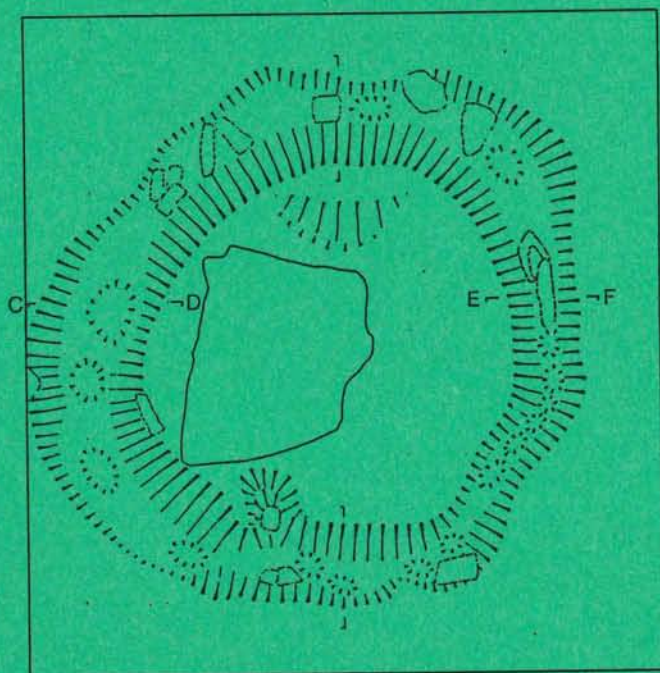


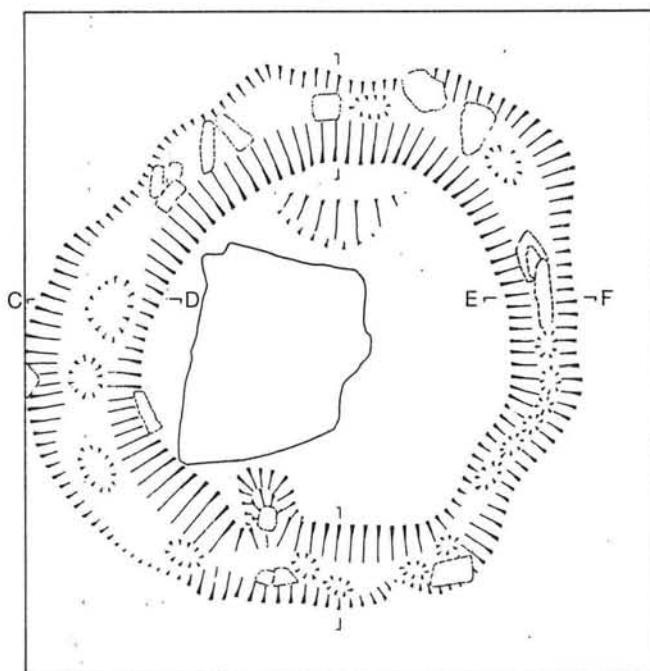
*Excavations at Pont-ar-Daf,  
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EXCAVATIONS AT PONT-AR-DAF, BRECON BEACONS, POWYS - OCT 1989

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EXCAVATION AT PONT-AR-DAF, BRECON BEACONS, POWYS - OCT 1989

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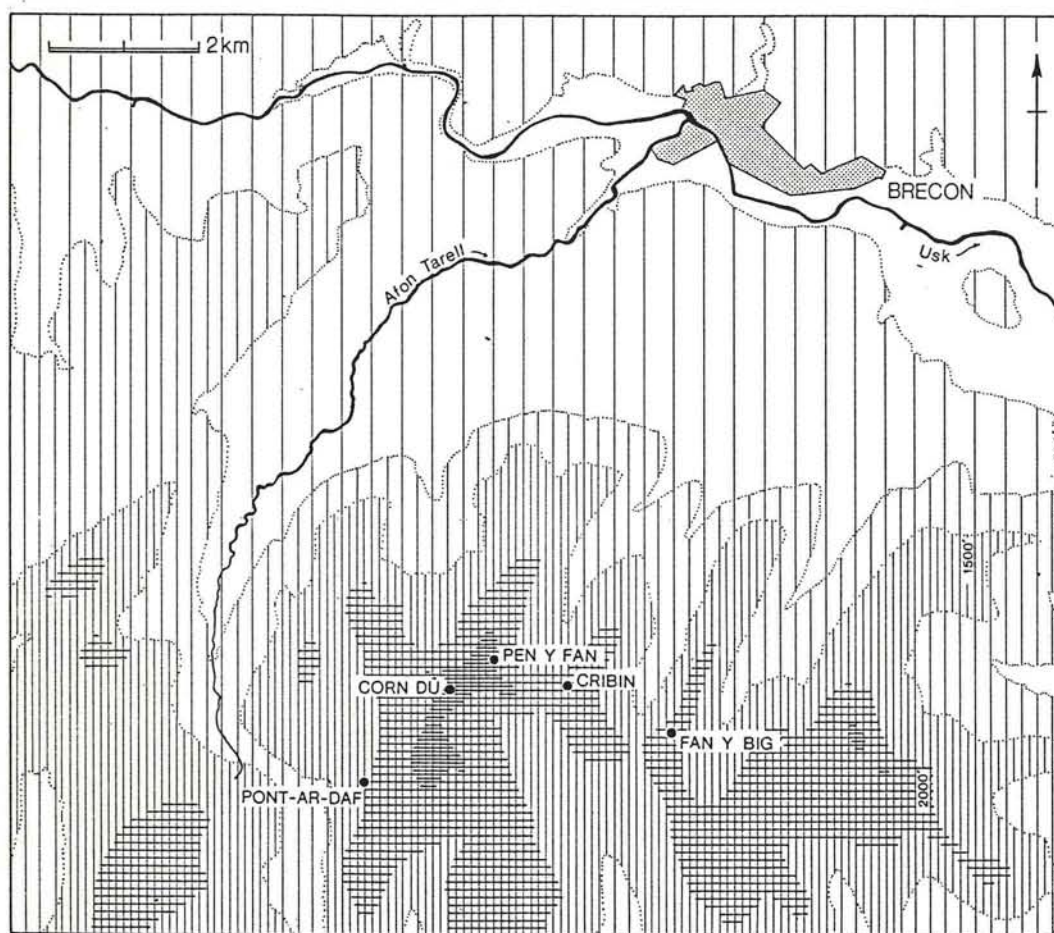
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**EXCAVATION AT PONT-AR-DAF, BRECON BEACONS, POWYS - OCT 1989**

