

**Excavation at Penyrheol, Lledrod, Ceredigion (NPRN 308511)
May-June 2014**

Interim Report



Penyrheol from the air (Crown Copyright RCAHMW, AP_2006_3828) by Toby Driver.

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1) NON-TECHNICAL SUMMARY

Penyrheol is an enclosure in the parish of Lledrod, Ceredigion, West Wales (Fig 1). The site was formerly known as Llwyn-Bwch, and was discovered in 2003 during an aerial survey undertaken by Toby Driver of the RCAHMW. The crop marks show a double ditched enclosure with a clearly defined entranceway (Fig 2), and a geophysical survey commissioned by the Royal Commission showed an additional enclosure and part of a ring gully located inside the inner enclosure. The inner enclosure ditch was excavated and produced Roman pottery dating to the 1st Century AD.

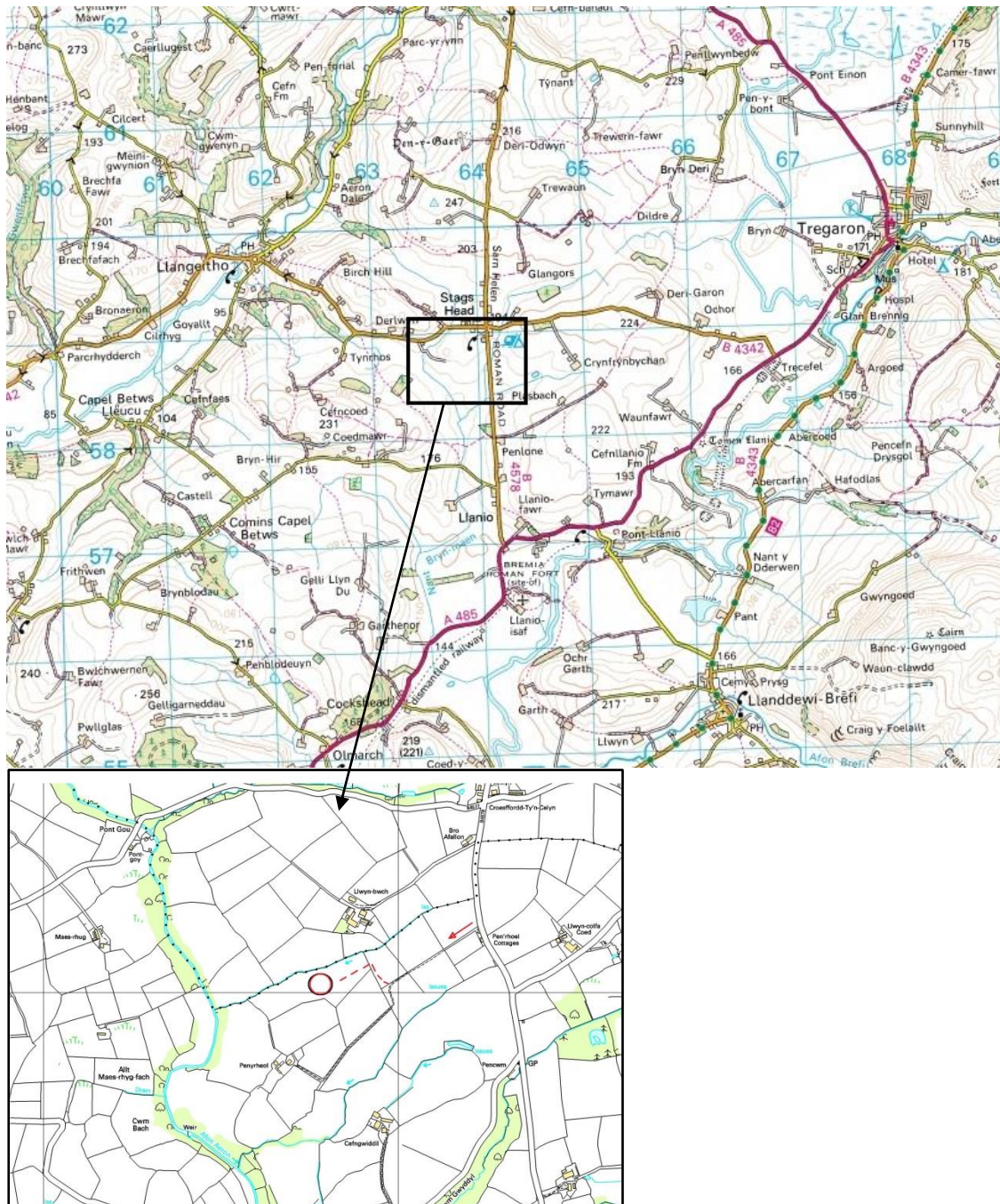


Figure. 1: Site Location



Figure 2: Penyrheol from the air (Crown Copyright RCAHMW, AP_2006_3828) by Toby Driver.

The excavation was led by Dr. Erika Guttmann-Bond (MIFA) of the University of Wales, Trinity Saint David, with input and advice from Dr. Toby Driver and Louise Barker of the RCAHMW and Site Supervision by Jerry Bond (AIfA) and Hywel Keen. The project functioned as a training excavation for students at the University of Wales TSD, while also focusing on a series of research aims which will be detailed below. The excavation was made possible by the kind support of the landowners/farmers, Ann, Ieuan and Gwenan Gwyn.

2) INTRODUCTION

2.1 Site description and topography

Penyrheol (NPRN 308511) is a crop mark enclosure located at SN6377 6302 in the parish of Lledrod, Ceredigion (Figures 1 and 2). It is described in Coflein (Coflein, n.d.) as a 'pear-shaped univallate defended enclosure', and prior to excavation it was presumed to be Iron Age (Driver 2013). It measures c. 50m in diameter, and there is a well-defined entrance on the west side.

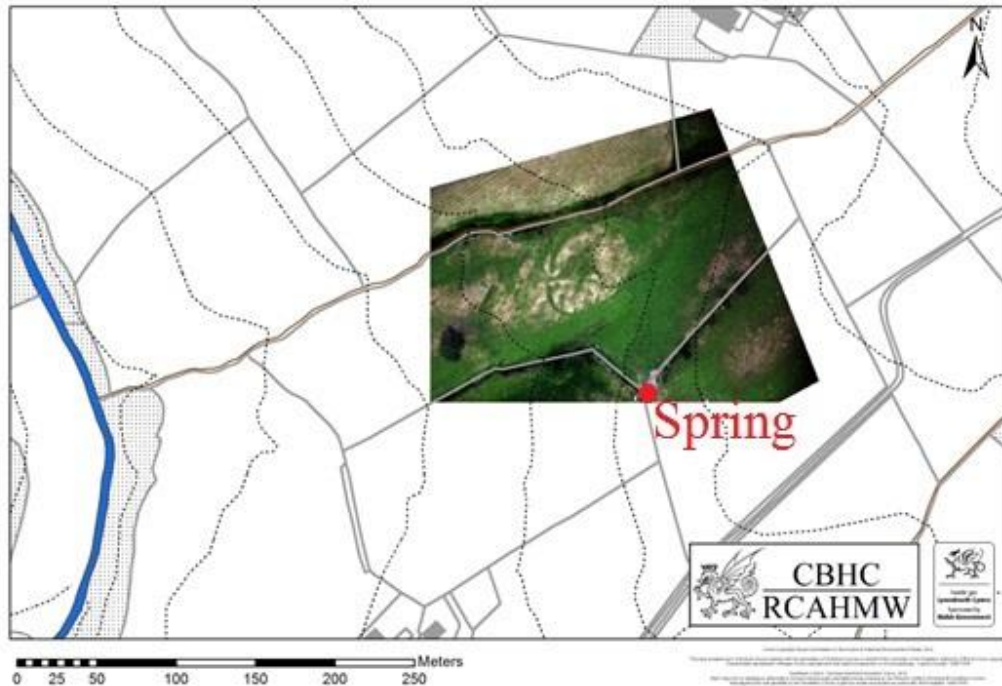


Figure 3: Aerial photo showing the spring and the crop marks overlying the contours.

An initial site visit was made in the spring of 2014, when it was noted that there appeared to be surviving earthworks which were initially thought to correspond to the bank of the enclosure, with a hollow in the centre of the earthworks. The site is on a flattish contour at c. 190m O.D (Fig 3). Small stream channels run downslope to either side of the enclosure; the northern stream is fairly linear and runs alongside a field boundary, which suggests that the original line of the stream was altered when the field boundaries were regularised. There is a spring in the field boundary up the slope to the south of the site. Both streams empty into the River Aeron, which reaches the sea at Aberaeron.

2.2 Geology and soils

The solid geology of the site is mudstone and sandstone of the Devil's Bridge Formation, pitched so that it is nearly vertical. This sedimentary rock protrudes nearly to the ground surface, and machining revealed the bedrock just beneath a few cm of topsoil in both trenches. The interface on the rock surface is a mix of loose shale and topsoil. The topsoil is a freely draining, slightly acid loamy soil (Land Information System). It is described as:

‘ Suitable for range of spring and autumn sown crops; under grass the soils have a long grazing season. Free drainage reduces the risk of soil damage from grazing animals or farm machinery. Shortage of soil moisture most likely limiting factor on yields, particularly where stony or shallow’ (Land Information System).

The site was under grass and is part of the Glastir Scheme, which aims to improve biodiversity and to promote sustainable land management in Wales. It was in use as sheep pasture before and after the excavation. The local soil is classed as having low fertility, but arable cropping is possible (Land Information System).

