431

SMR COPY

A55 Anglesey DBFO Scheme

Excavation reports for Ty Mawr, Melin y Plas and Penmynydd

Report No. 431

Prepared for
Richards, Moorehead and Laing

November 2001

Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

G 572

A55 ANGLESEY DBFO SCHEME

EXCAVATION REPORTS

CONTENTS

MELIN Y PLAS ROMANO-BRITISH SETTLEMENT, BRYNGWRAN

by George Smith

Contents:

MELIN Y PLAS PUBLICATION ILLUSTRATIONS

LIST OF CAPTIONS

1. Location map: local topography and land capability
2. Distribution of flint and other finds
3. House 1. Plan and sections
4. Pits 315 and 882, plan and sections
5. House 2 Phase 1. Plan and sections
6. House 2 Phase 2. Plan and sections
7. House 2 Phase 2. Detailed plan of culvert
8. House 2 Phase 3. Plan and sections.
9. House 5. Plan and sections
10. Pit groups and postholes. Gen plan and examples of sections of misc. pits, quarries, charcoal-filled, stone-filled and post-holes
11. Pit group 8. Detailed plan and sections
12. Misc. later features of possible buildings? 4 and 17, wall 152. Plan and sections
13. Medieval/Post-medieval field ditches pits and rubble spread of demolished settlement, plan and sections
14. Radiocarbon dates, combined plot
15. Settlement topographic location, reconstructed profile

PHOTOGRAPHS

1. Pit 315
2. Photogrammetric plan house 2
3. Close-up of capped drains house 2
4. Example of typical quarry pit/s

1. INTRODUCTION

The evaluation excavations carried out by GAT on the south side of the hill of Bryngwran identified a spread of stones associated with drainage features, which indicated the presence of at least one round-house of presumed Iron Age or Romano-British date and with the likelihood that other, more extensive settlement existed near by. Subsequent area excavation revealed the circular outlines of three round-houses represented by curvilinear gullies together with postholes and a number of outlying pits as well as gullies possibly representing the fragmentary remains of two other houses. The remains comprised a small farmstead of three main houses, which appeared to be unenclosed and set close together on the slope. The artefacts and radiocarbon dating showed occupation to have lasted from possibly as early as the first century BC to at least the early third century AD. After a long period of abandonment the site was cleared and re-used as an open platform for crop-processing in connection with an adjoining medieval field.

1.1 Archaeological and historical background

No sites or finds of archaeological interest were known here, or nearby, prior to the evaluation excavations carried out during assessment of the route of the then proposed A55. The nearest was a settlement of Romano-British date at Castellor, about 1km to the south-west (and in view of the site). A little further away an important collection of 2nd century BC to 1st century AD iron and bronze objects, the Llyn Cerrig Bach hoard was found in a peat pool, indicating the presence of a major ceremonial centre (Savory, 1976, 49-50). However, following completion of the excavations, it was brought to the attention of the excavators that a quern stone of Romano-British date had been found during construction of houses in Bryngwran, and could be seen at the Primary School.

The London to Holyhead post road was built over the Bryngwran ridge between 1820-30. Prior to this the original road followed a circuitous route around the contours, where it survives as a minor road, about 200m south of the excavation area. This probably continued the line of a much more ancient route with which the settlement may have been associated. This route skirted the foot of the higher land at the east side of the bogs of the Afon Crigyll and sandy wastes of Tywyn Trewan Common.

The area in which the site lies was, until recently, a single large enclosure of improved pasture with occasional arable. Slight evidence of ridge and furrow showed it to have been arable in the past. In 1900 there was a straight east-west division across the field, now disappeared, a division that is likely to derive from 18th century land improvements. This straight boundary in turn post-dated a curving boundary alongside an artificial leat that followed the contours around the base of the hill to supply the post-medieval mill of Melin-y-plas. The mill was not marked on the first edition OS map of 1818-23 (revised 1836) and so is probably later. However, the leat does appear on that map so there was probably an earlier mill. The land itself was formerly part of the Plas Llechylched estate, the house of which lies about 500m to the south-west and which was once part of the Bodorgan estate. There could have been a different field system before the 18th century land improvements but there was no surface or aerial photographic evidence of banks, ditches or lynchets so the hill could have been just open grazing. In the medieval period, Melin y Plas was in the cantref of Aberffraw, commote of Llifon and the chief township of the immediate area has not been identified. Llechylched, the focus of the present parish, was just a hamlet (Richards 1972). The present name of the field in which the excavated settlement lies is Cae Mynydd - 'hill field' and so uninformative although, negatively, may suggest that the hill was open land enclosed and named after 18th century enclosure.

1.2 Topographic setting

The area of the excavation lies on the south-facing slopes of a substantial but gently sloping ridge, 'Bryn Gwran' (Fig. 1). This rises to a height of 39m OD just to the north of the site while a stream, the Afon Caradog, lies at its foot, at 12m OD. The soils are developed over glacial clays and gravel and described as brown earths of the Sannan Series (Soil Survey of England and Wales: Anglesey 1958). Although this is a relatively good soil it is not of the best quality for modern agriculture, and these hill slopes are mapped as of Class 4: 'Poor quality', on the MAFF generalised agricultural land capability map (ADAS 1977)). This class of land has severe limitations that restrict the range of crops and or yields and is mainly suitable for grass with occasional arable and may be sensitive to drought (MAFF

1988). This explains why the land in the near vicinity has been maintained as large fields, probably for pasture (Fig. 1). Further to the north and to the south-east, however, is land with fairly similar soil: brown earth over drift, but developed over acid igneous rock and less prone to drought. This land is of Class 3: 'Good to moderate' land capability and this has a more complex pattern of smaller fields, probably for arable. It is on this land that the Castellor settlement is situated. Further to the south-west is the valley of the Afon Crigyll, which contains gleyed soil over alluvium and beyond is the extensive sand dune field and peat bogs of Tywyn Trewan Common.

The Melin y Plas settlement is not therefore located on the best soils in the neighbourhood, although it has some features that would have been attractive for early settlement. It is south facing, naturally drained, with a reasonable soil, a good vantage point and within easy reach of water. In its wider interpretation, however, the possibility must be considered that it might have been a rather marginal settlement in agricultural terms in all periods, and this may have affected its longevity of occupation or its prosperity.

1.3 Methods

The trial excavations demonstrated only that there were structural remains of probable round-houses in this area and that there was some reasonable preservation below the modern plough horizon. On comparison with known remains of this period a typical settlement would consist of a group of 3 or 4 houses, either in a tight group or spread out, possibly enclosed by a ditched enclosure or set within walled 'yards'. Initial clearance here of an area about 40m square suggested a compact area of features. The area exposed was then extended to about 60m square. The main area of features was about 40m by 30m, comprising the three round houses with no evidence of any enclosing bank or ditch.

The area excavations were carried out by machine removal of the ploughsoil. The stony nature of the archaeological remains and their prior identification through the trial excavations made it possible to remove the topsoil without harming the archaeological remains and much of the lower topsoil remained to be removed by hand. Part of the site encompassed a slight artificial terrace where the remains were better preserved and where there was also a greater depth of topsoil. Slight soil shadow marks of Medieval or Post-medieval field ditches were visible in the exposed area of soil and recoverable from the aerial photographs taken of the newly exposed area.

The majority of the 950 contexts here occurred within a relatively confined area and so the contextual evidence is complex. The actual depth of stratigraphy was, at the same time quite shallow, so there was little vertical separation. There was much superimposition of structures and phases of activity that was revealed, after removal of ploughsoil, as a dark stony spread that appeared more like rubble than a laid stone surface. Although the outlines of the three round-houses were clear, there were several overlaid phases of activity and many of the features, particularly post-holes and pits were stratigraphically isolated so could not be directly assigned to any phase. This must be borne in mind when considering the totality of the excavated remains, which were assigned to six phases.

1.4 Acknowledgements

The excavations were directed by Karina Kucharski for GAT and supervised by Andrew Shalcross and Ian Grant, assisted by F. Johnson, D. Pepper, S. Hughes, N. Fairburn, Clive Tranter etc. A photogrammetric survey of the site was carried out by BUFAU. Following Karina Kucharski's departure the excavation records were checked and the stratigraphic relationships analysed by Jane Kenney. The resulting records were then used to produce a structural analysis and interpretation (GAT 2001). The illustrations here have been produced by L.A. Dutton. Thanks must also go to Andrew Davidson, David Longley and Frances Lynch for comments and to Margaret Mason for editing.

2. THE ARCHAEOLOGICAL EVIDENCE

2.1 Phase 1: Early prehistoric activity (Fig 2)

The earliest period of activity at the site was represented by a number of pieces of worked flint and chert and these are discussed in more detail below. There were no pieces that could be certainly dated by type but the general style suggests comparison with the earlier Neolithic material from Trefignath

chambered tomb (Healey 1987), although one piece was possibly of later Neolithic date and two others could be Early Bronze Age. Only 54 pieces were found but this is still a significant number for Anglesey, where flint and chert are scarce raw materials. The pieces could therefore represent a significant focus of activity rather than being the chance finds from a widespread scatter that might represent just casual use and dispersal. The lithic pieces were all found scattered through the various levels of the site and none came from features that seemed likely to belong to the same period as the lithic objects. They were all then in secondary contexts and most of them were found during removal of the lower topsoil horizon. It is likely that any features relating to this Neolithic/Early Bronze Age activity were very shallow and were destroyed during later occupation and modern ploughing, and any artefacts incorporated in later horizons. However, a few features were found that were thought might belong to a phase predating the Iron Age/Romano-British settlement even though they had no direct relationship with the lithic scatter. These were small pits with charcoal-rich fill and are described later along with other pits. None were datable by artefacts or stratigraphy and none were radiocarbon dated although similar charcoal-filled pits commonly occur on Early Bronze Age funerary sites. Elsewhere on the site two radiocarbon dates were obtained which were much earlier than that expected in relation to the round-house settlement. One was from a large but shallow pit, F9, at the north-west part of the excavated area, and this produced a date of cal BC 1410-1200 (Beta-152576). The other was from a post-hole believed to be a structural part of one of the round-houses (house 5), and this produced a date of cal BC 3340 to 2920 (Beta-156485). Both these features seemed likely to belong with the later settlement and the samples were of good material. It is therefore suggested that the dates were much older than the features from which they were collected because either some ancient minerogenic carbon became incorporated (there are coal seams on Anglesey at Pentre Berw at a distance of 12km) or, perhaps more likely, that peat was being used as a fuel, being found about 1km away in the Crigyll Valley and commonly used as a fuel in Anglesey in historic times. This might contain woody remains like the willow/poplar found in the sample from the pit.

The presence of a small scatter of worked flint and chert at least shows that there was some early activity here although fairly small scale and temporary. The south-facing hillside with extensive views would have been suitable for such encampment and may have been open grassland at an early date. There is evidence of woodland clearance in Anglesey from at least the Early Neolithic period as demonstrated by studies of pollen from soils beneath the chambered tombs of Trefignath (Greig 1987) and Barclodiad y Gawres (Godwin 1956).

2.2 Phase 2: First century BC to first century AD (Fig. 3)

2.2.1 House 1

This phase sees the construction of the first round-house, house 1, which stratigraphically represents the earliest recognisable phase of the settlement since its structural area was truncated by a terrace (F377) cut into the hillside as part of the construction of another round-house, house 2, immediately to the south-east. The southern extent was also subject to greater erosion as a result of plough action over the terrace scarp.

The structural remains are mostly isolated features truncated by post-medieval ploughing and with few stratigraphic relationships. They consist of curvilinear gullies and drains and a number of postholes which can reasonably be assumed to be part of the structure because of their horizontal proximity. Some limited areas of the floor surfaces survived within the house.

The main defining features of the building are two concentric linear features, F23 and F25 which are taken to demarcate the inner and outer edges of a wall of cob or clay, 2 to 2.5m wide. This defines a building about 6.8m diameter internally and 12.3m externally. F25 (Fig. 3, secs 37 and 82) is an internal drain with stone capping, designed to be walked on, and defines the interior face of the wall. F23 was an open gully (e.g. Fig. 3, sec 73) and defines the limits of the outside face of the wall. However, as a 'drip gully' the thatched roof would have had a considerable overhang so the wall edge would have been some way back from the gully. Gully F23 was generally silt-filled, of low profile and had been re-cut at least twice (Fig. 3, sec 48). The deepest and best preserved part was at the north (Fig. 3, sec 73, while further to the south it had been truncated by modern ploughing (Fig. 3, sec 76).

The inner drain F25 lay approximately concentric to gully F23 and within its circuit was a thin layer, F167, possibly a remnant of the house floor. The surface F167 was of a sandy consistency with scattered charcoal fragments and patches of lighter coloured clay, which were interpreted as possible fragments of decayed, collapsed or demolished clay or cob wall.

The wall area between the inner drain F25 and the outer gullies F22 and F28 was largely devoid of features and there was no evidence of a break or of postholes which might mark an entrance. However such houses would commonly have an entrance in the south-east quadrant and this area had been removed by the later cutting of the terrace F377 and of a series of large pits.

In the interior of the house were a number of features, some of which cut, or had been butted by the floor surface F167 (Fig. 3, secs 37 and 75). Most were round bottomed with loam fill and too shallow to be post-holes although they could be have been post-pads. Those that were deeper or that contained stones that could have been post-packing are shown in a darker tone in Fig. 3. The distribution of these features within the interior of the house demonstrates their association with it. They could have fulfilled various functions, for instance for internal partitions, furniture or structural repairs. Supporting posts were not a necessary part of the structure of this type of house because the roof structure was supported on the wall plate.

Other features within the house comprise, first, a small area of burnt clay, F942, approximately central to the building, which was probably a central hearth; secondly a group of associated shallow features. F61 and F162. F61 seemed to have functioned as a drain with stone slab capping. Pit F162 had much charcoal in its fill and was linked to F61 by a narrow, shallow, linear feature. These features all cut or were contemporary with the floor layer F167 and probably derived from domestic activity.

Outside the house at the south-west side was a shallow wandering gully F356, with stony fill. This survived only tentatively, cut by later features, and may have been a continuation of the outer building gully F23 but all other features to the south were later features post-dating the cutting of terrace 377. On the north side of the building were two large shallow scoops, F15 and F17 which cut gully 23 (Fig. 3, secs 83 and 104). These were part of much later, medieval field boundary construction but respected the position of the house wall, which therefore must have still existed as an earthwork feature and have been incorporated in the line of the later field boundary.

There was no artefactual evidence from house 1 but charcoal from F162 produced a radiocarbon date of cal BC 30 to cal AD 130 (Beta-156484). This most likely derived from the latest activity within the house and accords with the complete lack of Roman pottery, and suggests that the house had a life span within that period.

2.2.2 Rectangular pits (Fig. 4)

Two pits, F315 and F 882, located 15m to the south-east of house 1, were distinctive because of their narrow, sub-rectangular plans and flat bases. They are stratigraphically amongst the earliest features on the site since the fill of both were cut by features belonging to two further round-houses in that area, house 5 and house 2, respectively and so may have been part of activity belonging with house 1. Two other features, F9 and F98, to the west of house 1, were originally thought to be part of the same activity because of their somewhat rectangular shape, but their profiles and fills suggest they are quite different.

Pit F315 was 2.90m long, 0.90m wide and 0.30m deep while F882 was 3.2m long, 0.9m wide and 0.52m deep. F315 had a thin basal fill of natural silt, a main fill of probably backfilled mottled, yellow-brown silt and a 'lining', 10-15cm wide, of soft, dark brown soil (PHOTO). The sharp outline of this 'lining' was taken to represent some kind of decayed timber structure within the pit. Pit F882, although of similar size and rectangular outline, did not have this 'lining' but the lower fill of both contained amounts of charcoal. F882 had an upper fill of soft yellow-brown silt, a middle fill of grey-black silt and a lower fill of firm grey clay with charcoal. The 'lined' pit F315 resembles a grave where a coffin has rotted and the cavity has then been displaced with soil. However, both features are rather long to be graves and coffin burials are unlikely for this period. They may therefore have had some other function, for instance as cooking 'troughs' like those found in association with 'burnt mounds'. However, the pits here are distinctly narrow, compared to examples found with a burnt mound at

Graeanog, Caernarfon and lack the fill of charcoal and burnt stones (Kelly 1992). Such pits involved cooking in a pit with hot stones and al are situated next to a water supply. In this respect it may be no coincidence that both pits lie at the downward end of drains or gullies although no actual connection was demonstrated. Pit F882 was situated in an area where a considerable amount of burning had take place and there were amounts of burnt stone in the vicinity although in nothing like the quantities found in burnt mounds. The top fill of F882 was the same mixed clayey layer as that found within house 2 and suggests that the pit may have been open when the house was in use, in its earliest phase and have been part of its domestic arrangements. Pit F315, on the other hand was outside the house and after it had been backfilled and disused it was cut by the outer 'drip' gully of house 5. It was also cut by a pit F323 interpreted as a clay quarry pit, part of a sequence of such pits that were dug during a secondary phase of use of house 2, possibly during its repair. If the outer drip gully F 71,of house 2 did supply water to pit F315 then the pit would have been related to the second phase of house 2. House 5, in turn, must therefore have been related to the third, last phase of use of house 2.

This stratigraphic interpretation is not certain and there was no direct dating evidence from these pits. The only artefact was a pebble burnisher, from the lowest layer in F882, which is of no help in dating but does show a connection with domestic activity. A similar stone was found in occupation deposits within house 2.

2.3 Phase 3: 1st to 2nd century AD

2.3.1 House 2 (Figs 5-8)

The area in the centre of the excavated area provided the best preservation because a terrace had been cut into the slope to provide a building platform. This created a shallow linear hollow and the archaeological remains within this terrace had been protected to some extent from post-medieval ploughing. Within this area was one main structural feature comprising a round-house, house 2, *c.* 13.5m in external diameter. An unusual feature was the provision of a gully-fed water supply into the building and this had involved a series of renewals of the internal drainage system.

The structural evidence shows that there were three main periods of use of the building. The earliest phase seems to have been pre-ceramic but on stratigraphic evidence post-dated the occupation of house 1, perhaps in the first-century AD. Most of the surviving structural evidence belongs to occupation in the second-century AD and the building was abandoned or dismantled by about the mid-third century AD, probably replaced by others nearby of which most evidence has been destroyed by post-medieval ploughing.

The walls of this circular building, as with house 1, had evidently been of clay, cob or turf and there were no traces of either stone or timber/wattle facing. Moreover, there was no internal circular drain like that in house 1, to define the inside edge of the walls. These can only be inferred from the position of the external drip gullies and the generally feature-free band *c.* 2m wide within their circuit.

House 2 was the most complex area of structural remains surviving on the site with a long series of renewed drains and a complex pattern of minor post-holes. This is partly because of the better preservation here, which meant that many more details of structures survived. Nevertheless, there are still differences from the structural remains of house 1.

The use of house 2 has been put into three sub-phases:

Phase 3a: G2.1 A terrace, cut as part of preparation of the building site and

G2.2 The earliest identifiable internal drain with associated floor deposits and postholes.

Phase 3b: G2.3 Occupation deposits with associated drains, postholes, floor levels and external gullies.

Phase 3c: G2.4 Secondary occupation or renewal with further related drains, post-holes and re-cut external gullies.

2.3.2 Phase 3a

2.3.2.1 House 2 construction terrace F377 (Fig. 5)

This was a broad, shallow cut into the hill slope, about 20m long and up to *c.* 0.5m deep. Although house 2 lay within its limits it extended some way beyond it and was probably a slight negative feature from the start, not simply a level terrace. It therefore provided a 'hood' drain for house 2 not just a building platform and curved around it at the east side. The material from the terrace may have been used in house wall construction or it may have been used to create an uphill bank. The extension of the terrace further to the west suggests that it was helping to drain a yard or working area, which may have contained subsidiary buildings.

The approximately straight, linear nature of the terrace on the slope contrasts with the circular shape of the house and hints at the former presence of a boundary here, possibly a bank or a post-line of which some postholes in the area of house 1 might be part. Some sort of boundary to the settlement could be expected.

Cutting of the terrace terminated the use of house 1 and it is therefore presumed that the earliest identifiable phase of house 2 was what replaced house 1.

In a later phase of use a series of shallow gullies were dug into the base of the terrace as drip gullies for house 2. Later still an extensive series of quarry pits (G6 and G8) were dug into the face of the terrace, probably to provide wall repair material for house 2.

The only artefact associated with the terrace was one flint flake, a residual find.

2.3.2.2 House 2 construction

The main surviving element of the earliest phase of the house was a stone slab-paved drain (F65), Y-shaped in plan, which was a re-cut of an earlier drain, F854. The two 'arms' of this drain joined together to exit into a smaller gully or plough-truncated drain at the southern, down-slope side.

A few small postholes and two layers of floor-like material, F668 and F694 were stratigraphically associated with drain F65. In addition there was a small area of burnt clay, probably a hearth (F594). These features and layers were all in the immediate vicinity of the drain. The layers were therefore of quite limited extent and could not be correlated with any more general phase of use of house 2. The layers, however, were of re-deposited clay and similar to more widespread floor layers found associated with later phases of the building. It seems likely that drain F65 was just part of the main occupation of the building despite its early stratigraphic position. The building had a series of internal drains and an outlet for the drainage would have been required. As a covered, sub-floor feature, the drain F65 could have continued to function when overlaid by subsequent floor levels. However, it must, at least, have been a primary element of the house.

A slightly curving, east-west oriented, stone-capped drain (F371) joined with the north, uphill end of drain F65. Its alignment suggested that it brought water into the house from the north-east via a culvert under the wall from external gully F74 (Fig. 5). Drain F371 appeared to be cut by drain F65 but if so probably as a re-cut as water needed to exit and possibly the drainage system was only needed intermittently.

This immediate area was a complex of stony spreads, gullies, post-holes, burnt stones, clay and charcoal and must have been the site of considerable activity, presumably cooking. The fact that all of this was adjacent to the rectangular pit F882 suggests that the pit was initially part of this activity although clearly not throughout this phase since its fill was cut by several small post-holes. There were also two larger deeper post-holes to the south, F744 and F751, 0.5m and 0.45m dia, respectively and both with post-packing stones. These lay on an arc concentric to the outer gully F74 and were suitably placed, 2m apart, to be the framing posts of a doorway. This would accord with the outlet for the drain F65 although a southern position for the doorway would not be normal, without the added protection of

a porch, of which there is no evidence. However, the later evidence suggests that the inner face of the house wall was further out.

Only one artefact belongs with this structural group, a stone bead, SF 252, from the fill of drain F854 and there was no direct dating evidence. However, soil samples from drain F65 and from a layer adjoining it produced a similar range of macrobotanical remains suggesting burning of crop processing waste (chaff), (samples 250 and 321, Ciaraldi, this vol.).

2.3.3 Phase 3b (Fig. 6)

This phase is represented by a scatter of small postholes, a group of stakeholes, a small hearth and a sequence of two main internal drains while two phases of gully were cut on the to the north and east outside the building. While gully 71 defines the outer extent of the building, the inner face has no surviving features. The wall must have been rebuilt or re-modelled to allow the outer gully to be cut as a flattened arc.

The group of stakeholes in the centre of the probable doorway may have had some use connected with the door. The scatter of postholes does not show any regular plan and so were more likely to represent minor internal structures. The possible hearth, F69, was a shallow pit with a layer of charcoal and blackened soil lying under a stony fill. As there was no evidence of burning *in situ* it may have been just a remnant of burnt debris surviving in a hollow, tight against the inner face of the clay wall. The hollow contained charcoal of oak, ash, birch and gorse/broom (Gale archive).

The building had an internal, stone-paved and partly stone-lined drain, F333, which brought water into the building from an external gully F536, a re-cut of the main gully F71. Close by was a large and deep pit, F109, that seemed to have been constructed as a sump to hold water that could then be transferred into the house via drain F333. The water was carried along a culvert with a substantial slab lining across the former line of gully 71 and then under the wall of the building (Fig. 7). The wall of the house was stabilised alongside the culvert partly by means of a large horizontal slab and by a large, re-used broken mortar (SF363). The drain's route through the clay/cob wall seems also to have been covered with some kind of timber or wattle framework represented by a series of small flanking post-holes (F634, 644 etc). The water from the drain was directed towards the centre of the house but avoiding the central area of about 3.5m diameter, which must have been the working and cooking area. The northern branch of the drain F333 was designed to direct ground water from this area into the main drain F327. F327 had no identified exit so must have been linked with the Y-plan drain F65 of the earlier phase, which must have continued to function.

Apart from the cut features, fragments of an associated layer (F166) of clay with pink (burnt) mottles and charcoal flecks F166 were recorded at the north edge of the building, in the centre and close to the Y-plan gully F65. This layer was interpreted as either a deliberately laid floor or as debris from a collapsed or demolished clay or cob wall. The layer could all be remnant wall material if the walls had been razed and re-used as flooring for the subsequent, final phase of the building.

The artefactual evidence from this phase comprised one piece of pottery, an iron object, a partially vitrified pebble, a piece of burnt daub and a flint. The iron object, SF241, was a strip or blade fragment and came from the drain F616. The vitrified pebble, SF127, came from a gully fragment F572 at the eastern edge of the building and received the comment: 'The temperature required to produce this vitrification is not likely in a domestic hearth, but would be more likely in a metallurgical hearth, such as a blacksmith's' (Young 2001). The daub, SF277, came from hearth F69. The flint, SF245, an irregular fragment, came from posthole F634.

The pottery, a fragment of a burnished dish or bowl, SF 246, came from the fill of posthole F634 in the north-east part of the building. It has been identified as 'Hadrianic or later' but the context is not very helpful since the pot could be residual in the posthole or have been incorporated during dismantling at a later stage in the building's use. The end of this structural group was therefore no earlier than 'Hadrianic or later' and this is supported by a radiocarbon determination of cal BC 10 to AD 230 (Beta-156486) from charcoal of willow/poplar from the hollow F69. This hollow also produced macrobotanical evidence of cereal processing (sample 336, Ciaraldi, this vol.).

A soil sample from drain F333 produced macrobotanical remains with residues of cereal processing and wild seeds (sample 254, Ciaraldi, this vol.). An adjoining post-hole produced a very similar assemblage (sample 261), suggesting they both derived from the same activity. However, seeds from the latter were dated by AMS to cal AD 870 to 1010 (Beta-156654), indicating that there had been contamination from medieval activity over the site of the house.

2.3.4 Phase 3c (Fig. 8)

This phase is represented by a modification of the internal stone-capped drains. The new drains, F613 and F298 similarly served to bring water into the building but by a new route further north from that of the previous phase. Again, there was no apparent new exit to the drains, so drain F65 continued to act as the outlet. The main drains were accompanied by a network of drains F374, F581 and F679 that drained the upper area of the house.

A number of post-holes lay scattered across the northern part of the building, of which none form any clear pattern. Some lay within the line of the wall of the building and may have been internal revetting, like another group, F678 etc, at the south-west. Several others all lie approximately alongside the drain F581and are similar to and may be a continuation of those flanking the culvert of drain F333 of the previous phase. They are quite shallow, 80-170mm in depth, but definitely post-holes because several had packing stones. If all are contemporary, they represent some kind of structure associated with the drains that in plan looks like a wandering fence-line. This could have retained the inner face of the wall but if so suggests that the wall was straight not curved.

A small hearth, F620, lay just east of the centre of the building. It was a shallow but neatly-cut feature filled with charcoal and burnt soil and capped with cobbles (burnt stone?) which showed clearly amidst the surrounding surface, F632, which was a clean yellow re-deposited clay. This layer F632 seemed to have been a deliberately laid flooring and was the only such layer associated with this phase and had probably once been more extensive. The other layers associated with this group were very localised ones of cobbling or re-deposited clay surviving in hollows or the tops of subsoil features.

There is little evidence for the actual building structure in this phase. The construction of a new culvert drain into the building must have meant that the clay cob wall was either totally replaced or cut through and replaced locally after the original culvert had collapsed. The interior pattern of drainage continued much the same.

One chert core, SF210, from a localised area of floor levelling, F610, in the north-east quadrant was the only artefact from this phase. However, charcoal from drain F298, mainly of willow/poplar but also including gorse/broom, oak, birch, hazel, holly and blackthorn (Gale archive), produced a radiocarbon determination of cal AD 660 to 1030 (Beta-152574) showing that, as with the samples from the previous phase, the drain must have survived as an underground void that had silted in after Medieval activity over the house site.