**1 LOCATION AND INTRODUCTION**

The site of Pont-ar-Daf lies on the western slopes of Tyle Brith and on the pathway from Pont-ar-Daf car park to the summits of Pen-y-Fan and Corn Du (fig 1). It lies at a height of c.533m OD and at NGR SN99452005. The site itself is situated on a slight ledge in the general and otherwise steep slope of the hill which is currently occupied by the main path to the summit. To the NNE, at a distance of some 1.5 km, the summit and cairn of Corn Du are visible from the site. A second cairn on the slopes of Bryn Du is visible some 2km to the W. In comparison to higher points of the Beacons nearby, the site affords no dramatic views except to the valley now occupied by the Beacons reservoir to the SW.



**Fig 1: Location of Pont-ar-Daf and other cairns in the vicinity**

The site was discovered by Mr M. Scruby of the National Trust at Dan-y-Gyrn, during footpath repair work in response to the severe visitor erosion on the pathway from the car-park at Pont-ar-Daf to Corn Du and Pen-y-Fan (see plate 1). Attention was first drawn to the area by the discovery of flint artefacts from a distinct scatter eroding out of the sides of the footpath. The site was recognised as a small circle of edge-set stones some 2m in diameter and which resembled a small kerbed cairn (plate 1). The National Trust brought the site to the attention of the Clwyd-Powys



Of the 16 flints recovered at various times from this general area, the majority are worked flakes (see appendix 1) though only 4 show signs of retouch or utilisation (fig 2, Nos 2, 3, 5, 10). In addition, some calcined flint has also been recovered from the path (Nos 4 and 14). The artefact assemblage comprises three scrapers and an arrowhead (fig 2, Nos 1, 6, 7, 15). Two end scrapers (fig 2, Nos 1 and 7) in particular are of a high quality and in a grey flint with traces of cortex remaining indicating the possible use of pebble flint. The short flakes and the artefacts present indicate a second millennium date for the assemblage within the traditional early Bronze Age.

Further finds from elsewhere in this area of the Beacons were made during a later survey of the cairns on Pen-y-Fan and Corn Du by C-PAT in May 1990 (Gibson 1990; Crew and Gibson forthcoming). These include two struck flakes, one with signs of retouch (fig 2, No.22), from the summit of Corn Du, about 15m south of the cairn (NGR SO 00752135) and a similar single unworked and unused flake from the SW edge of the plateau summit of Pen-y-Fan (NGR SO 01252155). The tang of a large barbed and tanged arrowhead (fig 2, No 21) was discovered on the pathway between the Pont-ar-Daf site and the summit of Corn Du (NGR SO 00532100). This latter find at least is contemporary with the Pont-ar-Daf scatter and helps augment a picture of what may be intensive second millennium activity on the Beacons.