3) BACKGROUND

There are around 800 known enclosed settlements in West Wales, including hillforts, coastal forts and enclosed settlements (Murphy and Mytum 2011). Enclosed settlements or farmsteads make up 562 of these settlements, with most enclosures containing areas of 0.25-0.40 ha (*ibid.*). 344 of these enclosed settlement sites survive as earthworks (*ibid.*), and before excavation we had hoped to find surviving banks at Penyrheol. Instead, we found that an outcrop of bedrock formed the embankment that we thought we observed on the ground.

Of the 562 enclosed settlements or farmsteads that were recorded in the recent survey, at least 57 had concentric annexes (Murphy and Mytum, 2011), and Penyrheol can be included in this number.

Most of the 562 settlements of Murphy and Mytum's review were located in Pembrokeshire and western Carmarthenshire, so Penyrheol is slightly unusual in being located further north from the bulk of similar sites. Hillforts are the more frequent form of settlement in the region, being a key feature of Ceredigion prehistory, and hillforts appear to be situated at regular intervals along Sarn Helen, the Roman road that runs beneath the modern B4578. 1.61km (1 mile) to the west of Penyrheol is the substantial bivallate hillfort of Castell Flemish, and Tre-Coll promontory fort is located 864m to the south.

Pen-y-Gaer hillfort is located 2.2km to the south of Penyrheol, and is within viewing distance from Penyrheol. Pen-y-Gaer is of particular interest because there are associated field boundaries evident on the aerial photographs, which appear to be contemporary with the hillfort itself. There is also a ditched lane leading from Pen-y-Gaer hillfort to Sarn Helen. The proximity of what may have been arable land suggested the possibility that Penyrheol may also have been in an area which was used as arable in the past.

The farmhouse of Penyrheol first appears under that name on the OS map of 1889; on the earlier map of 1834, it appears as 'Mynachdy' (Figure 4). This is derived from the Welsh 'mynach', or monk, and 'ty', or house, i.e. 'monk's house'. This would have been on or near Blaenaeron Grange, which is linked with Strata Florida Abbey (Williams 1990).

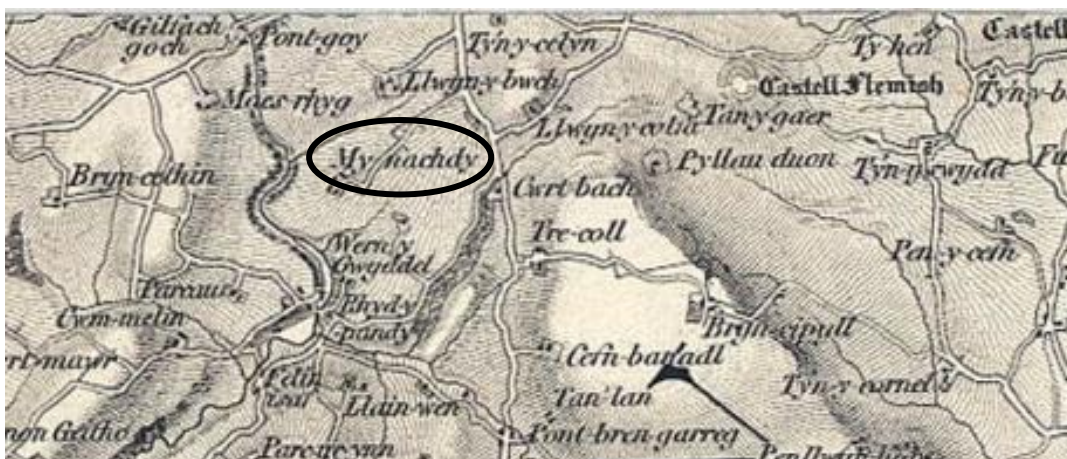


Figure 4: 1834 O.S. map showing farm marked as 'Mynachdy'.

4) AIMS AND OBJECTIVES

4.1 Aims

The excavation aimed to confirm the assumed Iron Age date of the site, and to investigate potential activity within the enclosure. The preservation of the archaeological remains was to be assessed, including the presence of any waterlogging which might preserve organic remains. Obtaining environmental evidence for past land use was another aim of the project. In addition, the site provided training for Lampeter undergraduates. The research design did not include excavation of the entranceway, because for this first season we wanted our inexperienced students to excavate a less sensitive part of the site.

A geophysical survey was commissioned in order to add detail to the available aerial photographs, so that we could obtain a more complete picture of the remains underground, and so that we could place our trenches accordingly.

4.2 Specific Objectives

- 1) To obtain dating evidence for the inner enclosure ditch, and to establish its character (i.e. depth, shape, artefacts and potential waterlogging in the basal deposits).
- 2) To investigate the interior of the inner enclosure, to determine if the magnetic anomalies recorded are in fact linked with archaeological activity within the enclosure.

5) METHODS

5.1 Survey

A geophysical survey comprising magnetometry and electromagnetic induction was carried out by R. Fry and M.J. Roseveare of Archaeophysica Ltd.

Table 1: Magnetometer survey method

Technical equipment	magnetometer
Measured variable	Magnetic flux density / nT
Instrument	Array of Geometrics G858 Magmapper caesium magnetometers
Configuration	Non-gradiometric transverse array (2 sensors, carried) & separate base station magnetometer
Sensitivity	0.03 nT @ 10 Hz (manufacturer's specification)
QA Procedure	Continuous observation
Spatial resolution	0.5m between lines, 0.25m mean along line interval

Table 2: Electromagnetic Induction survey method

Technical equipment	– electromagnetic induction
Measured variable	In-phase response (ppt) and Quadrature response (mS/m)
Instrument	GF Instruments CMD MiniExplorer
Configuration	Slingram in VCP configuration (shallowest penetration)
Sensitivity	10ppm @ 10Hz / 0.1 mS/m @ 10Hz (manufacturer's specification)
QA Procedure	Continuous observation
Spatial resolution	1.0m between lines, 0.25m mean along line interval

5.2 Excavation and sampling

Two trenches were excavated (Fig 5). Trench 1 measured 10 x 25m, with a 2m wide trench extending 10m towards the south from the south-east corner of the main trench. This trench was placed over the inner enclosure ditch so that it could be investigated in both branches of the trench.

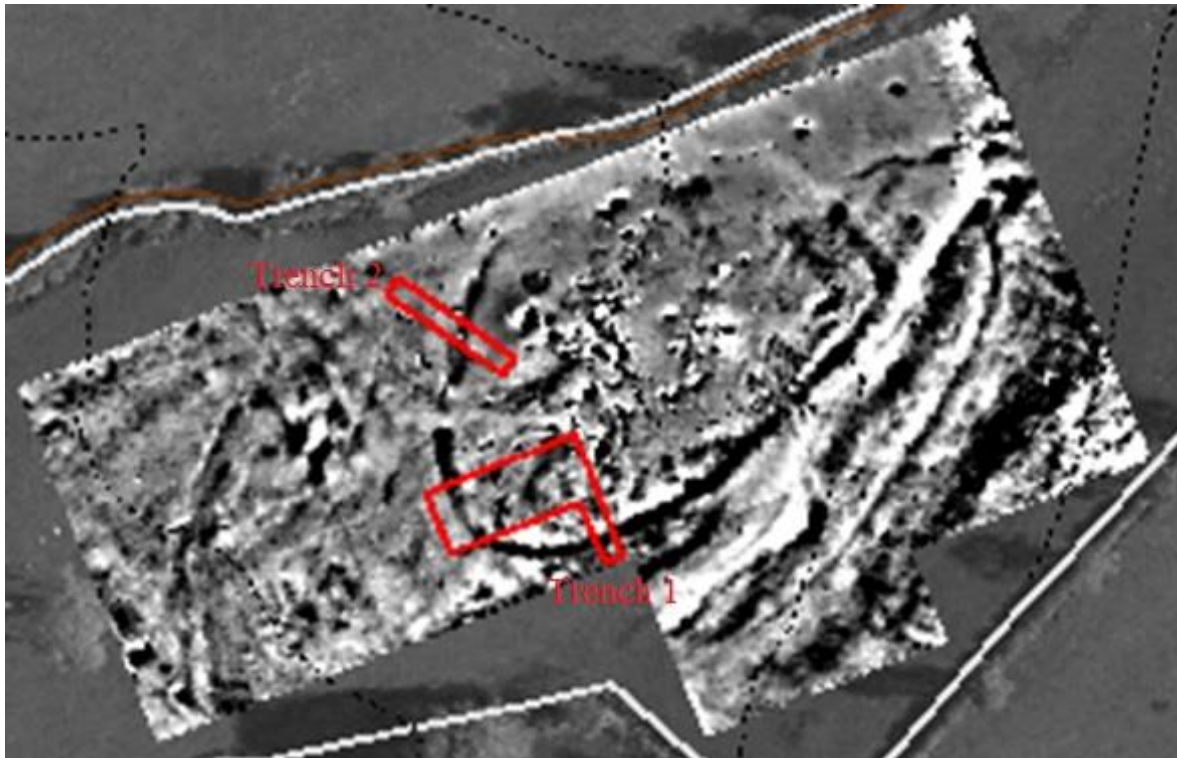


Figure 5: Trench location in relation to magnetometry survey.

Trench two measured 22 x 3m and was orientated roughly north-west to south-east. It was placed over what appeared to be a bank, which was thought to be the rampart of the enclosure. Trench plans were initially drawn at 1:100, with 1:20 plans to show detail.

