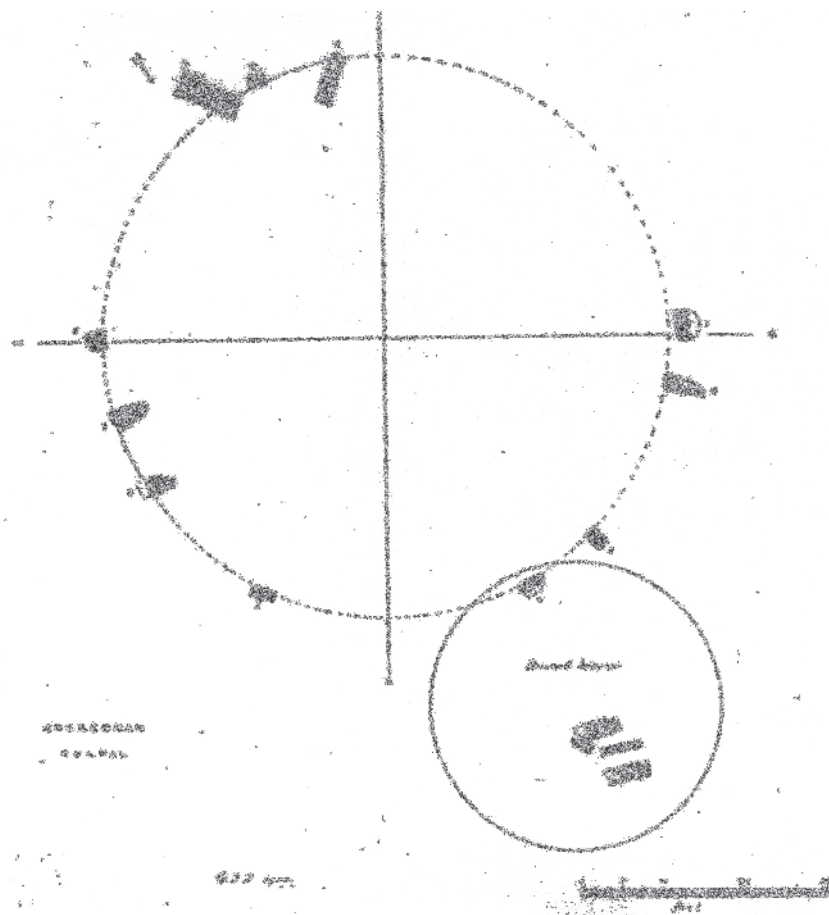