2.3.5 Phase 3a-c:House 5 (Fig. 9)

This area had been deeply truncated by ploughing so that only subsoil features survived, many of these remaining only to a very shallow depth. The principal feature was a rather irregular, curving gully F78, which appeared to be an external drip gully for a roundhouse of *c.* 12.5m maximum external diameter, similar to that of houses 1 and 2. Within and outside, but close by the gully were a number of small pits and postholes. Without the benefit of clear horizontal structural relationship or of stratigraphy it is not possible to be certain which form part of a single building or precede or succeed it. The external postholes do not obviously intrude upon the extent of house 5 and those at the north and the west may well be light structures, fence lines, etc., contemporary with it although they will be described separately later. The features that lie within the arc of gully F78 seem likely to belong to the house and so are treated as such.

Thin traces of a grey-brown silty layer (F227) were visible within the area defined by the gully 78. This layer contained scattered charcoal flecks and was noticeably different to another layer, F80, lying to the north-west, which extended over the area of house 2. F80 was lighter in colour with burnt clay

and burnt stone inclusions and respected the outline of gully F78, indicating that houses 2 and 5 were contemporary with each other.

Within the area of the presumed building defined by gully 78 the main feature is a Y-plan drain F228 which was shallow and badly truncated but a few former capping stones survived, slumped into its fill. The drain had run off directly down-slope to the south where it had probably drained under the wall of the house since the entrance would be more likely to be at the south-east.

The smaller features within gully F78 were all truncated by ploughing and varied from 250 to 500mm in diameter and 70 to 280mm in depth. There were also a number of shallow, less well-defined features that were regarded as natural. Most of the latter were holes where *in situ* stones had pulled out but include a shallow hollow, F220 and two narrow linear features, F201 and F394 interpreted as animal burrows.

The features accepted as probable post-holes cannot be easily identified as forming a single structure. The immediate overall interpretation was that gully F78 was a drip gully for a round-house with clay walls that had subsequently been ploughed away, leaving only the features that had been cut into the subsoil, that is, the post-holes and an internal stone-capped drain F228. Gully F78 is of the correct sized arc to belong to a clay-walled house but the other features cannot easily be identified as part of such a structure. The Y-shaped drain is similar to that found in house 2 and in better preserved examples at Bryn Eryr, Anglesey (Longley 1998). Two different layouts were identified there. The first, in clay-walled house A had two Y-shaped drains draining each side of the house and then exiting through the doorway. In the second, a later and smaller stone-walled house there was just one Y-shaped drain with each arm draining one side of the house, enclosing the central hearth. The drain of house 5 at Melin y Plas follows the pattern of house A at Bryn Eryr except that it probably did not lead out through the entrance, which would normally be on the south-east side.

Consideration of al the smaller features within the circuit of gully F78, highlights a group of four lying on an arc of about 6.5m diameter, a typical size for the interior of a round-house and indicating that this group formed part of a circular setting of posts around the internal face of a clay wall. At Bryn Eryr (*op cit*) the three round-houses showed an interesting sequence of structural types. House A, the earliest, was clay-walled and had an inner concentric ring of posts, that would have supported a ring beam, and was originated earlier than house B. House B was also clay-walled and had a ring of posts set against the inside the wall. These would have supported a wall-plate, which, with a trussed roof would have provided a much more useful open space. The latter originated between the 4th to 3rd century BC and continued in use to the 3rd century AD (ibid 64). A smaller, stone-walled house C was added during the 1st or 2nd century AD and continued until the late 3rd century. This house contained no structural post-holes and the roof structure would have been supported totally on the walls. House 5 at Melin y Plas is of the same type as house B at Bryn Eryr and provides an indication that it is pre-Roman in origin. The style of house 1, on the other hand, is comparable to house A at Bryn Eryr and they are both the earliest structures of each settlement.

The extrapolated layout for house 5 suggests an internal diameter of 6.5m with a clay-wall 1.5m wide. The house floor would have been terraced into or built up above the slope. The post-holes further up slope would have been cut deeper in relation to the slope and this corresponds with the fact that F392 and F401 are 280 and 330mm deep, respectively, while 179 and 183 are only 60 and 130mm deep. Post-holes 183 and 197 must define one side of the doorway, probably the north side, unless 179 and 181 are part of the doorway. The group of post-holes 169, 171, 185 and 310 could form an internal screen or 'inner porch' similar to one identified in house B at Bryn Eryr.

A small number of features do not seem to belong with this general interpretation. Pit 389, a stone lined pit of large post-hole, lay in the area where the clay wall of the house would have been and was cut by post-hole 392 and so must predate the house. At the west side of gully 78 was a group of four features, 212, 216, 218 and 398, that would have been outside the house wall. Their contemporaneity with the house is suggested by the way that gully 78 diverges at this point as if to go round the features. A possible explanation is that they represent a porch for a rear entrance to the house.

Artefactual evidence was slight and consisted of two pieces of iron and one piece of pot. The iron objects consisted of an indeterminate scrap from gully F78 and a possible chain-link fragment from drain F228. The pottery, a small chip of Samian of 'Hadrianic-Antonine?' date came from the thin layer

overlying the house and so is of little stratigraphic value. Two charcoal samples were submitted for radiocarbon dating. One was from post-hole 183, comprising oak heartwood, which produced a date of cal BC 3340 to 2920 (Beta-156485). Although there is some possible evidence for Neolithic activity in the area in the form of the scatter of worked flint and chert the feature itself is fairly confidently related to the house. The early date and two others from elsewhere on the site are explained as the result of use of bog-wood. The other sample was from the silt in gully F78. This included a mixture of species comprising alder, birch, hazel, oak, willow/poplar and gorse/broom and produced a date of cal AD 640 to 990 (Beta-152571). A small gully like this would be expected to silt in quite rapidly after it ceased to be maintained. Of what remains, there is no evidence that the house was rebuilt or modified or had a very long life. On the general pottery evidence from the site it would be expected that the house went out of use sometime in the 2nd century AD so the date must be explained as the result of contamination from an animal burrow. This is more acceptable because three other samples from apparently good contexts elsewhere on the site have produced similar dates. Together they indicate that there was a major phase of medieval burning over the site and that, as a result, earlier contexts became contaminated.

2.3.6 Phase 3b-c

2.3.6.1 The cobbled yard and stone spreads (Fig. 10)

To the west of house 2 lay a spread of well-packed stone and the better-preserved parts of this showed that it had been a deliberately laid, cobbled surface. It formed a yard surface contemporary with house 2 since it respected the building outline in its original disposition and was overlaid by some elements of the abandonment phase of the building (phase 4a and b, below). There were also some small areas of cobbling within house 2. A hollow in the cobbled surface respected the west side of the building, forming a continuation of the drip gullies around the north side. Within the area of surviving cobbling lay a linear spread of smaller, more neatly laid cobbling, interpreted as a path, F285, which followed just down slope of the east-west line of the terrace F377. The cobbled yard was subsequently cut by a few gullies, representing further building activity in the area after the end of house 2 and was overlaid by some spreads of stone dumping or demolition.

2.3.6.2 Pits (Fig. 10)

A considerable number of pits lay within the excavation area, concentrated to the west and south-west of house 2. The majority had been dug when the cobbled yard was in existence, because they avoided it, leaving two pathways to the west and south-west. Their association with the cobbled surface puts them with the second or the last phase of use of house 2. Most of the pits fell into seven contiguous groups (groups G6 to G12), which appeared similar to each other and to have been dug sequentially. There was one other group (G13) associated with medieval activity, described later and finally there were a number of scattered pits of various types and associations (G14). Excluding the medieval examples there were 54 pits of which 31 were probable 'quarry' pits, assumed to have been excavated for clay and the coarser components then backfilled (Table 1).

Table 1 Summary of pit types

2.3.6.3 Pit Group G6

This is a small group of pits of generally sub-rounded plan and rounded profile, varying from 0.14m to 0.69m in depth. The fills appeared to be re-deposited subsoil, probably backfilled, except for one, which contained a quantity of burnt clay. The pits cut into the face of terrace, F377, which was cut to provide a platform for the construction of house 2. The pits therefore, stratigraphically, are later than the first phase of house 2. The pits are interpreted as quarries, implied by their irregular outlines, bowl-shaped profiles and closely adjoining but separate positions, suggesting sequential excavation. However, a similar situation could occur with a sequence of rubbish pits but here the fill is mainly sterile. It is suggested that they were dug to acquire clay used in refurbishment or reconstruction of the walls or floors of house 2. The amounts of material would not have been sufficient for its actual construction. A larger amount of material would have been acquired from cutting the terrace on which

the house was built. Three of the pits in this group, 424, 526 and 835 contained burnt clay in their upper fill and this may have been debris discarded after the repair process. One of the pits, 278, had an upper fill of dark organic loam and charcoal, more typical of rubbish material. However, this had probably just accumulated in the top of the partially open pit rather than being a deliberate deposit. The largest and deepest pit, 305, was slightly different than the rest in that it had a fairly uniform fill of loam and cobbles. It also had a thin basal layer of clay and is interpreted as a 'puddling' pit for preparation of clay, later backfilled with field clearance stones. Pit 464 was rather different to the rest in its small size of 0.8m diam., and on its base was a layer of charcoal, probably deliberately deposited. The charcoal was mainly of oak heartwood and willow/poplar with some hazel (Gale archive). The charcoal of the latter two species produced a radiocarbon date of cal BC 350 to 300 or cal BC 220 to AD 40 (Beta-152572). The way the pit appears to have been cut sequentially to the adjoining pits means it can be included with the quarry pit phase even though its fill is different. It shows then, that house 2 was refurbished no later than cal AD 40, probably some time before, and that the terrace for the original construction of house 2 was cut some time earlier still.

2.3.6.4 Pit Group G7

A group of pits lying in an apparently related line. However, they proved to belong to more than one phase of activity. Two, of rather irregular outline, were interpreted as shallow quarry pits, like those of group 6 and were overlaid by flat stones forming part of the general surfacing of the area and overlaid by footings of a wall, F152, showing that the quarry pits at least predated the latest phase of the settlement and therefore associated with the second or final phase of house 2, as indicated for group 6. Four of the pits belonged to a later phase, one was charcoal-filled and cut into the fill of a quarry pit, one cut the cobbled surface F285 and two, F642 and 658 were part of the a larger working hollow, just a remnant of the latest yard surface, and containing some charcoal, burnt stone and burnt daub. There were no artefacts from any of these features that could be used for interpretation or dating although a layer of silt over them produced a number of worked flints.

2.3.6.5 Pit Group G8 (Fig. 11)

A small group of pits, all sub-rounded in plan with rounded profiles and averaging about 0.5m deep. The way these inter-cut each other suggests that they were closely contemporaneous but separate events, similar to that of the adjoining pits of group G6 interpreted as clay quarry pits. The way their layout respects each other approximately suggests that the position of one was still visible when the next was dug, and so on. The pits truncate one of the drainage gullies of house 2 but respect its outline so must relate to its phase 3b or 3c.

The main, primary fills of these were sterile silt, gravel and larger stones. Two of them had a fill that was 90% stones. The fills suggest they were backfilled soon after they were created. The only artefacts came from a stony top layer that belonged with a late phase of house 2 or even with a phase of its abandonment. These artefacts were a small whetstone, SF83 and an utilised pebble, SF126.

2.3.6.6 Pit group G9

A group of features taken to be associated by reason of their proximity. All the features in this area were significantly truncated by modern ploughing. They can, in fact, be separated into two sub-groups by type and these are probably also chronologically separate. Four were larger pits, 1.0 to 1.2m diameter with bowl-shaped profiles *c.* 0.4m deep and fills of sterile stony silt. They are similar to the pits of groups G6 and G8 and are probable quarry pits. The other five smaller pits, F36, 38, 40, 42 and 501were clearly not quarry pits and seem likely to belong to some related activity because of their similar size, about 0.4m diameter, and similar shallow depth. F38 and F501 were identified as possible post-holes and F501 had some packing stones. At 2.1m apart these two features could have been a structural pair, like others on the site (see External post-holes, below). Three of the pits, F36, F38 and F42 are distinctive being shallow circular scoops or hollows only 0.05 to 0.10m deep with a 'twiggy' charcoal-rich fill. The sides and base of F42 had been burnt, suggesting that the charcoal was formed *in situ* or had been placed in the pit while still hot. These features could be the bases of shallow 'camp fire' type hearths and so might be related to the flint scatter in this area. There was no artefactual or

other dating evidence and the charcoal was not identified or dated because the features were not stratigraphically related to any of the structures of the settlement.

2.3.6.7 Pit Group G10

These eight features can be divided into two sub-groups according to function and possibly chronology. At the east side is a single large sub-circular bowl-shaped pit F509, filled with stony silt, and this is a 'quarry' pit like those previously described. The remainder comprise a large shallow hollow, F276 approximately 3m in diameter and 0.2m deep surrounded on the west by an arc of five (possibly just four – F738 was not excavated) large but shallow post-holes. The hollow is so large that it must have been a working area although the fill was clean silt with no occupation or industrial debris. Subsided into the top of this fill was a rubble layer F33 belonging to the settlement's demolition and levelling. The post-holes possibly formed a curving shelter or even were part of a building *c.* 5m diameter. It seems significant that this possible structure takes up an area that is not part of the cobbled 'yard' surface, as if the two may have been contemporary.

A small pit was cut into the fill of the hollow, and in the pit was a large stone mortar, SF164 which seemed as if it may have been deliberately set in position but was in fact on its side. Such mortars have often been found *in situ* set in the floors of round houses and which might, therefore, suggest that the hollow and post-holes were the remains of a house. Possibly the mortar had been tipped on its side by plough disturbance or perhaps it had been deliberately buried and hidden.

In the top fill of hollow F276 were four pieces of pottery, SF86, SF89, SF102 and SF116. Two were hand-made, one was 'Hadrianic or later' and one was 'early third century' (Evans, this vol.). The latter was the latest identifiable pottery on the site but as it was in the top of the hollow, in which later material would have accumulated, does not help to date the hollow/building but does provide a probable end date for the settlement.

2.3.6.8 Pit Group G11

Two adjoining large sub-circular pits with bowl-shaped profiles and fills of sterile stony silt. They were probably backfilled soon after excavation and followed each other after a short interval, that at the north cutting the fill of the other and later itself cut by a small post-hole. They are similar to and probably part of the same phase of activity as the 'quarry' pits of groups 6 and 8 nearby, associated with the refurbishment of house 2. There were no artefacts or other was no associated dating evidence although the upper fill, probably a late silting, of pit F518 produced two small pieces of burnt clay or daub.

2.3.6.9 Pit Group G12

Three outlying sub-circular pits that were so close together and similar that they must be closely contemporary and probably dug sequentially. They resembled the 'quarry' pits described above because of their bowl-shaped profiles but their fills were rather different in being dark brown stony loam, rather than the subsoil-like silt of the 'quarry' pits. There were no artefacts or other evidence to suggest function or dating.

2.3.6.10 Miscellaneous, scattered pits (Fig. 10)

Apart from pits such as hearths, specifically associated with houses, there were thirteen pits of various types scattered across the area. Two of these, F67 and F389, were interpreted as probable post-holes because they were steep-sided with flat bases, quite unlike the bowl-shaped profiles of the 'quarry' pits. F67 was about 0.6m dia. and 0.17m deep and lay within the area that would have been encompassed by the clay wall of house 2. It lay in the right position to be part of an entrance setting, although if so it should have been part of at least a matching pair. F389 was about 1m dia. and 0.63m deep and had stone slabs lining its sides and base, indicating that it had held a large post, as much as 0.8m dia. Its fill was cut by one of the smaller post-holes thought to form a structural part of house 5 and it lay within

the area that would have been covered by the clay wall of house 5, so must pre-date house and therefore possibly be associated with house 1. Two other pits, F323 and F325, each about 1m dia. and 0.3m deep, had steep sides, flat bottom and rather stony fill and could be post-holes belonging to a porch for house 2, in conjunction with F67.

Four other pits were probable quarries of ovoid shape. Three of them, F11, F59 and F589 also were filled with the sterile stony silt typical of the 'quarry' pits described above. The other, F30 had a rather loamier fill and some lenses of charcoal. These are all probably early pits, belonging with house 1 by association. Pits F59 and F589 lie within the area of the clay wall of house 2 and so must predate its earliest phase although F59 could be in the entrance of house 2 and perhaps belong with one of its later phases. Pits F11 and F30 seem more likely to belong with house 1 because of their proximity to it.

Pit F269 was deeper and steeper-sided than most 'quarry' pits and had a fill of 70% stone cobbles. It was suggested to be a 'sump' and its position, closely adjoining the north-east edge of the outer gully of house 5, makes it closely comparable to pit F109, in a similar position next to house 2, and with a very similar stone fill.

Two other pits, F9 and F98 had quite well defined 'rounded rectangular' plans and were cut features but were formed as scoops on the slope and are interpreted as working hollows. Their fill had then preserved something of the old land surface rather than being deliberate fill or silting.

One other outlying pit to the south-east, F892, was of similar size and profile to the 'quarry' pits but had an upper fill of brown loam and rubble and a black, humic lower fill. This conforms more to a classic rubbish pit and certainly was not backfilled with the subsoil that came out of it.

The remaining pit, F896, was large and of irregular conical profile, filled with stony loam and was interpreted as a tree-throw hole.

These pits were largely devoid of artefacts or other dating evidence. F59 contained some charcoal, daub and an unidentifiable copper alloy fragment. The base of pit 98 had a thin layer of mottled silt with charcoal and daub.

2.3.6.11 External Post-holes, Groups G18 - G22 (Fig. 10)

These include all features identified as probable post-holes that lay outside the area of house 1,2 and 5. Only a sample of those identified and planned after the initial cleaning were excavated and some of these were then thought to be natural features such as stone-holes, so not all are necessarily man-made or structural. Those excavated were *c.* 26-38cm dia. and 7-12cm deep. This compares closely to the depth of those in the southern, eroded part of house 5 whereas those at the better-preserved northern side were 28 and 33cm deep. The truncation of the surface by modern ploughing means that many will have been lost. The majority of them lay to the east of house 2, with fourteen possible post-holes making up possibly four elements. First, north of house 5 is a line of four post-holes, similarly spaced at about 1.5m apart forming part of a boundary fence or two post-pairs. Nearby are two fairly clear post-pairs. East of house 2 are two isolated posts and further north again another post-pair. South-west of house 5 is another pair of post-holes and another pair lie further west again. There are also a few isolated post-holes.

The settlement as a whole has no formal enclosure such as a bank yet the houses and associated features are very compactly laid out and most notably there is no evidence of activity, in the form of pit digging, spreading to the east of the houses. It is possible then that there was a boundary of some sort here and the post-holes there may be part of a fence. Notably absent are any obvious 4, 6 or 9 post structures, interpreted as granaries, like those found at Bryn Eryr (Longley 1998), Cefn Du (Cuttler this vol.,) and Walesland Rath (Wainwright 1971). However, some of the group of post-holes just north of house 5 could make up part of such a structure, assuming a few have been missed or lost due to erosion. The paired posts are the most convincing and are likely to be free-standing structures such as drying racks or stack stands.

The only artefactual evidence from any of these features was one flint flake, presumed to be residual.

2.4 Phase 4 Late 2nd to early 3rd century AD

2.4.1 Phase 4a (Fig. 12)

During this phase house 2 was abandoned or demolished and clay silt from the walls accumulated over the floors of the former building as well as over the external cobbled surfaces of the 'yard' near by to the west where there were traces of subsequent buildings, represented by gullies and two stone-capped drains. These represent at least one and possibly two subsequent buildings (G4 and G17) of which all other structural remains have been removed by ploughing. House 5 may have been abandoned at the same time as house 2 or somewhat later, as there is no stratigraphic evidence.

The silts of this phase varied in colour from grey to brown, mostly fairly localised, either over the yard cobbles, just to the west, or around the drains within the area of house 2. Another equivalent silt, F378, formed the top fill of the terrace F377 above the silted-up 'drip' gullies of house 2. Layer F560 was the only extensive area of silt, covering a large part of the former interior of house 2. It was dark brown and similar to the silt that filled the tops of all the features in this area that cut into the subsoil. As silt this could be expected to be a fairly sterile layer, as it was, although it could have incorporated some objects already on the pre-existing surface. These artefacts comprised a fragment of burnt daub, a pebble burnisher and an iron nail. Two layers, F287/292 and F378 produced pottery identified as 'Hadrianic-Antonine' (SF114 and 150), while layer F560 produced pottery dated as 'Perhaps mid-Antonine' (SF258).

2.4.2 Phase 4b

During this phase of occupation a dark organic 'midden' layer accumulated over the site of the former house 2 and to some extent in the 'yard' area to the west. A further stone spread, G16, also accumulated in the yard area either as a result of further consolidation or as the debris of demolition.

The 'midden' layer in F104, a hollow just west of house 2, was dark brown/black and charcoal-rich with frequent pieces of daub and 50% stones. Its position suggest that the hollow in which it lay may have been part of a slight drainage feature around the south-west part of house 2, equivalent to the drip gullies on the north and east sides. Layer F58 filled the area around the Y-plan gully F65 and was streaked and mottled in yellow and black clay with 25% stones, some burnt. It was recorded as 'giving the impression of flowing downhill'. The most extensive layer, F56 (not on plan), was dark brown/black, mainly as a result of organic matter, rather than charcoal, and was recorded as spreading over 'most of the interior area' of house 2 although only strictly identifiable around the drains in the central area, equivalent in extent to that of layer F560 (Fig. 8).

Layer F58 produced one copper alloy fragment, SF90. Layer F104 produced a bone fragment, SF103. Layer 56, the most extensive, produced an iron nail, SF23, an iron fragment, SF25, a lead strip, SF28, a fragment of a stone mortar, SF91 and a hammer-stone, SF107. Layer F104 produced the largest single collection of potsherds on the site, most of which came from a single Black Burnished Ware pot of Hadrianic-Antonine date. The remaining pottery from this phase was of similar date.

There is some structural evidence (G4 and G17, below) of buildings on the site after the abandonment/demolition of house 2 and this would agree with the continued accumulation of rubbish. However, since the layer should include residual material from house 2 and rubbish from subsequent activity then house 2 had gone out of use by the end of the second century and any subsequent buildings by the early to mid 3rd century.

2.4.3 Building? G17 (Fig 12)

This possible building is identified because of the presence of adjacent features at the west edge of the settlement area of which the main elements were a curving stone-capped drain, F608, and the footings of a straight wall, F152. These are ascribed to a late phase in the settlement because the drain cut the cobbled yard surface associated with house 2 and the wall overlay a 'quarry' pit of house 2.

Of the other features in the vicinity of drain F608 only two were stratigraphically related – postholes F352 and F360, which also cut the cobbled surface. The remainder pre-dated the cobbled surface, including a 'quarry' pit, F747 and two slight terrace cuts, F354 and F349. The two linear gully fragments F22 and F358, just north of drain F608, had a similar fill to that of the gully 23 around house 1 and so may belong with it.

The stone-capped drain was identified as a possible building because it is of the same type as the internal drains in houses 2 and 5. However, its position on the edge of the terrace, F377, is an unlikely one for a building and it seems more likely to have been an external drain that was stone-capped because it had to drain water under the cobbled path, F258. The only useful evidence associated with the wall fragment, F152 was that an arm of the cobbled path branched off alongside it, demonstrating that they were contemporary. The wall must have been at about the western edge of the yard so it could have formed part of a boundary. There were no artefacts from any of these features.

2.4.4 Building? G4 (Fig. 12)

This possible structure was identified because of the presence of two narrow curvilinear features, F636 and F870 that cut into the cobbled surface of the yard associated with house 2, while F636 also cut into the levelled remnants of house 2. F636 was an open, external gully while F870 was a stone-capped and therefore probably internal drain. The two features were on arcs of about the right diameter to have been part of typical sized round-houses but about 3m apart and on arcs with different centres, so did not demarcate the outside and inside edges of the clay wall of a house. However, as seen, internal drains can follow various patterns so the external gully, F636, provides the best evidence for the existence of a building here, the latest recognisable at the settlement, post-dating house 2 and its associated cobbled yard and 'quarry' pits.

There were no artefacts from these two features although one piece of pottery, SF 174, identified as 'Hadrianic/Antonine', came from a stony layer overlying gully F636, but which was part of the more general disturbed stony spread in the area incorporating residual finds. It is possible that the 'working hollow', pit F276 (see pit group 10 above), just to the west, respected the edge of gully F636 and so may have been contemporary. In any case, the presence there of the latest piece of pottery on the site of 'early third century' provides an approximate concluding date for occupation on the site, and by implication, that of building 4. Gully F636 produced a small charcoal sample with a very varied selection of species comprising birch, hazel, hawthorn, oak, willow/poplar and gorse/broom (Gale archive). It was hoped that this might produce a useful reference for the end of occupation but the date received was cal BC 920 to 800 (Beta-152575). This is difficult to explain because the stratigraphic position of the feature is not in doubt. Neither does it seem possible that all these charcoal fragments of different species could be residual. The only possible explanation is that some of the charcoal was derived from ancient peat bog-wood, which distorted the overall result.

2.5 Phase 5 Medieval clearance and agriculture (Fig. 13)

After abandonment, the settlement would have consisted of a stony, hummocky area on the hillside, overgrown with scrub woodland, probably with traces of walls and platforms, much as many such settlements do to this day in more marginal upland settings. Surrounding the former settlement would have been more open land, the remnants of the stone-cleared land of the settlement's arable fields. A narrow field was laid out here, represented by three shallow ditches 855, 890 and 999, forming a long narrow field oriented up and down slope. Ditches 890 and 999 were only vestigial features in the excavated areas but their continuation around the former field area could be clearly seen in the freshly exposed surface on an initial aerial photograph. The field delimited by these three ditches was an 'acre's' width, that is, about 22 yards (20m) and so this was fairly certainly a medieval 'strip' field. Its southern end intruded on the former settlement area and this was probably found to be too stony and abandoned. This is represented by the line of pits, which are likely to be the result of the creation of a bank across the field strip here. This series of large, shallow, irregular scoops, 0.10-0.35m deep, all contained a similar main fill of topsoil-like brown loam and a thin, silted basal fill. Two of them cut the outer gully F23, of house 1 (see Fig. 3). The pits lie in a linear, east-west arrangement that suggests they all belong to a single episode. There was no artefactual or other dating evidence but it is suggested

that they were dug to create a field bank here across the width of the strip field. The line of pits respected the position of house 1 because its clay wall still formed an upstanding earthwork, which was incorporated into the cross-field bank.

At the same time as the creation and use of the strip field, the area of the former settlement was cleared of its scrub cover, and burnt off before being re-used for crop-processing. There were also some minor rubble spreads over the cobbling so this activity probably involved some clearance of the collapsed buildings. This phase of late re-use is indicated by the existence of four radiocarbon dates from the settlement which fall within the period of AD 7th to 11th centuries, one of them on residues of crop processing. This provides, by association, a date for the strip field, the ditches of which themselves provided no artefactual or other evidence.

2.6 Phase 6: Post-medieval clearance and agriculture (Fig. 13)

Initial exposure of the excavation area after removal of the topsoil revealed an irregular stony spread. layer, F33. This proved to be occupying the slight terrace on which house 2 had stood, and so had a fairly regular edge at the uphill side, the edge of the terrace, while at the downhill side it was irregular where it had been truncated by ploughing. The rubble therefore covered and protected, to some extent, the site of house 2 but not house 1 and 5. The stony layer may have partly been cobbling or yard consolidation material but the quantity of stone suggests that some of the house walls must have had stone facing even though there was no *in situ* evidence of such walls. This represents such an extent of disturbance and re-distribution of the former building remains that a period of deliberate clearance and levelling is indicated. This amount of clearance seems unlikely to have happened during the medieval phase, when the settlement remains were, rather, incorporated in the new field layout and re-used. The major levelling therefore more likely to have been during the 18th century when, as part of the Bodorgan estate, the area was subject to agricultural reorganisation and improvement. The rubble spread was a mixed and disturbed horizon that could be expected to contain a variety of residual objects. These comprised four stone objects, five flints, one iron nail, one piece of daub and three pieces of pottery identified as 'mid second century'.

This phase of clearance and agriculture is represented by the double ditches, F207 and F229, of a new field pattern at the east side of the excavated area. These are oriented on a quite different alignment to the strip field ditches. The boundary type, representing the ditches dug to create a *clawdd* or hedge bank, is one that formed a typical part of eighteenth to nineteenth-century agriculture in Anglesey and Llyn. However, there were very few finds from these later field ditches, none of any use for interpretation and no typical nineteenth-century pottery, for instance. The absence of this boundary from the mid-19th century tithe map shows that the boundary must have been abandoned and probably demolished by that time.

3. DATING AND CHRONOLOGY

The evidence available for ascertaining the overall period of occupation and the duration of the phases of use of the settlement comprise stratigraphy, radiocarbon dating and pottery identification. The description of the excavated features (above) is set out according to the phases of use identified by study of the structures and stratigraphy and the radiocarbon dating results recorded alongside the description of the contexts in which they occurred.