**The Flint Arrowhead (fig 2:15)**

By H. Stephen Green, National Museum of Wales

### 3 EXCAVATION

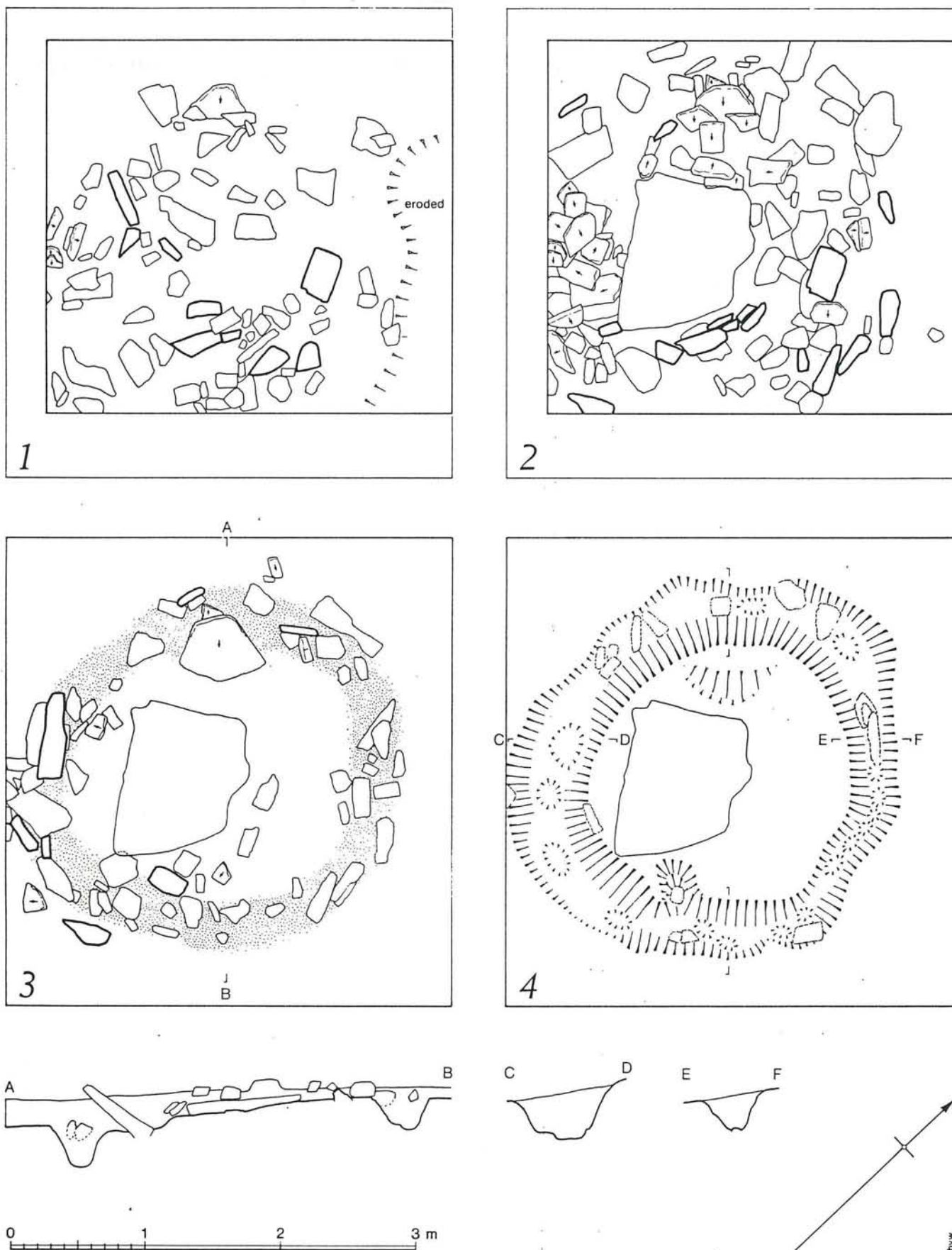
As mentioned above, the site appeared as a low mound, some 10cm above the level of the surface peat where uneroded, and partly defined by an incomplete circle of edge-set stones (plate 1, fig 3). A trench was laid out around the monument and the surface peat and loose stones removed. All excavation was by hand.

**Plate 1: Pont-ar-Daf before excavation. Note the severe footpath erosion towards Corn Du in the background.**

Removal of the surface peat and stones did not reveal the small kerbed cairn as expected, but a thin layer of stones, some of which appeared to be fortuitously edge-set and which had originally been responsible for bringing about the discovery of the site. These stones, nevertheless, were probably deliberately placed over a large flat stone slab which lay directly on the natural pink-orange sandstone-derived subsoil (fig 3) (for subsoil Munsell colours see Appendix III). Possible dressing or quarrying marks in the form of broadly curved chipping scars, were noted on the edge of this slab (plate 2).

The slab was centrally placed within an area 3m in diameter defined by a substantial bedding trench. Other than this large slab, there were no recognisable internal features. The bedding trench was continuous with no apparent causeway and contained substantial packing stones (fig 3) and sparse flecks of charcoal. It measured some 45cm in mean width and c.30cm deep (fig 4, Plate 3). No individual post-pipes were noticed in the fill of the trench, but the depressions of post-bases were located in the soft subsoil at its base. From both the arrangement of the packing stones and





**Fig 3: Excavation plans and sections of Pont-ar-Daf. 1 The site before excavation; 2 Surface peat and loose stone removed; 3 site at subsoil level, top of bedding trench visible; 4 bedding trench excavated and post-base depressions visible on trench floor.**

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Plate 2: Pont-ar-Daf, the central slab in situ. Note the chipping marks on the near edge.



Plate 3: The bedding trench after excavation

the post-impressions on the base of the trench, the individual posts appeared to be close-set and measured 15-20cm in diameter. Finds of flint flakes in the bedding trench and below the central slab suggested that the site post-dated the flint scatter already mentioned.

The charcoal from the site comprised small flecks which were evenly spread throughout the fill of the bedding trench. There were no large fragments which might have been expected had the posts had been burnt in situ nor were there dense concentrations of fragments suggesting a fire in the immediate area of the monument. Oak, hazel, poplar and rowan charcoal were all identified amongst the fragments suggesting to G. Morgan (see below, Appendix 2) that the charcoal was derived from firewood from a fire somewhere in the vicinity.

