

PEN Y DINAS  
ARCHAEOLOGICAL SURVEY

REPORT NO. 52

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Ymddiriedolaeth Archaeolegol Gwynedd  
Gwynedd Archaeological Trust

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by P.T.Muckle

for Aberconwy Borough Council

Gwynedd Archaeological Trust Report No. 52

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## Introduction

Pen y Dinas is a hillfort occupying a limestone spur on the south-east side of the Great Orme's Head (Gwynedd Archaeological Trust PRN 637). The hillfort is a Scheduled Ancient Monument (ref. Cn 39). The site is heavily overgrown and the archaeological features are either disturbed or hard to distinguish. Recently an interest has been expressed in clearing some of the vegetation in order to make a selection of the huts more visible. An agreed management plan is needed before any work commences, the first stage of which involves an accurate survey of the site.

## The Nature of the Site

The hillfort is not immediately obvious when casually viewed from below. On the south and east are vertical cliffs falling towards Llandudno and the quarried area behind the Empire Hotel. The land is more gently sloping on the west and north sides, with the easiest approach being from the north-west. The outer ramparts are most clearly defined on the north-west side, although they are largely obscured by a dense tree growth of mixed species, with hawthorn and blackthorn dominating. The south-west and north-east slopes are entirely overgrown and almost impassable. The surface of the fort within the ramparts is a mixture of pasture, hawthorn and blackthorn, with the trees growing in small stands centred on the sites of huts. On the south and south-east sides are limestone pavements and outcrops, below which are extensive and dense stands of hawthorn and blackthorn, making the area impossible to survey at present.

## Previous work

There are no detailed and accurate plans of the hillfort, probably due to the constraints of the vegetation described above. The only published plan is that by G.A. Humphreys, surveyed in 1911. The plan is little more than a small and simplified sketch, and whilst being a fair effort for the time it is not adequate for management purposes. The accompanying text mentions a triple vallum and 60 to 70 huts, four to seven yards in diameter and constructed with concentric rings of large stones. Subsequent visits by the Royal Commission on Ancient and Historic Monuments, the Ordnance Survey and others have produced several very rough sketch plans and profiles across the ramparts and further descriptive text.

Two of the huts on Pen y Dinas have been excavated, one in the middle of the last century which yielded 'any quantity of animal bones, limpet and snail shells and a piece of Samian ware' (Penrhos MS 841, U.C.N.W.). An excavation in 1960 also produced large quantities of sheep and ox bones as well as an antler knife handle, a bone needle, a small bone button, two cow horns, two hammerstones, burnt stones or pot-boilers, a fragment of green stone and fragments of burnt clay. There were also thick beds of limpet, mussel and oyster shells. No traces of internal structure were discovered. A summary of the excavation was deposited with the Mostyn Estate Offices. The large number of bones and shells recovered was due to the preservational effect of limestone on organic materials containing calcium.

The excavations, although on a small scale, raise some interesting questions regarding the occupation of the hillfort. The single sherd of Samian ware recovered in the last century indicates a Romano-British date, although there was no dating evidence from the excavation in 1960. The three most significant finds in local terms were the fragment of green stone, the hammerstones and the fragments of burnt clay. The possibility of an association with the Bronze Age copper mines on the Great Orme has been previously raised, although the evidence at present is too scant to support this idea.

## The Survey

The survey carried out by Gwynedd Archaeological Trust was to supplement a general topographic survey by Co-ordinated Surveys of Llandudno, the intention being to overlay one onto the other. The purpose of the survey was to outline and characterise the main archaeological features of the site to enable the formulation of a management plan. At this stage the plan is not intended to be a definitive survey for publication, although further detail can be added. The survey was time-consuming, painful and complicated. This was due to several factors, such as the uncertainty of the status of the features and the dense vegetation. These problems were particularly acute on the western ramparts, although the various scoops and hollows in the centre of the fort were also problematic. It became apparent as the survey progressed that natural features such as low outcropping cliffs were utilised as rear walls for many of the huts. There are also a number of areas where outcrops have flat areas in front which would have been suitable for huts, although there are no traces of such. The survey included the more significant of these outcrops. The dense vegetation slowed the survey of the ramparts down to an extent where less than a third of the daily average number of points could be recorded.