3.1 Phase 1

The earliest activity on the site is represented by a scatter of flint and chert pieces, mainly recovered from the base of the topsoil but also occurring in a variety of features. No subsoil features have been identified that definitely belong with this phase although a straggling group of small, shallow charcoal-filled pits at the south-west side of the area stand out as being unlike any other pits found and just possibly much earlier that the rest. These are also the type of shallow scoops that could be the hearths of transient occupation, such as a camp site. This would be appropriate to the suggested Early Neolithic date of the flint assemblage. No radiocarbon date was obtained from the charcoal-filled pits but, by chance, a Neolithic date was obtained from a pit F183 that was regarded as a structural post-setting of house 5. This date was cal BC 3340 to 2920 (Beta-156485), completely at variance with the

likely Romano-British date of the round-house. The charcoal was oak heartwood (Gale, archive) and therefore somewhat older than the date of deposition, but was otherwise a good sample and in large pieces so should have avoided the possibility of contamination with ancient mineragenic carbon. Either the post-hole is actually much earlier than the round-house or peat bog-wood was being used.

Two other dates were obtained which fell much earlier than can be expected for any phase of the settlement. The first came from the shallow scoop or hollow F9 at the north-west part of the site and this was cal BC 1410 to 1200 (Beta-152576). The second came from a gully or drain F636, stratigraphically part of the latest phase of the Romano-British settlement, and was cal BC 920 to 800 (Beta-152575).

The scoop F9 could be a natural hollow such as a tree-hole and so could preserve a remnant of old land surface and evidence of earlier activity. However, there is still the alternative possibility that the charcoal sample, of willow/poplar (Gale archive), consisted of old bog-wood.

The date from the gully F636 is perplexing since the gully is stratigraphically later than house 2, which has good pottery evidence of an AD 2nd century date. A further difficulty is that the charcoal in the sample contained a very similar species composition to that from the fill of the main drain in house 2 final phase (F298), which produced a medieval radiocarbon date (see below). The date from gully F636 must somehow have been distorted through inclusion of bog-wood or mineragenic carbon.

3.2 Phase 2

This phase represents the earliest period of the round-house settlement with the construction and use of house 1. The absence of pottery from any of the features associated with this house suggests a pre-Roman date for its construction and abandonment. However, pottery did not come into general domestic use in this area until the mid 2nd century AD. Apparently continuous occupation through the later Iron Age and Romano-British period at Cefn Graeanog II, Graeanog and Bush Farm, Caernarfon and at Bryn Eryr, Anglesey was accompanied by only very small quantities of pre-Hadrianic pottery. The pottery that was present was mainly of finer, status items with general domestic use still presumably dependent on wooden vessels (Going and Marsh 1998, 31 and Evans, 1998, 144-5). It would not be surprising to find an absence of pottery during the first century AD at a small and not very prosperous settlement like Melin y Plas, quite distant from sources of supply at Segontium.

A post-hole F162, in house 1 contained charcoal of oak and ash sapwood (Gale archive) and this produced a radiocarbon date of cal BC 30 to cal AD 130 (Beta-156484) with an intercept date of AD 50. A date within this range for last use of the house would fit the suggested structural sequence.

3.3 Phase 3

It was assumed on excavation that the terrace (F377) for house 2 removed part of house 1 and that, therefore, house 2 must be entirely later than house 1. In fact the positions of house 1 and 2 are mutually exclusive. It was actually a series of pits (groups 6 and 8) that cut the area of house 1. The irregular line of the terrace, F377, west of house 2 suggests that it may have been extended in the course of cutting these pits, which belong with a later phase of house 2. The earliest phase of house 2 then could have existed alongside house 1. One of the pits (F464) that cut the area of house 1 contained charcoal of willow/poplar, oak and hazel (Gale archive) and this produced a radiocarbon date of cal BC 350 to 300 or cal BC 220 to 40 AD (Beta-152572). The charcoal appeared to be a deliberate deposit in the base of the pit, not a scatter of residual material so the date should be associated with the pit itself. It is therefore at variance with the expected date of 2nd century AD for the cutting of these pits. The date does, however, overlap with that from house 1 but is difficult to explain unless the sequence of house 2 is extended back considerably. There are relatively few contexts surviving that belong with the earliest phase 3a, of house 2 but there is no pottery from these so a first century AD or earlier, origin is not impossible.

Phase 3b comprises the second phase of house 2. A small, charcoal filled pit, F69, belonging to this phase, within the house, contained charcoal of oak, ash, willow/poplar, gorse/broom and birch (Gale archive). This produced a radiocarbon date of cal BC 10 to cal AD 230 (Beta-156486) and this fits in well with the pottery from this phase, identified as 'Hadrianic or later' and 'perhaps mid-second century' (Evans, this vol.).

In phase 3c, house 2 was refurbished in its final period of use. Its drainage system was replaced, external gullies were recut and probably the majority of a series of external pits were dug, perhaps to provide clay for repairing the house walls. Pit groups 6 and 8 together could have provided a maximum of only about 9 cu. m of material. The walls of house 2 would probably have been at least 1m high, or possibly at least 1.5m high, compared to the walls of a well-preserved, stone-built round-house at Cwm Ystradllyn, Garndolbenmaen (Gresham 1972). If 1m high they would have required about 50 cu. m of material, or if 1.5m high, about 75 cu. m. The pits avoided an extensive area of cobbling or stone-surfaced yard to the west of house 2, which therefore was in existence when the pits were dug and probably originated in the previous phase. A discrete layer of charcoal of hazel and blackthorn on this cobbled surface produced a radiocarbon date of cal AD 890 to 1020 (Beta-152573). Another sample of charcoal, containing a wide range of species from within the main drain (F298) of house 2 in this latest, phase produced a radiocarbon date of cal AD 660 to 1030 (Beta-152574). These dates are taken to mean that their contexts were contaminated by percolation or intrusion from a widespread phase of medieval activity over the area and belonging to a later phase, 6, discussed below. There was unfortunately no artefactual evidence that could be assigned certainly to house 2, phase 3c with just two pieces of pottery, both probably residual, identified as 'Hadrianic – Antonine'.

The construction of house 5 took place at some point within the life of house 2 and both must have coexisted at some point. The external gully of house 5 was re-cut at least once but the relative complexity of structural modifications during the life of house 2 suggests that house 5 had a shorter lifespan. Unfortunately, there were few surviving contexts from house 5. Charcoal, of a variety of species, from the external 'drip' gully, F78 produced a radiocarbon date of cal AD 640 to 990 (Beta-152571) and therefore was ascribed to contamination from later activity from phase 6a. The only other sample, of oak heartwood charcoal from a post-hole, F183, taken to be part of the main structural setting in house 5, produced a date of cal BC 3340 to 2920 (Beta-156485). The amount of charcoal indicates that it was not just residual so, if the post-hole does belong to house 5, the only possible explanation is that bog-wood was being used. The only pottery from the house was not closely associated and certainly residual, a very small eroded chip of Samian 'Hadrianic- Antonine?'.

3.4 Phase 4

This phase represents the abandonment or demolition of house 2 and probably of house 5. Clay silt from the walls of house 2 accumulated over the floors of the former building as well as over some cobbled surfaces nearby. This phase includes traces of other subsequent buildings in the 'yard' area, although most evidence of these was destroyed by post-medieval ploughing. These later building traces consist of a fragment of straight wall, external type gullies and two stone-paved drains probably representing further buildings, one of them a round-house. A drain, F636, belonging to the latter produced charcoal and a prehistoric radiocarbon date, possibly due to the use of bog-wood (discussed above).

Later in this phase a dark humic 'midden' layer accumulated over the remnants of house 2 and to some extent in the yard. The earlier, silty layers produced pottery of 'Hadrianic – Antonine' and 'perhaps mid-Antonine'. The midden layer produced the largest concentration of artefacts from the site including several pieces of pot of Hadrianic-Antonine date.

On the west side of the yard was a large hollow, F276, within an arc of post-holes possibly representing a roofed working area. Its upper fill produced a few potsherds including one of 'Early 3rd century date' (Evans, this vol.). This provides the latest available date for occupation of the settlement and presumably its abandonment, no later than mid 3rd century, similar to the abandonment of the Cefn Du settlement although the larger and more prosperous settlement of Cefn Cwmwd continued into the mid 4th century.

3.5 Phase 5

This phase comprised the construction of a narrow strip field at the west side of the area delineated by shallow ditches. This phase was identified as probably medieval because of the nature of the strip field. Subsequently, three samples from the later phases of the settlement produced medieval radiocarbon dates, as described above. These were initially interpreted as deriving from a phase of scrub clearance and burning over the site in connection with establishment of the strip field.

Contamination of drains cast some doubt on charred macrobotanical samples from the settlement so cereal grains from a post-hole associated with the main internal drain of the second phase of house 2 were submitted for radiocarbon dating and these also produced a medieval date of cal AD 870 to 1010 (Beta-156654).

The presence of cereal grains amongst other charred material suggests more than just scrub clearance. If there had been occupation on the site sometime between the 7th to 11th century we could expect to see some structural evidence such as, at least, a house platform although we would not expect to find artefacts that would help with dating. There are no unusual artefacts or evidence of new structures although there were some rubble spreads over the cobbles that possibly represented some dumping or levelling of the settlement remains. Some of them sealed the 'working hollow' F276 with its 'early 3rd century AD' pottery. It is suggested that the site of house 2, which would have survived as a slight platform, was re-used in the early medieval period as a site for burning crop-processing wastes as well as scrub clearance materials. The mixture of crop-processing detritus was interpreted as meaning that the crops were actually processed elsewhere (Ciaraldi, this vol.). This could have been quite close by, on site, and would have involved winnowing and possibly sieving (Williams 1985, 111). The clearance of scrub woodland is suggested by the range of species represented in the three samples that produced medieval dates, notably blackthorn which occurs in two of them, whereas no blackthorn occurred in the samples with Romano-British or earlier dates. Gorse/broom also occurs in these two samples and hazel in all three. The macrobotanical material from the two samples associated with medieval dates seems distinctive in their range of species being dominated by barley and oats. However, a similar range of species is evident in the one sample from the previous phase of house 2 which produced a radiocarbon date of cal BC 10 to cal AD 230 (Beta-156486). However, this macrobotanical sample was considerably different to the other two in other respects, in that it was almost entirely grain, not chaff, and included a rather different range of wild species (Ciaraldi, this vol.). The dominance of oats in the two latest samples is not surprising when it is known that they are of Medieval date and compare closely to the assemblages from a series of pits of AD 10th century date from Rhuddlan, Clwyd (Manley *et al* 1985). The latter were interpreted as deriving from small scale cleaning of cereals prior to consumption and, interestingly, contained hazel nuts, presumed to be also foodstuffs, and these occur in both the later samples at Melin y Plas.

Table 2 Melin y Plas: Summary of radiocarbon samples submitted

3.6 Phase 6

Within this phase post-Medieval clearance and agricultural improvement was represented by a new field boundary and a spread of rubble across the site, derived from levelling of the remaining buildings and infilling of the former terrace.

To summarise, the structural features pottery and radiocarbon dating evidence can be shown to corroborate each other in broad terms although the date of origin of the settlement cannot be fixed. Without the benefit of radiocarbon dating however, the presence of substantial activity in the medieval period would not have been identified, despite the evidence of agriculture of that period nearby.

4. ENVIRONMENT AND ECONOMY

The structural and arefactual evidence provided few clues as to the economy of the settlement although the saddle quern shows grain processing and the two large mortars probably processing of other foodstuffs. The remainder of the objects are representative of the whole range of domestic functions required of a more or less subsistence economy, including minor crafts such as leather working. Notable, however, is the absence of spindle whorls and this might imply that sheep were not being kept.

The macrobotanical remains provide the most useful evidence although, as discussed above, only two samples from the first phase of house 2 can be confidently accepted as belonging to that phase. These are dominated by chaff but with a few cereal grains, accompanied by weed seeds of plants of both wetland and grassland/heath type. This odd mixture is taken to represent either burnt wastes of crops processed on site, fodder, bedding or burnt thatch (Ciaraldi, this vol.). The latter is a strong possibility since accidental burning of the thatch must have been a high risk with an open hearth. It would also be more likely to produce charred rather than burnt material. In addition, historical records show that even where straw or reed was available for thatch, an underthatch of local wild material, such as bracken or heather, was used (Wiliam 1993). Both bracken and heather were found in the two samples here as well as plants from wetland habitats, for example sedge, which could have served the same purpose, as was similarly interpreted at the Romano-British settlement of Ty Mawr, Holyhead (Williams 1986, 68).

These two samples from house 2 were dominated by spelt wheat and so are very different from the three later samples which were dominated by oats and barley, and which have now been identified as of Medieval date. Spelt is the most common dominant in crop assemblages from the Romano-British period in Wales (Caseldine 1990, 77, 87). The presence of several wild species typical of grassland and heath suggest that stock would have been kept and a mixed economy would be expected in the Romano-British and Medieval periods. In contrast, species typical of woodland are absent although the presence of a variety of woody species amongst the charcoal shows trees must have been present. The predominance of woody shrub, scrub wood and coppicing/pollarding species amongst the wood charcoal suggests that woodland was scarce. A decline in the woodland cover in the Iron Age and Romano-British periods was illustrated in the pollen evidence from both Bryn Eryr, Anglesey (Caseldine 1998, 253) and Cefn Graeanog II on the mainland (Chambers 1998, 60). After abandonment of the Romano-British settlement, secondary woodland of birch and hazel would have developed. Further clearance would have taken place as population increased again with more settled rule from at least the 11th century. Anglesey is thought to have been largely deforested by the 12th century (Carr 1982, 19-22 and 40-44). The evidence of earlier farming, in the period 7th to 11th century is not unexpected and the use of the long, narrow medieval strip field is notable and its orientation up and down the slope. This contrasts with the likely form of the fields that would have accompanied the Iron Age/Romano-British settlement. They can be expected to have been small sub-rectangular plots oriented mainly along the contours, as exemplified by well-preserved areas of fields at Hafoty Wernlas and Caer Odyn, Caernarfon RCHMW 1960, 192 and 296). The medieval open field system of narrow strips (lleiniau) was largely erased by post-Medieval agricultural improvements in this area, but occasional races have been identified, for instance close to Cefn Du, Anglesey (White and Smith 1999, 26-8) and at Dwygyfylchi, Conwy (Griffiths 1923). Possible traces of medieval fields near to Melin y Plas are retained in some of the field names where the name erw - 'acre' occurs in the Crigyll

valley - Erw Meiolon and close to Llechylched church - 'Cae Erw' (Parry-Jones pers. com.). The contrast between the Iron Age/Romano-British field pattern is paralleled by differences in the macrobotanical assemblage that suggest either a change from ard to mouldboard ploughing or an expansion of farming into less well-drained areas (Ciaraldi, this vol.).

5. THE SETTLEMENT IN ITS WIDER SOCIAL SETTING

This was a small farmstead which, if we consider that at least two houses may have been in existence at any one time, may be classed as a 'nucleated but unenclosed' settlement. As a class these are a typical component of the settlement pattern of the Romano-British landscape on Anglesey and the mainland of north-west Wales (Smith forthcoming). Unenclosed settlements like Melin y Plas, and especially those with clay or cob walled houses, are less likely to survive or be recognisable today and so are greatly under-represented in the presently known distribution of such settlement, which is concentrated on the hillier and more marginal north-east of the island. In fact such small settlements were probably the most common type in the lowland landscape. Their presence in otherwise unexpected areas is illustrated by the discovery of a similar open settlement of clay-walled houses while investigating other features at Pant, on the Llyn peninsula (Ward and Smith 2001). Enclosed settlements also form a much smaller proportion of known settlements of this period on Anglesey than on the adjoining mainland. This may be partly put down to the relative abundance of stone for building on the mainland. However, it is possible that there were, originally, fenced enclosures on what otherwise appear to be open sites. One of the categories applied to settlement of this period (Smith forthcoming) is that of 'unenclosed settlements but set within yards' and in this type the houses are closely liked together in combination with a series of yard enclosures but not enclosed by a separate bank or wall. This type is recognisable amongst stone-walled settlement and is also likely to be present amongst clay-walled and possibly timber-post built settlement. Melin y Plas, with its scatter of external post-holes, could be one such. It can be pointed out, for instance, that the houses and all the features relating to the settlement are very tightly grouped. All the various pits occur to the south-west of the houses and none to the 'rear' at the north-east. This suggests that land at the north-east was not available, whether as a result of ownership or land-use. The pits concentrate at the south-east despite the fact that this must have already been a well-used area, having to carefully avoid use the spare ground not taken up by the cobbled path/yard. This contrasts with Bryn Eryr, for instance, where the pit digging was focussed on an area at the rear of the houses, away from the path/yard area, a position where we might expect to find a 'garden plot'. Melin y Plas was never, therefore, enclosed in the accepted sense, but was nucleated and 'bounded' in some way. As a closely set group of buildings it is little different than Bryn Eryr, for instance, except for the absence of an enclosing bank. This lay-out was deliberate and provides the benefit of increased wind shelter, although it is hard to explain why, a Melin y Plas the yard was on the windward, not the lee side of the houses.

There are almost a thousand recorded examples of round-house settlement in north-west Wales but Anglesey has, relative to its size, the lowest density of such settlements. There is an average of 12.3 settlements per 10km square compares to 40 to 50 per 10km square in the nearby mainland (Smith forthcoming). However, Anglesey has the largest proportion of land of good agricultural capability with 16% of arable compared to an average of 6% in the Caernarfon/Bangor area, 12% on the Llyn peninsula and only 3% in Meirionnydd (Gwynedd 1986). We should expect therefore that it would have had the highest population in the region and the low number of recorded Iron Age/Romano-British settlements must be put down to poor survival in an arable landscape. It follows from this that the A55 DBFO scheme provides a sample transect across almost the whole width of Anglesey, over large areas of arable or improved farmland, where no archaeological remains had previously been recorded. It is obviously not a random, nor a representative sample, since it follows the better-drained centre of the island, while the hillier and rockier land to the east and the low-lying, valley bogs and marshes to the west mean a greater proportion of agriculturally marginal land in these areas. If we assume, for the sake of illustration, that the average settlement capability is about half that of the A55 transect, which is about 22km long by about 100m wide, on average, then the discovery of three new Iron Age to Romano-British settlements is equivalent to about 490 such undiscovered settlements overall. This means a settlement density of about 68 per ten km square or 1 settlement about every 1.5 sq. km and indicates an almost completely utilised landscape, as it is today. While these figures seem high, and in reality settlement would be unevenly distributed, they are certainly no higher than the density evident in some of the best preserved areas of Romano-British landscape on the mainland such

as that around Rhostryfan, Caernarfon (RCAHMW 1960, 192) or Cwm Ystradllyn, Garndolbenmaen (RCAHMW 1964, Fig. 6).

Of the fifty examples of round-house settlement that have been the subject of some excavation in north-west Wales, nearly all have provided evidence of Romano-British date (Johnstone 1990). A few more recent excavations with the benefit of radiocarbon dating have been able to show that some settlements have origins in the later 1st millennium BC, as may be the case at Melin y Plas. The overall settlement pattern may therefore have changed little with Romanisation. Its origins lie in a tribal society, dominated by fairly local social groupings of which the larger, defended settlements were probably the focus. This view is supported by the fairly even distribution of such defended sites on Anglesey, as if each had a specific territory (Lynch 1991, 259). The nearest large defended site to Melin y Plas is the (unexcavated) multivallate enclosure of Y Werthyr, Llantrisant, 7km to the north, with another a little further away at Caer y Twr, Holyhead. There is also a smaller hilltop enclosure of unknown date at Caer Helen, only 2km to the north-west. Although Melin y Plas was a single nucleated farmstead it could form just part of a more extensive dispersed settlement pattern, if the suggested figures for settlement density are correct. In any case, Melin y Plas was probably not self-sufficient and independent but an outlying part of a larger social group and this was very likely to have been centred on the settlement of Castellor only 1.5km to the south-west. The Castellor settlement originally comprised over twenty round-houses and an abundance of objects found during partial clearance in the 19th century, including copper ingots, suggests that it was a prosperous settlement like Cefn Cwmwd (Pritchard 1871).

The large defended enclosures would have been abandoned or lost their role with Romanisation. It is possible that, with the enforced peace, the agricultural economy may have expended. As discussed above, the absence of first century pottery from Melin y Plas does not exclude the possibility of foundation after the advent of Roman control in *c.* AD 78.

Kelly (1990) has identified a change, in upland areas at least, from timber to stone-walled houses, probably dependent on declining timber resources, in the later first millennium BC. At Bryn Eryr and Bush Farm, however, a change was noted from clay-walled to rather smaller stone-walled houses in the Romano-British period, probably in the 2nd century AD. At Melin y Plas, the only house with a surviving, clearly identifiable, structure is that of the earliest house, 1, of *c.* 12m overall diameter. House 2, which continued later, is rather bigger at *c.* 14m overall diameter, while house 5, on limited evidence, was probably about the same size as house 1. Although the evidence is sparse it is possible to see some parallels in structural change in comparison with those at Bryn Eryr and Bush Farm. The earliest house at Melin y Plas, house 1, had a clay wall with internal concentric drain and this is similar to Bryn Eryr House A, which probably had an internal post ring (Longley 1998, 229). Neither house 2 nor house 5 at Melin y Plas had evidence of such a drain. However, house 5 probably had a post ring set against the inner wall face and this style of building parallels that of house B, phase 2 at Bryn Eryr, originating in the 4th to 3rd century BC but continuing into the Roman period. The evidence is confusing but house 2 at Melin y Plas may also have been of similar construction even though such a long period of currency as that at Bryn Eryr is unlikely. House 2 was replaced or rebuilt probably during the course of the second century. The lack of surviving structural evidence for this later phase may be because it was dependent just on wall-supported trusses, rather than on earth fast timbers. After clearance and levelling for agriculture, followed by repeated ploughing there would have been no above-ground remains.

Internal drains are a normal element of Romano-British round-house plans in north-west Wales although they vary greatly in lay-out. The commonest lay-out is one where there is a drain concentric to and around the inner face of the house wall. A second typical is a 'wishbone' drain around a central working area. Drains often exit through a doorway but sometimes they originate outside a house and continue through, occasionally exiting beneath a wall. The drains may act just as a conduit for natural ground water seepage particularly where a house is built deeply into a slope as at Cwm Ystradllyn, Garndolbenmaen. In that case later modifications seem to have involved providing a raised floor or living/sleeping area supported on stone wall 'joists' (Gresham 1972). In house 2 at Melin y Plas water was deliberately introduced into the house by a system of culverts and it may be seen as just one of a number of minor innovations in house design in the Roman period, like the modifications at Cwm Ystradllyn and the walled subdivisions of round-houses at Porth Dafarch, Holyhead (Stanley 1876) and Tre'r Ceiri, Llanaelhaearn (Hogg 1962). Elsewhere in Wales, much more extensive changes were happening to rural settlements in this period. At Whitton, south Glamorgan, several stake-walled

round-houses were replaced by rectangular stone-walled buildings during the course of the 2nd century AD (Jarrett and Wrathmell 1981). At Prestatyn, north-east Wales a stake-walled round-house originating in the 2nd or 1st century BC was replaced by rectangular timber buildings in the late first century AD (Blockley 1989). North-west Wales provided something of a contrast in that Romanisation had less influence. Round-houses continued to be the normal domestic buildings, with only minor improvements, like those described at Melin y Plas, although rectangular buildings were introduced for subsidiary functions such as granaries, byres and workshops.

REFERENCES

ADAS 1977. *Land capability map of England and Wales*, HMSO.

Baynes, E. Neil 1908. The Excavations at Din Lligwy, *Arch. Camb.* 6th Ser. VIII, 183-210.

Britnell, W. 1989. The Collfryn hillslope enclosure, Llansantffraid Deuddwr, Powys. *Proc. Prehist. Soc.* 55, 89-134.

Burnham, B. and Davies, J.L. 1990. *Conquest, Co-existence and Change. Recent Work in Roman Wales*. Trivium 25, St. David's University College, Lampeter.

Caseldine, A. 1990. *Environmental archaeology in Wales*, Dept. of Archaeology, St David's University College, Lampeter.

Chambers, F.M. and Price, S.M. 1988. The environmental setting of Erw-wen and Moel y Gerddi: prehistoric enclosures in upland Ardudwy, north Wales. Proc. of the Prehist. Soc., 93-100.

Edwards, N., ed. 1997. *Landscape and settlement in Medieval Wales*, Oxbow monog. 81, Oxford.

Edwards, N. and Lane, A., eds 1988. *Early Medieval Settlement in Wales, AD 400-1100*, University of Wales, Bangor and Cardiff.

Evans, J. 1998. The Romano-British pottery. In Longley *et al* 1998.

Gale, F. 2001. *The charcoal wood identifications*, A55 Anglesey DBFO Scheme archive.

GAT 2001. *A55 Anglesey DBFO scheme: Updated site interpretation for Ty Mawr, Melin y Plas and Penymynydd*, Rep. No. 404, GAT.

Godwin, H. 1956. Report on samples of peat and underlying old ground surface. In Powell and Daniel 1956, 23.

Going, C. and Marsh 1998. The Romano-British pottery. In Kelly *et al* 1998.

Greig, J.R.A. 1987. Pollen and plant macrofossils. In Smith and Lynch 1987, 39-44.

Gresham, C.A. 1972. Dr Gerhard Bersu's excavations in Cwm Ystradllyn, *Arch. Camb.*, CXXI, 31-60.

Griffiths, W.E. 1923. The tithe map of Dwygyfylchi, *Arch. Camb.*, LXXVIII pt. II, 7th ser., vol. III, 327-33.

Gwynedd 1986. *Draft Structure Plan*, Gwynedd Council, Caernarfon.

Healey, E. 1987. The worked flint. In C.A. Smith and F.M. Lynch 1987. *Trefignath and Din Dryfol, the excavation of two chambered tombs in Anglesey*, Cambrian Archaeological Monograph No. 3.

Hogg, A.H.A. 1962. Garn Boduan and Tre'r Ceiri, excavations at two Caernarvonshire hill forts. *Arch. Journ. 117 (1960), 1-39.*

Jarrett, G. J. and Wrathmell, S. 1981. *Whitton, An Iron Age and Roman Farmstead in South Glamorgan*, Univ. of Wales Press, Cardiff.

Johnson, N. 1981. The location of rural settlement in pre-medieval Caernarvonshire. *Bulletin of the Board of Celtic Studies*, 29 (2), 379-415.

Johnstone, N.M. 1989. *Gazetteer of Excavated Late Prehistoric and Romano-British Hut Groups in Gwynedd*, unpublished B.A. dissertation, UCNW, Bangor.

Kelly, R.S. 1992. The excavation of a burnt mound at Graeanog, Clynnog, in 1983. *Arch. Camb.* 141, 74-96.

Kelly, R.S. 1988. Two late prehistoric circular enclosures near Harlech, Gwynedd. *Proc. of the Prehist. Soc.*, 54, 101-51.

Kelly, R.S. 1990. Recent Research on the Hut Group Settlements of North Wales. In Burnham and Davies, eds, 1990, 102-11.

Kelly, R. S., Fasham, P.F. and Mason, M. 1998. *The Graeanog Ridge*, Cambrian Monograph No. 6. Cambrian Archaeological Association.

Longley, D.M.T. 1998. Bryn Eryr: An enclosed settlement of the Iron Age on Anglesey. *Proc. of the Prehist. Soc.*, 64, 225-73.

Longley, D.M.T., N.M. Johnstone and J. Evans 1998. Excavations on two farms of the Romano-British period at Bryn Eryr and Bush Farm, Gwynedd, *Britannia* 29, 185-246.

Lynch, F.M. 1991. *Prehistoric Anglesey*, 2nd ed., Anglesey Antiquarian Soc., Llangefni.

MAFF 1988. *Agricultural land classification of England and Wales*, HMSO.

Manley, J., Otlet, R.L., Walker, A.J. and Williams, D. 1985. Early medieval radiocarbon dates and plant remains from Rhuddlan, Clwyd, *Arch. Camb.* 134, 106-19.