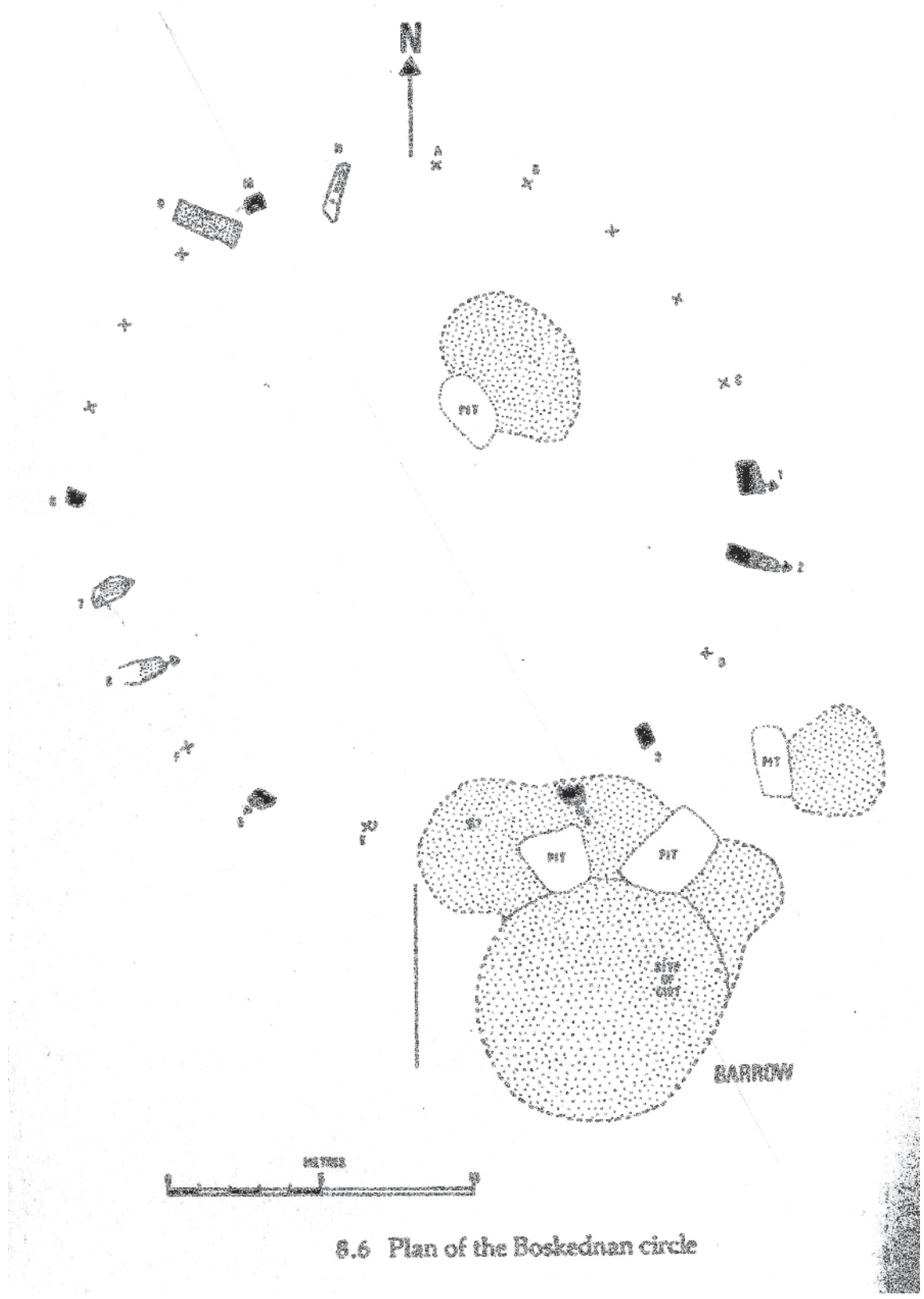