The site was surveyed using a Geodimeter 400 and the data processed using MAP 400, DGM3 and EasyCAD.

## CATALOGUE OF ARCHAEOLOGICAL FEATURES

The following is a catalogue of archaeological features surveyed on Pen y Dinas, Llandudno. The two main groups of features described are the huts (01 - 65) and the ramparts (100 - 124), although other features such as the rocking stone and a stone cannon (201 - 205) were also recorded during the survey.

### Catalogue of Hut Sites

The measurements in the catalogue are generally given to the nearest 0.5m in the case of diameter, and to the nearest 0.1m in the case of height and depth. This is because the site perimeters are not clearly defined on the ground.

- Dia: approximate overall diameter of the site.
- H: external height of bank/orthostats or height of lower scarp of platforms.
- Dep: internal depth of site taken from top of bank or depth of upper scarp of platforms.
- Len: length of features that are clearly not circular or sub-circular.
- Wid: width of features that are not circular or sub-circular.
- Asp: approximate direction which the site is facing.
- Ent: orientation of entrances, where visible.
- Veg: dominant vegetation on site, with some indication of density.
- ? means query or possible.

### Platforms

Platforms are a common feature within hillforts, particularly around the perimeter where they are often interpreted as quarry scoops. A level platform was created on sloping ground by excavating into the up-slope and piling the spoil immediately downslope. Round timber-framed houses were often built on platforms. In the catalogue the excavated area of a platform is called the upper scarp, whilst the built-up area is called the lower scarp. A bank was often built around the upper scarp to divert groundwater and provide additional protection from the elements. A platform with no visible lower scarp is referred to as a negative platform.

## The Catalogue

1. Low circular bank with occasional stones visible, slightly hollow though very overgrown and not well-defined. Sited on the perimeter of the fort.  
Dia:7m H:0.1m Dep:0.2m Asp:W Ent:?N Veg:dense hawthorn/pasture.
2. Shallow platform, probably cut into natural at the rear, with possible walling in places at the front. Sited on the perimeter of the fort.  
Dia:5m H:0.1m Dep:0.4m Asp:W Ent:?N or S Veg:hawthorn/blackthorn.
3. Negative platform backing onto an outcrop, possibly utilising a low outcropping stone as part of the east wall. Sited on the perimeter of the fort.  
Dia:7m H:0.25m Dep:0.5m Asp:WSW Ent:?S Veg:light blackthorn/pasture.
4. Low discontinuous stony bank with a circular hollow interior. Sited near perimeter.  
Dia:7m H:0.15m Dep:0.5m Asp:W Ent:?N, E or S Veg:hawthorn/blackthorn.
5. Circular hollow with a single stone on the north side. Sited near the perimeter.  
Dia:6m H:N/A Dep:0.4-0.5m Asp:W Ent:N or ?W Veg:light blackthorn.
6. Well-defined negative platform with some stones set low into the ground at the front. Sited on the perimeter.  
Dia:7m H:0.2m Dep:0.8m Asp:W Ent:?N Veg:light blackthorn.
7. Well-defined low circular stony bank with a hollow interior, cut into the ground at the rear (negative platform). Sited near the perimeter.  
Dia:7m H:0.2m Dep:1m Asp:W Ent:N or ?W Veg:blackthorn/hawthorn.
8. Circular setting of a single discontinuous line of stones, some of which are upright, and a slightly hollow interior. Sited near the perimeter.  
Dia:6-7m H:0.5m (orthostats) Dep:0.1m Ent:? Veg:blackthorn/hawthorn.
9. Well-defined platform, the front of which may be utilising a ?natural break of slope. Sited near the centre.  
Dia:6-7m H:0.6m Dep:0.7m Asp:W Ent:? Veg:pasture.
10. Deep negative platform with a low stone-free bank on the east side. The west side is obscured by vegetation. Sited on the perimeter.  
Dia:6-7m H:0.1m Dep:0.7m Asp:WSW Ent:?N Veg:blackthorn.
11. Platform, possibly natural. The rear scarp is steep and the front is utilising the same break of slope as no. 9, with which the site may form a pair. Sited near the centre.  
Dia:4m H:0.8m Dep:0.8m Asp:W Ent:?NE or SW Veg:pasture.
12. Platform, probably natural. The rear scarp is slight and the platform is sited directly above no. 11. Sited near the centre.  
Dia:3-4m H:0.8m Dep:0.4m Asp:W Ent:?SW or NE Veg:pasture.
13. Shallow negative platform with a low stone-free bank around the front. Sited near the centre.  
Dia:6m H:0.1m Dep:0.4m Asp:NW Ent:?W Veg:light blackthorn and pasture.
14. Well-defined low circular stony bank with a hollow interior, cut into the ground surface on the east side. Sited near the centre.  
Dia:8m H:0.2-0.4m Dep:0.5m Asp:W Ent:?N Veg:large hawthorn, blackthorn.
15. A low circular stony bank with a hollow interior, cut slightly into the ground. On the north side a double line of stone walling can be seen. Sited near the centre.