All archaeological features were hand excavated using mattocks and trowels, and were planned at 1:20 with section drawings at 1:10. Discrete features were half sectioned and linear features were excavated in 1m long slots. Samples for bulk flotation and separate radiocarbon samples were recovered from securely sealed features where charcoal was present in the soil. Written, drawn and photographic records were maintained throughout the course of the project. Recording was carried out using a system based on the MoLAS recording system (pro-forma context sheets etc.), using discrete context numbers for each context. Feature numbers were assigned to features which had multiple excavated slots through them. All archaeological features and deposits were recorded on context sheets and stratigraphic site matrices were compiled. Contexts which produced charcoal were sampled for bulk flotation, with a 1 bucket (10 litre) minimum sample size.

6) RESULTS

6.1 Survey

The inner Penyrheol enclosure ditch measures 76m x 55m and encloses 0.34 hectares (Driver 2014), and so is of an average size (based on Murphy and Mytum's 2011 survey of enclosures in West Wales). The outer ditch has not been completely revealed by either the air photos or geophysics, but appears to measure c. 145m x 82m. The geophysics also revealed a smaller, sub-rectangular enclosure to the west of the main enclosure, measuring 32m x 29m; this is either cutting or cut by the outer enclosure ditch (Figure 6).

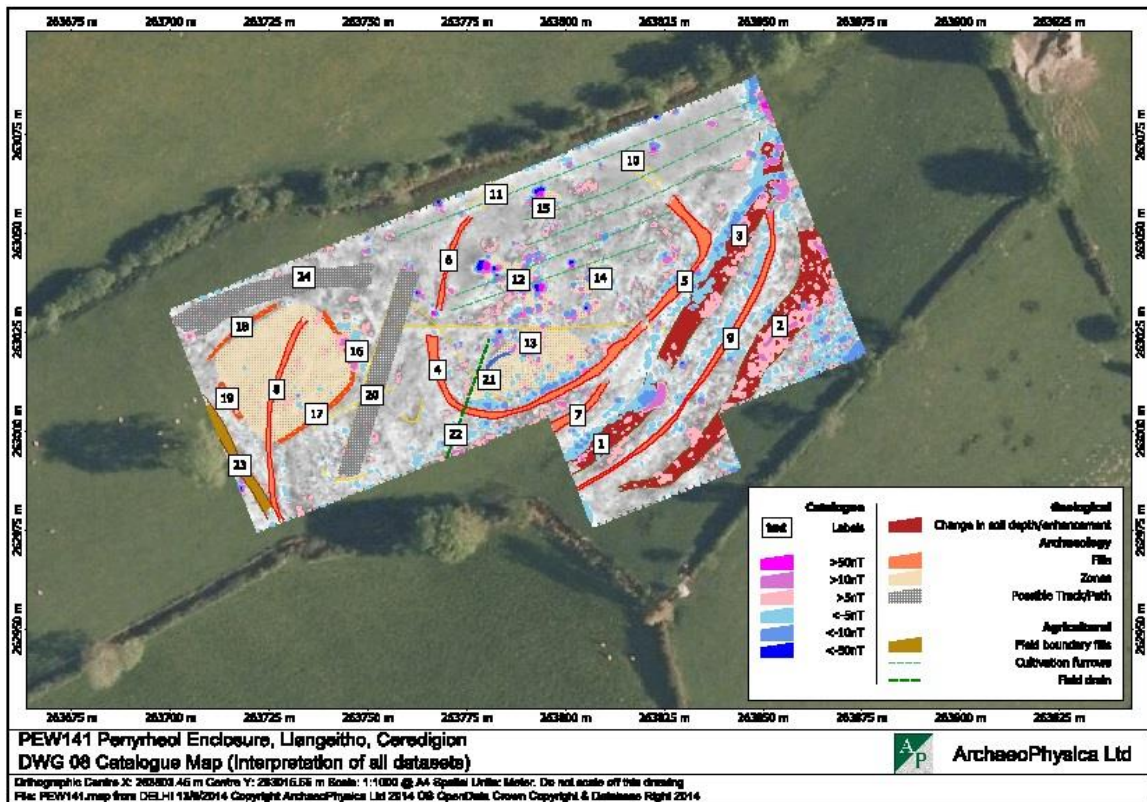


Figure 6: Geophysics plot

6.2 Excavation

The topsoil (1000) was up to 0.20m in depth, and was removed by machine to reveal a stony horizon which formed an interface between topsoil and bedrock (Figure 7). This interface horizon was removed by hand, using mattocks and trowels, and all artefacts within it were assigned to the topsoil. The topsoil (1000) contained 18th, 19th and 20th century pottery, but also a possible Roman sherd. All context descriptions are listed in Appendix 1, and finds are listed in Appendix 2. Additional feature photos are in Appendix 3.



Figure 7: Removing the topsoil.

Inner Enclosure Ditch

The inner enclosure ditch (Feature 110) was revealed in both trenches (Figures 8 and 9). Four slots were excavated through it in Trench 1, and a fifth was excavated through it in Trench 2 (Figures 10-13).

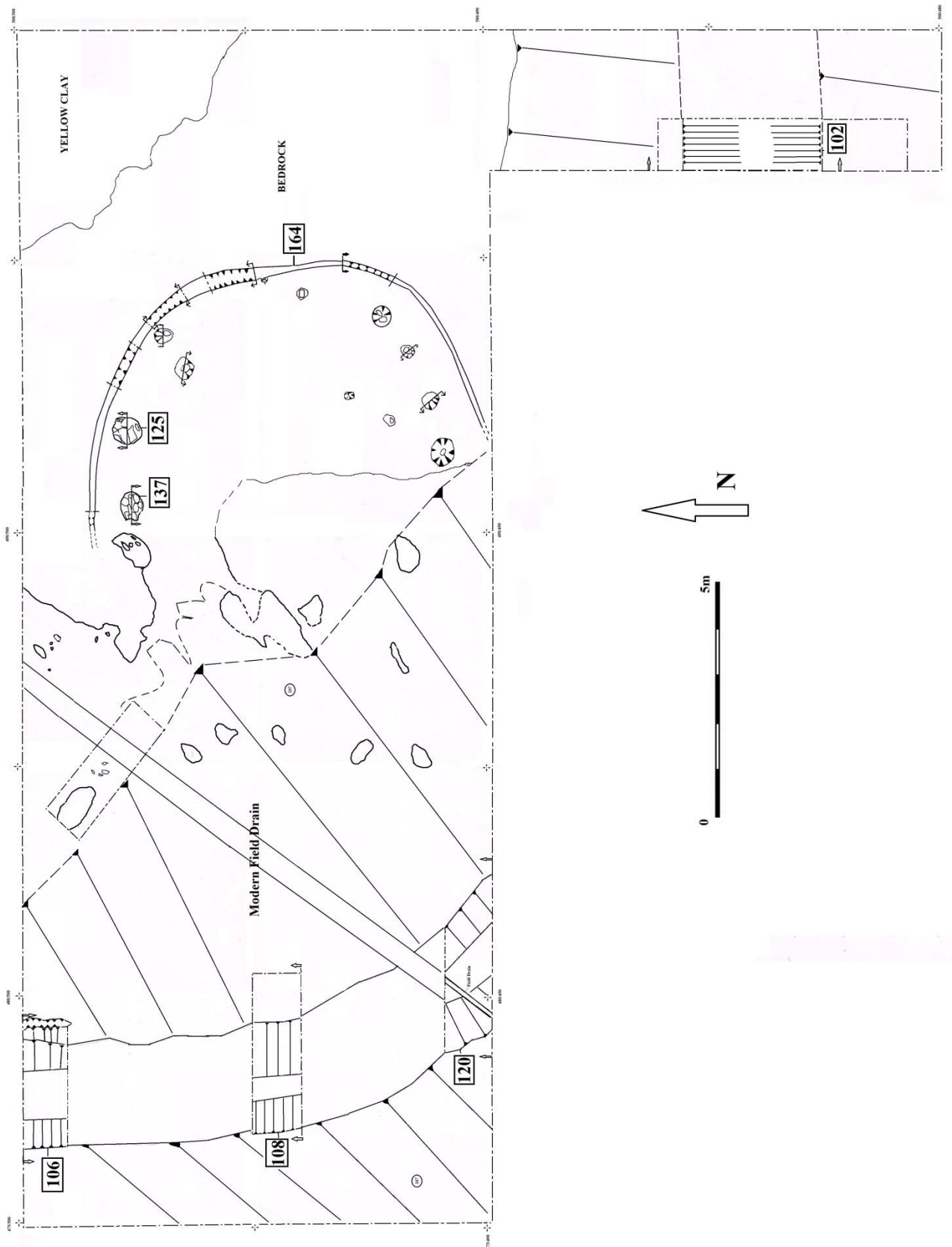
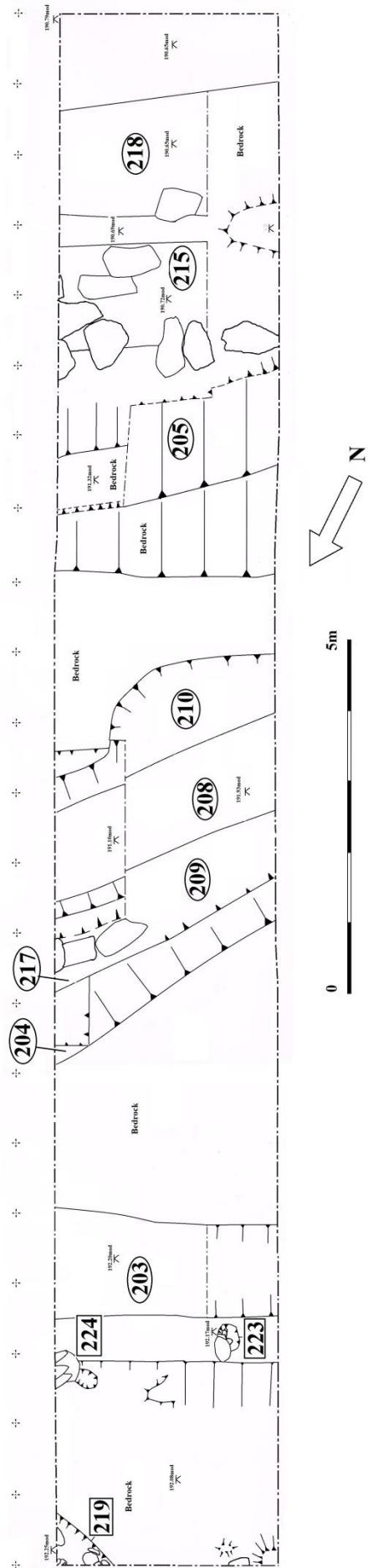