Fig 13 Plan of the Nine Maidens in the Victoria County History (1906, opposite page 388)



8.6 Plan of the Boskednan circle

Fig 14 Plan by John Barnatt (1982, 166).



Fig 15 lifting aside a fallen stone prior to excavation to locate the stone's socket



Fig 16 Charlie Johns excavating to locate the socket of the fallen stone

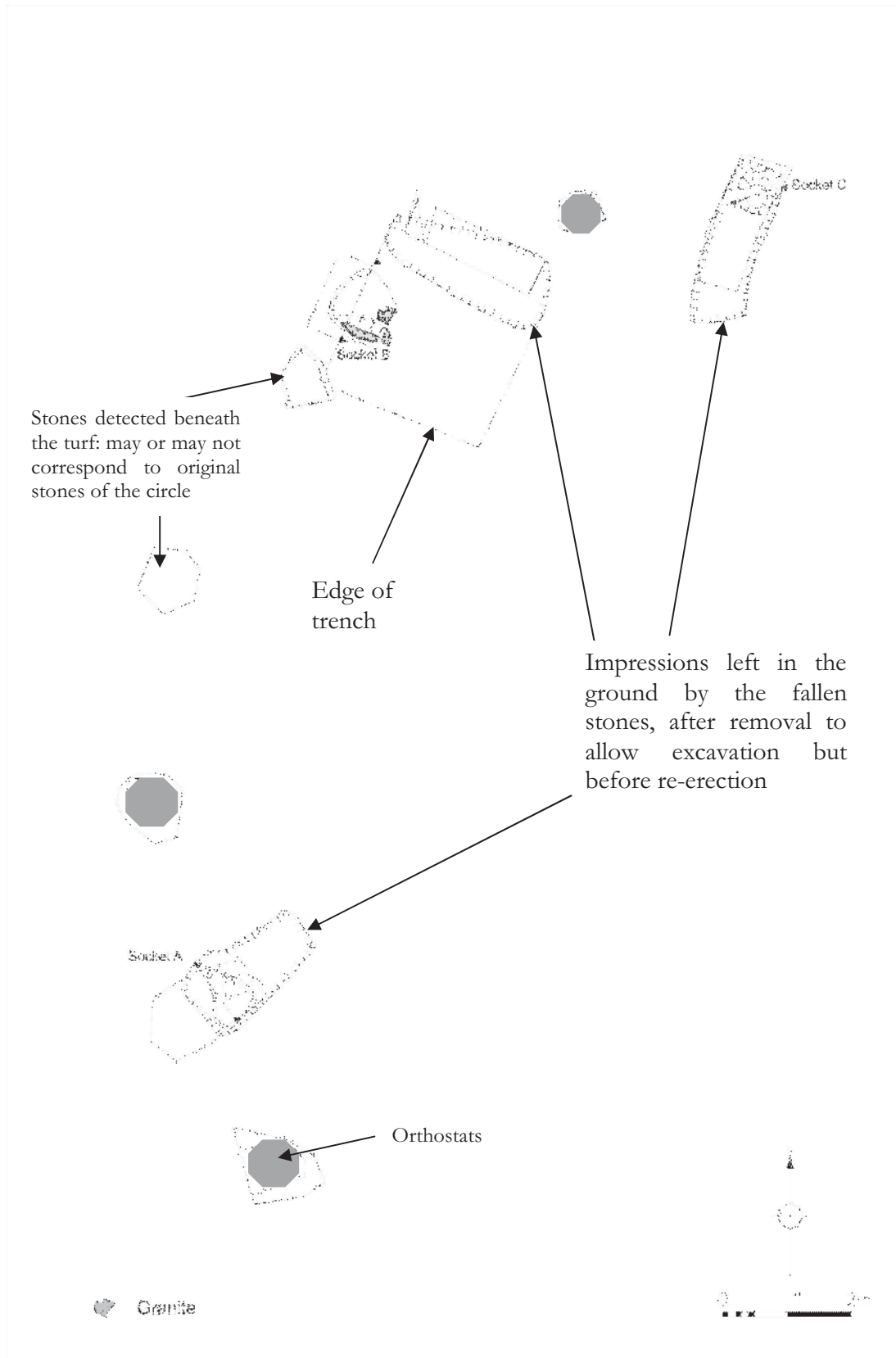


Fig 17 Plan of the excavation trenches by Sean Taylor

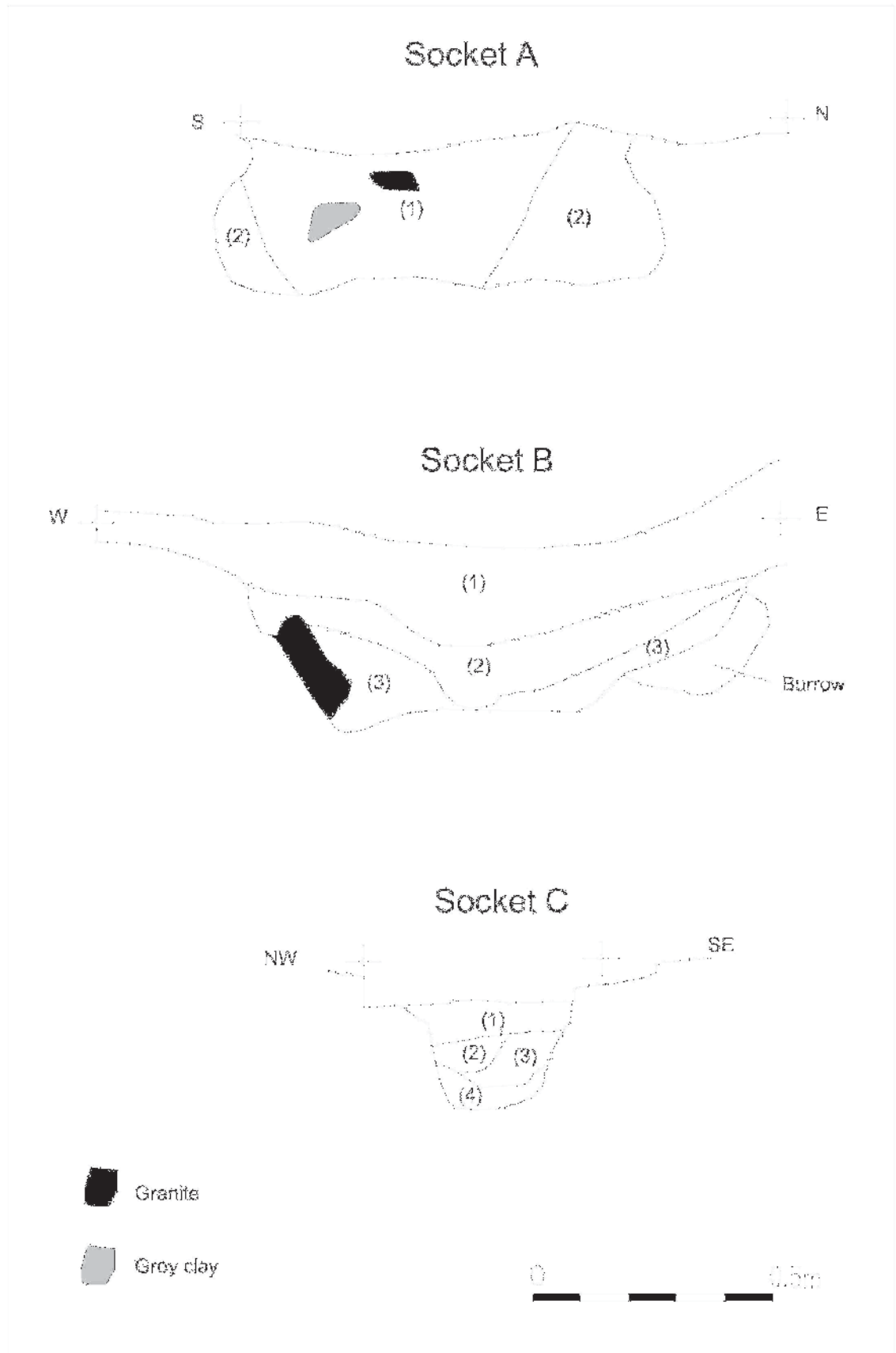


Fig 18 Section drawings of the excavated sockets for the stones that were subsequently re-erected (Sean Taylor)



Fig 19 Socket A half-sectiond



Fig 20 Socket A fully excavated



Fig 21 Sean Taylor excavating Socket B; packing stones can be seen in the excavated socket



Fig 22 Socket B half-sectioned



Fig 23 Top of fill for socket C at the end of the stone's impression in the ground



Fig 24 Socket C half-sectioned



Fig 25 HES plan of the Nine Maidens, showing areas of dense gorse (in cross-hatching) that were removed in 2004, and the positions of the stones that were re-erected.