- Dia:8m H:0.2m Dep:0.4m Asp:W Ent:W Veg:hawthorn/light blackthorn.
16. Shallow negative platform, stone-free. May have utilised low outcrop to the west for front. Possibly forming a yard to nos. 15 or 17. Sited near the perimeter.  
Dia:5m H:0.2m Dep:0.3m Asp:W Ent:?N or S Veg:blackthorn and pasture.
  17. A well-defined circular stony bank with a hollow interior. Some of the stones are quite large and are generally in a single line, although there appears to be a double line on the south side. The hut is slightly cut into the ground surface on the east side. Sited near the perimeter.  
Dia:8.5m H:0.3m Dep:0.5m Asp:W Ent:W Veg:dense blackthorn.
  18. Poorly defined oval platform ?utilising outcrop for front wall. Also very shallow small platform adjoining to the south. Sited near the centre.  
Length:7m H:0.3m Dep:0.6m Asp:W Ent:?W Veg:dense blackthorn.
  19. Platform, well-defined rear scarp, possibly utilising outcrop for front wall. Paired with no 20. Sited near the centre.  
Dia:6m H:0.3m Dep:0.6m Asp:W Ent:?SW Veg:dense blackthorn/hawthorn.
  20. Platform, clearly defined upper scarp, uncertain front. Sited near centre.  
Dia:?5m H:0.1m Dep:0.5m Asp:NW Ent:?? Veg:pasture/blackthorn.
  21. Feature of uncertain status, with low irregular mounding and shallow scoops, possibly natural or disturbed. Sited near the centre.  
Dia:3.5m H:0.4m Dep:0.5m Ent:N/A Asp:N/A Veg:pasture/blackthorn.
  22. Possible negative platform, very unclear due to vegetation. Sited near the centre.  
Dia:6m H:? Dep:0.4m Asp:NNW Ent:? Veg:dense blackthorn.
  23. Shallow negative platform, probably the result of build-up in front of no. 24 and the use of the area to the west as a path. May have been a yard. Sited near the centre.  
Dia:4m H:? Dep:0.5m Asp:N Ent:? Veg:pasture/blackthorn.
  24. A well-defined negative platform with a low stony bank on the west side and front. Sited near the centre.  
Dia:7m H:0.3m Dep:0.8m Asp:N Ent:N Veg:blackthorn.
  25. Steep stony negative platform, possibly using a natural break of slope at front. ?Created during installation of cable car support. Sited near the centre.  
Dia:6m Max H:N/A Dep:0.6m Asp:N Ent:? Veg:pasture.
  26. Steep stony negative platform, ?natural, no clear front. Sited near centre.  
Dia:4m H:N/A Dep:0.6m Asp:N Ent:? Veg:pasture.
  27. Shallow negative platform, no visible front. Sited near centre.  
Dia:4m H:N/A Dep:0.3m Asp:NE Ent:? Veg:pasture/blackthorn.
  28. Slight platform, shallow upper scarp, ?low bank on front. Sited near centre.  
Dia:5m H:0.1m Dep:0.2m Asp:N Ent:? Veg:dense blackthorn.
  29. Well-defined negative platform with low bank around upper scarp. ?Natural bank around front. Sited near centre.  
Dia:9m H:0.2m Dep:0.6m Asp:NE Ent:E Veg:pasture.
  30. Steep negative platform, no clear front. Sited near centre.  
Dia:4.5m H:N/A Dep:0.4m Asp:NE Ent:? Veg:pasture.