#### 4 THE FINDS

With the exception of the charcoal mentioned above and in Appendix 2 below, the finds from the excavation were generally few and undiagnostic. Six flint flakes were recovered from the excavated area, two of which were calcined (Appendix 1, Nos 17, 18b). Four flakes retained patches of cortex suggesting, as did the finds from the scatter, that pebble flint was being used. Two of the flakes (fig 2, Nos 16 and 20) showed traces of having been utilised but no diagnostic artefacts were found.

It would appear from the nature of the finds that these flints also belong to the general scatter described above and in which case it is interesting to point out that flint No 16 was located below the central slab of the excavated monument. This suggests that the scatter is, therefore, stratigraphically earlier than the slab's deposition. Strictly speaking, therefore, the radiocarbon date of 3509 $\pm$ 47 BP obtained from charcoal in the bedding trench (see below) acts only as a Terminus Ante Quem for the flint scatter though there is no reason to believe that the flints and the site are not broadly contemporary.

#### 5 RADIOCARBON DATING

The total charcoal was submitted to the Radiocarbon Laboratory, Queen's University, Belfast and it provided a date of 3509 $\pm$ 47 BP (UB-3216). This uncorrected radiocarbon date (1559 $\pm$ 47 bc) lies within the conventional early Bronze Age and is contemporary with the suggested date of the flint assemblage. The radiocarbon determination calibrates to 1905-1762 BC at 1 Sigma (Pearson and Stuiver 1986) (see Appendix IV for calibration data).

#### 6 DISCUSSION

The site at Pont-ar-Daf is problematical in its interpretation. It comprises a circular bedding trench set within an area of flint scatter and was later covered by a stone and peat capping. The bedding trench appeared to be completely circular, without any apparent causeway, and contained upright, contiguous posts. From the survival of the post-impressions in the base of the bedding trench, it is uncertain whether these posts formed a complete circle or whether there were gaps in the circumference. The presence of packing stones within the fill of the trench, however, suggests that the posts were, indeed, contiguous and that the circle was complete. It



may be noted, however, that there is a trace of a possible stone-free area in the western arc (fig 3) which may possibly represent a back-filled stretch of bedding trench, c.40-50cm wide, and which may have acted as a causeway or entrance.

A large, flat and roughly dressed slab was placed within the central area sealing some flint from the scatter. During the course of excavation, this slab was initially thought to be a cist cover, or the coverstone of a pit but, on lifting the stone, it was found to lie directly over the natural and undisturbed subsoil. The function of the stone is unknown; it did not exhibit signs of burning, either on or around it, which might have suggested that it had been a hearth-stone, nor does it appear to have played any obvious structural role.

At an unspecified time subsequent to the construction of the bedding trench, presumably when the monument had gone out of use and the timbers had rotted, the site was covered by a thin capping of earth and stone in a final act of abandonment.

The closest parallel that the writer can find for the site at Pont-ar-Daf is a small circular monument (site 8) between Ynys Isaf and Bettws in Llanfair-Mathafarn-Eithaf, Anglesey which was excavated as part of the rescue and salvage excavations during the construction of the Rhosgoch to Stanlow Shell Oil Pipeline (White 1977). This site comprised a circular bedding trench about 1m across at the top, with an observed overall diameter of c.5m and internal diameter of c.3m. The bedding trench contained close-set timber posts c.20cm in diameter which had burnt down in situ (White, 1977, 480). No finds were recovered from the site and no radiocarbon date obtained from the charcoal.

White draws parallels between this site and the small hengiform sites of the Dorchester complex (Atkinson et al. 1951, Sites IV, V, and VI). The parallels are not very satisfactory, however. Site IV at Dorchester measures 10m in overall diameter, the ditch is composed of conjoining pits, and 25 cremation deposits were found within the area enclosed (ibid 35-42). Site V was also 10m in overall diameter, the ditch composed of conjoining pits, and enclosed 21 cremation deposits (ibid 43-50). Site VI is 11.5m in diameter though the ditch is, at least, continuous but 49 cremations were located in the enclosed area (ibid 51-59).

No traces of burials were found either at the Brecon or Anglesey site and Pont-ar-Daf at least is possibly as much as a millennium later than the Dorchester sites. Furthermore, the uniformly low phosphate counts for the site (Appendix III) do not suggest the former presence of archaeologically invisible inhumed or exposed burials. Pont-ar-Daf also measures only 2.7m in overall diameter, under a third of the diameters of the Dorchester sites. Even Fargo Plantation, the smallest of the 'hengiform' sites in the broadest sense of the term (Atkinson et al. 1951; Clare 1986), has a diameter of some 10m; three times the size of Pont-ar-Daf.

The structural sequence of Pont-ar-Daf is somewhat similar to that discovered at the palisaded ritual monument at Street House, Cleveland (Vyner 1988). Here the site was roughly square but with bowed sides making the site appear somewhere between rectangular and circular. It measured 9m across and was defined by a palisade trench interrupted by causeways in the

NE, SW, W and E arcs. As at Pont-ar-Daf, the final act on the site appears to have been covering the bedding trench with a layer of stone. Admittedly, however, this stone-deposition at Street House is more localised than the overall internal dumping encountered at Pont-ar-Daf. The later neolithic and earlier bronze age pottery from Street House and the radiocarbon dates of 3740 $\pm$ 60 BP (2275-2230 or 2210-2120 or 2080-2040 BC) (BM-2566) and 3700 $\pm$ 50 BP (2190-2160 or 2145-2030 BC) (BM-2567) are, however, entirely in keeping with the Pont-ar-Daf dates.