Figure 8: Plan of Trench 1

Figure 9: Plan of Trench 2



In all sections apart from (102) (which was cut into glacial till), the ditch was cut through the vertically bedded slate bedrock, to a depth of 1.10 to 1.36m below the topsoil surface. In Trench 2, the ditch was cut into an outcrop of bedrock, with a steep natural slope occurring on the northern side of the ditch. Immediately to the north of the rock outcrop was a trackway, discussed below.

The sides of the enclosure ditch were steeply sloping and the base was flat or slightly concave. The ditch was c.2.30 to 3.30m wide, and tip lines and the uneven accumulation of infilling suggested that the bank was on the inside of the enclosure. The basal layer of the ditch contained frequent iron/manganese nodules, indicating seasonal waterlogging; there was also gleying of the natural till around cut (102) (the cut within the stream bed to the south of the enclosure).

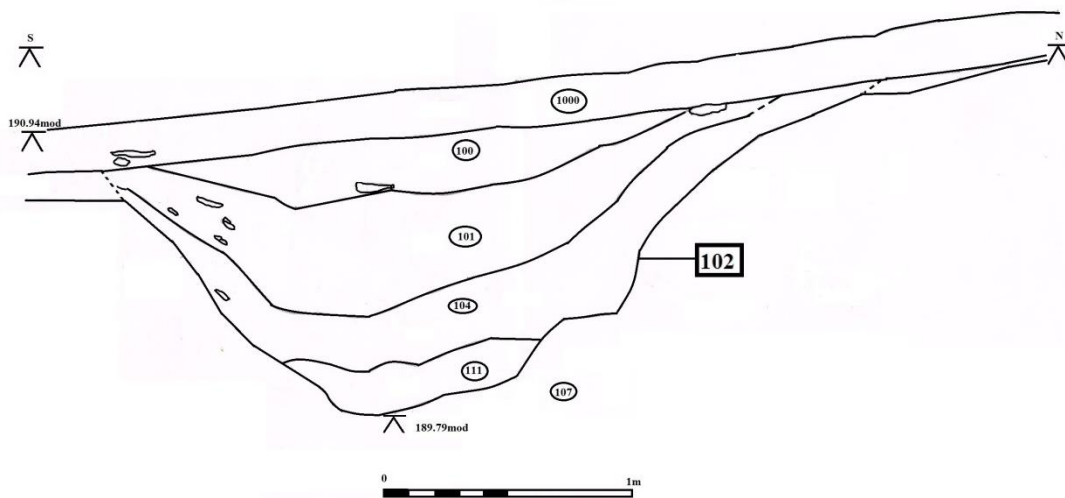


Figure 10: Enclosure ditch section 102



Figure 11: Enclosure ditch section 102

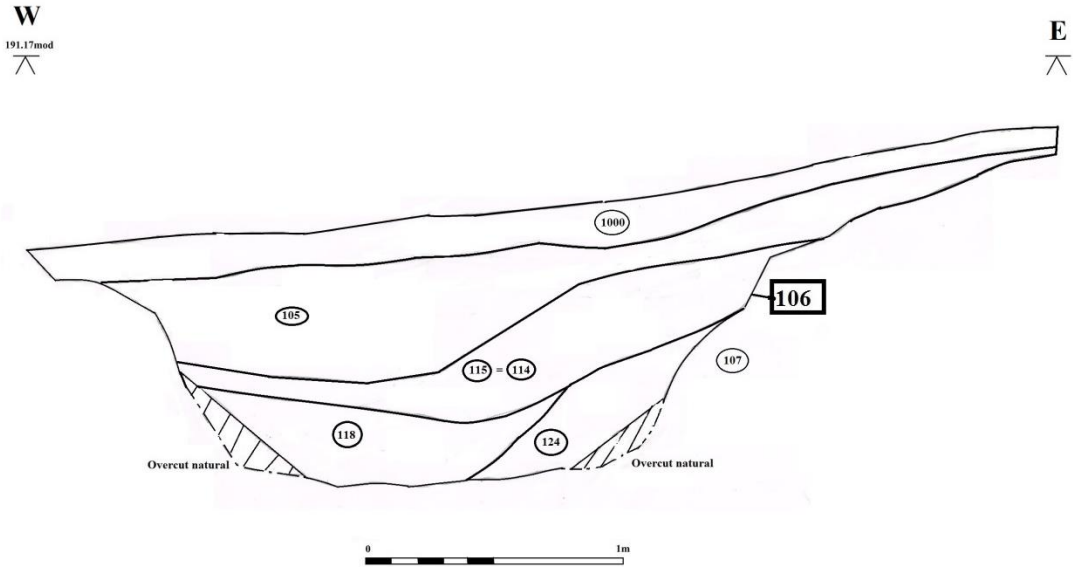


Figure 12: Enclosure ditch section 106

Two sherds of Dressel 20 amphora were found in the uppermost enclosure ditch layer (105); one sherd was found in the excavated slot (106), and another was found during cleaning over the ditch between slot 106 and 108. Dressel 20 pottery was made in Spain in the 1st to 3rd centuries AD; the sherds found at Penyrheol probably date to the 1st century AD (Dee Williams, pers.comm.). Layer (105) also produced one very small and abraded sherd of medieval pottery, and two post-medieval sherds of red earthenware. The uppermost fill (109) of cut [108] also produced a sherd of ceramic in a local, medieval fabric; this could be a ridge or floor tile or a pot sherd. The enclosure ditch fills also produced burned stone, burned clay or daub, and possibly slag. A fragment of iron was found in ditch fill (100) and a small nail was found in (112=116). Burned, possibly calcined bone was found in enclosure ditch fill (209). The finds are listed in Appendix 2.

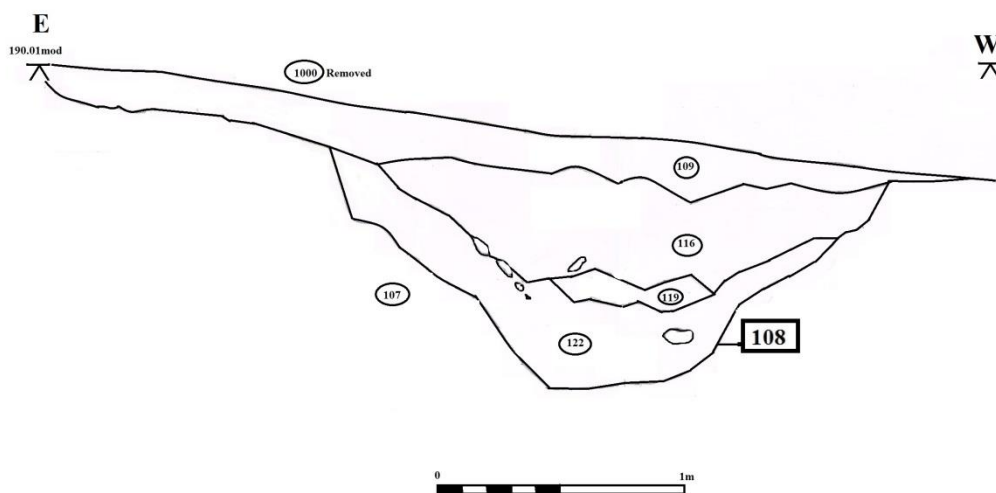


Figure 13: Enclosure ditch section 108

The slot through the enclosure in Trench 2 revealed three boulders on the inner edge of the ditch (Fig. 14).



Figure 14: Ditch section 207, showing boulders in southern section

Trackway

The enclosure ditch was cut into bedrock in Trench 2, and there was a deposit of colluvium (205) on the northern face of the outcrop. This slopewash overlay several large stones, which overlay a second deposit of slopewash (206). Layer (206) overlay a metallated trackway, which had two smooth, somewhat polished surfaces separated by a ridge of bedrock (Fig 15). Each linear depression was 1.6m wide, making up what is interpreted as a roadway surface c. 3.80m wide. This appears on the magnetometry survey as feature 20.