31. Well-defined negative platform, no clear front. Sited near centre.  
Dia:5m H:N/A Dep:0.5m Asp:NE Ent:? Veg:pasture.
32. Slight negative platform with a downward sloping base. Sited near the centre.  
Dia:7m H:N/A Dep:0.5m Asp:E Ent:? Veg:dense blackthorn.
33. Well-defined negative platform with a slight hood bank and lower scarp. Sited near the centre.  
Dia:6m H:0.2m Dep:0.6m Asp:E Ent:S or ?N Veg:pasture.
34. Shallow negative platform, slightly hollowed, possibly utilising outcrop on E side. Sited near the centre.  
Dia:7m H:N/A Dep:0.4m Asp:E Ent:?N Veg:pasture.
35. Indistinct low circular stony bank with slightly hollow interior. Sited on the perimeter.  
Dia:7.5m H:0.1m Dep:0.2m Asp:W Ent:? Veg:very dense blackthorn.
36. Deep negative platform, slightly hollowed. Appears to be cut on the north side by another negative platform (no. 64). Sited on the perimeter.  
Dia:7.6m H:N/A Dep:0.5m Asp:W Ent:? Veg:blackthorn.
37. Steep negative platform, hollowed, west side forming inner rampart. ?quarry scoop. Sited on the perimeter.  
Dia:5.5m H:N/A Dep:0.6m Asp:W Ent:? Veg:pasture/blackthorn.
38. Shallow trapezoidal feature of uncertain status, west side forming inner rampart. Sited on the perimeter.  
Len:8m Wid:5m max. Dep:0.2m Asp:W Ent:?N or S Veg:blackthorn/pasture.
39. Low circular grassy bank with a hollow interior, backing onto inner rampart bank. There is a stone set into the west side which may mark the entrance. Sited on the perimeter.  
Dia:7.5m H:0.2m Dep:0.4/5m Asp:SW Ent:ESE Veg:blackthorn/pasture.
40. Small negative platform backing onto the inner rampart and immediately north of a possible entrance. There is a very slight negative platform above and to the east. Sited on the perimeter.  
Dia:4m H:N/A Dep:0.3/0.4m Asp:SW Ent:?S Veg:pasture.
41. Very low discontinuous stone-free bank with a very slightly hollow interior. Sited near the perimeter.  
Dia:5m H:0.1m Dep:0.2m Asp:SW Ent:?S Veg:pasture.
42. Very overgrown negative platform with outcrop to the rear and a low bank in front. Sited near the perimeter.
43. Well-defined stone-walled circular hut backing against a low cliff. On the SSE side the walling is built with a single orthostatic stone line, whilst on the NNW side the wall is of double stone facing. The walling is absent on the SE side. There is a very low bank and the hut is slightly hollowed. Sited within the SE pavement area.  
Dia:9m H:0.7(orthostats) Dep:0.4m Asp:SE Ent:S/SE Veg:blackthorn/pasture.
44. Possible hut site loosely defined by occasional low orthostats, backing against low cliff. Sited within the SE pavement area.  
Dia:7.8m H:0.2m Dep:0.1m Asp:SE Ent:? Veg:blackthorn/hawthorn.