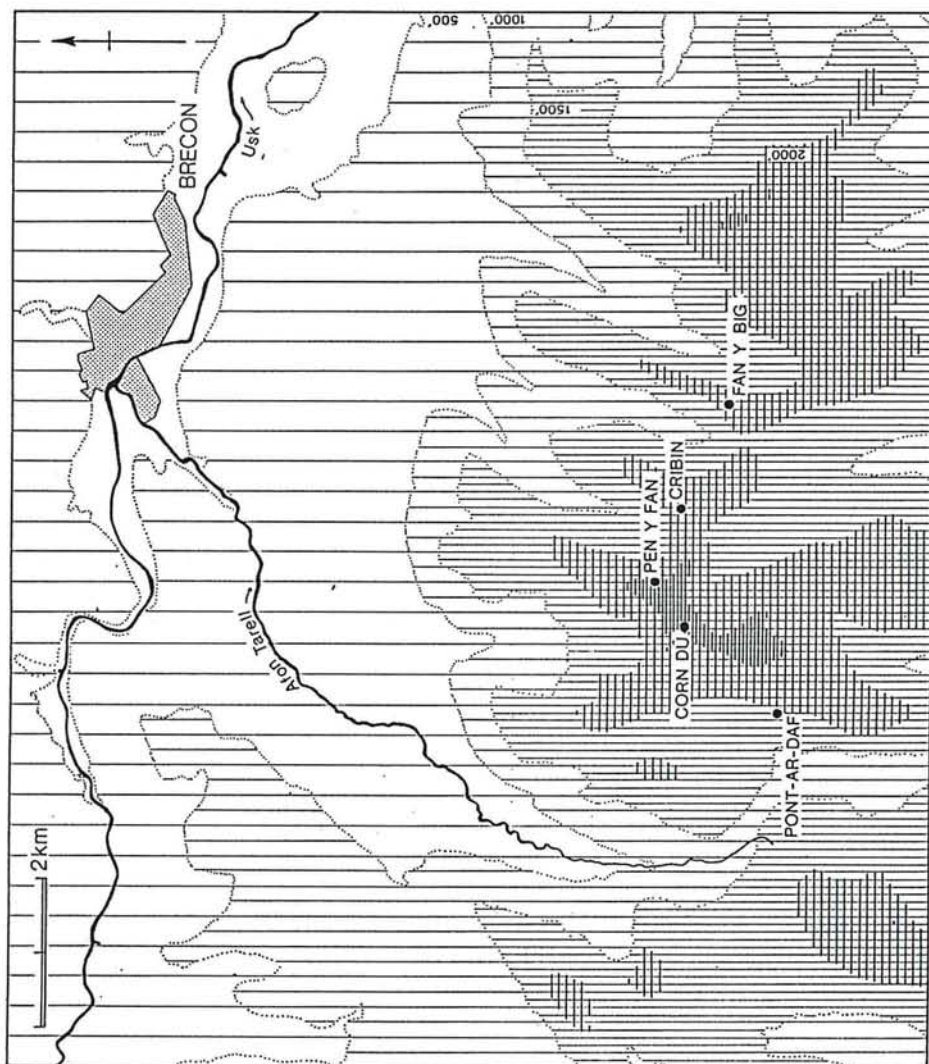
Pont-ar-Daf is even small for domestic structures of this period and does not overtly appear domestic in nature. It measures only c.17m<sup>2</sup> in internal area and has none of the features such as hearth, internal stakeholes or occupation debris normally associated with a hut site. Similarly the phosphate and magnetic susceptibility analysis (Appendix III) indicate no differences between the soils inside and outside the structure which might have been expected had the interior been occupied. Little is known of other, non-habitation, domestic structures in bronze age Wales, such as cattle or sheep pens, but once more the uniformly low phosphate counts (Appendix III) suggest that consideration of this farmyard function are also unwarranted.

In conclusion, we must consider that the timber circle at Pont-ar-Daf is one of a type of hitherto unrecognised bronze age monuments in Wales and hope that the future discovery and excavation of other examples may shed light on their function.