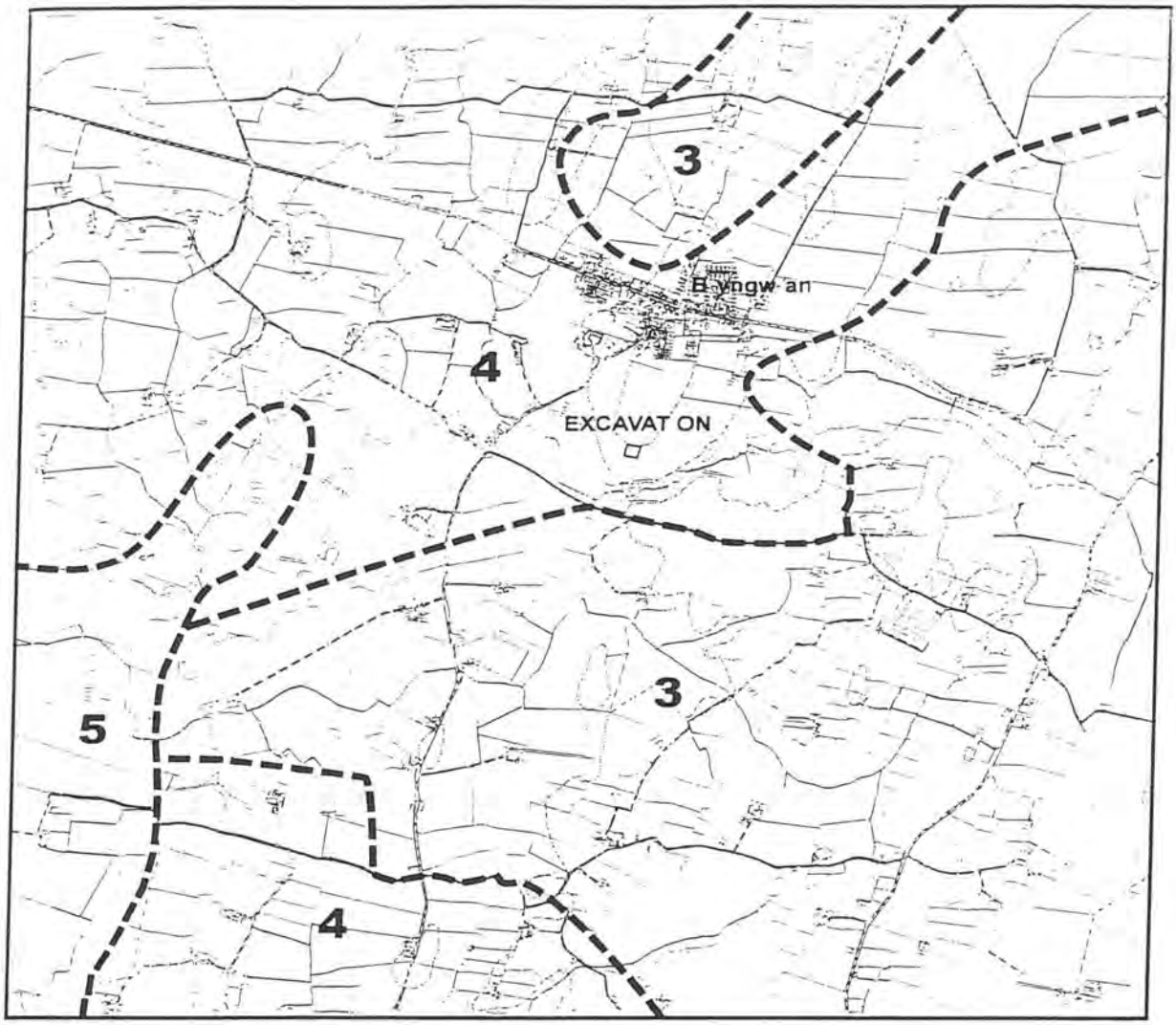
Maynard, D., Hughes, G. and Davidson, A. 1999. Archaeological operations on the new A55 Llandegai to Holyhead route, *Archaeology in Wales* 39, 51-6.

Parry, M.L. 1985. Upland settlement and climatic change: the medieval evidence. In D. Spratt and C. Burgess, eds, *Upland Settlement in Britain*, BAR Brit. Ser. 143, 35-49.

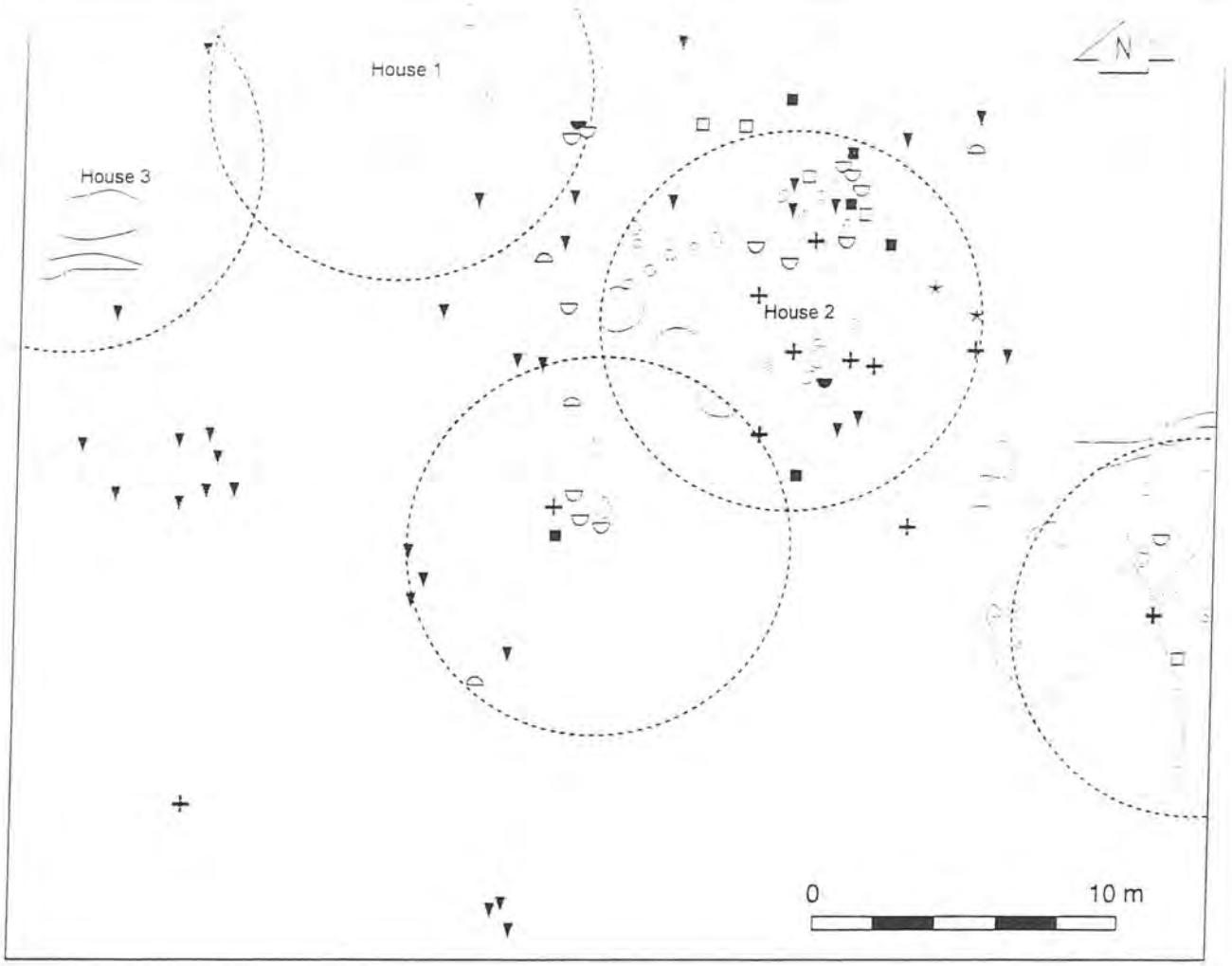
Powell, T.G.E. and Daniel, G.E. 1956. *Barclodiad y Gawres*, Liverpool University Press.

RCAHMW 1937. *Inventory of Ancient Monuments in Anglesey*. Royal Commission on Ancient and Historical Monuments in Wales, HMSO.

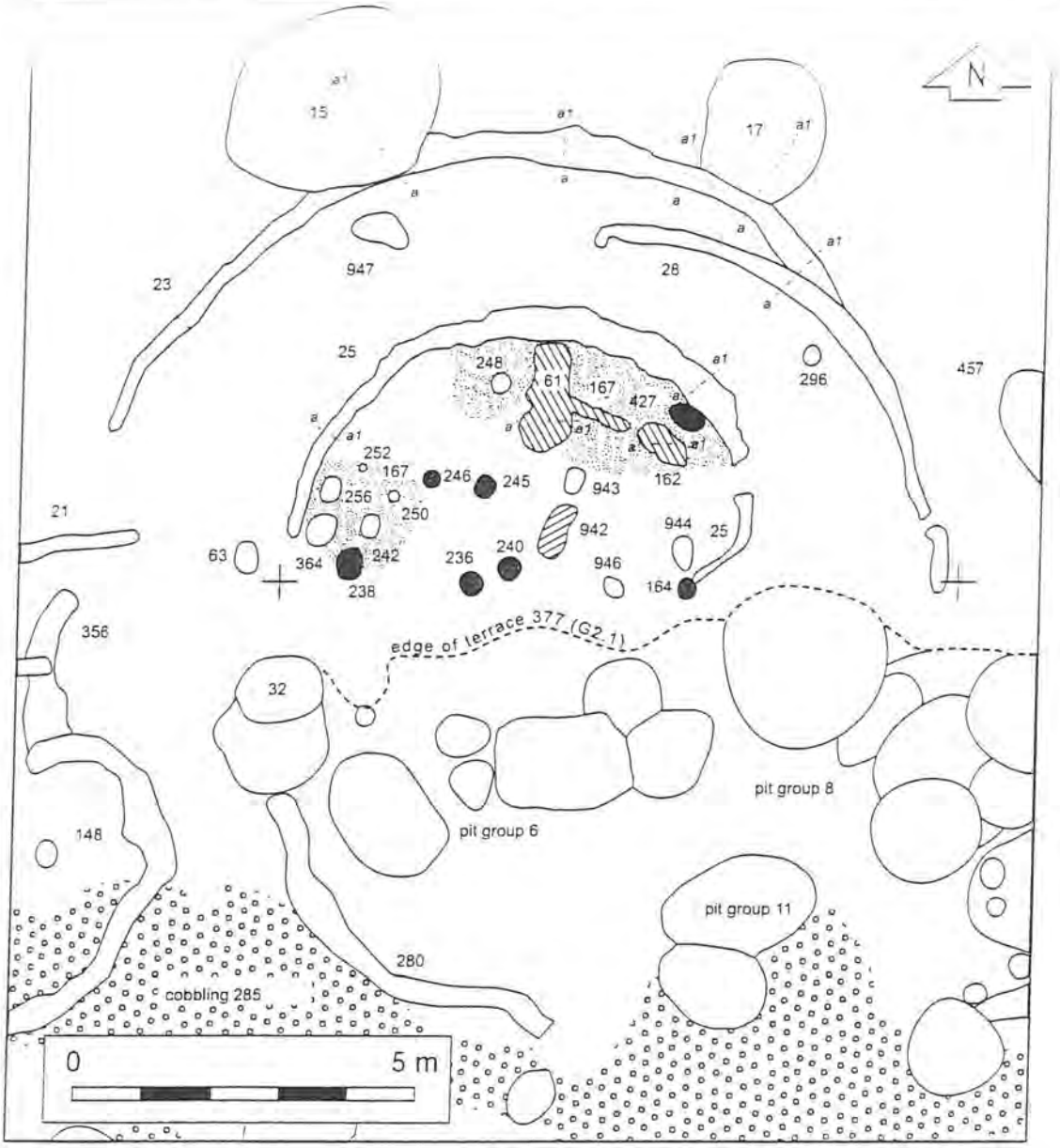
RCAHMW 1960. *Inventory of Ancient Monuments in Caernarvonshire, Vol. 2: Central*. Royal Commission on Ancient and Historical Monuments in Wales. HMSO.
RCAHMW 1964. *Inventory of Ancient Monuments in Caernarvonshire, Vol. 3: West*. Royal Commission on Ancient and Historical Monuments in Wales, HMSO.
Richards, M. 1972. Medieval Divisions. In M. Richards, ed. *An Atlas of Anglesey*, Anglesey Community Council.
Savory, H.N. 1976. *Guide catalogue of the Early Iron Age Collections*. National Museum of Wales, Cardiff.
Smith, C.A. 1974. A morphological analysis of late prehistoric and Romano-British settlements in north-west Wales, *Proc. Prehist. Soc.*, 40, 157-69.
Smith, C.A. 1977. Late Prehistoric and Romano-British Enclosed Homesteads in North Wales. *Arch. Camb.* CXXVI, 38-52.
Smith, C.A. 1987. Excavations at the Tŷ Mawr Hut Circles, Holyhead, Anglesey. Part IV, Chronology and Discussion, *Arch. Camb.*, CXXXVI, 20-39.
Smith, C.A. and Lynch, F.M. 1987. *Trefignath and Din Dryfol, the excavation of two chambered tombs in Anglesey*, Cambrian Archaeological Monograph No. 3.
Smith, G.H. 1999b, *Gwynedd Hut Group Survey, Archaeology and Conservation*, Rep. no. 357, GAT.
Stanley, W.O. 1867. On the remains of the Ancient Circular Habitations...at Tŷ Mawr... *Arch. Journ.* 24, 229-42.
Thompson, D. S. 1997. *Historic Landscape Characterization of Ll• n Environmentally Sensitive Area*, Rep. 261, Gwynedd Archaeological Trust, (Bangor).
Wainwright, G.J. 1971. The excavation of a fortified settlement at Walesland Rath, Pembrokeshire. *Britannia* 2, 48-108.
Ward, M. and Smith, G.H. 2001. The Llŷn Cropmarks Project: Excavations by Richard Kelly and Michael Ward, *Studia Celtica*.
White S.I. and Smith, G.H. 1999. Capel Eithin, a funerary and ceremonial complex..., *Trans. Anglesey Antiq. Soc.*
Wiliam, E. 1993. *Home-made Homes*. National Museum of Wales, Cardiff.
Williams, D. 1985. Plant remains. In Manley *et al* 1985.
Williams, G. 1988. Recent work on rural settlement in Later prehistoric and early Historic Dyfed. *Antiq. Journ.*, 68, 30-54.
Young, T. 2001. *Archaeometallurgical residues from Anglesey*, A55 Anglesey DBFO scheme archive.

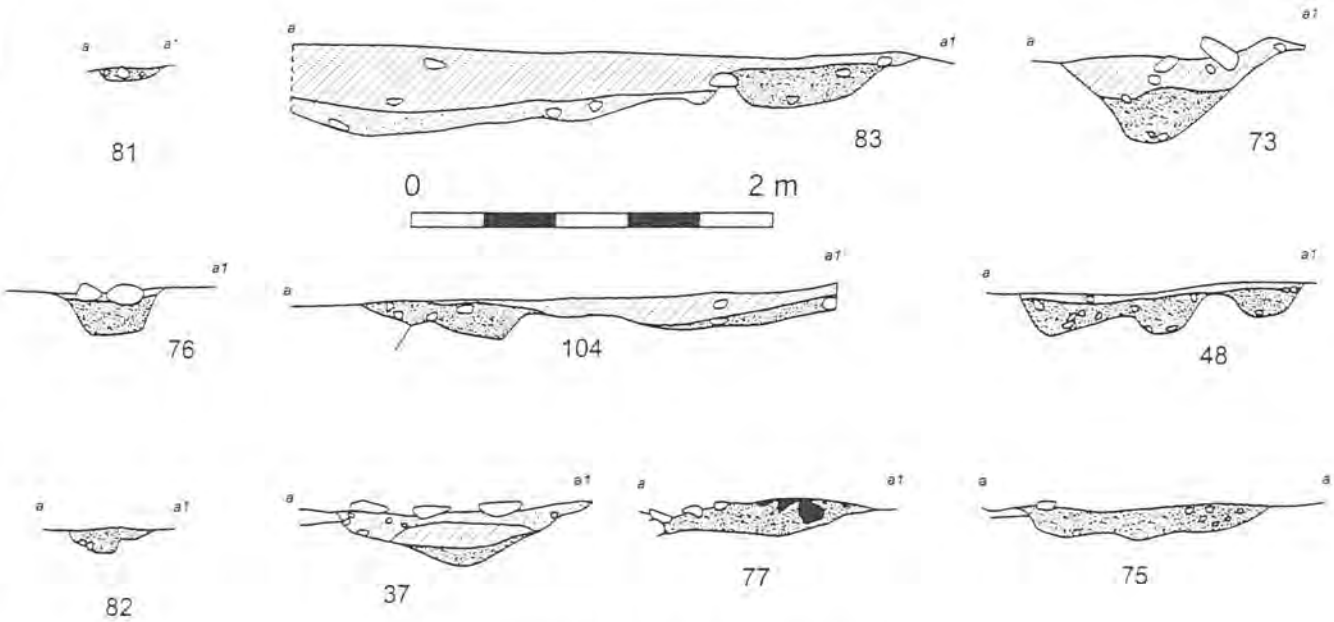


MELIN Y PLAS : Fig. 1. - Topographical location and land use capability.

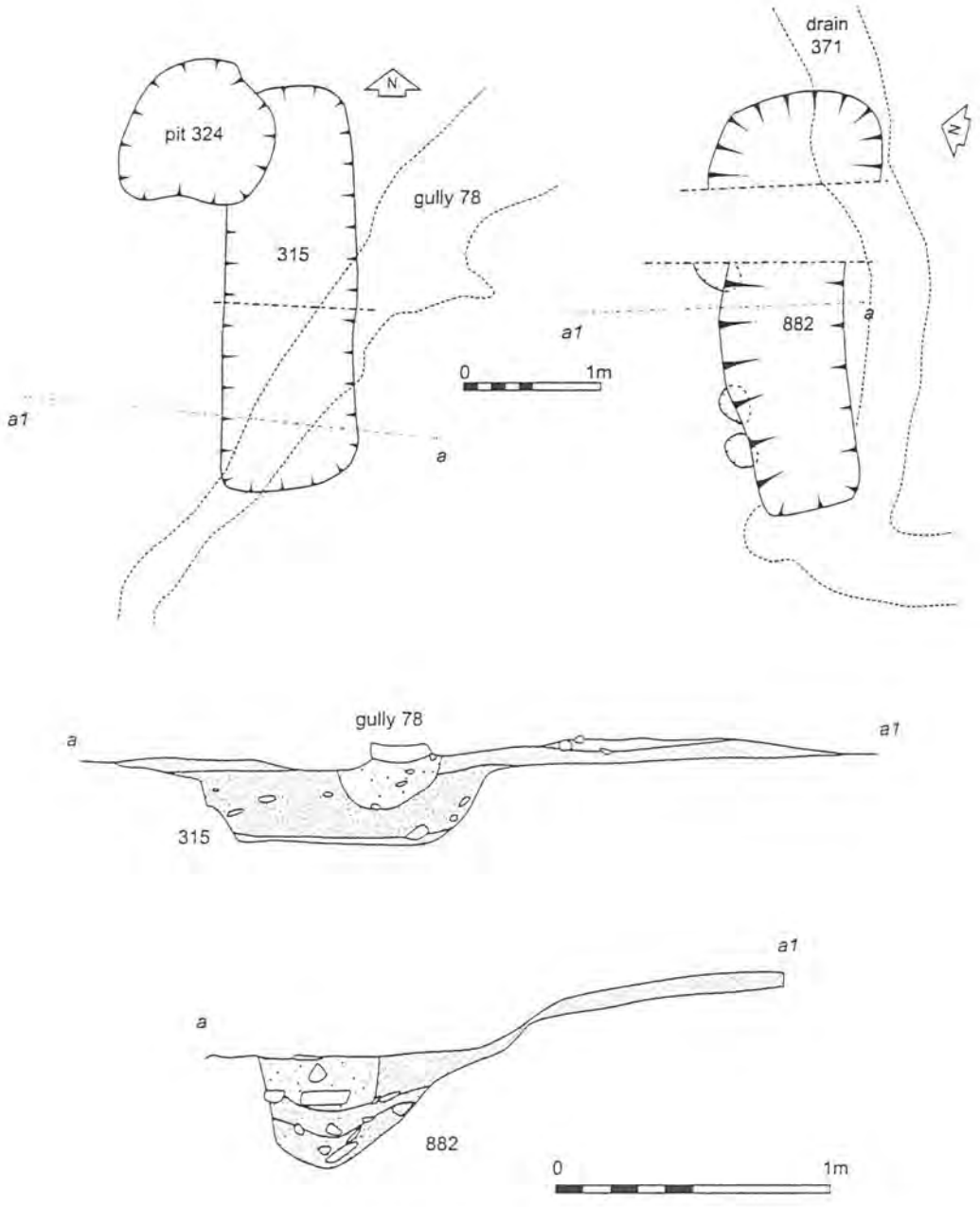


MELIN Y PLAS : Fig. 1. - Distribution of flint and other finds.

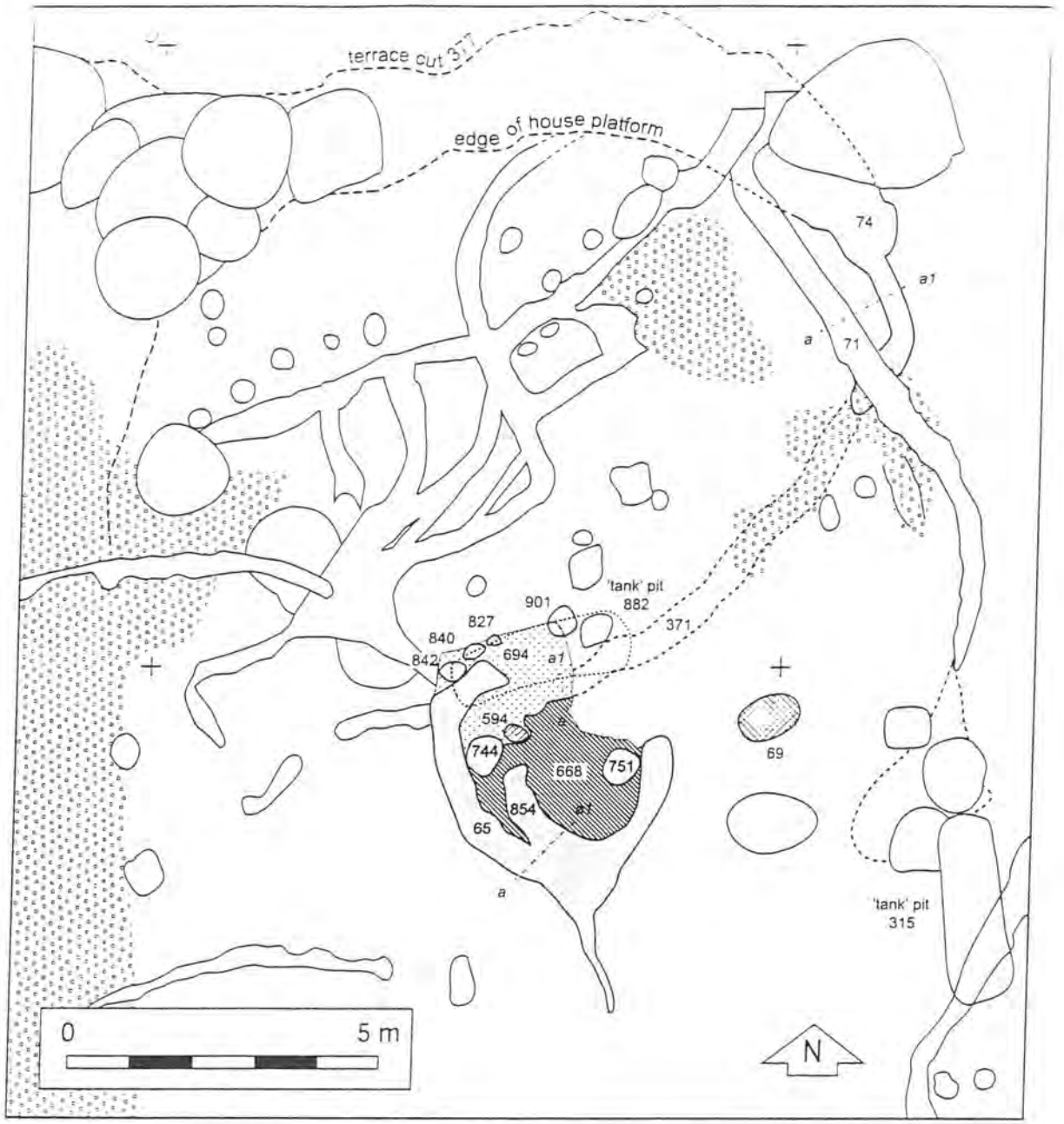


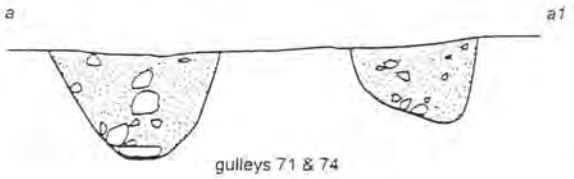


MELIN Y PLAS : Fig. 3 - Building G1



MELIN Y PLAS : Fig. 4 - "tank" pits.