Figure 15: Trackway, looking south-west

Ring Gully and post holes

A rock-cut ring gully was identified in Trench 1, with a diameter of c. 8.90m (figs. 16 and 17). It was not a complete circle, but occurred as a semi-circle which provided drainage from the upper slope to the east of the ring gully to the lower slope on the west. A sherd of pottery, cautiously interpreted as Roman Severn Valley Ware, was produced from gully deposit (159).

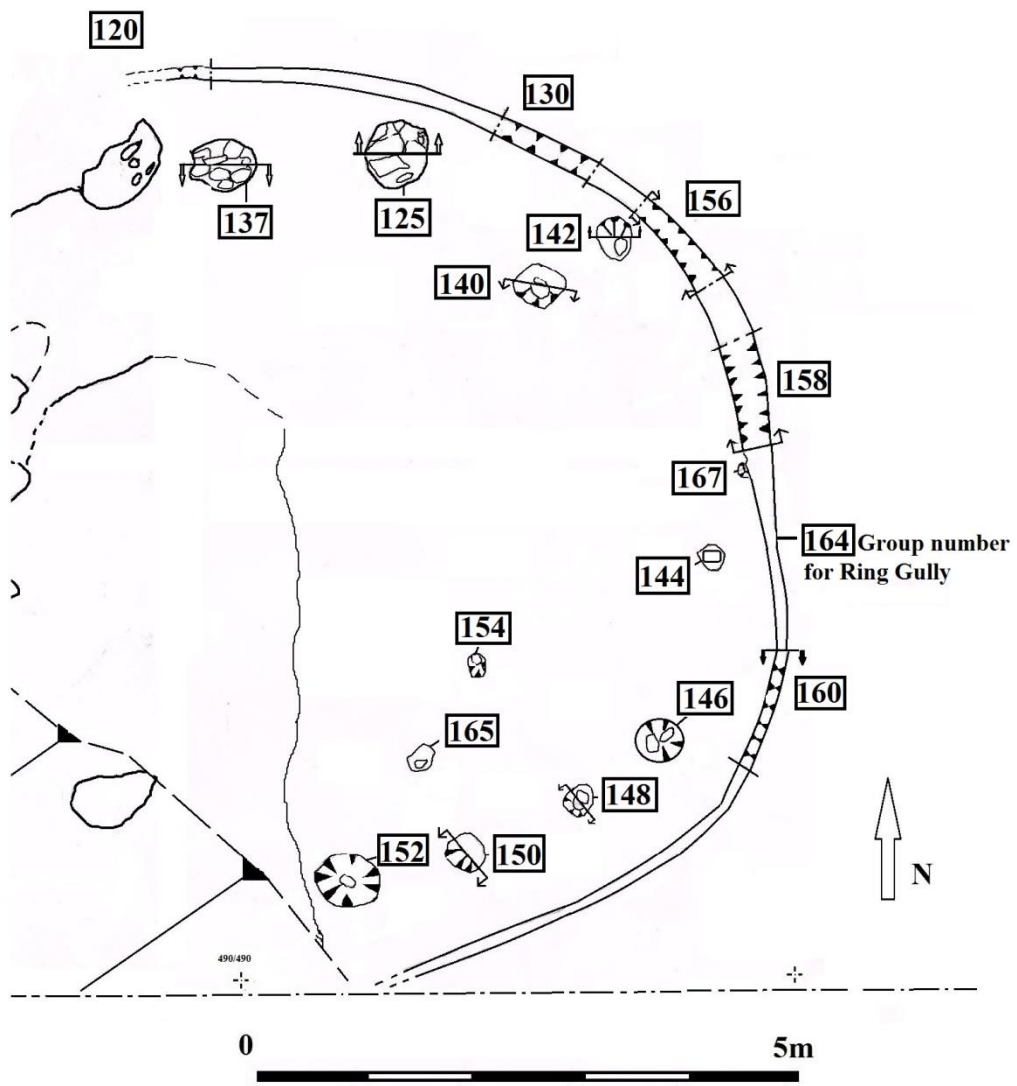


Figure 16: Plan of ring gully and post holes

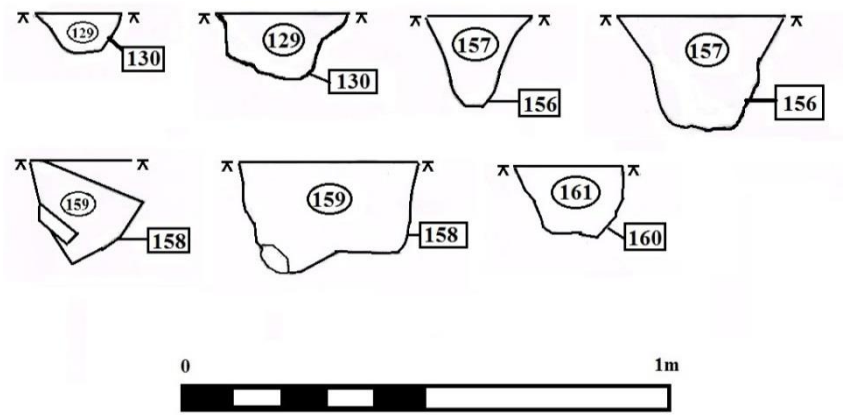


Figure 17: Ring gully sections

Two substantial post holes marked the north-facing entranceway, measuring 0.78 (125) and 0.68m (137) in diameter and 0.28 (125) and 0,34m (137) in depth. They were characterised by abundant and carefully placed stone packing (Fig 18).



Figure 18: Post holes in Ring Gully entranceway

Hearth

A hearth composed of (113), (169) and (171) was excavated 3.5m to the west of the ring gully. Charcoal was frequent in all layers, and the lowest layer (171) also contained orange material suggestive of burned clay. Inclusions of brown clay also appeared to have been heated. It cannot be demonstrated conclusively that the hearth was associated with the house structure, but it seems likely, given the proximity; also, a sherd of possible Roman pottery was recovered from layer (113); this was thought to be Severn Valley Ware. Radiocarbon dates might also help to demonstrate the link, but given the margin of error in C14 determinations, it may not answer the question conclusively. It can be noted that 11 roundhouses in Wales have been recorded as having ‘clearly associated’ external hearths, as opposed to 87 with internal hearths and 4 with both internal and external (Ghey et al. 2007).

Structural features in Trench 2

Post holes 223 and 224 measured 0.48m diameter x 0.33m depth and 0.63 diameter x 0.23m depth, respectively (Fig. 19). Both post holes had flat bases and were cut into bedrock, and both contained post packing. There was no obvious gully associated with the structure, and if there are other associated post holes, these are likely to be outside the trench area.

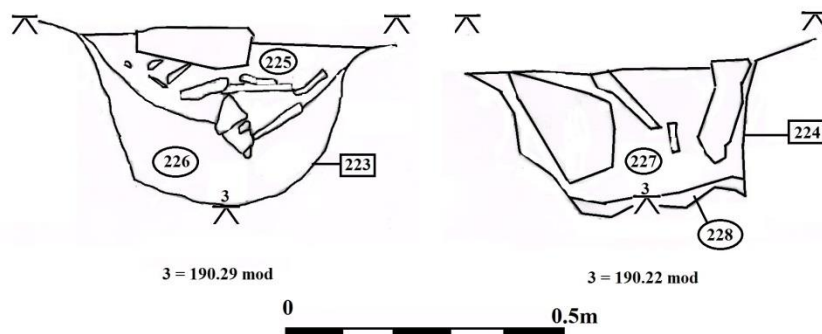


Figure 19: Post holes in Trench 2

Layer 211 was a layer of stony soil which included large, flat rocks measuring up to 0.40 x 0.40m (Figure 20). This is likely to be a floor surface, which may be within the structure, which would mean that the post holes are possibly forming another north-facing entranceway. This layer contained a fragment of very soft and friable, poorly preserved, undated tile.



Figure 20: Possible floor surface (211) in Southern end of Trench 2.

A cut (219) was found in the south-west corner of Trench 2, which appeared to be a construction cut. It was filled by a compact clayey deposit with large stones. This deposit was sealed by layer 211, the possible floor surface. The cut (219) appeared to be linear, but only a small area was exposed, with most of the feature running under the baulk. If it was a linear feature, it was not in line with the post holes (223) and (224).

6.3 Environmental

Bulk samples were subject to combined sieving and flotation back at the Environmental Sciences lab in Lampeter; a table showing the contexts sampled and the sample size is located in Appendix 4. The bulk sieving mesh was 500 μ m, and the stack of sieves included 1mm, 500 μ m and 250 μ m. The samples were air dried and are currently stored at the University until funding can be obtained for the archaeobotanical analysis.

6.4 Artefacts

The most significant finds were two sherds of ceramics, identified as Dressel 20 Roman amphorae, which date to the 1st century AD. The sherds came from the uppermost fill (105) of the inner enclosure ditch (106), which suggests that the ditch was largely infilled by the 1st century AD. The uppermost fills also contained two sherds of medieval ceramic, and two sherds of post-medieval. The ditch may still have been evident as a slight dip in the land surface at that time. The sherd of possible Roman pottery in the ring gully was identified as possibly Severn Valley Ware (Dee Williams, pers. comm.), which was produced from the 2nd-4th centuries (Potsherd Atlas). A sherd of the same fabric from a hearth deposit suggests a link between the roundhouse and the hearth.