45. Possible hut site backing against low cliff. Poor definition. Sited within the SE pavement area.  
Dia: ?8m H: ? Dep: ? Asp: SE Ent: ? Veg: dense hawthorn/blackthorn.
46. Dubious hut site backing against low cliff, defined by occasional stones on perimeter. Sited within the SE pavement area.
47. Possible hut site backing against low cliff, some stone in places. Heavily overgrown, allowing only a minimal survey of the feature. Sited within the SE pavement area.
48. A well-defined stone-walled circular hut backing against a low cliff, slightly hollowed. The walling is double faced on the SW side and single lined on the NW side. The front of the hut is defined by the edge of a limestone ledge. There may be a second hut immediately to the N. utilising the same low cliff. Sited within the SE limestone pavement area.  
Dia: 7m H: 0.4m(orthostats) Dep: 0.6m Asp: E Ent: ?SE or NW Veg: light blackthorn, elder and ash.
49. Deep negative platform with no visible front, facing the interior. Possible quarry scoop. Sited near the perimeter.  
Dia: 6m max. H: N/A/ Dep: 0.7m Asp: E Ent: ? Veg: pasture/hawthorn.
50. Negative platform, possible quarry scoop although no trace of rampart. Sited near perimeter.  
Dia: 3m H: N/A Dep: 0.4m Asp: E Ent: ? Veg: pasture.
51. Negative platform, elongate/oval shape running along contour. Sited near perimeter.  
Len: 4m Wid: 2.5m H: N/A Dep: 0.5m Asp: E Ent: ? Veg: pasture.
52. Shallow circular hollow, possibly natural with no visible encircling bank. Sited near the perimeter.  
Dia: 3.5m H: N/A Dep: 0.3m Asp: E Ent: N/A Veg: pasture/blackthorn.
53. Shallow circular hollow lying in front of short length of low cliff. Sited near the perimeter.  
Dia: 3.5m H: N/A Dep: 0.25m Asp: SE Ent: ? Veg: pasture.
54. Possible hut site; a flat area in front of a short length of low cliff. Sited within the SE pavement area. Asp: SE Veg: pasture.
55. Negative platform with sloping interior and orthostats on lower edge. A second line of stones running across the centre of the hut may be collapse from above. Sited within the SE pavement area.  
Dia: 6m H: 0.4m Dep: 0.5m Asp: SE Ent: ?SW Veg: blackthorn.
56. Platform with deep upper scarp, particularly on the east side, and a slight lower scarp. Sited near the perimeter.  
Dia: 6m H: 0.2m Dep: 0.8m Asp: N Ent: ?N Veg: blackthorn.
57. Possible site of hut. Slight negative platform with a few stones round perimeter. Sited near the perimeter.  
Dia: 6m H: 0.2m Dep: 0.3m Asp: N Ent: ? Veg: pasture/trees.
58. Deeply scooped negative platform cut into outcrop and utilising low cliff on the W side. There is tenuous evidence of a lower scarp. Sited near the perimeter.  
Dia: 7m H: 0.2m Dep: 1.4m Asp: NNE Ent: ? Veg: blackthorn.



59. Well-defined platform with the lower scarp utilising natural outcrop on the E side. The footings of a park bench can be seen in the hut interior. Sited near the centre. Dia:7.5m H:0.5m Dep:1m Asp:NE Ent:?NW Veg:pasture/blackthorn.
60. Poorly-defined circular hut with a discontinuous line of large stones around the edge and a slight upper scarp. Sited below a cliff outcrop near the perimeter. Asp:SW Ent:? Veg:pasture.
61. Possible site of hut, although very overgrown and unclear. Utilising low cliff for a back wall with some stone visible around edge. Possibly built up to an inner line of rampart bank. Sited on the perimeter.
62. Possible site of hut, defined by a circular setting of large orthostatic stones. The area is very densely overgrown, making survey impossible and interpretation uncertain. The circle formed by the stones appears smaller than the other huts of similar type, being about 2.5 - 3m across.
63. Possible site of hut, the front of which is defined by several low orthostats which may have formed part of the inner rampart, similar to no. 61. Very overgrown. Sited near the perimeter.
64. Deep negative platform, slightly hollowed. Appears to cut through no. 36. Sited near the perimeter.
65. Possible hut site utilising low cliff to the rear and rampart revetment at the front. Sited on the perimeter.