Fig 26 Scrub clearance under way at the Nine Maidens in May 2004



Fig 27 Drainage work underway at the Nine Maidens in May 2004



Fig 28 Plan of the Nine Maidens, showing the locations of the drainage trenches (with, in light grey: the paths and bare areas)

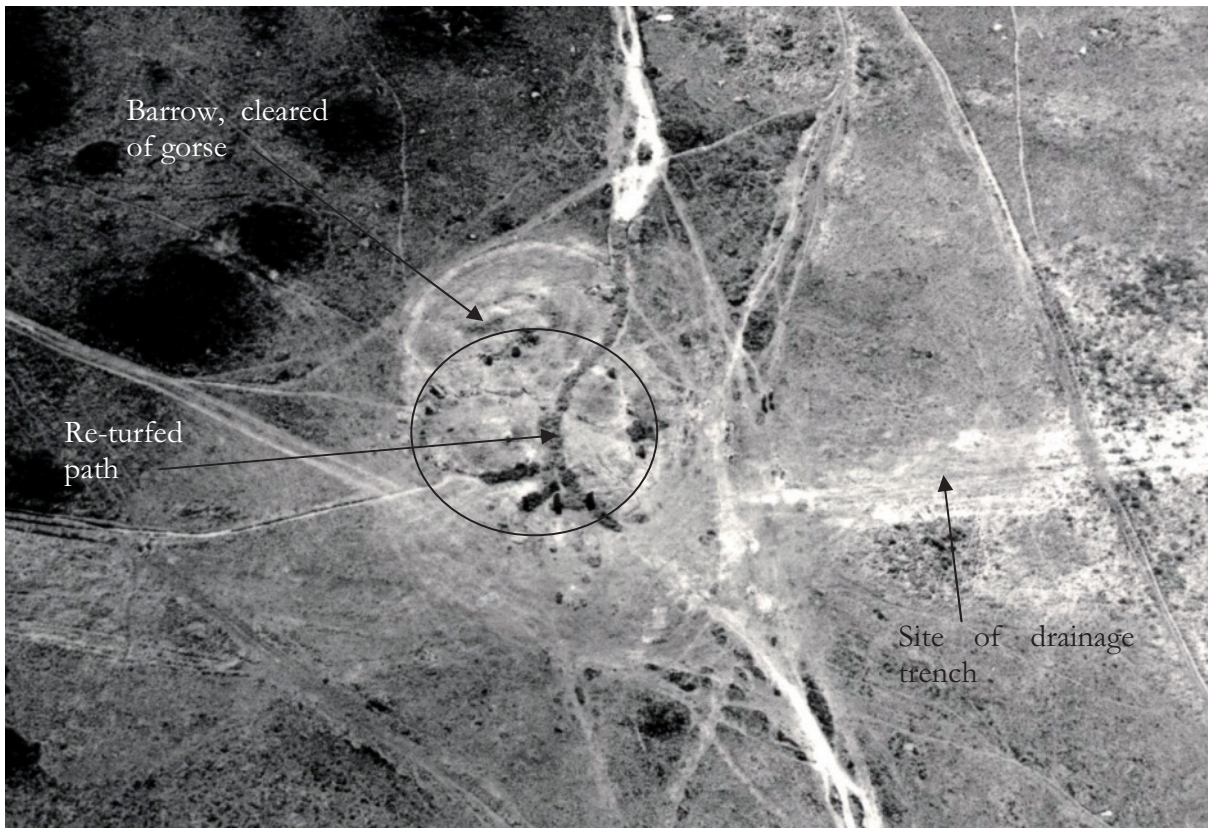


Fig 29 Air photo of the Nine Maidens, shortly after the management work. Though not the best photo of the site, it does show the re-turfed path very clearly; but most obvious are the many paths focussing on the circle, demonstrating the immense pressure that it is under. (CAU air photo F63/8)



Fig 30 Stone 1 is re-erected



Fig 31 Stone 2 is lifted into the ground, an offering is placed and the socket back-filled