7) DISCUSSION

7.1 Enclosure

The inner enclosure (feature 110) was excavated in four sections in Trench 1. A 1m slot through the inner enclosure was also excavated in Trench 2, on the opposing side of the entranceway. This section differed from the slots in Trench 1, in that large stones were found on the inner side of the ditch. These are interpreted as either a revetment placed on the inside of the enclosure ditch, and/or as a wall on the inner side of the ditch.

The revetment feature in Trench 2 has a parallel; a similar feature was found at the Iron Age enclosure of Troedyrhiw (Verwig, Ceredigion), where quartz boulders were found above the lower enclosure ditch fills on the inner edge of the ditch near the entranceway (Murphy and Mytum 2005).

A date was obtained for the final phase of the inner enclosure ditch in Trench 1. Two sherds of 1st century Roman amphora (Dressel 20) were obtained from the uppermost fill, which suggests that the enclosure had fallen out of use by that time. This may be because the settlement was no longer enclosed, or it may be that only the outer ditch was used at this time. Two sherds of medieval pottery and two of post-medieval suggest that the ditch was still evident as a dip in the land surface in the medieval to post-medieval periods—the pottery may have been incorporated into the ditch by ploughing. Further excavations will hopefully provide a date range for the outer ditch and the ancillary enclosure identified in the magnetometer survey. In the meantime, we are awaiting C14 dates for charcoal from the enclosure ditch and the ring gully.

7.2 Roundhouse

The roundhouse in Trench 1 was not immediately apparent when the trench was first opened, but it weathered out during the course of the excavation. The ditch was not a continuous circle, but rather formed half a circle with the termini facing downslope. Presumably it served as drainage, leading water from the upper slope to the east of the building to drain downhill to the west. It was cut into the bedrock to a depth of 0.40m from below the surface of the natural, and most sections had a U-shaped cut with a flat base. It was between 0.14 and 0.27m wide.

There were six post holes that appeared to form a ring within the ring gully, with two larger and more substantial post pits defining the entranceway to the north. The distinguishing feature of the post holes was the occurrence of post-pads, which helped to define the often unclear post hole features. The post-holes that marked the entranceway were considerably larger and deeper, with diameters of 0.58 and 0.60m. The other distinguishing feature was the large quantity of carefully placed post-packing. The substantial entranceway post holes were very like the ones described at the roundhouse excavated at Ffynnonwen (Murphy and Mytum 2011), which also had post-packing stones:

Table 3

	Penyrheol 1	Penyrheol 2	Ffynnonwen
Diameter	0.68 and 0.78m	0.48 and 0.63	0.6m
Depth	0.28 and 0.34m	0.33 and 0.23	0.4m
Distance apart (centre to centre)	1.65m	2.6m	2.6m

While it is usually expected that round houses will have an entranceway to the south or east, it is not uncommon for houses dating to 500BC-1BC to have a north facing entranceway. A survey undertaken by Ghey et al. (2007) shows that 20% of Welsh roundhouse structures in that time period had a north facing entranceway (Fig 21). Figure 22 shows the overall orientations, with east and southeast being the most common orientation.

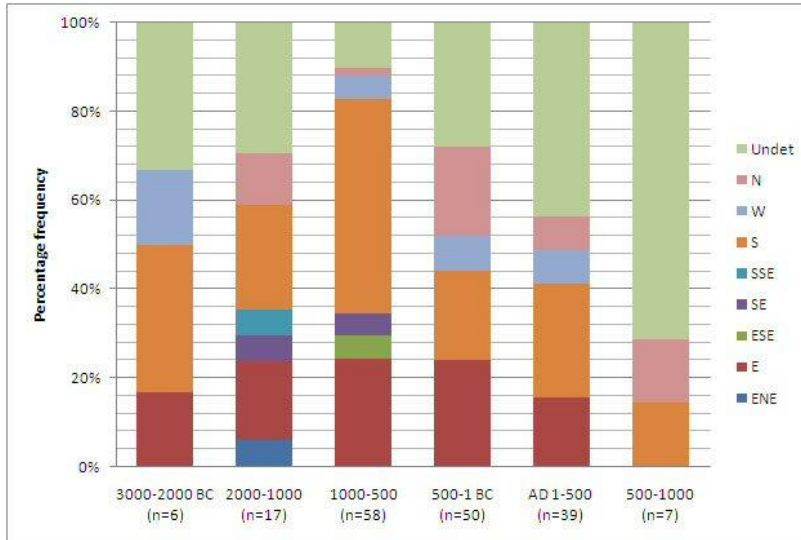


Figure 21: Histogram showing the frequency of roundhouse entrance orientations organised by 500-year period. (Ghey et al. 2007)

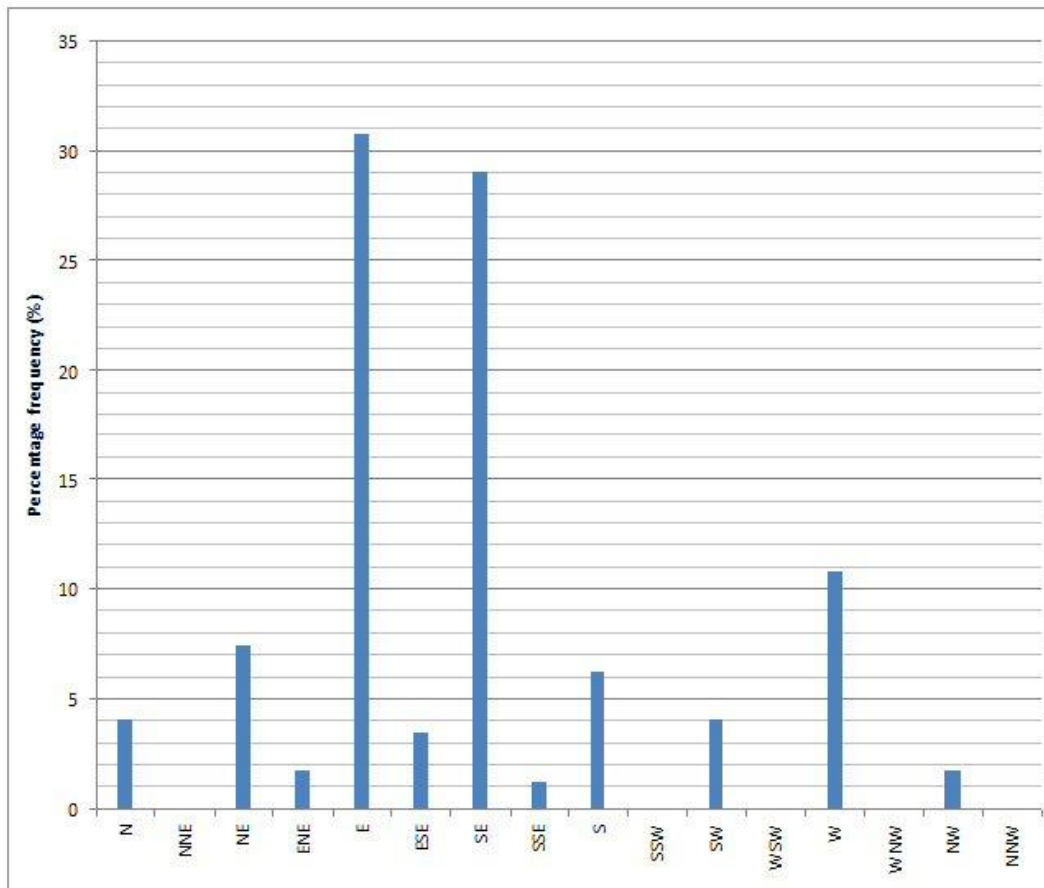


Figure 22: Histogram displaying the percentage frequencies of entrance orientations of houses. From Ghey et al. 2007.

The dating evidence includes sherds of 1st century AD pottery from the latest infill of the inner enclosure ditch. The roundhouse and hearth also produced pottery which has been tentatively ascribed to the Roman period; both sherds are thought to be Severn Valley Ware, which dates to the 2nd-4th centuries. There are a number of Romano-British roundhouses known in Wales, which can be seen as contemporary parallels (Table 4 and Figure 23). The medieval and post-medieval sherds are thought to post-date the roundhouse and enclosure.