## Ramparts

Ramparts are artificial defences which usually take the form of earth and stone embankments, occasionally with a stone facing or revetment, and an outer ditch. A wooden wall or palisade was often built along the top of the banks to add height and to provide a platform for the defenders. Sometimes the defences would be entirely of stone, with a double line of facing stones packed with a rubble core. Many hillforts have between one and three lines of defences and a similar number of entrances.

The topography of Pen y Dinas influenced the siting and type of rampart; on the south and east are sheer cliffs and steep slopes, whilst on the north and west sides the slope is more gentle. The ramparts directly reflect the topography, with strong defences on the gently sloping ground and no defences (visible) on the south and east slopes, which are protected by vertical cliffs of 25m and over. Because the ramparts are linear and now poorly defined features they are more loosely described than the huts. The ramparts fall naturally into two areas, the north and west sides, which are earth and stone banks, and the south-west side, where the ramparts are drystone walls or revetment. On the north side the Victorian path (115) has obscured all traces of rampart.

### *North-west Defences*

The hillfort originally had three, or possibly four, lines of defence on the north-west side, two (or three) outer ramparts (100 and 101) set close together at the base of the natural slope and an inner rampart (102) following the break in slope at the top of the hill. The outer rampart (100) is a fairly well-defined earth bank about 1m high and has been disturbed by the relatively recent construction of a drystone revetment on its western face. The rampart can be traced from the southern side of the modern entrance westwards for a distance of 45m. At one point (104) it appears that the modern field wall and bank diverge, although the bank continues to have a drystone facing. This section of rampart may be original although this seems unlikely in view of the general disturbance within the area. There is a ditch on the inside of the bank which has been used as a footpath, although it is now redundant. The outer defence re-appears on the outside of the field wall (105) where it becomes a low scarp with no inner ditch. This can be traced for about 50m. The outer rampart (111) to the north of the modern entrance is more substantial, being over 2m high. Unfortunately the archaeological status of this rampart is uncertain because of later modifications: the construction of the footpath (107) in the last century and the (unrecorded) extension of the ski-slope car park in the last decade.

The middle rampart (101) is less well defined than the outer rampart, although it can be reliably traced from the modern entrance westwards for a distance of 50m. The rampart consists of a steep scarp about 1.2m high with a 2.5m berm behind. The rampart is built of earth and angular rubble, and is eroding quite badly in places. The north end of the rampart has been cut into by the modern path (107) and cannot be traced beyond this point. There is an area of scree (109) at the southern end of the rampart which may have been core material from the inner rampart wall above.

Above the north end of 101, at the back of the 2.5m berm, is a second scarp or rampart about 30m long and up to 1.3m high (106), running north-eastwards. The rampart consists of loose scree (108) which is retained by a line of outcropping boulders. It is unclear whether this scarp follows the original line of rampart; it is possible that the scree is core material that has tumbled from the upper rampart wall. If the scarp is original and 101 is projected northwards by a few metres, then there appear to be four and not three lines of defence at this particular point (111, 101, 106, 110). Unfortunately the creation of the path has levelled this crucial area and without excavation interpretation remains open to question.

The inner line of defence (102) is defined in most places by a clear break in slope with little evidence of a bank; that is to say an inner down-slope. There is a slight bank visible to the south of hut no. 01 (113), and to the west of huts no. 36 and 39 (114). There is also a 15m length of embankment to the east of the opening created by the Victorian 'zig-zag' path (115). The banks are at most 0.5m high and about 1m across. On the north side of the fort, just above the path, is a short section of collapsed stone rampart (112), incorporating a large beach pebble. The remains are only two courses high and extremely fragile. There are also smaller fragments of broken and cracked beach pebble in this area and also in those areas of exposed scree (108, 109), some of which are probably pot-boilers, although they may also have been used for pounding and grinding.