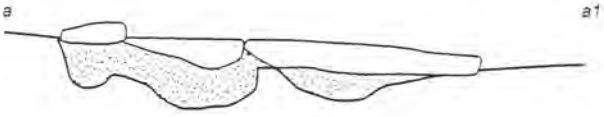




gulleys 71 & 74

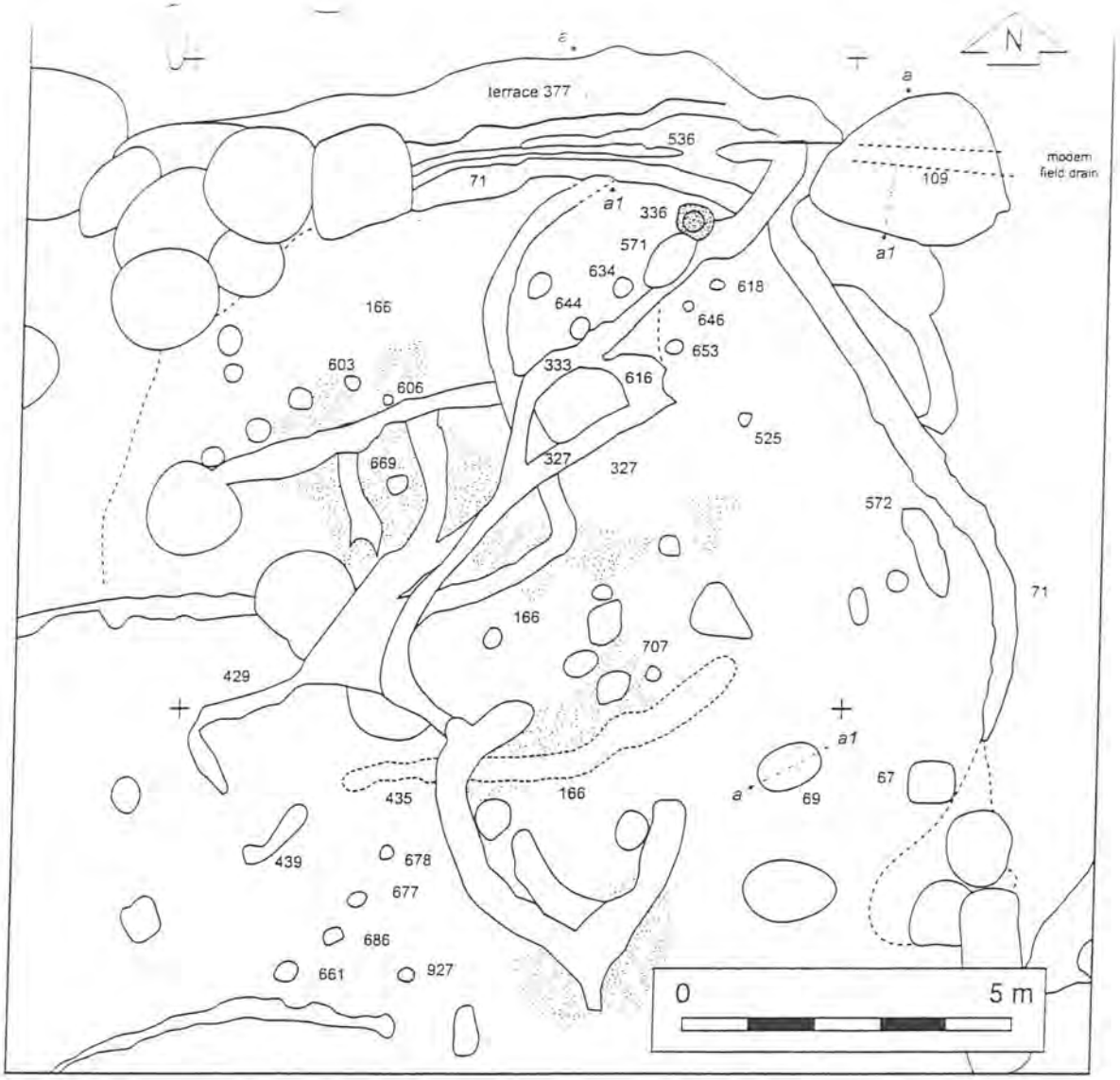
0 500mm

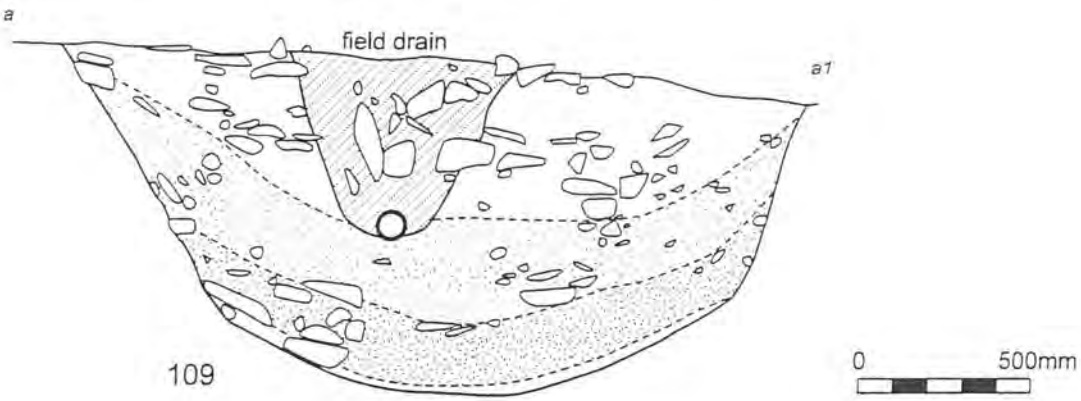
drain 371

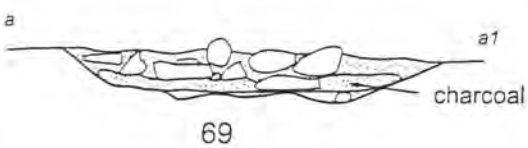


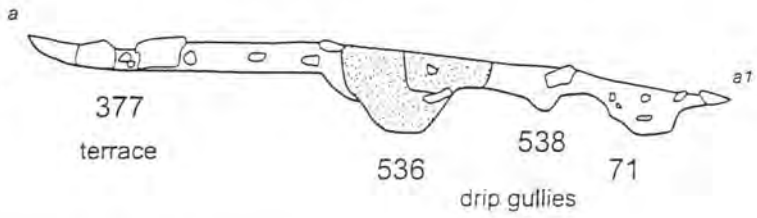
drain 854 drain 65

MELIN Y PLAS : Fig 5 - Building G2.1 and G2.2

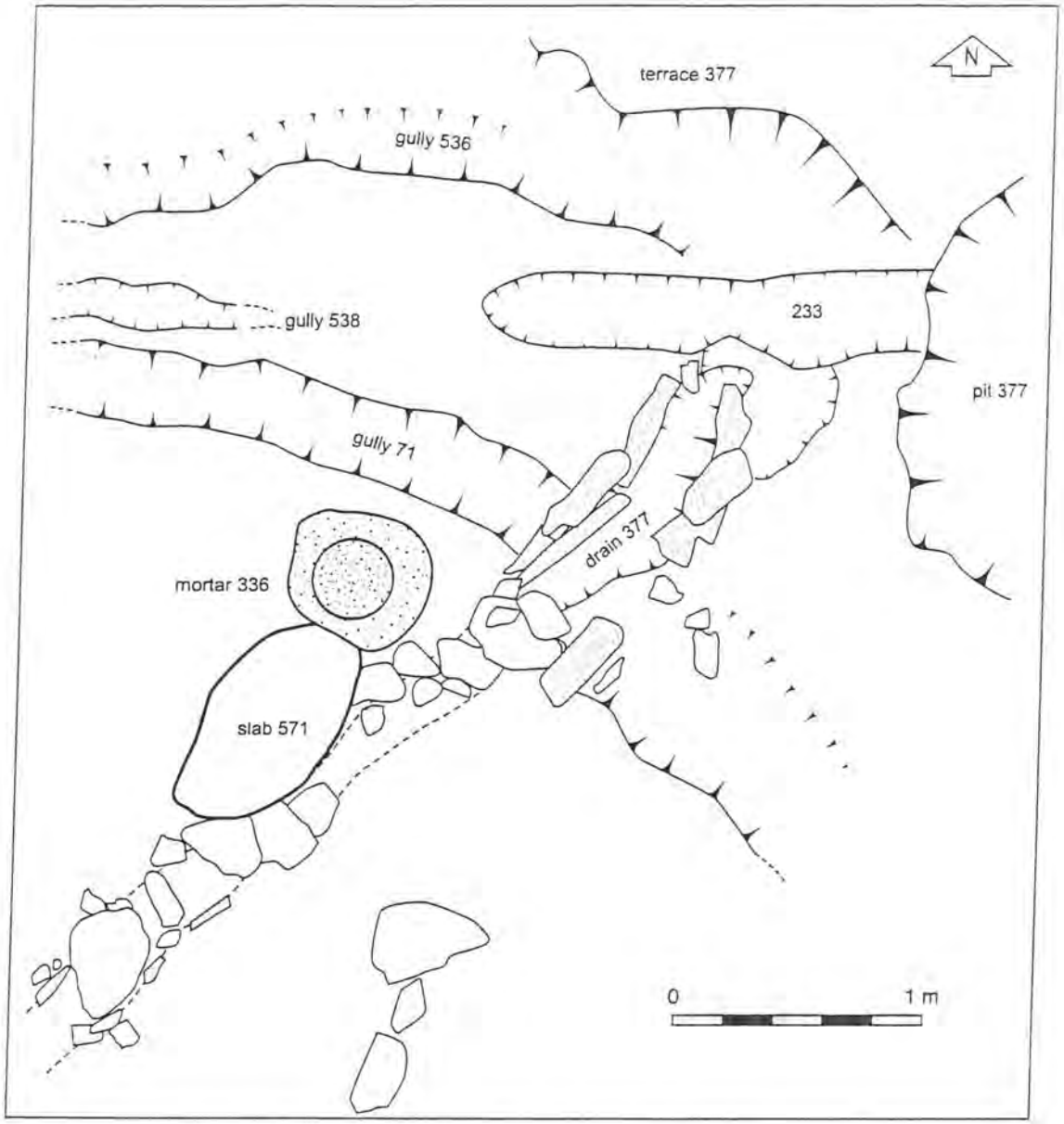




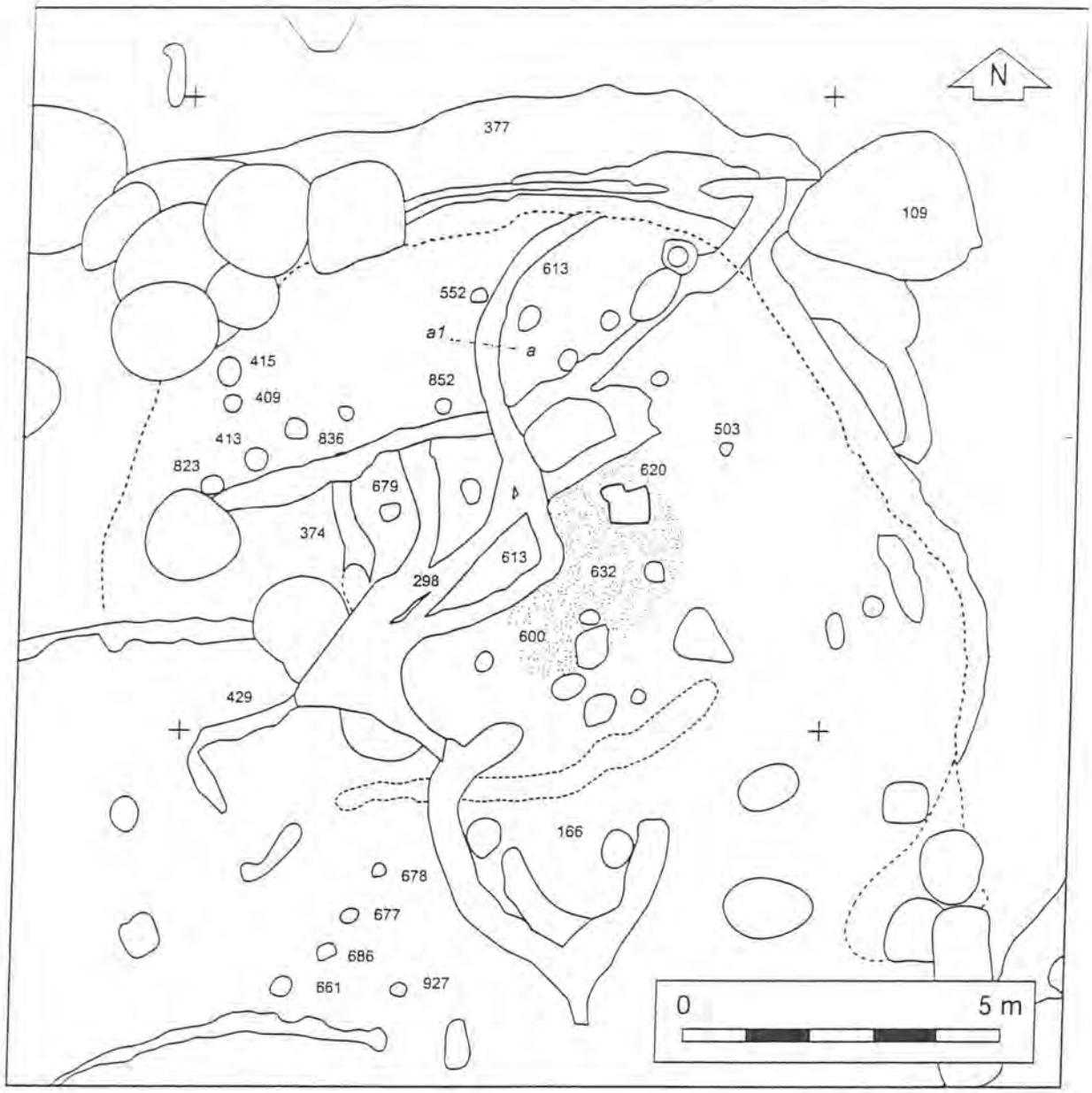




MELIN Y PLAS : Fig. 6. - Building G2.3

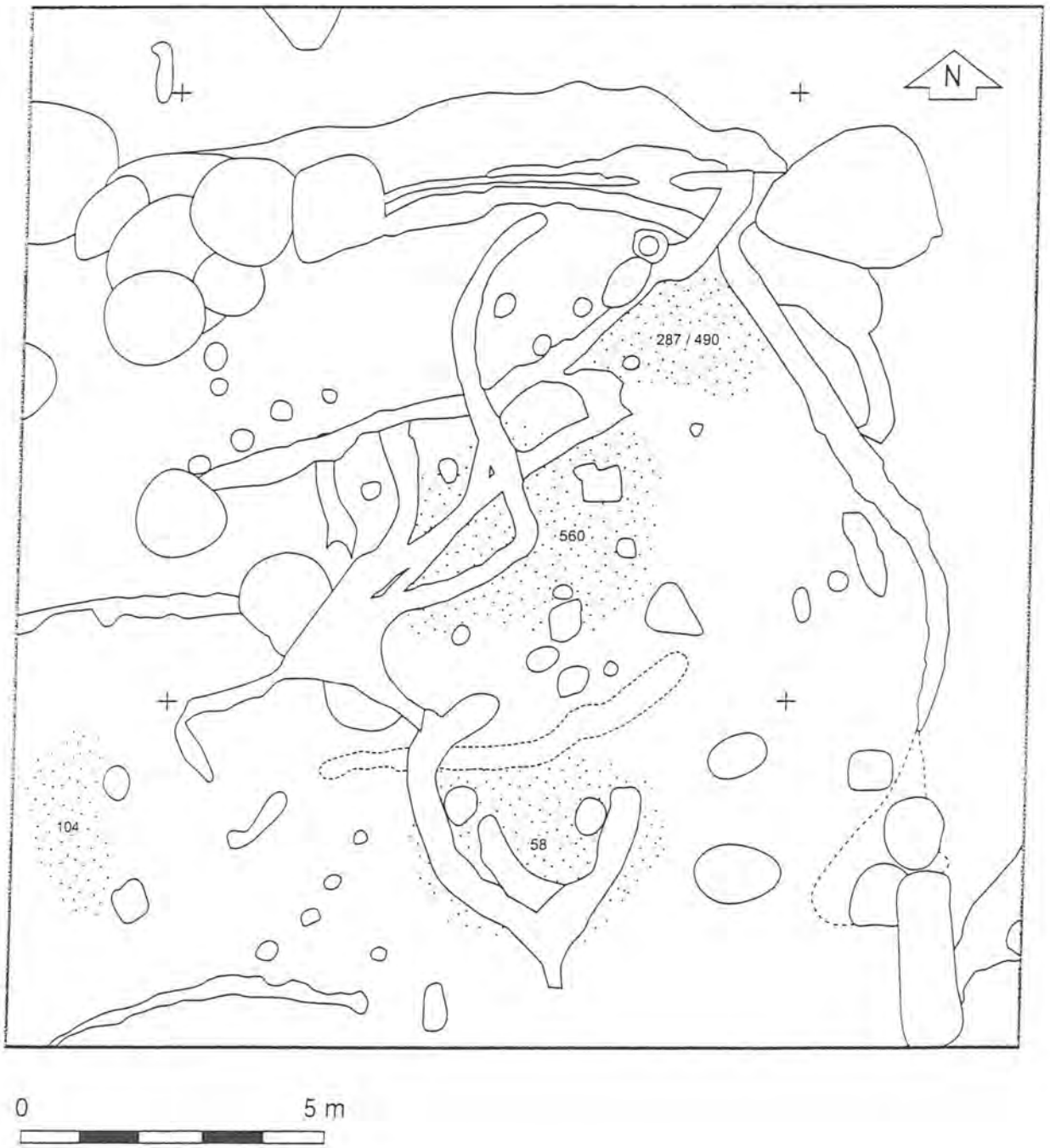


MELIN Y PLAS : Fig. 7. - Drain, mortar and culvert.

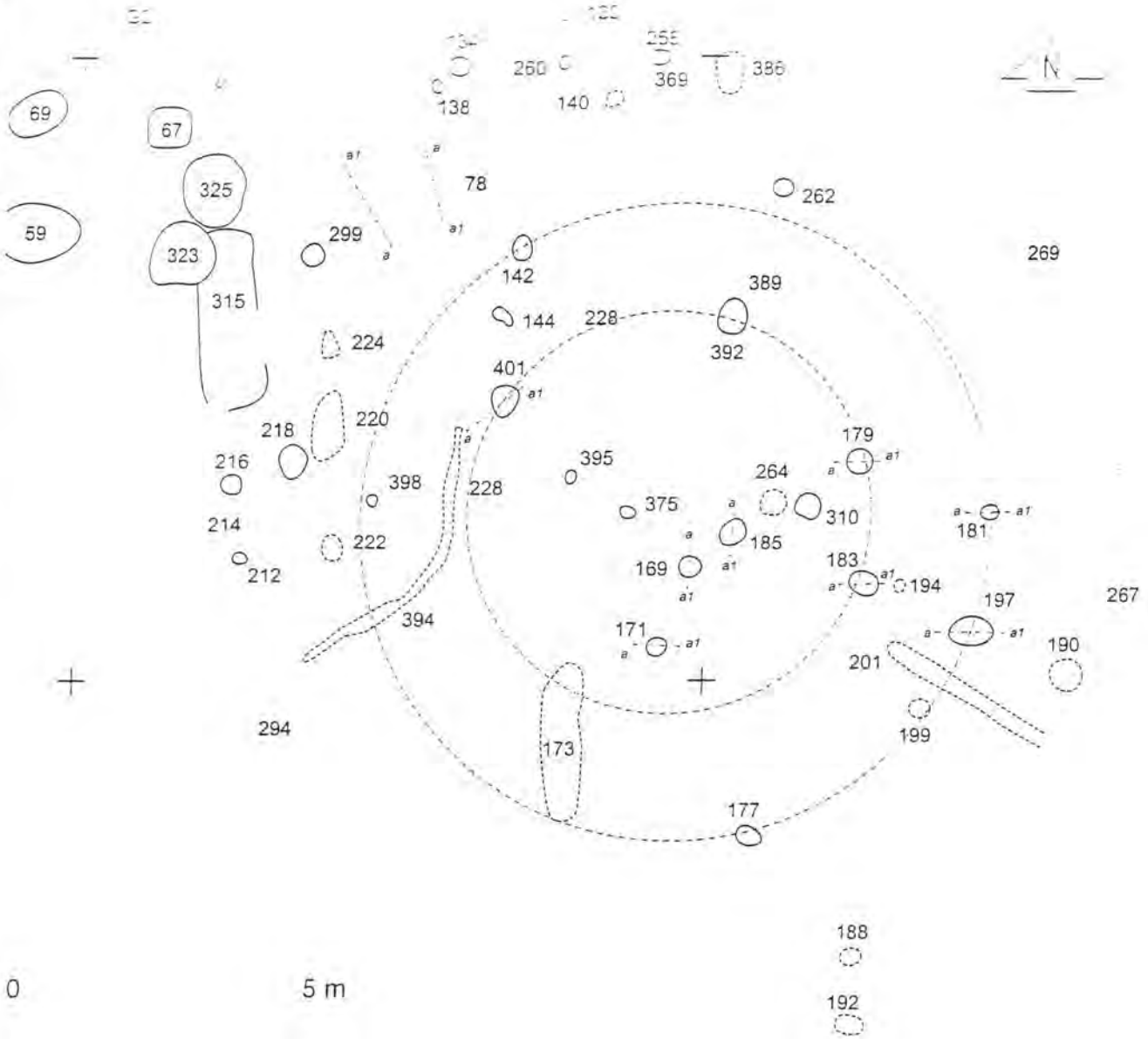


drain 298

MELIN Y PLAS : Fig. 8. - Building G2.4.



MELIN Y PLAS : Fig. 8. - Building G2.5 and G2.6.