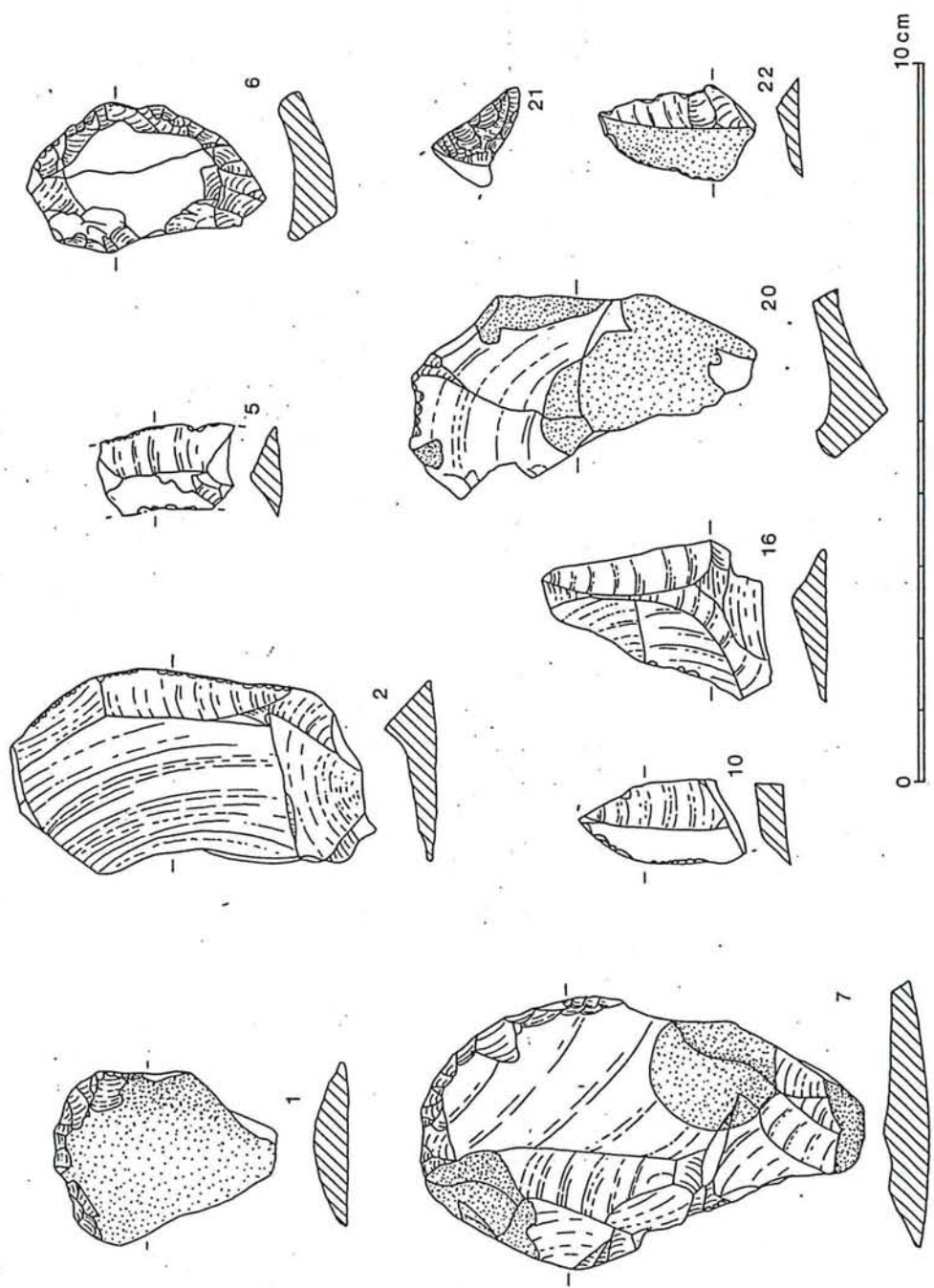
## 7 ACKNOWLEDGEMENTS

The writer, on behalf of C-PAT, would like to thank Mssrs M. Scruby and P. Park (National Trust, Dan-y-Gyrn, Libanus) and Mr P. Dorling (Brecon Beacons National Park Authority) for bringing the site to our attention. We benefitted from on-site discussions with Mr J. Latham and Dr E. Plunkett-Dillon (National Trust, Aberystwyth). Dr H.S. Green (National Museum of Wales, Cardiff) kindly identified the flint artefacts from both the surface scatter and the excavation and provided the note on the arrowhead. The excavation was funded by the National Trust and the post-excavation was funded jointly by the National Trust and Brecon Beacons National Park Authority. The illustrations are by Brian Williams. The excavation archive is currently housed at the offices of the Clwyd-Powys Archaeological Trust, 7a Church Street, Welshpool, Powys.









## APPENDIX I.

### FINDS FROM THE FLINT SCATTER

based on comments by H. Stephen Green

- 1\* End scraper in grey-brown flint with working edge at the distal end and with traces of the bulb and striking platform remaining. Extensive cortex remaining on dorsal side. 31mm by 24mm (max). From flint scatter outside the excavated area.
- 2\* Flake of grey flint with bulb and striking platform in tact and with a hinge fracture at the distal end. Retouched and utilised on one edge. 49mm by 28mm (max). From the flint scatter outside the excavated area.
- 3 Flake of grey flint with some possible signs of utilisation and with some cortex remaining. 21mm by 13mm (max). From the flint scatter outside the excavated area.
- 4 Two fragments of burnt flint. 11mm by 10mm and 16mm by 9mm (max). From the flint scatter outside the excavated area.
- 5\* Utilised flake, perhaps a blade fragment, in grey-brown flint with a patch of cortex remaining, 16mm by 11mm (max). From the flint scatter outside the excavated area.
- 6\* Scraper in grey-cream coloured flint. Bulb of percussion visible but with the striking platform removed. Traces of polish visible on the retouch. 33mm by 20mm (max). From the flint scatter outside the excavated area.
- 7\* End scraper in grey flint with patches of cortex remaining and with retouch extending to both sides. The flake from which the scraper has been made has lost its striking platform and there are traces of polish resulting from use. 60mm x 36mm. From the flint scatter outside the excavated area.
- 8 Flake fragment in grey flint, 8mm by 6mm (max). From the flint scatter outside the excavated area.
- 9 Flake fragment in grey flint 27mm by 17mm (max). From the flint scatter outside the excavated area.
- 10\* Flake fragment in dark grey flint with some traces of retouch on one side. 23mm by 12mm (max). From the flint scatter outside the excavated area.
- 11 Flake fragment in grey flint, 13mm by 8mm (max). From the flint scatter outside the excavated area.
- 12 Waste chip in grey flint. 17mm by 9mm (max). From flint scatter outside the excavated area.
- 13 Waste chip of cream-coloured flint with bulb visible. 13mm by 7mm (max). From flint scatter outside excavated area.