### *South-west defences*

These are generally stone-built with little or no trace of a bank. Because they occur in short, largely unrelated sections they can be described individually:

- 117 A line of fairly large stones set into the ground, connecting the western entrance to a major outcrop 12m south. Possible tumble immediately below the line of stone.
- 118 Drystone revetment built onto and linking vertical outcrop faces. About 17m long and 1.5m high. There is a section of buttressing about 2m long towards the southern end, which appears to be secondary to the revetment.
- 119 A short length of rampart continuing the line of 118.
- 120 A stony bank about 12m long, 1m wide and 0.5m high, across the top of a slight break in slope and connecting to minor outcrops.
- 121 A single-course stone wall built across the possible southern entrance (123). The "wall" is probably secondary.

### **Entrances**

There are three possible entrances, one in the north, one in the west and one in the south.

- 122 Western entrance: a break in the ramparts due west from the rocking stone (201). The gap is about 2.5m wide and there is a path sloping downwards.
- 123 Southern entrance: This possible entrance is partially hidden by a false edge to the hillfort. The entrance is a sloping ledge 2.5m wide running west from just below hut no. 53 before swinging northwards and down towards the sheep pens. The entrance is partially blocked by a single-course stone wall (121).
- 124 Northern entrance: possible entrance at the top of path 116. Clear evidence of rampart bank to the east and section of tumbled rampart to the west (112).

### **Other features**

- 201 The rocking stone
- 202 Large erratic boulder at end of outcrop
- 203 Upright stone, height about 1m
- 204 Stone cannon, 21 holes bored into 2 outcrops
- 205 Limestone pavement, "intra site road".

## Towards a management plan

### 1) *Ecological Considerations*

A detailed survey by a suitable agency of the flora and fauna of the site would be necessary in order to avoid removing rare or important species during clearance. As clearance proceeds, ideally the position, species and age of each plant should be recorded. This record will be invaluable when assessing the rate of regeneration on each site, and the potential frequency of re-clearance. The potential for palaeoenvironmental research should also be assessed.

### 2) *Archaeological Considerations*

**Huts:** Three huts have been identified as being suitable for clearance, nos. 17, 43 and 48. As each hut/area is cleared, a detailed hand-drawn survey is required of each (scale 1:50 or 1:100) coupled with a written description and photographic record. The plans should include all detail of slope and outcrop, and each site requires at least two profiles recorded. The huts should be described according to a pre-determined system to allow comparison. Eventually the entire fort could be recorded in this fashion.

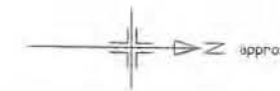
**Ramparts:** The ramparts in the north-west are eroding at an unknown rate, largely due to sheep and goats. A series of 5 or 6 profiles based on fixed points would enable the rate of erosion to be measured precisely. A strategy is needed to consolidate the existing ramparts, particularly those areas with no grass cover. The ramparts 112 and 118 need to be planned and the elevations drawn and photographed. The clearance of blackthorn on the hut sites may result in more intensive grazing which in turn may lead to more rapid erosion of the ramparts by sheep and goats.

### 3) *Visitor Access*

It has been noticed that metal detectors operate on Pen y Dinas. This is illegal and should be discouraged with clear warning notices. Visitors should be diverted away from sensitive or dangerous areas, such as the north-west ramparts or the southern entrance. This could be achieved with low-key signposts leading to information panels and the selective blocking of unofficial paths leading through the more sensitive areas.

# PEN Y DINAS HILLFORT

GREAT ORME, LLANDUDNO



- stone walled hut
- hut site (earthwork)
- rampart masonry
- edge of outcrop
- scree or rampart core



CWYNEDD ARCHAEOLOGICAL TRUST LTD

SURVEYED BY PTM, AJS, RR, LAO  
DRAWN BY PTM  
MAY 1993