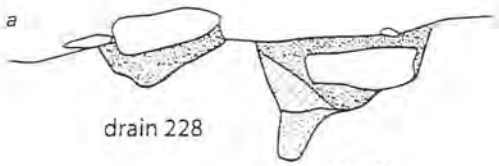
ph 169

ph 181

ph 197

ph 171

ph 183



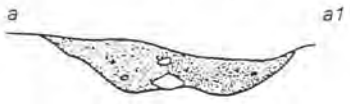
drain 228

ph 401

ph 177

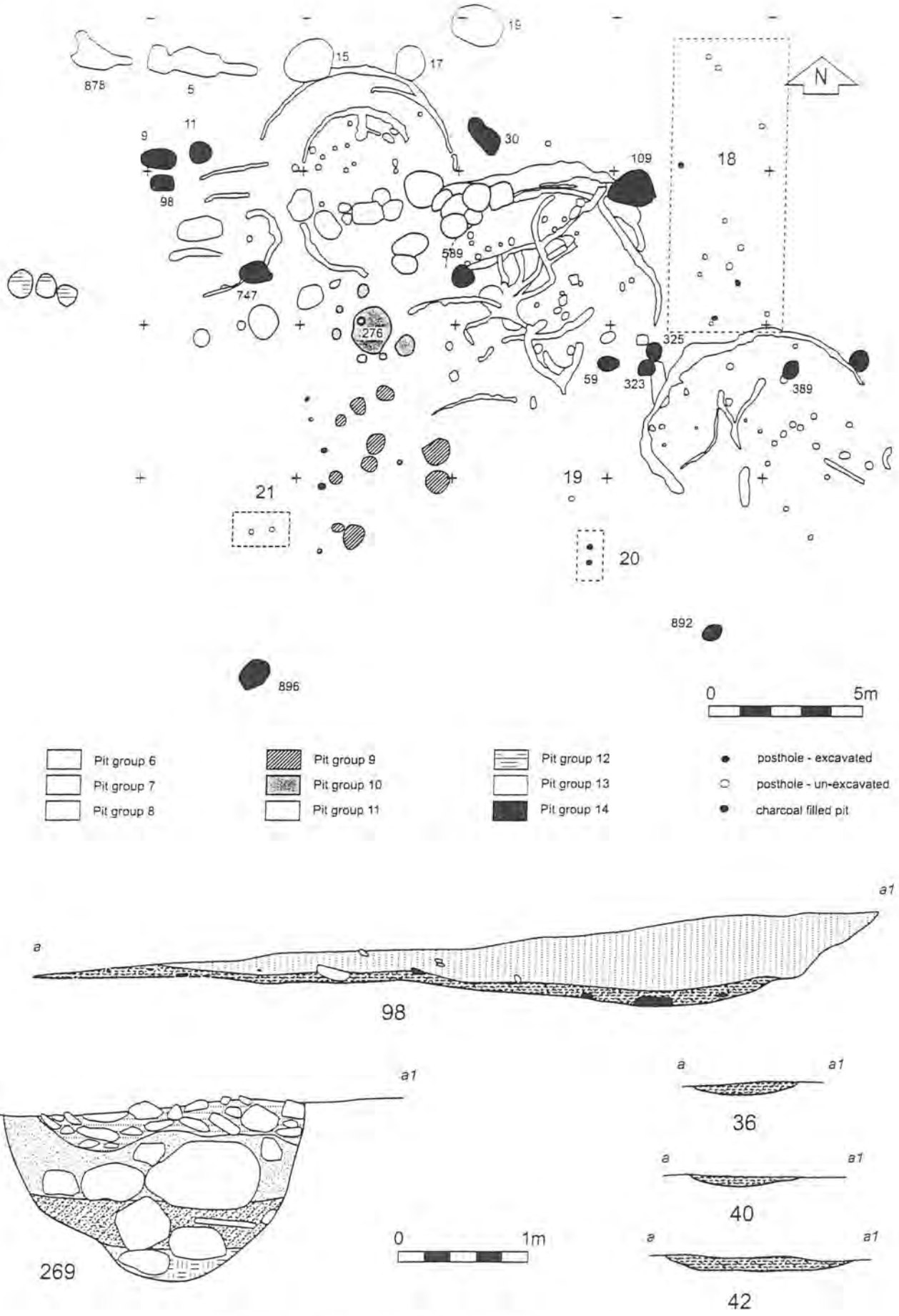
ph 185

ph 179

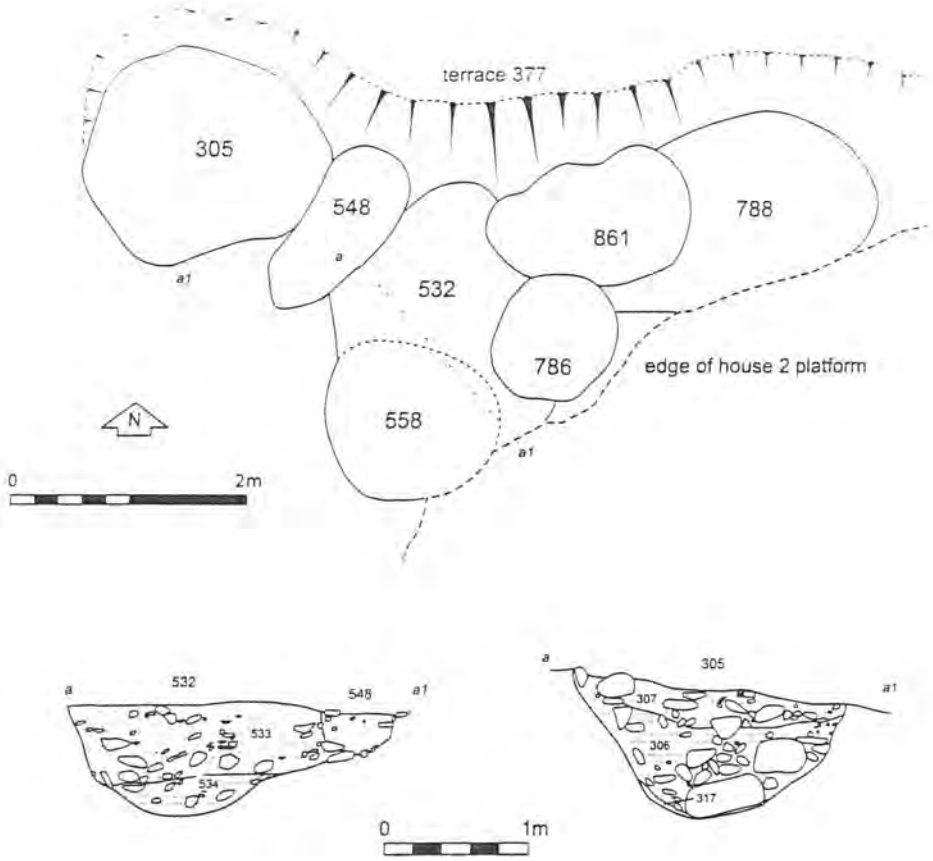


gully 78

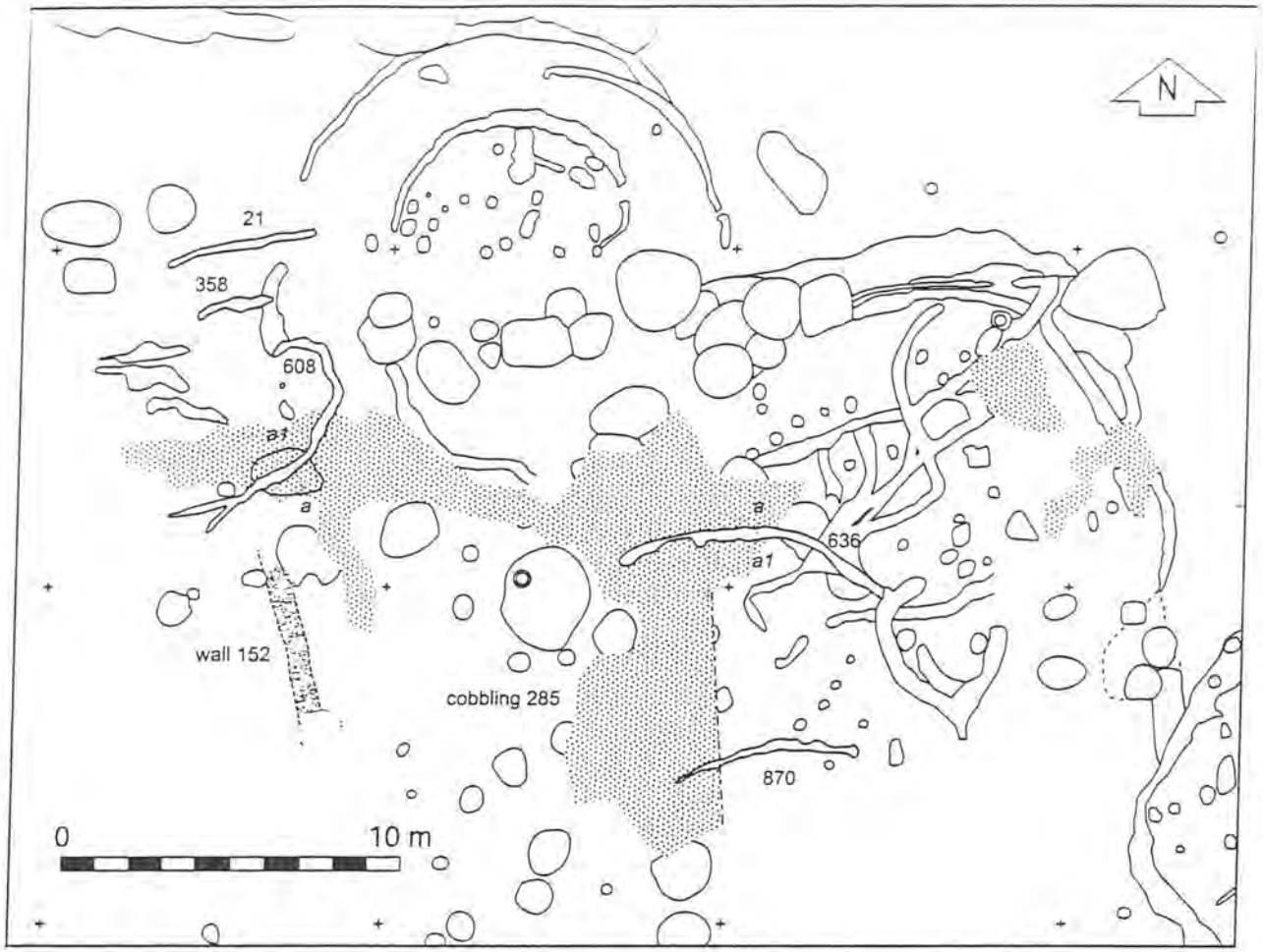
gully 78

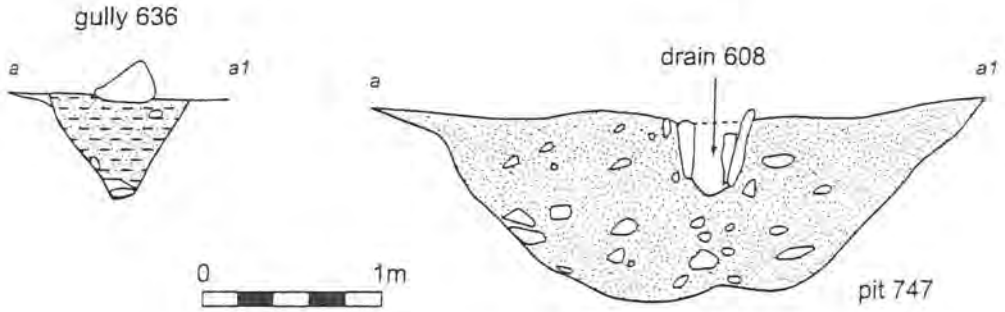


Melin y Plas : Fig. 10 - Pit groups G6 - 14 and postholes

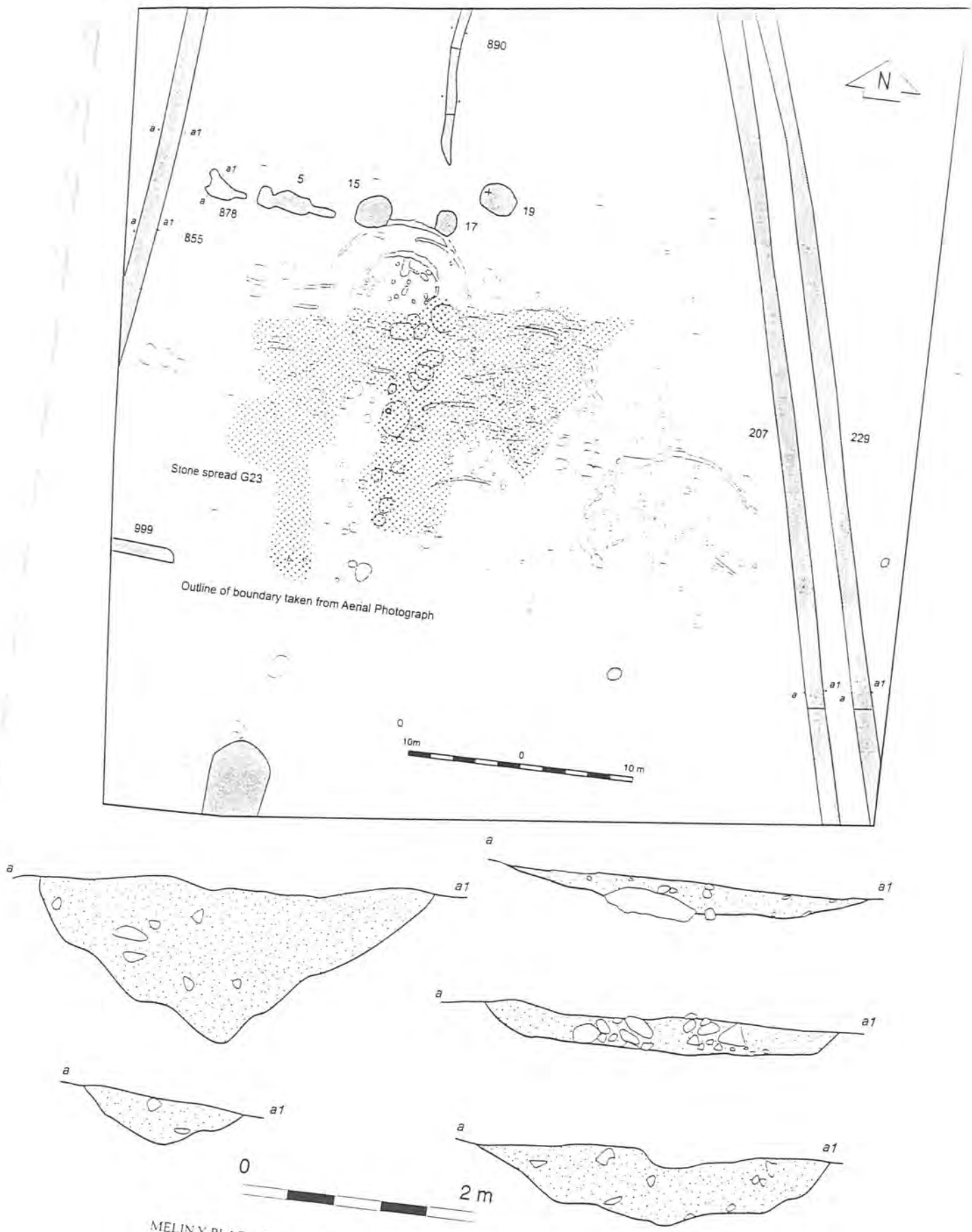


MELIN Y PLAS : Fig. 11. - Detailed plan of pit group 8 and sections through 305 and 532.

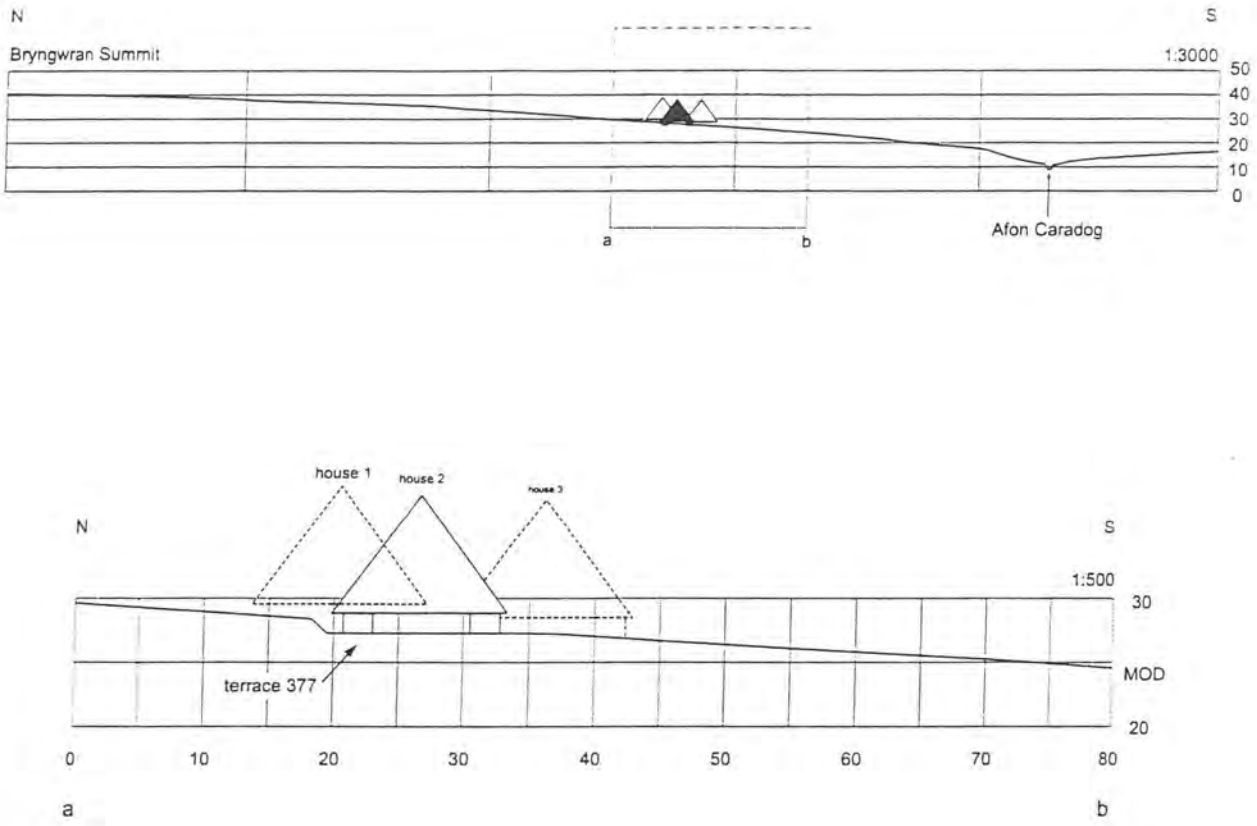




MELIN Y PLAS : Fig. 12. - Miscellaneous later features & cobbling 285.



MELIN Y PLAS : Fig. 14. - Stone spread G23, medieval and post-medieval ditches G24.



MELIN Y PLAS : Fig. 15. - Site setting and slope profile.

TY MAWR BRONZE AGE BARROW AND EARLY MEDIEVAL CEMETERY

by Jane Kenney

CONTENTS

1. INTRODUCTION

The Ty Mawr site is located within the boundaries of Ty Mawr farm, east of the Kingsland district of Holyhead, Holy Island, SH 2519 8137 (see **fig 1**). The present site has no connection with the prehistoric hut group of the same name at the foot of Holyhead Mountain. The initial evaluation excavation revealed an early medieval cemetery with associated circular features. Full excavation (carried out between January and April 1999) showed this to be a small cemetery of 43 graves, including stone-lined cists, dug graves and graves containing timber structures. The cemetery partly overlay a barrow of Bronze Age date. Worked flints and Peterborough Ware pottery beneath the barrow suggested earlier activity, possibly of a domestic nature. In addition there were postholes of an early Neolithic date.

1.1 Archaeological and historical background (fig 1)

Holy Island, located in a prominent position on the Irish Sea, has an on going tradition of sea faring and trade, which predates Christianity. Holyhead had a natural harbour, providing protection whatever the wind direction, and Treaddur Bay was a harbour in the medieval period, and probably earlier (Carr 1982, 25). The island should not be seen as isolated, but must have been connected, at all periods, to various parts of Britain and Ireland by sea routes.

There is evidence of considerable Neolithic and Bronze Age activity on Holy Island, including both artefacts and monuments. The Neolithic monuments are represented by burial chambers, of which one, Trefignath, has been excavated and consolidated (Smith 1987). Another, the Trearddur monument, can still be seen, although its interpretation is difficult, but four other sites of alleged burial chambers are no longer visible. Eight Neolithic polished stone axes have been found on the island (Lynch 1991, map 2, 62).

The Bronze Age monuments are mainly standing stones and cairns. There are eight possible standing stones recorded, including a pair at Plas Meilw, and at least seven barrows, three of which form a cemetery at Porth Dafarch. Artefacts discovered include palstaves, a bronze hoard, a macehead and a jet necklace from a cist.

The fort of Caer y Twr crowns the summit of Holyhead Mountain. Within it are the remains of a mortared structure of Roman date, possibly a signal tower or lighthouse. There is also a promontory fort at Dinas, on the coast west of Porth Dafarch.

There are several hut groups around the base of Holyhead Mountain. That at Ty Mawr, near South Stack, has been extensively excavated and was mainly occupied in the Roman period (Lynch 1991, 149), although other sites may have been in use earlier or later than this. The Roman fort, which now surrounds the church in Holyhead, is well preserved, with some of the walls surviving to nearly 9m in height.

Holy Island was of considerable importance in the Early medieval period, with several sites possibly attributable to that period. In addition to Caer Gybi, which was a *clas* or religious centre, six sites of early churches are known, and several holy wells, which may be of medieval origin. Long cist graves have been discovered at the church site of Towyn y Capel, at Porth Dafarch, cut into the barrows, and possibly at Caer Gybi.

Ty Mawr, therefore, lies within a landscape heavily used within both the main periods represented on site.

2.2 Topography and geology

Holy Island, or Ynys Gybi, lies off the north-western coast of Anglesey, separated from it by a narrow strait. Most of Holy Island is lowlying, but undulating, characterised by north-east to south-west aligned rocky ridges within intervening boggy hollows. The island is dominated by Holyhead Mountain, which stands in its north-western corner and reaches 220m in altitude.

The site of Ty Mawr is located at an altitude of about 15m OD, towards the north-eastern corner of the island. It is less than 1km from Penrhos Bay. The barrow sat on the top of a low rise, and had good visibility in all directions (see **figure 1**).

Geologically Anglesey is composed largely of Pre-Cambrian rocks, most notably the Mona Complex. These bedded rocks have undergone intense pressures leaving them deformed and folded, and volcanic events have resulted in their interbedding with lavas, ashes and tuffs. These make up much of the bedrock of Holy Island (Davies 1972).

The bedrock under the site is composed of pale green chlorite schists, part of the New Harbour Group of the Mona Complex (Keeley 1987, 35), and it is overlain by boulder clay. The soils formed over these substrates are brown earths of the Rocky Gaerwen and Trisant types (Geological and soil survey maps). These soils can carry crops or excellent pasture, and were frequently chosen for settlement in the prehistoric period (ibid). The site was under grass before the excavation, but it is likely to have been intensively improved.

A pollen study in a bog about 1km south-east of Ty Mawr (Greig 1987), suggested that the Boreal period vegetation was of a scrubby, sub-arctic type. The woodland developed in the usual sequence, from open woodland with birch to denser, mixed oak forest, but with an unusual amount of willow. The climax forest contained oak and elm, with hazel as an under-storey. A band of peat, in which little pollen survived due to the drying out of the bog, was dated approximately to the start of the Neolithic period. The band contained charcoal and other evidence for burning, suggesting forest clearance in the immediate area. Pollen from the preserved soil under the Trefignath tomb suggests that the area around was substantially cleared in the early Neolithic (ibid, 44). When the pollen record continued it showed that the forest had been replaced by grassland and arable fields. In the medieval period, and later, increased erosion into the bog indicated the expansion of arable farming.

2.3 Methods

The trial excavations demonstrated the presence of an early medieval cemetery on the site, so the aim of the full excavation was to reveal the extent of the cemetery and investigate related features. An area of approximately 3.6 hectares was stripped of topsoil by a JCB with a toothless bucket. The majority of this area was hoed clean, to enable the recognition of features. The pressure of time meant that some of the southern part of the site was no completely cleaned, and only obvious features were cleaned up for investigation. However, intensive cleaning extended more than 10m south of the southern perimeter of the cemetery.

The identification of graves was difficult because of the similarity between their upper fill and the natural subsoil. Zones around known graves and between the isolated western grave and the rest of the cemetery were intensively and repeatedly cleaned by trowelling to ensure that all graves were recognised. When no further graves were revealed by trowelling a JCB was used to reduce the subsoil, to provide a final check that no additional graves existed.

All the graves, postholes, the ring ditch [037], and the penannular feature [053] were fully excavated. Sections were dug across the other ditches and field boundaries to sample them.

All the radiocarbon dates presented below are calibrated and quoted at 2 standard deviations.

2.4 Acknowledgements

The site was excavated under the direction of Karina Kucharski, with the aid of supervisors Ian Grant and Andrew Shallcross, and the excavation team: Marie ?, Melanie ?, John B, S Hughes, Carole J, F Johnson, Liam K?, J Kenney, C Lane, D Pepper. Karina Kucharski also completed the initial phase of post-excavation work. The post excavation and writing up was completed by Jane Kenney. The project manager during both excavation and post-excavation stages was Andrew Davidson. The illustrations have been produced by A Dutton. Thanks must also go to David Longley for comments and to Margaret Mason for editing.

2. DESCRIPTION OF THE SITE AND ITS PHASES

The archaeological activity on the site may be divided into five phases, comprising pre-barrow activity, the construction and use of the barrow, its abandonment and possible deliberate decommissioning, the early medieval cemetery, and later post-medieval and modern activity. See **figure 2** for general site plan and **figure 3** for finds plot.

2.1 Phase one (fig 4)

2.1.2 The old ground surface

The construction of the barrow preserved the original ground surface below it. The A horizon was lacking, but the yellow brown silt resembled a leached B horizon merging into the unaltered subsoil. On the preserved soil were discovered several sherds of Neolithic pottery. These were mostly from two vessels, one probably an early Neolithic carinated bowl, the other a decorated Peterborough ware bowl in the Mortlake style (Gibson this volume). The sherds are all badly abraded, and must have lain on the ground surface for a long period before the barrow was constructed.

Occasional flint flakes were recovered from beneath the barrow, and there was a loose concentration of flints amongst the graves to the north of the barrow. The majority of the tools are consistent with an early to middle Neolithic date, and most were knapped on site. The only diagnostic item was a fragment of leaf-shaped arrowhead (Smith, this volume). A perforated pebble and 5 hammer stones were recovered from the barrow ring ditch, and seem to have been incorporated into the barrow revetment (context 038), but probably originated from the Neolithic activity. The hammer stones also demonstrate that flint knapping occurred on site. The pottery may indicate the domestic nature of the activity, and flint knapping would be consistent with this, but there is no firm evidence that this was a settlement site.

Within the preserved ground surface were the remains of several hollows, some interpreted as treeholes; one of the latter contained sherds of the Mortlake vessel. The trees were obviously removed before the barrow was constructed, and may represent Neolithic clearance of the area. The pollen work on and near the Trefignath tomb showed evidence of Neolithic forest clearance (Greig 1987, 42, 44).

Charcoal from the old ground surface was dated to 4920-4680 BC (Beta-152585). The fifth millennium BC witnessed the transition from Mesolithic to Neolithic in Britain, but most current evidence suggests that this occurred towards the end of the millennium. This early fifth millennium date can probably be referred to as late Mesolithic, but no diagnostic Mesolithic artefacts were produced by the pre-barrow phase activity. The survival of Mesolithic charcoal here is unexpected, considering the quantity of later activity in the area, but incorporation into the turf must have protected it. This raises the possibility of late Mesolithic activity on the site. All the identifiable charcoal from the sample was *Quercus*, so this may indicate the first clearance of the oak forest in the area.

2.1.3 Postholes

Several postholes, many of them containing burnt material, were discovered scattered amongst the graves. The postholes were between 0.16 and 0.30m deep and between 0.24 and 0.60m in diameter. Most of those in the northern part of the site contained packing stones, though a small group in the southern part of the barrow (400, 410, and possibly 408) lacked packing stones. At the eastern end of grave 161 was a short slot [012], running perpendicular to the long axis of grave. Feature 012 measured 1.8 x 0.4m, and was up to 0.16m deep. It was filled with stones set at an angle, some of which were grouped as if forming the packing around posts. The settings for up to three posts could be identified. On the western edge of the cemetery, cut by grave 064, was a bowl-shaped feature, with evidence for *in*

in situ burning [079]. This was interpreted as a hearth, and may be related to the same activity that produced the postholes.

The lack of stratigraphy over much of the site made it difficult to assign the postholes to a specific phase. In no case did a grave cut one of these postholes, and although several postholes lay within the area of the barrow, the shallowness of the deposits made their relationship with the barrow difficult to establish. Posthole 331 was located too close to the edge of the barrow ditch for the two features to be contemporary, but not close enough for any relationship between them to be preserved. Many of the postholes formed lines nearly parallel to the rows of graves, and most were located within the proximity of at least one grave. This led to the initial interpretation that the postholes were related to the cemetery.

Initially two postholes [234 and 344] were dated; 234 lay just outside the ditch of the barrow and 344 just inside. Postholes 234 and 344 produced dates of 4980+/-210 BP (4250-3350 BC, Beta-152580) and 4620+/-110BP (3640-3020 BC, Beta-152582), respectively. The dates are early Neolithic, and overlap at 2 sigma, but the errors are unacceptably large so two further dates, from postholes 121 and 400, were carried out to confirm them. Cut 121 was located close to the other dated postholes, and was dated to 5110+/-60 BP (4030-4020 and 4000-3770 BC, Beta-156488). 400 lay further south, forming part of the group of smaller postholes lacking packing stones. It was dated to 4550+/-50 BP (3490-3460 and 3370-3093 BC, Beta-156489). In addition a charcoal rich layer from the hearth, cut 079, was also dated to investigate the relationship of this feature to the postholes. The hearth fill produced a date of 5150+/-60BP (4040-3780 BC, Beta-156490)

The only identifiable charcoal from posthole 234 was willow or poplar, which implies that the charcoal was not from a post burnt *in situ*. 344 contained some fragments of *Quercus*, which might possibly have originated from a burnt post. However, there were also traces of alder, birch and hazel, suggesting more general burning. It is probable that the charcoal was deposited in the postholes with the backfill around the post. The only identifiable charcoal in samples from 400 and 121 was *Quercus* heartwood, more suggestive of *in situ* posts.

The dates from posthole 121and the hearth [079] are statistically indistinguishable; they are remarkably close if the second possible date range form the 121 sample is accepted. There is little doubt that the hearth is related to the postholes. The date from 234 also overlaps with these dates, but its large error makes this inconclusive. Postholes 344 and 400 seem to be dated a little later, as their dates do not overlap with the other dates at 2 sigma. Posthole 400 and those close to it may represent slightly later Neolithic activity, but posthole 344 would seem to form a coherent part of the pattern of earlier postholes.

2.2 Phase two (fig's 5A, 5B, 6)

This phase sees the construction of the barrow, which survived primarily as negative features, with only slight remains to identify an earthen mound. A ring ditch [037] defined the monument. Over the treeholes and old ground surface were patches of a brown clay layer with charcoal (168), possibly initial levelling prior to construction of the barrow, or perhaps part of the body of the mound. The ring ditch [037] formed a circle nearly 13m in diameter, and the ditch was 1.1-1.3m wide and up to 0.45m deep, with a broad, flat base, giving a wide U-shaped profile.

The ditch was largely filled by a reddish brown, silty sand (contexts 190 and 187), very similar to the natural subsoil. This consistently sloped down the outer edge of the ditch, as if dumped in from the outside. Its texture, and lack of contamination with other deposits, suggests that it was upcast from the ditch, deposited immediately outside, and later deliberately dumped back in. This implies the presence of a bank surrounding the monument, which was redeposited in the ditch when the monument went out of use. Thin lenses of silt (196, 352, 359) formed the primary deposits in the ditch, beneath the backfill.

A dark brown stony layer, no more than 0.12m deep (199 and 078), may be the remains of the mound, but it was just below the topsoil and severely disturbed by bioturbation. A penannular structure [cut 53] inside the ring ditch cut through this layer, so there must have been some material deposited inside the ditch over the contemporary ground surface.

The other fill of the ring ditch (fill 038) also provides evidence for a mound or bank inside the ditch. The barrow was first visible as a circle of stones. As these were excavated their angles of slope indicated that they had tumbled into the top of the ditch. These stones are interpreted as the remains of a revetment, which had collapsed into the partly filled ditch. There were no stones large enough to be kerbstones, so the structure is imagined as a drystone revetment wall to a mound or bank inside the ring ditch.

One internal structure may be associated with phase 2. A stone slab (103), set in the old ground surface, and carefully packed round with smaller stones, was discovered in the western quadrant of the barrow. This seemed too level and carefully placed to be a natural stone. This feature was out of alignment with the later cemetery and too small even for an infant burial. It may, therefore, represent the base of a cremation burial cist, part of which would have lain within the fabric of the barrow. No other traces of cremation burials were discovered, but these may have been within the body of the mound, and never cut the preserved ground surface. The barrow seems to have been completely flattened by agricultural activity, probably quite recently, causing the loss of almost all the mound and anything within it.

2.3 Phase three (fig 6)

This phase represents the abandonment of the barrow. The ring ditch was open long enough for a thin layer of natural silting to have occurred (contexts 196, 352, 359), although this could have been produced by a single winter's erosion. The ditch was then partially in-filled with material from the outer bank. The homogenous, unstratified nature of this back-fill deposit discounts gradual erosion as the process by which the ditch was in-filled. It is more likely to represent the deliberate slighting of the bank to decommission the barrow relatively soon after it was constructed. The stones of the revetment then collapsed into the partly filled ditch, on top of the bank material. This may indicate that the barrow was also levelled, but equally it could be entirely natural, the stones collapsing as the mound eroded.

No suitable material was recovered to allow the dating of the construction of the barrow. A sample from the upper stony fill (context 038) of the ring ditch was dated and produced a middle to late Bronze Age of 1110-840 BC (Beta-152581). This context is interpreted as representing the collapse into the ditch of the stone revetment to the barrow mound. As this would indicate the abandonment and deterioration of the monument, the radiocarbon date would fit reasonably well with expectations.

Very little of the charcoal from this sample could be identified, but 1g was Ulex/Cytisus (gorse/broom), implying an open landscape over the abandoned barrow.

2.4 Phase four (fig's 7, 8)

This phase, separated from the former by some 2,500 years, sees the development of a small cemetery of 43 inhumation graves. Most of the graves were stone lintel graves, but the cemetery also included simple dug graves and graves containing structures interpreted as timber cists. The graves, aligned approximately east-west, were arranged in four rows running roughly north to south, the southern ends of which cut into the remains of the barrow.

A single, isolated grave [214] lay to the east of the main group. It was on the eastern edge of the investigated area, so it is not known whether there were further burials to the east, but the area to the west, north and south of this grave were intensively searched for graves, without success. The grave had a stone cist, and traces of a lintel, and was similar to other graves in the cemetery, with the exception of a cairn built at its western end. Only one other grave at Ty Mawr, grave 075, had a cairn.

Bone survival was extremely poor, due to the acidity of the soil, and only two graves contained fragmentary skeletal remains. However, in some of the slab-lined cists the enamel of the crowns of the teeth survived.

See the appendix for a table summarising the main features of each grave

2.4.1 Grave types

Number of graves in each category of grave type:

Total stone long cist graves 29
- Complete cists (side slabs, basal stones and lintels) 22
- Cists without stone lintels 6
- Cists without basal slabs 1

Total timber cist graves 10
- Timber cist graves with timber stains 5
- Timber cist graves without timber stains 5

Dug graves, no lining of any sort surviving 4

Total number of graves 43

2.4.1.1 Stone long cist graves

The stone long cist graves were constructed of local micaceous schist slabs, usually a vertical slab at each end, several side slabs, and three or four slabs each forming the floor and the lintel capping. The cists were built so that the western end was slightly raised, the eastern end was often slightly narrower and this, coupled with the occasional teeth found at the west ends, indicates that the bodies were buried facing the east in Christian fashion. The single exception to this was a child's grave [100] dug into the barrow. In this burial the cist was broader at the eastern end, suggesting that the body lay facing west. Six stone cist graves had no evidence of lintels, and may have had wooden, rather than stone capping [008, 010, 064, 075, 097, 214]. A single example [68] lacked basal slabs.

Two graves with stone long cists [75 and 214] had small cairns over their western ends, presumably as markers. Cairns are occasionally found in other early medieval cemeteries, such as Hallow Hill, St Andrews, where 3 of the 145 graves dug may have had cairns (Proudfoot 1992, 415).

2.4.1.2 Timber cist graves

Of particular interest are the ten graves that had fairly small stones lining the edges of the grave cut. In some cases, eg grave 110, the stones were built up to form a crude drystone revetting against the long sides of the grave, but this structure did not seem to be self-supporting. In other cases there was a row of stones down each long side, and sometimes as few as two or three stones. Grave 304 had a very similar stone revetment to grave 110, but in this case the timber structure inside was preserved. Four other graves [150, 216, 252, 283] also produced traces of timber structures. This demonstrates that the stones were packing to support the timbers, not a grave lining in themselves.

The timber survived as dark, organic soil stains, and blackened fibres, which were sufficiently undisturbed to define the planks lining the graves. In two of these graves [216, 304] stains from the bodies also survived, along with very fragile fragments of bone. Two of the graves [304 and 283] with the best preserved timber remains demonstrate that these structures were composed of planks forming the sides and ends of a timber cist. This was not a coffin in the strict sense as no nails were discovered. In grave 110 three slabs, too small to be lintels, had fallen in on top of the primary fills of the grave. Probably these had been placed on a wooden cover to the grave, and had fallen in only when this cover had decayed. It is assumed, by comparison to grave 110, that the lintels of the other timber cists were also of wood. The preserved remains of timber covers have been recovered from other sites, eg grave 66 at Capel Eithin (White and Smith 1999, 130).

It appears that this type of grave can have many or few packing stones, but that the presence of smaller stones along the sides of a dug grave should be taken as evidence of a timber cist. The interpretation of this burial type as a timber cist grave will be further discussed below, and examples of similar features from other sites will be given.