Fig 32 Stone 3 is restored



Fig 33 The restored circle

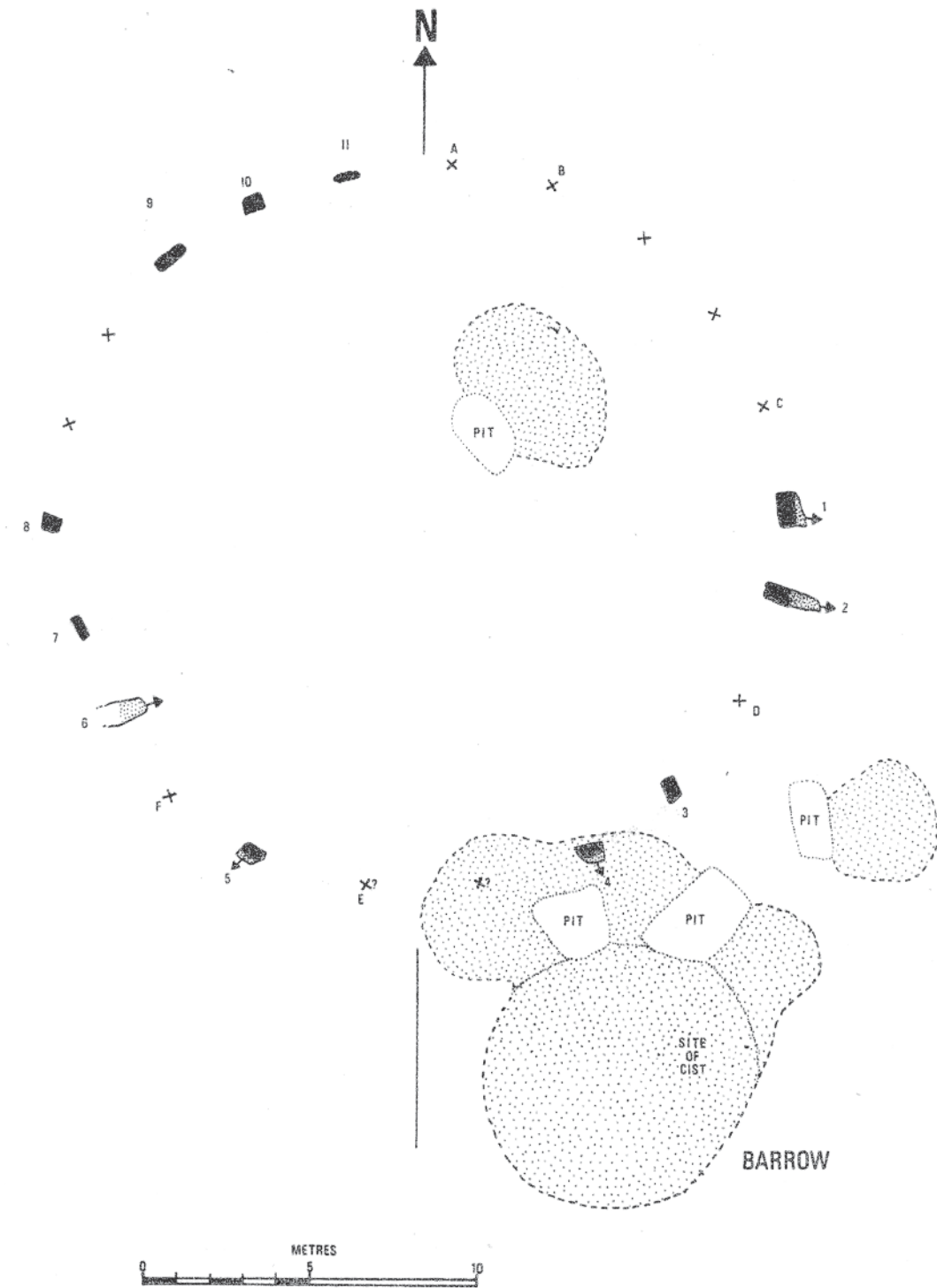


Fig 34 Sketch plan, based on Barnatt 1982, of the restored circle



Fig 35 The restored stones on the north-north-west of the circle