Table 4: Romano-British roundhouses in south Wales (after Ghey et al. 2007)

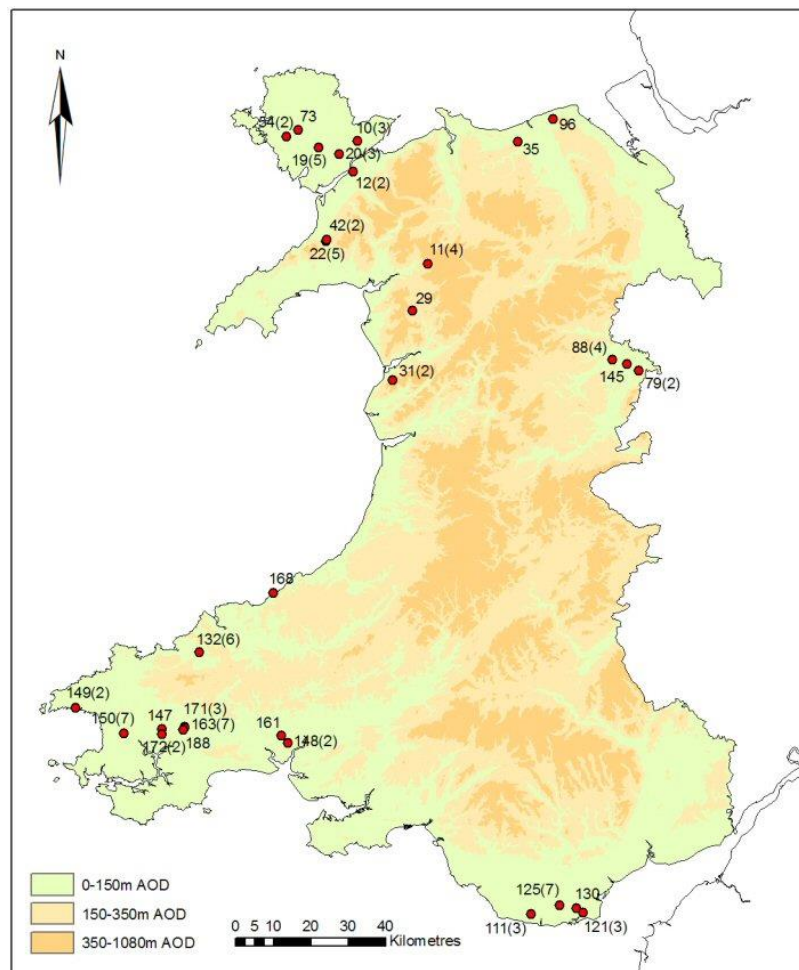
Pembrokeshire	Glamorgan	Carmarthenshire	Ceredigion
Castell Henllys	St. Athan	Penyrcoed	Pendinas Lochtyn
Porth y Rhaw	Whitton	Llangynog II	Ffynnonwen ¹
Walesland Rath	Pencoedtre		Pen Dinas ²
Woodbarn Rath	Biglis		
Broadway			
Dan-y-coed			
Woodside Camp			
Holgan Camp			

¹ Mytum and Murphy 2012

² Forde et al. 1963

The table shows that most known sites are in Pembrokeshire, with a few other sites known in Ceredigion. The numbers are very low (only 17 sites of this date, including Penyrheol), and may simply reflect the number of excavations in the different regions. There are also a number of features thought to be house platforms within a number of Ceredigion hillforts, which have yet to be excavated (Driver, pers. comm.).

Figure 23: Distribution of settlements with houses whose earliest estimated or radiocarbon dates lie during 600 BC-AD 200, based on estimated or calibrated radiocarbon dates (Map data: Crown Copyright/database right 2007; an Ordnance Survey/EDINA supplied service). From Ghey et al 2007.



7.3 Trackway

The Trackway uncovered in Trench 2 runs directly past the enclosure—but it also runs more or less directly between the modern farmsteads of Penyrheol and Llwyn-bwch. Without more dating evidence it is impossible to provide a date—but it is an intriguing feature. Sarn Helen seems to link a number of hillforts, which appear to be regularly spaced along its route—but the density of hillforts in south-west Wales could contribute to false identification of routeways.

7.4 Further research

This season aimed to excavate the inner enclosure ditch and to evaluate the magnetic anomalies within the enclosure. If there is opportunity to return to the site, future years' aims will be:

Inner enclosure:

- to excavate the entranceway to the inner enclosure,
- to open up an area at the southern end of Trench 2, to see if more postholes and perhaps a complete roundhouse might be found which relates to the substantial post holes found in Trench 2,
- to expose more of the potential construction cut feature in the same area (and to find the extent of the layer interpreted as a floor surface.
- We are also interested in what we *haven't* found: to date there has been no sign of storage structures. Further excavation in the inner enclosure may reveal four-post structures.

Outer enclosure

- to excavate the outer enclosure
- the sub-rectangular enclosure to the west of the site is also intriguing, and in further seasons we would like to examine the relationship between this feature and the outer enclosure ditch.

We will be seeking funding for assessment of the charred remains which were collected through bulk sieving and flotation, and we will be sending off C14 samples from the inner enclosure ditch and the ring gully.

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APPENDIX 1: CONTEXT DESCRIPTIONS

Context no.	type	fill of/ filled by	filled by	Part of	Munsell no.	Munsell colour	texture (e.g. silty clay)	Notes
100	ditch fill	102		110 enclosure ditch	10YR 3/3	dark brown	sandy clay silt	
101	ditch fill	102		110 enclosure ditch	10YR 4/2	dark greyish brown	silty clay	
102	ditch cut		100, 101, 104, 111	110 enclosure ditch				
103	layer				10YR 4/2	dark greyish brown	sandy clayey silt	
104	ditch fill	102		110 enclosure ditch	10YR 5/6	orangy brown	clay silt	
105	ditch fill	106		110 enclosure ditch	10 YR 4/2	dark greyish brown	sandy clay silt	
106	ditch cut		105, 115=114, 118, 124	110 enclosure ditch				
107	ditch fill	106		110 enclosure ditch	10 YR 4/2	dark greyish brown	clay	
108	ditch cut		109, 16, 119, 122	110 enclosure ditch				
109	ditch fill	106		110 enclosure ditch	10 YR 3/3	dark brown	clay silt	
110	feature							inner enclosure ditch
111	ditch fill	102		110 enclosure ditch	10 YR 2/1	black	grit	
112								number discarded
113	layer							charcoal-rich layer; part of hearth

114								same as 115
115	ditch fill	106		110 enclosure ditch	10 YR 4/2	dark greyish brown	sandy clay silt	
116	ditch fill	108		110 enclosure ditch	10 YR 4/2	dark greyish brown	sandy clay silt	
117	layer				10 YR 4/2	dark greyish brown	silty clay	layer below 103 and above 133
118	ditch fill	106		110 enclosure ditch	10 YR 2/1	black	clayey sand	manganese
119	ditch fill	108		110 enclosure ditch	10 YR 3/2	dark brown	sandy clay silt	
120	ditch cut		121, 138, 123, 128, 132	110 enclosure ditch				
121	ditch fill	120		110 enclosure ditch	10 YR 3/3	dark brown	gritty clay silt	
122	ditch fill	108		110 enclosure ditch	10 YR 4/6	dark yellowish brown	sandy silty clay	
123	ditch fill	120		110 enclosure ditch	10 YR 4/2	dark greyish brown	clayey silt	
124	ditch fill	106		110 enclosure ditch	10 YR 4/3	dark yellowish brown	sandy clay silt	
125	post hole cut							
126	post hole fill	124		125 post hole	10 YR 3/2	dark greyish brown	gritty clayey silt	
127	post hole packing	124	126	125 post hole				masonry
128	ditch fill	120		110 enclosure ditch	10 YR 2/2	very dark brown	silty clay	
129	ring gully fill	130		164 ring gully	10 YR 3/4	dark yellowish brown	gritty clay silt	
130	ring gully cut			164 ring gully				
131	natural layer							
132	ditch fill	120		110 enclosure ditch	10 YR 4/2	dark greyish	clayey silt	

						brown		
133	ditch fill	135			2.5 YR 4/2	Weak red	silty clay	
134	ditch fill	135			10 YR 3/1	very dark grey	silty clay	
135	ditch cut		134, 135					
136	post hole fill	137		137 post hole	10 YR 3/3	dark brown	clayey sand	
137	post hole cut		136, 139					
138	ditch fill	120		110 enclosure ditch	10 YR 5/2	dark brown	silty sand	
139	post hole packing	137		137 post hole				masonry
140	post hole cut		141					
141	post hole fill	140		140 post hole	10 YR 3/3	dark brown	silty clay	
142	post hole cut		143					
143	post hole fill	142		142 post hole	10 YR 3/3	dark brown	clayey silt	
144	post hole cut		145					
145	post hole fill	144		144 post hole	10 YR 3/3	dark brown	silty clay	
146	post hole cut		147					
147	post hole fill	146		146 post hole	10 YR 3/3	dark brown	silty clay	
148	post hole cut							
149	post hole fill	148		148 post hole	10 YR 3/3	dark brown	clay silt	
150	post hole cut							
151	post hole fill	150		150 post hole	10 Yr 3/3	dark brown	clay silt	
152	post hole cut							
153	post hole fill	152		152 post hole	10 YR 4/3	dark yellowish brown	silty clay	
154	post hole cut							
155	post hole fill	154		154 post hole	10 YR 4/3	dark yellowish brown	silty clay	
156	post hole cut							
157	ring gully fill	156		164 ring gully	10 YR 3/2	v. dark greyish	clay silt	

						brown		
158	ring gully cut			164 ring gully				
159	ring gully fill	158		164 ring gully	10 YR 3/2	dark greyish brown	clay silt	
160	ring gully cut			164 ring gully				
161	ring gully fill	160		164 ring gully	10 YR 4/3	dark yellowish brown	silty clay	
162	ring gully cut			164 ring gully				
163	ring gully fill	162		164 ring gully		dark yellow brown	silty clay	
164	feature			164 ring gully				
165	post hole cut							
166	post hole fill	165		165 post hole	10 YR 3/4	dark yellowish brown	clay silt	
167	post hole cut							
168	post hole fill	167		167 post hole	10 YR 3/3	dark brown	clay silt	
169	layer adj 113			113 layer	10 YR 4/6	dark yellowish brown	clayey sand	
170								
171	layer under 169			113 layer	10 YR 6/2	light brownish grey	clayey silt	
201	deposit			202	10 Yr 3/2	dark greyish brown	silty clay	
202	wash infill			wash infill above 211	10 YR 4/4	dark yellowish brown	clay silt	
203	wash infill				10 YR 4/3	brown	clay silt	
204	ditch fill				10 YR 5/6	yellowish brown	clay silt	
205	slope wash			layer above 206	10 YR 5/4	yellowish brown	silty clay	
206	slope wash			layer above 215 & 216	10 YR 4/2	dark greyish brown	silty clay	
207	ditch cut							