2.4.1.3 The dug graves

Four of the graves had no trace of a cist either in timber or stone, and were simple dug graves [175, 299, 313, 328]. However, grave 313 was so badly damaged by the post medieval field boundary that the absence of a cist could not be proved. This is a very small sample, so it is hard to determine the

significance of the absence of timber traces in these graves. The variability of preservation in the timber cist graves demonstrates that timber remains would not inevitably survive, even though they do in other graves in the cemetery. The complete lack of stones from these graves is more convincing in suggesting that there was no timber cist within these graves, but there were other methods of protecting the body, which would be even less likely to be preserved. The use of shrouds (Price 1987, 60) and wattle-lining (White and Smith 1999, 132) has been suggested from some cemeteries.

2.4.2 Skeletal remains

The preservation of skeletal remains was very poor, due to the acidity of the soil, but sufficient evidence of bodies remained to be sure that the majority of the graves had been used for burial. In several cases only the enamel of the crowns of the teeth survived, but deposits of dark, organic silts occasionally indicated the rough shape of the body. The two graves with the best preserved body shadows, 216 and 304, also had some fragile fragments of bone surviving. In grave 216 only the mandible, including some teeth, and parts of the skull survived, but the body shadow indicated that the skeleton had been adult. In grave 304 parts of both femora, and the distal end of the left tibia, were present, but the bone was so fragile that it did not survive excavation and lifting intact. The maxilla and mandible, complete with teeth, were preserved essentially as a cast in the soil. This was detailed enough to identify the teeth present (Brickley this volume).

Especially around the skull the traces of the body were not merely stained soil, but appeared to be formed by a process involving the replacement of the bone and some body tissue with soil minerals. The remains of tissue over the skull was dark brown in colour, but the traces of the skull itself was of a more yellow colour, even though the texture of both were similar. This suggests that the processes involved distinguished between bone and tissue, preserving the difference between them.

Many stone cist graves had deposits of pinkish brown, silty clay lying directly on the basal slabs. This was interpreted as a product of the decomposition of the body. At Hallow Hill cemetery, St Andrews (Proudfoot 1992, 400) a similar 'sticky clay' was found near the skeleton in one cist, and this was also assumed to be 'the result of tissue decay'.

2.4.3 Orientation

The above table lists the orientation of each grave as measured from the site drawings along the mid-line of the grave. The orientation is given to the nearest 10 degrees east of grid north. This approximate measurement was chosen to avoid false precision. Judging the mid-line of the grave is somewhat subjective, and it is unlikely that the grave diggers surveyed in the graves with scientific precision.

The Ty Mawr graves are all orientated between 90 degrees and 120 degrees east of north, with 10 graves orientated almost exactly east-west. In all cases, but one [grave 100], the head was at the western end.

2.4.4 Other related features (fig's 7, 8)

2.4.4.1 The penannular enclosure

Inside the ring ditch of the barrow was a slot [053], which was nearly, but not quite concentric with the ditch, and was probably penannular, rather than a complete circle. This inner ring was approximately 6.5m in diameter and the slot measured up to 0.65m in width, and varied in depth between 0.1 and 0.4m in depth. It contained at least three post-impressions in its base, and a complex of deposits best interpreted as the packing around posts of various sizes, thus suggesting upright posts forming a timber wall or structure. The south-eastern arc ended in a rounded terminus. The north-eastern quadrant of the ring was particularly shallow, and was removed before being identified during the machining of the evaluation trench. The other terminus was therefore lost, but the gap in the ring was orientated roughly towards the east. A scatter of stones (95, 96) just south of and cut by grave 42, may represent the continuation of this feature, but it was disturbed and confused, probably by tree roots, so little sense could be made of it on excavation.

Close to the surviving terminus was a posthole (cut 339) containing a very charcoal-rich fill, (context 356). The cut was 0.3m deep and c.0.5m in diameter.

It appears that this penannular structure was deliberately demolished. The packing stones (054), which fill the upper part of 053, were rather randomly positioned, and the actual locations of the posts were not evident. This is probably due to the posts being removed, and the stones therefore being disturbed.

The phasing of this feature is difficult because of the very shallow stratigraphy on the site; however, slot 53 clearly cut through the barrow mound material, and therefore post-dates at least the initial deposits of the barrow mound.

A sample from the fill of the penannular slot (context 054) was dated in an attempt to demonstrate whether this feature was part of the barrow or associated with the cemetery. The fill of posthole 339 was also dated to test its association with the penannular structure. The date from the slot was 4840-4700 BC (Beta-152584), and that from posthole 339 was 4790-4450 BC (Beta-156655). Both dates overlap at 2 sigma with that for the ground surface (4920-4680 BC (Beta-152585)); the date from the penannular structure is particularly close, overlapping significantly at 1 standard deviation. These three dates should be considered as statistically indistinguishable. In all three samples all the identifiable charcoal was *Quercus*.

A shallow rectangular feature, cut 291, has also been assigned to this phase. It measured 0.6 by 0.46m, with rounded corners, and a slight triangular projection at its western end. It was 0.1m deep, with a flat base and steep sides, and orientated 130 degrees east of north (ie on roughly the same alignment as the graves). It was filled with greenish brown silt (292) similar to the capping of the graves. Indeed it was, before excavation, suspected to be a child's grave. No stratigraphy at all survived in this area, and the phasing and function of this feature rely entirely on its location just north of the centre of the penannular slot. The significance of this feature is discussed below.

2.4.4.2 The ditches

With the exception of 214, all the graves are restricted to a small area between the junction of two ditches, 006 and 159. There are numerous ditches, slots and furrows within the investigated area, several of which produced no dating evidence. Ditches 020, 055, 056 and 057 are probably related to the post-medieval field system (see below), but the close spatial relationship between ditches 006 and 159 and the cemetery make it possible that they have an earlier origin. Ditch 159 is particularly significant. It was 1.2m wide and c. 0.4m deep, with a neat, U-shaped profile. It was parallel to the graves in the north-western corner of the cemetery, and did not cut any of the graves. The position of grave 299 in relation to the ditch is particularly striking. The grave seems to be so perfectly parallel to the ditch that it must have been aligned on it.

Ditch 006 is nearly, but not perfectly perpendicular to ditch 159. It was c. 1m wide and 0.45m deep, and also roughly U-shape in profile. Like 159 it did not cut any graves, and lay close to the eastern-most graves in the cemetery, though the alignment of the graves changed slightly in the north-eastern corner of the cemetery, and none of the closest graves were perpendicular to the ditch. Although ditch 020 has confused the relationship between ditches 006 and 159, enough natural sub-soil survived to demonstrate that they had never actually joined, but that there was a gap between them.

159 continued well beyond the cemetery to the west, and 006 continued to the north. It probably also continued to the south, but was not followed to the limits of the excavated area. Therefore, if these ditches were early medieval, they were not originally constructed as a boundary to the cemetery. Rather, the cemetery seems to have been situated in the corner of an existing enclosure, and designed to fill the area between the barrow and the enclosure's corner.

Other possibly related features include two parallel furrows [060 and 061] to the north of ditch 159. These are parallel to the ditch, suggesting they were furrows in a field defined by the ditch. The 18th century map (Penrhos II, 772) indicates ridge and furrow running ran north-south, parallel to ditch 020, so it is unlikely that the furrows date from that period. Somewhat more enigmatic were two shallow ditches, 016 and 018, positioned perpendicular to one another. The latter was parallel to ditch 006. These were only 0.6m wide, but 0.35m deep, and were initially thought to be foundation trenches. However, excavation failed to reveal traces of a built structure or stone robbing, although some lime mortar was recovered.

Summary of features possibly related to the cemetery
Boundary ditches: 006, 159
Other ditches or furrows: 016, 018, 060, 061

2.4.4.3 Artefacts

Very few artefacts can be attributed to phase 4. One fragment of unidentifiable ceramic and three lithic pieces were residual within grave fills. A perforated slate fragment was recovered from a grave, but this could also be residual from the Neolithic occupation. An oyster shell was found in the upper fill of grave 304 and a periwinkle shell came from the upper fill of grave 387, but there was no evidence of them being deliberately deposited in the graves. A fragment of a bone comb, initially believed to be medieval, was concluded to be late post medieval in date (Bevan, this volume).

There are numerous examples of quartz pebbles being deposited in early medieval graves (Llandough (Thomas and Holbrook 1996, 76); Isle of May (Yeoman 1999, 194), Whithorn (Hill 1997, 469); Ardnadam, (Rennie 1984, 265)). To test whether this had occurred at Ty Mawr quartz pebbles were routinely collected from the grave fills, and a sample was collected from the general area, while cleaning back, in order to provide a comparison. Quartz was found in the fill of 8 graves, but there was little difference between this and the quartz in the comparative collection. In some graves there were slightly higher proportions of waterworn pebbles than were found generally, but these pebbles were naturally present in the glacial till. It appears that at Ty Mawr the quartz pebbles were a natural component of the subsoil, and were only accidental inclusions in the grave fills.

2.5 Phase five (fig's 2, 9)

A number of ditches cross the site, mostly running either parallel, or perpendicular, to the current field boundaries. Some of these may relate to the early medieval activity (see above), but others contained post-medieval artefacts and corresponded quite closely to the map evidence (figure 12). Ditch 020 contained post-medieval pottery, glass and metal objects, and can be identified fairly confidently with the north-south boundary shown on the 1817 and 1840 maps (Penrhos II.804, tithe map). Ditches 055 and 056 are probably the boundaries shown crossing on the 1769 map (Penrhos II.772). 057 is parallel to 055, and probably also related to this field system. A possible furrow [230] is parallel to ditch 056, and 232 is roughly perpendicular to this. These are presumably also related to the 18th century field system, although they did not produce any dating evidence. The current field boundaries were probably laid out around 1846-8 when the railway was constructed (GAT 204, 251).

The ditches, 159 and 06, discussed above as possibly medieval also appear on the post-medieval maps. Ditch 159 is probably the main east-west boundary running across the area, though the alignment is slightly askew. Ditch 06 may be an earlier version of ditch 20. The continued use of these ditches as boundaries in the post-medieval period does not rule out the possibility of an earlier origin, though their interpretation as medieval would be more convincing if they failed to appear on later maps.

The cemetery lay within a field named as 'Cae Rodyn' (*sic*) (kiln field) on the 1769 map (Penrhos II.772), though no trace of a kiln was found, during the excavation. There was no indication in the field names of the cists having been known about by the local population. This demonstrates that, while field names can sometimes be useful, they should not be used to demonstrate the absence of important sites.

3. DISCUSSION

3.1 Pre-barrow phase

Neolithic occupation on the site is indicated by the artefact scatters and by the dates from the postholes. The Peterborough ware sherds were all recovered from below the protection of the barrow. Previously there were only four findspots with Peterborough ware from Anglesey (Gibson 1995), and the present work on the A55 has added three new sites Cefn Du, Pen y Mynydd and Ty Mawr. On all three sites the pottery is associated with slight and amorphous features, rather than with clear occupation evidence. This is a common problem for Peterborough ware throughout Wales (Gibson 1995, 29). Gibson lists three sites where Peterborough ware was found under Bronze Age cairns, and in two of these cases the pottery was associated with domestic contexts, including house plans. However, the pottery is also associated with a variety of sites including ditched enclosures and burial sites. Examples of the latter in Anglesey come from Bryn yr Hen Bobl and Trefignath. The Peterborough ware at Trefignath occurred in the portal of the eastern chamber, along with charcoal dated to the end of the first millennium BC and sherds of Romano-British pottery, suggesting repeated squatter occupation of the entrance area (Smith 1987, 33).

Although Peterborough ware can come from sites with various functions it seems probable that this pottery at Ty Mawr represents Neolithic occupation of the site. Its presence below the barrow may be coincidental, as sherds deposited elsewhere would not have survived.

Flints were also discovered under the barrow, but the scatter in the northern part of the cemetery supports the idea that early occupation of the area was more widespread. The flint assemblage was described as a 'relatively "normal" assemblage' (Smith this volume), with little evidence of mixing from different periods. There was a scarcity of diagnostic pieces. The leaf-shaped arrowhead was of a type (Green's type 4a or b) generally assumed to be early Neolithic, but which could have been used at any time into the late Neolithic (Smith this volume). A thumbnail scraper and spurred piece are more typical of the late Neolithic and early Bronze Age, but similar pieces are found in an early Neolithic context at Trefignath chambered tomb. It is difficult to ascribe any of the assemblage to the period of barrow construction and use, but the assemblage does indicate activity on the site in the early or middle Neolithic.

The majority of the lithics were in secondary contexts, and Smith (this volume) estimates that as many as 800 lithic items might have been lost in the removal of the topsoil. The exact nature and location of the activity is therefore difficult to assess. The leaf-shaped arrowhead may represent an isolated object lost during hunting, but the presence of a scraper and the evidence for on-site knapping is indicative of occupation on the site.

The postholes and the related hearth feature [079] consistently produced early Neolithic dates, but these are significantly earlier than the usual date for Peterborough ware. The radiocarbon dates on Peterborough ware from Wales follow national trends, which suggest that the use of Peterborough ware was restricted to the period between 3500 and 2500 BC (Gibson 1995, 30). The date from posthole 400 does comfortably fall within this period. Postholes 400, 410, and the possible posthole 408 may be associated with the activity which produced the Peterborough ware, all of which was found just to the west of these postholes.

The postholes in the northern part of the site are generally of a different character, most having stone packing, and several being quite large. The dates suggest that these are the result of an earlier phase of activity probably related to the flint scatter and the hearth. The postholes can be compared to known Neolithic structures. Ireland has a wealth of rectangular Neolithic buildings, mostly slot built, although separate posts are often also used in the construction. They often have length to breadth ratios of between 2:1 and 3:1 (Grogan 1996, 43). In Britain rectangular buildings are more often post-built, although there is a variety of building styles and sizes (Barclay 1996, 71-73, Darvill 1996). In size they vary between 3.5m by 2.3m for the post-built structure at Gwernvale (Britnell and Savory 1984, 52) to the large slot-built structure at Balbridie, Aberdeenshire, which measured 24m by 10m (Ralston 1982).

There are currently three post-built Neolithic structures known in Wales. Under the long cairn at Gwernvale, Brecknock, a small 6 post structure was found adjacent to a slot-built structure (Britnell and Savory 1984, 50-54). Darvill (1996, 86), rather unconvincingly, joins these two features together

into a single, large building, but the excavators themselves considered the six poster more likely to relate to the cairn, and to be stratigraphically separate from the slot-built structure (Britnell and Savory 1984, 141). At Clegyr Boia, St David's, Pembrokeshire, two rectangular houses were uncovered: house 1, constructed of posts with stone revetment, measured 7 by 4m. House 2, which the excavator interpreted as circular, has posts defining a rectangle measuring 4.6 by 3m (Lynch et al 2000, 49, Williams 1952, 24-29). Much closer to Ty Mawr was the structure at Llandegai, Gwynedd. Postholes defined a tripartite building measuring 13 by 6m (Lynch et al 2000, 51).

From these comparisons it can be concluded that a rectangular pattern of posts, with a ratio of length to breadth of between 2:1 and 3:1 might define a Neolithic house. Five of the Ty Mawr posts (224, 228, 234, 256, 344) could be interpreted as such a structure if the ring ditch had destroyed the sixth post. This feature would be approximately 4m long and 2m wide, placing it at the smaller end of the range, but with appropriate proportions. However, this does not account for the line of posthole continuing further north, or for the apparent east-west line of smaller postholes comprising 121, 234, 256, and 318. Central post lines supporting a ridge pole are not found in the larger Neolithic houses (Darvill 1996, 86), so the line of posts between 256 and 012 cannot be interpreted in this way. The position of the hearth [079], at some distance from the postholes, is suggestive that the structure is not domestic. Hearths do occur outside Neolithic houses, but they are positioned only just outside the walls.

A simple interpretation of the posts as a rectangular house is not possible. Alternatively the posts can be seen as parallel lines about 2m apart and aligned nearly north-south. The longest of these lines extends for nearly 8m, and may have been over 9m long if a posthole was lost due to the construction of the barrow ditch. The western line is only 4m long, but it is possible that grave 072 destroyed a post. To the north of grave 072 is a grave free area, so there can have been no further postholes in this line, until grave 218, which could have destroyed a theoretical northern-most post. The stone-filled postholes were easier to identify on the ground than the graves, so it is unlikely that any surviving were missed in the excavation.

The most remarkable feature of these lines is that they are perpendicular to ditch 159, nearly parallel to the rows of graves, and aim at the centre of the barrow. The similarity in alignment seems too close to be coincidental, yet it seems unbelievable that they influenced the later developments on the site millennia after the posts had rotted away.

3.2 The Bronze Age barrow

Before discussing this feature as a barrow it is worth ruling out other possible interpretations. The Ty Mawr feature is very similar in size and proportions to another site type, the clay-walled round house, which was also in use in the Bronze Age. The site of Meyllteyrn Uchaf on the Llyn peninsula (Ward and Smith forthcoming) provides a good comparison, and is, in fact, the only excavated example in North West Wales of that period. The three middle Bronze Age roundhouses revealed by the excavation had many features in common with the Ty Mawr structure. They all had internal wall slots which held wattle fences and varied between 4.2m and 6.5m in diameter, very similar in appearance and size to the inner penannular slot at Ty Mawr. There were also postholes at the terminals of these penannular slots, which formed the start of a porch. House C had a stone revetment, though this was internal. The houses were surrounded by eaves drip gullies, and a space between 1.5m and 2.5m wide between the drip gully and the inner slot represented the thickness of the clay wall. The overall diameter of the houses was up to 12m. The sizes and proportions are remarkably similar to the Ty Mawr feature, and if the inner penannular slot is included as a contemporary part of the feature, it could be seen as a clay-walled roundhouse.

The dates for the abandonment of the roundhouses, ranging from c.1400-800 BC, are indistinguishable from the date of 1110-840 BC (Beta-152581) for the abandonment of the Ty Mawr feature.

The differences are, however, of greater significance than the similarities. Two of the houses had traces of hearths, which were not found at Ty Mawr. More importantly the ring ditch at Ty Mawr was regular and neatly cut, very nearly circular and with a consistent U-shaped profile. The drip gullies at Meyllteyrn Uchaf were not investigated in detail, but the plans suggest irregular features, probably largely formed by the rain running off the roof. The Ty Mawr ring ditch does not resemble a drip gully.

The identification of a floor level at Ty Mawr is not possible. The old ground surface was clearly defined, but produced no evidence of it being a Bronze Age occupation surface. Above that was the mixed, stony layer (199/78) interpreted as traces of the barrow mound. This is clearly not a floor surface and the inner penannular slot cut this layer. If the feature were a house there would be no reason to spread this deposit, totally unsuitable as a flooring surface over the ground. As this layer has survived, a trace of the clay walls might be expected to be present, but there was no difference between the layer 199/78 outside and inside the penannular slot. The interpretation as a roundhouse does not explain the probable external bank at Ty Mawr.

The phasing of the penannular slot [cut 53] is important in the interpretation of the feature. Stake circles, often numerous concentric ones, seem to be relatively common in Bronze Age barrows (Ashbee 1960, 27). Brenig 45 has an inner stake circle similar in size and rather irregular shape to Ty Mawr, but it is composed of discrete stakeholes. Brenig 45 also had a palisade trench forming a kerb. This appeared as a narrow ditch with traces of timber post sockets within it (Lewis 1993a, 68-70). Although it presumably performed a different function to the feature at Ty Mawr, the construction technique resembles the inner circle at Ty Mawr better than the stake circles do. However, most of these stake circles and palisade trenches were found beneath mound material, and there is little evidence that they were ever inserted later through the mound. Although the association of the penannular slot with the ring ditch cannot be entirely ruled out, it may be that parallels for this feature are best sought amongst early medieval sites.

The absence of burials or cremations does not rule out that the structure was a barrow. Although in most barrows cists are dug into the subsoil below the barrow, cremation burials can be placed within the mound itself, without disturbing the subsoil. A good example of this on Anglesey is provided by the Llanddyfnan barrow (SH 508 784), where all the urns discovered were within the barrow mound, apparently placed there as the mound was constructed (Lynch 1991, 173). If this occurred at Ty Mawr, where almost the entire mound has been subsequently removed, there would be no trace of the burials, and even the sherds of the urns would have been removed.

The Ty Mawr feature is a little small compared to many barrows, and its ditch is narrower than some, though quite comparable to the Brenig turf mound barrows, and other sites further afield. The date of the construction of the feature could not be established, but the middle/late Bronze Age date from its abandonment suggests that it was built at some time during the early or middle Bronze Age. There seems to be no objection, therefore, to describing the feature as a Bronze Age barrow.

The barrow is atypical of barrows in Wales because of its ditch and probable external bank. On Anglesey in particular as ditches are rare and external banks do not generally occur around Welsh barrows (Lynch 1991, 156). However, Bronze Age barrows can be very variable in style, even in one small area, as emphasised by the Brenig excavations (Lynch 1993).

Although none of the barrows at Brenig are identical to Ty Mawr several have individual features in common with it. Brenig 47 has a circular spread of stones round the barrow, which has been described as a 'stone skirt'. This overlies a partial, shallow rock cut ditch. The sections show the stones tipping into the ditch in a way reminiscent of Ty Mawr (Lynch 1993, 41-44). Brenig 42 was the only barrow in the group to have a real ditch; this was 0.5m deep, between 0.8 and 1.5m wide, and had a neatly cut U-shaped profile. It also had a bank composed of the ditch material, dumped on the inside of the ditch before the mound was constructed (Lewis 1993b, 47-48). Brenig 45 had a stone wall, which seemed to revett the mound. This had upright stones set in stone holes and smaller stones built over and around them (Lewis 1993a, 68-69). It is possible, that before it collapsed the outer stone ring at Ty Mawr resembled this wall.

Fox (1959) proposed a very similar revetment for the second phase of the barrow at Talbenny, Pembrokeshire. The outer revetment, built to contain the expanded mound initially looked like a kerb on excavation, but Fox argued that smaller stones had been built over and around the kerbstones (Fox 1959, 55). The smaller stones had fallen into the ditch in a manner reminiscent of Ty Mawr, and it is interesting to see that the same interpretation of a collapsed revetment was concluded in both cases. Not commented on by Fox, but illustrated in all the sections published of the site (Fox 1959, figs. 31 and 36), are lenses of "yellow sediment" sloping into the ditch fill, at its outer edge. Although it is not possible to be sure from the published drawings, this may represent bank material dumped back into the ditch as at Ty Mawr.

Some cairns in Wales have external banks, eg the one on the summit of Moel Hebog, near Beddgelert, is described as having 'the flattened remains of an encircling bank of stone' (RCAHMW 1960, 32). They can also have ditches, such as that which surrounds the cairn on the summit of Mynydd Mawr, near Betws Garmon (RCAHMW 1960, 35), and the orthostatic kerb can be replaced by a built revetment (RCAHMW 1960, lx). Three barrows with ring ditches were identified from aerial photographs and geophysical survey at Bryn Bodfel on the Llyn peninsula (Ward and Smith forthcoming). A barrow excavated at Trelystan, near Welshpool, was surrounded by a ditch, in its first phase, and interestingly, had attracted a small post-Roman cemetery (Britnell 1981, 202-4).

Further afield barrows and cairns in Ireland have ditches and outer banks, while these features are common in England, especially in Wessex (Ashbee 1960, 27). In the Irish examples as listed by Waddell (1990) ditches and particularly external banks are relatively rare, but the majority of examples given were dug in the 19th or early 20th centuries with a concentration on the burials rather than the structure of the mound. Three sites are given which have both a ditch and an external bank. As these are located in counties Derry, Limerick and Mayo it suggests such features were widespread across Ireland. Other barrows with ditches and outer banks are found in Sligo at Scurmore and Rathdooney Beg.

3.2.1 Brenig 42

This barrow provides an interesting parallel to Ty Mawr. The two barrows are not identical, but they have several factors in common. The diameter of the mound at Brenig 42 was slightly larger than Ty Mawr: c.13.5m compared to 10.5m internal diameter at Ty Mawr. Brenig 42 had a ditch very similar in size and profile to Ty Mawr; the Brenig 42 ditch measured 0.8-1.5m in width and an average depth of 0.5m (Lewis 1993b, 47), the Ty Mawr ditch was 1.1-1.3m wide and up to 0.45m deep. Both were neatly cut to a U-shaped profile. The material from the ditch at Brenig 42 had been deposited to form a bank on the inside of the ditch, whereas at Ty Mawr the slope of deposits in the ditch suggests a similar bank on the outside.

At Brenig 42 the mound survived to a height of just over 1m, with well preserved traces of the individual turves that composed it. Three other barrows at Brenig were also constructed of turf (Lynch, Lewis and Waddell 1993, 47-87). It is proposed that the Ty Mawr barrow similarly had a turf mound. Even if the material from the ditch had not been used to create an external bank at Ty Mawr, there would have been insufficient material to form a mound of adequate size. The absence of any large stones within the area of the mound shows that this was not a cairn, so the only obvious source of mound material would be turf, stripped from the surrounding area. The stony layer (078/199) lying over the area inside the ring ditch gives few clues to the mounds composition, as stones can be used within turf mounds.

The Brenig 42 mound was revetted by hurdling, whereas Ty Mawr had stone revetment, but both show that some form of revetment was considered necessary for turf mounds. Both barrows produced very few finds, and there were no traces of burials from either, although Brenig 42 had a possible rectangular mortuary structure at its centre. There was pre-barrow activity under Brenig 42, as at Ty Mawr, perhaps dating to the 7th millennium BC in comparison to a date on a pit below Brenig 40 (5700- -80 BP, cal BC 6565-6409, HAR-656) (Lewis 1993b, 50-51, Lynch 1993, 213).

The Brenig group demonstrates that all the features of the Ty Mawr barrow were employed in North Wales. If Brenig 42 had its bank on the outside of the ditch and its hurdle revetment was replaced by the stone revetment from Brenig 45, then it would be almost identical to the Ty Mawr barrow. There can be little difficulty in seeing Ty Mawr as part of the tradition of North Wales Bronze Age barrows.

The Brenig turf barrows were dated to a period between 2160-1525 BC. Brenig 42 seemed to fall within the earlier part of this period with a date of 2080-1894 BC (HAR-713 3610+/-70 BP) from a posthole of the mortuary structure (Lynch 1993, 213-14). The date of 1110-840 BC from Ty Mawr (Beta-152581) for the abandonment of the barrow and collapse of the revetment does not exclude it from being constructed at a similar date to the Brenig examples.

3.3 The early medieval cemetery

3.3.1 The date of the cemetery

Ty Mawr is a typical, though rather small, early medieval cemetery, fitting nearly all the characteristics of early medieval burial listed by *Longley and Richards (19??, 3). The traditions seen in these cemeteries had their origins in the Roman period, or in the case of special graves, in the Iron Age (*Longley and Richards 19??, 3-4). Burial by extended, supine inhumation first appeared in Britain in the first and second centuries BC. The rite was adopted throughout the Roman world during the 2nd century AD, and became the predominant rite in Britain by the 4th century (O'Brien 1999, 5). The use of long cists increased during the 4th century AD in Roman Britain and in Ireland. Graves in Roman cemeteries were frequently laid out in rows and aligned east-west (*Longley and Richards, 19??, 5-6), so most of the main features of early medieval cemeteries were already in existence before cemeteries consisting mainly of long cists appeared.

The earliest dates in Britain for long cist cemeteries come from sites in Fife and Lothian, some of which are pre-Christian. Dates from Broxmouth, East Lothian, Lundin Links, Fife, Catstane, Midlothian and Hallow Hill, Fife, fall within the fourth century AD or earlier (Proudfoot 1992, 443). However, the 5th and 6th centuries are a more usual date for the start of such cemeteries. During the 8th century churches were established in villages and tended to attract cemeteries to them. The earlier cemeteries were abandoned in the 8th and 9th centuries, unless a church was built in the cemetery, usually on site of an important grave (*Longley and Richards, 19??, 7-8). The general date for early medieval cemeteries is therefore usually given as between the 6th and 9th centuries AD.

Grave 66 at Capel Eithin (White and Smith 1999, 145) produced two samples for radiocarbon dating. The resulting dates were as follows with calibration at 95% probability:

1870+/-60 BP (CAR 483) AD 5 to 260 or AD 295 to 325

1120+/-90 BP (CAR 484) AD 685 to 1035

The earlier possible calibration for the first date seems far too early, so the second alternative is probably the better date. There is considerable difference between these two dates, despite the fact that they came from the same large timber. The authors explain this by suggesting that the plank dated was from a large, old tree and therefore there could be a difference of several hundred years between the heartwood and sapwood. In this case the most recent date should be taken as the date of felling and the date of the burial. Unfortunately the size of the error on the date means that it cannot be used to date the grave more specifically than the generalised date of the 6th to 9th century AD.