- 14 Fragment of burnt flint. 10mm by 8mm (max). From flint scatter outside the excavated area.
- 15 Arrowhead (see above, section 2)

#### FINDS FROM THE EXCAVATIONS

- 16\* Flake of grey flint with traces of utilisation. 33mm by 19mm (max). From subsoil surface, site grid 01500244.
- 17 Fragment of calcined flint 19mm by 13mm (max). From the subsoil surface, site grid 00710264.
- 18 Two flint fragments found together. One flake fragment in grey flint with traces of cortex and patina surviving, 33mm by 26mm (max). One burnt fragment with traces of cortex remaining, 16mm by 16mm (max). both from the subsoil surface, site grid 00520182.
- 19 Waste chip of grey flint, 7mm by 6mm (max). from the subsoil surface, site grid 01130335.
- 20\* Flake fragment in grey flint with patches of cortex remaining and with traces of retouch and utilisation. 50mm by 27mm (max). from the subsoil surface, site grid 00490184.

#### OTHER FLINTS FROM THE AREA

- 21\* Fragment in white flint representing the barb from a barbed and tanged arrowhead from the pathway below the summit of Corn Du, at SO 00532100.
- 22\* Flint flake in a grey flint with traces of utilisation and cortex. 22mm by 13mm (max). From the summit of Corn Du, SO 00752135.
- 23 Fragment of a blade in white flint with traces of cortex visible. 22mm by 12mm (max). From the summit of Corn Du, SO 00752135.
- 24 Fragment of flint. From the summit of Pen-y-Fan, SO 01252155.

\* = illustrated



## APPENDIX II

### CHARCOALS FROM PONT-AR-DAF

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Floated charcoal	diam (mm)	ring count	age est.	growth rate
Oak, <u>Quercus spec.</u>	50	20	30	slow
	50	15	30	slow*
	50	8	15	fast
Poplar type, <u>Populus spec.</u>	25+	fragments		
Hazel type, <u>Corylus avellana</u>	25+	fragments		
Rowan type, <u>Sorbus spec.</u>	20+	2	5	
<b>Seived residue</b>				
Oak,	50+	5	15-20*	
	25+	6	12	slow
<b>Residue**</b>				
Oak	40+	-	-	knot
	50+	10	20*	
Poplar	25+	fragments		
Hazel	25+	fragments		

\* = bulk of sample

\*\* = this sample was fragmentary and iron concreted.

### APPENDIX III

#### PHOSPHATE ANALYSIS OF THE SUBSOIL AT PONT-AR-DAF

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#### INTRODUCTION

'Subsoil' samples were taken on a 0.5m grid from the area within and immediately surrounding the circular timber structure at Pont-ar-Daf, in the hope that they may shed some light upon its function. Attention focused on two properties:

- (i) **Phosphate-Pt** Total phosphate (phosphate-Pt) was determined by alkaline oxidation with NaOBr using the method described by Dick and Tabatabai (1977). Phosphates, which are present in all organic matter (including bones, excreta and plant material), are relatively insoluble and tend to become 'fixed', particularly within the clay fraction of soils. Previous studies in upland Wales have demonstrated the potential of phosphate analysis in locating possible areas of increased sepulchro-ritual activity, perhaps including the excarnation of corpses (eg Carneddau - Crowther 1990) and in investigating spatial patterns of activity within buildings (eg Cefn Graeanog - Conway 1983).
- (ii) **X (Chi)** Low frequency magnetic susceptibility (X-Chi) largely reflects the concentration of magnetic forms of iron oxide (eg maghaemite) in the soil, this being dependant upon the presence of iron and of alternating reduction-oxidation conditions that favour the formation of magnetic minerals. Burning, in particular, causes marked X(Chi) enhancement (Tite and Mullins 1971). For example, subsoil samples from beneath cremation and hearth sites at Cairn 1, Carneddau (Gibson forthcoming), had X(Chi) values as high as  $0.345 \text{ um}^3 \text{ kg}^{-1}$ , compared with background levels of less than  $0.100 \text{ um}^3 \text{ kg}^{-1}$ .

In addition, pH (1:2.5, water), loss-on-ignition ( $375^\circ\text{C}$  for 16 hr; Ball 1964) and particle size were determined for representative samples from within and outside the structure.

#### RESULTS AND DISCUSSION

##### General character of the soils

The site is located on a small bench on the steep, well-drained slopes of Tyle Brith (SN 994200). Soils in the area are predominantly ferric stagnopodzols of the Lydcott series (Rudeforth *et al.* 1984).