208	ditch fill	207			10 YR 4/4	dark yellowish brown	clayey silt	
209	ditch fill	207			10 YR 4/4	dark yellowish brown	silty sand	
210	ditch fill	207			10 YR5/6	yellowish brown	silty sand	
211	stone spread			202 wash infill		dark greyish brown	stony soil	
212	deposit				10 YR 2/5	dark greyish brown	stony soil	
213	deposit				10 YR 3/6	dark yellowish brown	stony soil	
214								
215	metalling				10 YR 4/2	dark greyish brown	sandy silty clay	
216								
217	stone revetting			207	10 YR 5/6	yellowish brown	silty sand	
218	metalling				10 YR 4/2	dark greyish brown	clay silt	
219	cut							
220	cut fill	219			10 YR 4/2	dark greyish brown	clayey soil	
221	ditch fill	207			10 YR 5/4	yellowish brown	sandy clay	
222	ditch fill	207			7.5 YR 4/6	strong brown	sandy silt	
223	post hole cut							
224	post hole cut							
225	post hole fill	223		223 post hole	10 YR	dark brown	stony soil	
226	post hole fill	223		223 post hole	10 YR 4/3	very dark grey	stony clay	
227	post hole fill	224		224 post hole	10 YR 5/3	brown	silty sand	
228	post hole fill	224		224 post hole	10 YR 3/2	very dark greyish brown	stony clay	

229	trackway cut		215, 218					
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APPENDIX 2: FINDS CATALOGUE

Penyrheol 2014 Trench 1													
CONTEXT		Bone	Charcoal (not C14 samples)	CBM (Ceramic building material)	Fired Clay/daub	Industrial debris - slag/hearth material, coal etc.	Metal - Fe	Metal - Pb & other white metals	Glass - vessel & window	Pottery	Stone - worked/dressed	Stone - amorphous for geological ID	Unclassified (requiring specialist ID)
TOTALS	Count	8	0	0	3	0	53	3	2	10	1	1	34
	Weight (g)	67.2	15.7	0	4.2	47.9	374.9	69	10.3	89.1	61	170	881.9
(1000) = U/S	Count	2		0	0		11	3	1	4	0	0	0
	Weight (g)	66	7.5	0	0	0	84	69	7.9	52.3	0	0	0
Trench 1 (100)	Count	0		0	0		1	0	0	0	0	0	0
	Weight (g)	0	2	0	0	0	19.3	0	0	0	0	0	0
Trench 1 (101)	Count	0		0	1		1	0	0	0	0	0	0
	Weight (g)	0	0	0	1.1	10.4	76.1	0	0	0	0	0	0

CONTEXT		Bone	Charcoal (not C14 samples)	CBM (Ceramic building material)	Fired Clay/daub	Industrial debris - slag/hearth material, coal etc.	Metal – Fe	Metal - Pb & other white metals	Glass - vessel & window	Pottery	Stone - worked/dressed	Stone - amorphous for geological ID	Unclassified (requiring specialist ID)
Trench 1 (103)	Count	0		0	0		32	0	1	0	0	0	0
	Weight (g)	0	0.5	0	0	16.4	107	0	2.4	0	0	0	0
Trench 1 (104)	Count	0		0	1		0	0	0	0	0	0	0
	Weight (g)	0	5.7	0	2.6	21.1		0	0	0	0	0	0
Trench 1 (105)	Count	0		0	0		0	0	0	2	1	0	0
	Weight (g)	0	0	0	0	0	0	0	0	26.3	61	0	0
Trench 1 (109)	Count	0		0	0		0	0	0	0	0	0	5
	Weight (g)	0	0	0	0	0	0	0	0	0	0	0	0.5
Trench 1 (111)	Count	0		0	0		0	0	0	0	0	1	15
	Weight (g)	0	0	0	0	0	0	0	0	0	0	162	879
Trench 1 (112)	Count	0		0	0		1	0	0	0	0	0	0
	Weight (g)	0	0	0	0	0	0.8	0	0	0	0	0	0

CONTEXT		Bone	Charcoal (not C14 samples)	CBM (Ceramic building material)	Fired Clay/daub	Industrial debris - slag/hearth material, coal etc.	Metal – Fe	Metal - Pb & other white metals	Glass - vessel & window	Pottery	Stone - worked/dressed	Stone - amorphous for geological ID	Unclassified (requiring specialist ID)
Trench 1 (113)	Count	6		0	0		1	0	0	4	0	0	0
	Weight (g)	1.2	0	0	0	0	2.5	0	0	9.5	0	0	0
Trench 1 (115)	Count	0		0			2	0	0	0	0	0	5
	Weight (g)	0		0		0	40.1	0	0	0	0	0	0.5
Trench 1 (116)	Count	0		0	1		2	0	0	0	0	0	9
	Weight (g)	0	0	0	0.5	0	40.1	0	0	0	0	0	1.9
Trench 1 (117)	Count	0		0	0		2	0	0	0	0	0	0
	Weight (g)	0		0	0	0	5	0	0	0	0	0	0
Trench 1 (118)	Count	0		0	0		0	0	0	0	0	2	0
	Weight (g)	0		0	0	0	0	0	0	0	0	31	0

CONTEXT		Bone	Charcoal (not C14 samples)	CBM (Ceramic building material)	Fired Clay/daub	Industrial debris - slag/hearth material, coal etc.	Metal – Fe	Metal - Pb & other white metals	Glass - vessel & window	Pottery	Stone - worked/dressed	Stone - amorphous for geological ID	Unclassified (requiring specialist ID)
Trench 1 (119)	Count	0		0	0		0	0	0	0	0	0	0
	Weight (g)	0		0	0	0	0	0	0	0	0	0	0
Trench 1 (122)	Count	0		0	0		0	0	0	0	0	2	0
	Weight (g)	0	0.9	0	0	0	0	0	0	0	0	181	0
Trench 1 (159)	Count	0		0	0		0	0	0	1	0	4	0
	Weight (g)	0	0	0	0	0	0	0	0	12.5	0	344	0

Penyrheol 2014 Trench 2															
MATERIAL															
CONTEXT		Bone	Charcoal (not C14 samples)	CBM (Ceramic building material)	Fired Clay/daub	Industrial debris - slag/hearth material, coal etc.	Metal – Fe	Metal – Cu	Metal - Pb & other white metals	Glass - vessel & window	Plaster/mortar/lime	Pottery	Stone - worked/dressed	Stone - amorphous for geological ID	Unclassified (requiring specialist ID)
TOTALS	Count	1	0	1	0	0	0	0	0	0	0	1	0	14	0
	Weight (g)	0.5	0	71	0	508	0	0	0	0	0	3.9	0	1622	0
(1000)=U/S	Count	0		0	0		0	0	0	0	0	1	0	0	0
	Weight (g)	0	0	0	0	0	0	0	0	0	0	3.9	0	0	0
Trench 2 (202)	Count	0		0	0		0	0	0	0	0	0	0	2	0
	Weight (g)	0	0	0	0	0	0	0	0	0	0	0	0	60	0
Trench 2 (209)	Count	1		0	0		0	0	0	0	0	0	0	0	0
	Weight (g)	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0
Trench 2 (211)	Count	0		1	0		0	0	0	0	0	0	0	10	0
	Weight (g)	0	0	71	0	508	0	0	0	0	0	0	0	1548	0
Trench 2 (215)	Count	0		0	0		0	0	0	0	0	0	0	2	0
	Weight (g)	0	0	0	0	0	0	0	0	0	0	0	0	14	0

APPENDIX 3: ADDITIONAL SITE PHOTOS



Inner enclosure ditch, section (106)



Inner enclosure ditch, section (108)



Inner enclosure ditch, section (120). Cut at an oblique angle against the section, and disturbed by modern field drain.



Post holes 137 (nearer) and 125, within ring gully in Trench 1



Post Hole 125, in ring gully entranceway



Post hole 137, during excavation



Gully section 130, ring gully



Section 130, ring gully



Section 156, ring gully



Ring gully cut 158



Ring gully cut 158, section detail



Ring gully



Ring gully with hearth in top left corner (west of roundhouse)



Detail of boulders in enclosure section 201



Enclosure ditch section 207



Post hole 223, Trench 2



Post hole 224, Trench 2



Trackway with boulders on surface, Trench 2



Trackway with boulders, Trench 2, looking south.



Trackway with boulders, Trench 2



The excavation trenches from the air. Crown Copyright RCAHMW, AP_2014_1309, 11th June 2014. Photo by Toby Driver.

APPENDIX 4: Sampling

Bulk sieving/flotation samples processed

Sample no.	Context no.	quantity	
6	119	c. 25 litres	From Enclosure ditch slot 108
7	115	c. 25 litres	From Enclosure ditch slot 106
9	123	c. 23 litres	From Enclosure ditch slot 120
10	134	c. 13 litres	Fill of irregular feature in Trench 1
12	113	c. 21 litres	Upper fill of hearth in Trench 1
15	169	c. 20 litres	Layer in hearth
16	170	c. 9 litres	Fill of ring gully in Trench 1
17	171	c. 21 litres	Layer in hearth
18	170	c. 7 litres	Fill of ring gully
19	170	c. 1 litres	Fill of ring gully