Characteristically, these are reddish, loamy soils with a peaty surface horizon. The subsoils sampled are probably from the top of the Bs horizon. They have a low organic matter content (LOI, range 1.68-3.20%; table 1), are very acidic in reaction (pH 3.88-4.21) and range in texture from loams to sandy loams.

### Phosphate-Pt and X (Chi) surveys (figs. 4 and 5)

Because of their low clay content (12.8-15.5%) the subsoils at Pont-ar-Daf have only a limited ability to fix phosphates. This, combined with the vulnerability of coarse-textured upland soils to leaching, probably explains the generally low phosphate-Pt concentrations recorded (range 0.065-0.166 mg g<sup>-1</sup>; table 2). There is no significant difference between the average phosphate-Pt concentration within the structure and that outside. Indeed, some of the highest values lie outside the structure. Furthermore, there is no clear spatial pattern in the phosphate-Pt data (fig 4).

The X (Chi) results are consistently low (0.023-0.074 um<sup>3</sup> kg<sup>-1</sup>; table 2) and all lie within the range characteristic of natural subsoil. There is no obvious pattern in the results (fig 5), nor is there a strong correlation between X (Chi) and phosphate-Pt across the site.

### CONCLUSION

There is no evidence of any significant phosphate-Pt enrichment in the subsoils within the excavated area at Pont-ar-Daf, and the results of the soils analyses undertaken provide no fresh insight into the possible functions of the structure. It must be stressed, however, that the soils and topography of the site are poorly suited for phosphate retention. Thus, the absence of positive findings may partly, or wholly, be a reflection of this.

**Table 1: Characteristics of representative samples from outside and inside the timber circle.**

SAMPLE	COLOUR	LOI (%)	pH (1:2.5, water)	SAND (%)	SILT (%)	CLAY (%)
OUTSIDE						
025/375	Reddish brown (2.5YR4/4)	2.27	4.21	50.7	33.8	15.5
325/075	Weak red (2.5YR5/2-4/2)	3.20	3.98	56.1	28.7	15.2
INSIDE						
175/225	Weak red (2.5YR4/2)	1.68	4.09	51.7	35.5	12.8
225/175	Weak red (2.5YR5/2-4/2)	2.16	3.88	54.8	30.5	14.7



Table 2: Phosphate-Pt concentrations and Chi values

SAMPLE	Phosphate-Pt (mg g <sup>-1</sup> )	Chi (um <sup>3</sup> kg <sup>-1</sup> )
025/075	0.131	0.046
025/125	0.111	0.029
025/175	0.107	0.023
025/225	0.131	0.028
025/275	0.107	0.034
025/325	0.146	0.068
025/375	0.129	0.048
075/075	0.136	0.035
075/125	0.130	0.035
075/175	0.148	0.044
075/225	0.120	0.057
075/275	0.114	0.034
075/325	0.120	0.029
075/375	0.102	0.025
125/075	0.124	0.033
125/125	0.142	0.054
125/175	0.094	0.047
125/225	0.109	0.048
125/275	0.091	0.042
125/325	0.119	0.046
125/375	0.115	0.055
175/075	0.106	0.074
175/125	0.091	0.044
175/175	0.167	0.063
175/225	0.132	0.064
175/275	0.142	0.046
175/325	0.137	0.033
175/375	0.126	0.045
225/075	0.139	0.046
225/125	0.145	0.055
225/175	0.132	0.066
225/225	0.158	0.057
225/275	0.117	0.072
225/325	0.166	0.046
225/375	0.158	0.065
275/075	0.133	0.044
275/125	0.139	0.056
275/175	0.103	0.046
275/225	0.109	0.045
275/275	0.158	0.059
275/325	0.136	0.046
275/375	0.129	0.056
325/075	0.126	0.045
325/125	0.127	0.046
325/175	0.140	0.043
325/225	0.098	0.057
325/275	0.065	0.044
325/325	0.137	0.046
325/375	0.125	0.046

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**Fig 4: Pont-ar-Daf, Results of the Phosphate-Pt survey**

Pont-Ar-Daf /file report.txt / 23-8-90 / A.M.G.

**Fig 5: Pont-ar-Daf, Results of the X(Chi) survey**



#### APPENDIX IV

##### THE RADIOCARBON DATES FROM PONT-AR-DAF

Technical data regarding this date using University of Washington "Calib" programme (version 2.0) is as follows:

<u>Lab ID</u>	<u>C-14 age (years BP)</u>	<u>Delta C-13 rel PBD</u>
UB-3216	3509±47*	-25.7±0.2 per mil

\* - includes error multiplier of 1.2300

Calibrated age(s)	CAL BC 1880	1831	1829
	CAL BP 3829	3780	3778

##### Cal BC age ranges obtained from intercepts (method A):-

1 Sigma	1905-1852	1850-1762
2 Sigma	1970-1737	1712-1708

Summary of the above ---

1 Sigma	Cal BC	1905 (1880 1831 1829)	1762
2 Sigma	Cal BC	1970 (1880 1831 1829)	1708

##### Cal BC age ranges (cal ages as above) from probability distribution (method B):-

% area enclosed	Cal BC age ranges	relative area under probability distribution
68.3 (1 sigma)	1902-1856	.33
	1849-1766	.67
95.4 (2 sigma)	1974-1736	.99
	1716-1703	.01

For the datasets and intervals used, see Pearson and Stuiver 1986.

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