James (1992, 103) lists radiocarbon dates from 9 early medieval cemeteries in Wales. Some of the earliest dates, ranging from 3rd to 7th century at 2 sigma, come from the cemetery excavated at the Atlantic trading estate, Barry. James (1992, 97) interprets these dates to suggest that the cemetery was begun in the Roman period, but Newman and Parkin (1986, 55) state that there were no grave goods from the graves. The dates presented could as easily be from the second part of their range as the first, and as such would fall within the normal range for early medieval cemeteries. Similarly early dates from other sites, such as Plas Gogerddan and Caerwent (James 1992, 103), should, perhaps, be taken as representing events in the 5th to 7th centuries, rather than much earlier, unless artefactual evidence is found to support the earlier end of the date range.

The latest dates presented by James overlap into the 11th and 12th centuries, but again the earlier ends of their ranges still fall comfortably into the accepted period, which sees these cemeteries going out of use in the 8th or 9th centuries. Even with errors of +/- 60 years radiocarbon dates are too crude to be able to securely clarify the history of cist cemeteries.

Some early medieval cemeteries do have artefactual evidence for origins in the late Roman period. Llandough cemetery began as a late Roman cemetery, as hobnails in the earliest graves demonstrates, although burial continued until the 11th century (Thomas and Holbrook 1996, 75). The cemetery at Hallow Hill, St Andrews, could appear to have originated in the Roman period as two of the graves produced Roman artefacts, but one of the cists containing Roman artefacts also produced 7th century radiocarbon dates. Proudfoot and Aliaga-Kelly (1996, 439) feel that it is more likely that the Roman

artefacts represent heirlooms of considerable antiquity when buried, comparing it to the occurrence of Roman artefacts in Anglo-Saxon graves in England.

3.3.2 The location of the cemetery

The presence of a Bronze Age barrow and an early medieval cemetery on the same site is most probably not coincidental. Edwards (1986, 31) has stated that "there seems to be a remarkable affinity between the siting of long-cist graves and Bronze Age burials". Examples closest to Ty Mawr include Capel Eithin and Arfryn. At Capel Eithin, near Gaerwen, Anglesey, a Bronze Age barrow also formed the focus of a group of graves within an early medieval cemetery. The barrow also had Neolithic pottery preserved below it. A group of urn burials, probably also under a barrow provided another focus in the same cemetery (White and Smith 1999). The cemetery at Arfryn, Bodedern, also seems to have been dug around an earlier feature; this time probably the mounded remains of a Bronze Age clay-wall round house, possibly mistaken for a barrow by the founders of the cemetery (Hedges forthcoming).

The use of Bronze Age monuments as foci for later burial seems to begin in the Iron Age in Wales (James 1992, 90). Plas Gogerddan, Dyfed, has both Iron Age inhumations and a small early medieval cemetery associated with three ring ditches (James 1992, 90-91). Tandderwen has a Bronze Age barrow enclosed in a square ditch related to the early medieval cemetery there (Brassil 1988, Brassil and Meredith 1986, Brassil and Owen 1987).

For the barrow to have influenced the location of the cemetery at Ty Mawr it must have been visible in the early medieval period. It can be demonstrated that the outer ditch of the barrow was completely infilled at this time. The stones from the mound revetment had collapsed into the ditch and 5 graves cut through this stony deposit in the upper fill of the ditch. If anything could be seen of the ditch it must have been a very slight hollow, which would probably be overlooked. There is no evidence that the barrow was deliberately flattened when the ditch was in-filled. The revetment probably collapsed as part of the natural erosion of the abandoned barrow, but the barrow mound probably remained largely intact.

If the barrow had been of much height the penannular slot would have been unlikely to have cut into natural, whereas it was 0.4m deep in places. It, therefore, seems probable that the barrow was always low. The barrow is not indicated on the 18th and 19th century maps of the area, but low, eroded barrows are often overlooked on the maps. A vast number of Bronze Age barrows still survive upstanding today, so weathering alone would be insufficient to flatten the barrow by the early medieval period. It is most probable that the barrow was flattened in fairly recent times, to improve the pasture, which would explain the lack of traces of the mound and absence of Bronze Age artefacts.

Erosion may have caused a slight change in the shape of the barrow, causing its summit to appear slightly further north than originally. This would explain why the inner penannular enclosure was placed off centre compared to the ring ditch.

At Ty Mawr there is the possibility that the barrow was not the only factor in the location of the cemetery. The boundary ditches 159 and 06 seem to define the cemetery on two sides, with the barrow marking the third side. Both ditches are probably represented on the post medieval maps (see **figure 9**), but that does not rule out their earlier origins. If the ditches were in use in the early medieval period they were not constructed primarily to define the cemetery, rather it appears the cemetery was placed within the junction of the ditches.

If this was the case it can be argued that the presence of a barrow in the junction of the boundaries was not coincidental. Barrows are frequently argued to be placed on boundaries, and on the limits of farmland (*Spratt 1982, ?). It is possible that the barrow marked an earlier boundary, later defined by the ditches, suggesting considerable continuity in the use of the landscape.

3.3.3 Grave types

Ty Mawr has a variety of grave types, which can be compared to other sites in Wales and elsewhere. Many of the Ty Mawr graves are particularly well-preserved examples of their type. The three main grave types are stone long cists, timber cist graves and dug graves. These will be discussed below.

3.3.3.1 Stone long cists

The long cist is the classic early medieval grave type, occurring on most early cemeteries. The basic description of the long cist can be defined as a 'stone slab-lined grave with slabs set on edge, intended to protect and contain an extended inhumation' (*Longley and Richards 199?, 9), but design was variable. Many long cists lack base slabs, some lack lintels, others have end slabs only and some are reduced to small cists around the head only. They are normally rectangular in plan, with a tendency to narrow at the foot end, which is clearly seen in many of the Ty Mawr examples.

Of the 47 sites with early medieval burials listed by Longley and Richards (19??) in Gwynedd, 29 had cist graves. Of these only Capel Eithin, Ty Mawr, and Caer Gybi had complete cists. Ty Mawr is unusual in its high proportion of complete cists. Lintels are relatively common, but basal slabs appear to be rare in Gwynedd. The quality of slabs locally available on Holy Island means that the Ty Mawr cists are particularly well constructed. This availability may account for the high proportion of graves with basal slabs.

3.3.3.2 Timber long cists

Several cemeteries have produced evidence of timber structures. The recognition at Ty Mawr of a particular type of timber lined grave, identifiable even when the timber does not survive, could greatly increase the known number of timber lined graves. Graves with packing stones, with and without traces of timber, were found at Whithorn. Some of the timber structures in the graves were constructed from dug-out tree trunks, but others were plank-built, without nails, like the Ty Mawr examples. Hill (1997, 70) treats the plank lined graves at Whithorn as an alternative version of long cists, and the evidence from Ty Mawr supports the idea that the timber structures were wooden copies of the stone cists. Both stone and timber cists are found scattered throughout the Ty Mawr cemetery, suggesting that there is no chronological differentiation between them. In this report Hill's example has been followed and the timber structures are referred to as timber long cists.

Graves referred to as 'boulder-edged' at Hallow Hill, St Andrews (Proudfoot 1992, 400) are identical to the Ty Mawr timber cist graves, although wood did not survive on the Scottish site. These graves were not common on the site, comprising only 13 of the 145 burials excavated, but they were widely scattered across the site (Proudfoot 1992, 399, 407).

On sites where good slabs are not available the difference between genuinely stone lined graves and timber cists may be difficult to recognise. The difference between the two grave types may be somewhat arbitrary, as many cists seem to use both timber and stone. At Ty Mawr grave 71 had slabs at head and foot, making it a type of partial cist as seen on other sites, but it also has a small quantity of packing stones down the long sides. This suggests that the cist had stone short sides and timber long sides, with, presumably, a timber cover. The variety of partial stone cists that have been recorded could have been completed with timber elements, particularly timber covers.

Evidence for timber bases to stone long cists comes from Porth Dafarch (Stanley 1878). All four graves, both cist graves and dug ones are described as having a deposit of charcoal in their bases, under the bodies. There is some suggestion in Stanley's text that this was not charcoal, but preserved wood. The sandy nature of the site would generally inhibit the preservation of wood, but the graves all had a layer of clay beneath the 'charcoal', which would improve preservation conditions.

Grave B was a typical linteled long cist, but lacked stone slabs on its floor. Stanley discusses at length the possibility of the partial burning of the body in this grave, but complexity of his explanations, including covert cremation, suggests that the evidence for cremation was not straightforward. He does not describe any burnt bones, but bases his claim for cremation on the absence of smaller bones, the ones most likely to be lost by leaching. The deposit of 'charcoal' is postulated to be the ashes of 'heather, ferns, etc.', because it does not have the consistency of wood charcoal. I would suggest that the consistency was very soft and fine, like the coffin stains in the Ty Mawr graves, and that the deposit was black rather than dark brown, because it was stained by the 'slimy' black earth which is described as filling the cist (Stanley 1878, 30-31). This makes these graves fit comfortably within the long cist tradition, in which there is no evidence for cremation. If this reinterpretation is accepted then all four of the Porth Dafarch graves had timber slabs in the base, including the dug graves.

At Capel Eithin graves 66 and 79 had 'coffin stains' similar to those at Ty Mawr, and were also interpreted as plank built cists (White and Smith 1999, 130). However, there were several graves with

only a small number of stones placed against the side of the grave cut (White and Smith's type E grave, fig 41). These graves closely resemble those at Ty Mawr interpreted as timber cists, with only the packing stones surviving.

A particularly unusual example of a possible timber cist grave also comes from Capel Eithin, feature 90. During the excavation there was initially some doubt expressed that this was a grave, but phosphate sampling supported this interpretation (White and Smith 1999, 122). Although there was no dating evidence the feature is discussed with the Romano-British phase on the site, because of its proximity to the square Roman structure. However the plan and section very closely resemble the Ty Mawr timber cist graves. The major difference is in size. Feature 90 measured 2.90 by 1.0m internally compared to grave 304 at Ty Mawr (the timber lining measured 1.95m by 0.45m). Feature 90 is about 23% longer internally than the timber structure in grave 304, and over 50% wider. The extra width may indicate that this was a double burial, or possibly an unusually large individual was interred. However, the unusual location of the grave near the Roman structure, at the opposite side of the cairn to the majority of other graves, suggests the speculation that this grave was specifically designed to look large and impressive. Perhaps it was intended to hold the remains of a metaphorical, rather than literal, giant amongst men. The alignment of the grave as north-east to south-west does not exclude it from being part of the cemetery as several of the other graves closest to it are similarly aligned.

Capel Eithin raises the question whether timber cist graves indicate a high status. Although the exact relationship of feature 90 to the rest of the cemetery is not clear, it almost certainly belongs to this phase, rather than the Romano-British phase, and it is a grave of considerable importance. The two graves within the square enclosure at the other side of the cemetery [graves 66 and 67] are both timber cist graves. The grave [74], which cuts grave 66 and blocks the entrance to the square enclosure, has a stone long cist, but a general chronological interpretation cannot be proposed from this single example. The rest of the timber cist graves are distributed throughout the cemetery, though with a tendency to concentrate towards the square enclosure. At Ty Mawr the timber cist graves are also distributed apparently randomly amongst the stone cist graves, but the only grave within the proposed penannular enclosure is a timber cist grave [304]. It is possible that another timber cist grave [216] acts as a focus for other graves, as those in the eastern part of the cemetery seem to form am arc around it. In an area like Anglesey, with plenty of good stone and few large trees, it cannot be assumed that the stone cists were the most expensive and high status alternative of grave construction.

Charcoal is mentioned from several graves where timber preservation was good. In the case of Porth Dafarch it has been argued that this was a misidentification, but charcoal was definitely present in other examples. At Capel Eithin samples of the coffin stain taken from grave 66 for dating were securely identified as charcoal. At the early medieval cemetery at the Atlantic Trading Estate site, Barry, some timber in the graves had a burnt veneer. Price (1987, 60) suggests that the timber may have been scorched to aid preservation. This is probably the origin of charcoal deposits in other timber-lined graves. Some of the timber structures at Ty Mawr, when first excavated appeared to have this charred veneer on their inner faces. However, when the sample of the timber lining from grave 304 was sieved no charcoal was recovered with the exception of a single small fragment. Charring of the inside of the planks would be excepted to produce significant quantities of charcoal, which should have preserved well. The absence of charcoal in the sample suggests that, in some cases, the charred appearance is an artefact of the timber preservation and is not actual charring.

3.3.3.3 Dug graves

No indication of any kind of lining or other protection for the body was recovered from the dug graves at Ty Mawr, but evidence from other sites suggests that bodies may at least have been wrapped before interment. The use of shrouds was suggested at the Atlantic Trading Estate cemetery, Barry, as many of the bodies were found with their shoulders hunched, as if bound. On this site shroud burials were placed within partial or almost completely lined cists, and in graves with traces of timber structures (Price 1987, 60). The almost complete lack of skeletal material from Ty Mawr prevented the recognition of such burial practices.

Capel Eithin produced evidence of the use of timber in dug graves, but remains suggested different structures to the timber cists. Grave 28 (White and Smith 1999, 132, fig 43) had a sloping strip of wood within a humic line high up within the grave fill, possibly part of a cover. Other graves had thin wood or charcoal lines within the grave fills, and these may represent the use of wattling as an alternative to

timber planks. If dug graves were commonly wattle-lined, or covered with wattling, this evidence may not have survived at Ty Mawr.

One dug grave at Berllan Bach, Bangor (Longley 1995, 62), produced traces of a timber structure, and the two dug graves at Porth Dafarch had timber bases (Stanley 1878, 30-31). So it does seem possible for dug graves to have timber elements. It is probable that these three grave types do not represent distinct differences in burial practices, but are part of a continuous range of alternative methods of constructing essentially the same grave type. Local availability of resources and the wealth of the deceased's relatives might have determined what proportion of the cist was built of wood or stone, or whether cheaper alternatives might be chosen.

3.3.3.4 The isolated grave(fig 2)

The isolated eastern grave [214] is puzzling. It may indicate the existence of a further group of graves to the east, but lacking evidence for this, it should be considered as an outlier to the rest of the graves on the site. The plan of the grave suggests that the body was buried with the head at the western end, in common with most of the rest of the graves. It is possible that this grave belonged to a holy man or priest, who was buried so that he could rise and lead his flock on Judgement Day. It is difficult to find comparisons with other sites in respect of this grave, as the limits of very few cemeteries have been securely identified.

3.3.4 Demography of the cemetery

Judging from the size of the graves, both adult and infant graves were found. To analyse this more objectively the internal length of the graves were measured. This was defined by either the internal length of the cist, the internal area defined by the packing stones where timber cists had not survived, and by the timber cist itself where it had. In the dug graves the length of the base of the cut was measured. There is probably a tendency to over estimate the length of the timber cist graves lacking timber remains, as there may have been space between the stones and the cist supported by them. Three of the graves were so badly damaged by the post medieval ditch that their full length could not be determined.

Graves categorized by internal length of cist

Age at death	Internal grave length	No. of graves	% of total measured graves	Combined %s
Infant	<1.0m	10	25%	Infant/child =
Child	1.0-1.4	3	7.5%	32.5% of total
Small	Adult 1.4-1.6	9	22.5%	All adults =
Adult	>1.6	18	45%	67.5% of total

Although no claim is made that this measurement gives an accurate height for the individual buried in the grave there must have been a general connection between body height and the length of the grave constructed. An extremely rough estimate of the age of the individual at death can be suggested. Some of the graves were very small, and can only have been constructed for infants, unless animals were being given full burial rites, which seems unlikely at this period. A small number of graves were larger than the infant graves, but still seemed too small for a full grown adult. These have been termed children's graves, but they could also have been for particularly small adults. There are 9 graves measuring between 1.4 and 1.6m. These were presumably adults' graves, but it is tempting to suggest that the majority belonged to women. The largest single category is graves over 1.6m in length. Although women were probably also included in this group, most people buried in these graves were probably men.

When the age of death is analysed for each grave type it can be seen that there is no significant bias towards one grave type for either infants or adults. People of all ages seem to have been buried in any grave type, though stone cists were most common.

Age of death and grave types

Grave type	Adults	% of each class	Infants/children	% of each class

Stone cist	15	58	7	32
Timber cist	7	78	2	22
Dug grave	2	50	2	50

There appears to be some grouping within the cemetery which is suggestive of family plots. Infant graves are not isolated, but scattered amongst the adult graves. There is some indication of a pattern of groups of three graves; one large adult grave, one small adult, and one infant [e.g. 033, 049, 104; 110, 073, 108; 193, 165, 010]. While the nuclear family may spring to mind as an explanation for this grouping, numerous other hypotheses could be put forward.

3.3.5 Orientation

On Anglesey the range of orientation in early medieval cemeteries varies between 15 degrees and 175 degrees east of north. At this latitude sunrise varies between 48 degrees and 130 degrees east of north from midsummer to midwinter, giving the extent of the range that can be perceived as east. Beyond these limits burials can be described as being north-south aligned, and about 14% of the Anglesey early medieval graves can be considered north-south burials (Longley forthcoming).

There is a concentration of burials from the Anglesey cemeteries orientated between 50 and 90 degrees east of north. This is largely due to burials at the two largest, excavated cemeteries on the island, Arfryn and Capel Eithin, falling within this range. Capel Eithin shows two peaks in orientation, one around 50 degrees and one between 70 and 80 degrees. Most of the Arfryn graves lie between 60 and 90 degrees, with a peak between 70 and 80 degrees. However, when all early medieval cemeteries in north Wales are considered the same pattern appears, so there appears to be a genuine trend (Longley forthcoming).

The direction of the sunrise is not the only factor that can influence the orientation of graves, but seen in relation to sunrise these cemeteries suggest an emphasis on spring and early summer. The association between the orientation of the grave and the sunrise is not simply that the grave is orientated on the sunrise at the time it was dug. In that case the orientations would be expected to reflect the pattern of mortality throughout the year, with, particularly, many more winter orientations. The sunrise at a specific time of year may have been taken as a standard, and the emphasis on spring suggests that Easter was of significance.

Ty Mawr is interesting because it does not follow this trend: with its graves orientated between 90 and 120 degrees east of north, they are aligned towards the sunrise in early spring or autumn. Other smaller cemeteries on Anglesey, eg Porth Dafarch and Llechcynfarwy, also have a south-easterly orientation, so it may be of little significance here. However, it is interesting to note that a line from the summit of Holyhead Mountain, so obvious from Ty Mawr, passing through the site, would be orientated about 125 degrees east of north. A more likely an explanation for the different orientations is a variation in theology and tradition between Arfryn/Capel Eithin and Ty Mawr.

3.3.6 The layout of the cemetery

The cemetery at Ty Mawr is laid out in a fairly regular manner, certainly when compared to many of the other excavated cemeteries in Wales (see James 1992). The graves do not group around the barrow as they do around the foci at Capel Eithin and Arfryn, but the barrow probably influenced the location of the site. There is some indication of a deliberate plan to the cemetery. The most obvious elements of the layout are the north-south rows, but some graves also seem to form perpendicular, east-west lines. The eastern side of the cemetery deviates from this plan and grave 216 may act as a focus for the graves here.

No grave cuts another, and all are spaced so as to respect earlier graves. This demonstrates that all the graves were visible in some way throughout the life of the cemetery. However, there is no evidence of stone or postholes that might have held markers for the graves. The postholes found amongst the graves belong to a much earlier phase of the site.

Over much of the site the overburden was removed down to an orangy silty layer (context 5) interpreted as remains of a previous soil horizon. The lintels of the long cists were discovered just below this level, suggesting that they were close to the contemporary ground surface. The lintel graves, and most of the other graves, were covered with a clayey layer, similar to the unaltered natural of the site. There is little room for backfill in these cist graves, raising the question of what was done with the spoil from digging the grave. The obvious solution is that it was heaped on top of the grave, with the soil layers being deposited in reverse order to that in which they were dug out. That is, the unaltered subsoil was deposited first directly on top of the lintel (this is the clayey layer recovered in excavation), presumably altered subsoil was deposited next, with the top soil last, allowing the grave mound to be rapidly stabilised by vegetation cover. This prominent mound would mark the grave without the need of wooden or stone markers.

The cemetery can be described as having 3 rows running from ditch 159 to the barrow. To the west of these are two groups of three graves, and to the east the strict definition of rows breaks down. There are also perpendicular lines set at fairly regular intervals (see **figure 8**). The rows and lines may represent the planned layout of the cemetery.

The regularity of the pattern breaks down towards the east. Although the east-west lines do continue through the eastern half of the cemetery a possible fourth row is severely distorted. The eastern graves can be seen as forming an arc around grave 216, which is isolated in this area. With the exception of grave 042, there is also a gap between the southern graves and the rest of the cemetery, although they fit better with the general plan of the layout.

3.3.6.1 The putative special grave and circular shrine

The penannular slot [cut 53] inside the barrow ditch [cut 37] might appear, initially, to be part of the barrow. Numerous barrows and ring cairns are known with rings of posts or stakeholes concentric to the kerb or ditch (Ashbee 1960, 27; Lynch 1993), but all these were stratigraphically below the mound of the barrow or cairn. In the present case, although the deposit identified as mound material (199/78) was mixed and confused by soil formation processes, it was clear that feature 53 cut through it. In addition feature 53 is not quite concentric with the barrow ditch, being located somewhat to the north of the expected position. While not conclusive, these factors introduce a strong element of doubt about the association of the penannular slot with the barrow. There is no stratigraphic reason why this feature cannot be included in the early medieval phase.

Grave 304 seems to have been positioned inside the penannular slot. It is not central, as is usual with enclosed early medieval graves, but the presence of feature 291 may explain this. The phasing and interpretation of this area is problematic and relies heavily on parallels with other sites rather than purely on internal evidence, but these comparison suggest that the penannular structure is of an early medieval date.

The penannular slot and a posthole close to its terminal were dated to 4840-4700 BC (Beta-152584) and 4790-4450 BC (Beta-156655), respectively. Far from solving the phasing problem these dates create further difficulties. The dates are statistically indistinguishable from the date on the old ground surface (4920-4680 BC, Beta-152585). While the smaller charcoal sample from the slot could be residual and have originated from the old ground surface, this explanation becomes difficult for the large sample from the posthole. Posthole 339 contained large amounts of well preserved charcoal, which if interpreted as residual, must be envisaged as existing in large quantities on the old ground surface, surviving disturbance by Neolithic activity and the construction of the barrow, to be incorporated into the backfill of a possibly early medieval posthole. The ground surface immediately around cut 339 was not particularly rich in charcoal, so it seems unlikely that this occurred naturally in the soil dug out of the posthole.

The concept of this charcoal being residual seems very difficult to support. An alternative would be if the charred timber was of ancient origin, such as bog oak. There are no known sources of bog oak in the vicinity, but there are numerous submerged forests around the coast of Anglesey, some of which, no doubt, contain oaks of a suitable date. In this case the dates could be used to demonstrate that the slot and the posthole were infilled at the same time, though it brings us no closer to identifying when that time was. The charcoal in the old ground surface would be envisaged as having been introduced through animal burrows. The problem comes in imagining how and why these water-logged timbers

would have been used. When dried out they would be likely to have been too warped and brittle to be of use in construction, and there would have been much easier sources of firewood.

The third alternative is, of course, to take the dates at face value and accept the features as Mesolithic. This is the most exciting option, and should, therefore, be treated with most caution. As the features cut the so-called mound layer (contexts 078, 199) this would also have to be Mesolithic. The construction of a Bronze Age ring ditch around a Mesolithic timber structure, long rotted away, seems highly unlikely, so the hypothesis would demand that the ring ditch, and its presumed outer bank were also Mesolithic. The presence of a late Bronze Age date from the loose, stony upper fill of the ditch would not prevent this interpretation, but the Peterborough pottery under the mound layer would present considerable problems. The absence of diagnostic Mesolithic artefacts is not a problem as the technologies of the late Mesolithic and early Neolithic are very similar with the exception of a few diagnostic tools. If none of these tools were appropriate to the use of the site, recognising Mesolithic activity from the lithic assemblage would be impossible. A considerable advantage of this hypothesis would be to explain what the possible Neolithic post avenue was running towards, as the earthworks, if not the timber structure could easily have survived into the early Neolithic.

The greatest problem is the contradiction to the established perception of the Mesolithic composed of all known sites in Britain and elsewhere in Europe. Monumental sites are very rare in the Mesolithic period, although monumental postholes of a Mesolithic date were discovered in the Stonehenge carpark (Allen 1995). More evidence than two anomalous radiocarbon dates is needed to counter the weight of established theory.

In the absence of a suitable explanation of the radiocarbon dates it is proposed to discard them as anomalous and rely entirely on the form of the features to interpret them. It is acknowledged that this approach is unsatisfactory, but at present there is little alternative.

3.6.7 A search for parallels

If the penannular structure is not related to the barrow, as seems to be the case, then, despite the radiocarbon dates, it is probable that it was part of the cemetery. Although the case cannot be proved, there are parallels for this feature in other early medieval cemeteries. Enclosures around graves are quite common at this period, but they are usually square, not circular (O'Brien 1999). However, a circular feature, interpreted as a small timber-walled enclosure, was found at Whithorn (Hill 1997, 89-96). The first stage of the phase 2 circular 'shrine' feature was marked by a shallow groove with sporadic packing stones, and possibly associated postholes. This feature was interpreted as the remains of a plank wall, possibly supported by large stakes. Although the remains are much slighter than those at Ty Mawr, the feature at Whithorn was severely disturbed and truncated by the numerous later phases of activity. The external diameter of the Whithorn shrine was c.5m, compared to 6.5m for Ty Mawr, but the difference in size might not be significant. Of particular interest is a posthole in the Whithorn feature in almost exactly the same position as posthole 339, adjacent to the terminus of the penannular slot.

The Whithorn 'shrine' probably did not have a burial within it, but a massive lintel grave 'apparently designed to receive successive burials' (Hill 1997, 90) was positioned just outside it. At Ty Mawr grave 304 does appear to have been deliberately placed within feature 53. Special graves with square enclosures or ditches of the early medieval period are usually centrally located within their enclosure, whereas grave 304 is very much off centre. Hill (1997, 94) suggests that an inscribed timber or stone pillar stood within the empty shrine at Whithorn, although there was no archaeological evidence for this. With this in mind the features in the area at Ty Mawr were reconsidered, and one previously disregarded feature may actually demonstrate the presence of such a stone at Ty Mawr.

Feature 291 was a shallow, rectangular hole, regular enough to be a deliberately dug feature, but its function was not initially obvious. Considering that the feature must have been truncated by the flattening of the barrow mound, this flat-bottomed hole would provide adequate support for a flat-bottomed stone. 291 was located just north of the centre of the penannular feature 53, and the presence of a stone in this position would explain why grave 304 was located off centre. The slight triangular distortion of the rectangular shaped feature at its western end could be explained by the pressure of the stone being tipped over to remove it; there was also a depression in the base at this side. It is unlikely that this stone, if there was a stone, belonged to the Bronze Age barrow, like that at Bedd Branwen

(Lynch 1997, 136, fig 74) because it is not central to the barrow ditch. However, the short, flat-based stone at Bedd Branwen, resting in a shallow stonehole, gives a good impression of how the stone in 29 would be envisaged.

The end of phase 1, period I, at Whithorn is dated to c.550 AD, so the early 'shrine' constructed immediately after that period must date to the second half of the 6th century. By comparison with dates on early cemeteries in Wales (see above 'dates'), this would be an acceptable date for the construction of the Ty Mawr circular structure, and the founding of the cemetery.

Other parallels for an early medieval penannular enclosure

Circular enclosures of various forms are found on early medieval cemeteries across Britain and Ireland, although they are rare, except in the south-east of England. Penannular enclosures were relatively common in SE Anglo-Saxon England, especially Kent. As well as a high proportion of penannular enclosures, the Kent cemeteries also have a high incidence of reuse of prehistoric burial sites (O'Brien 1999, 141).

In general the penannular enclosures are small features enclosing a single central burial. The large majority of these enclosures are ditches, but there are some indications of posts associated with them, and in rare cases perhaps fences in the ditch. Three of the penannular enclosures at St Peters, Broadstairs, had stakeholes within the enclosure ditch, which were interpreted as the support for a wicker fence. Lord of the Manor, Ozengell, also had traces of wicker fences in the ditches of two enclosures (O'Brien 1999, 138-139). The presence of a posthole in the entrance to penannular enclosures is seen at Finglesham and St Peters, Kent (O'Brien 1999, 136, fig 23), and at Cuxton, Kent (MOLAS 2000, 460).

The Roman cemetery at Kelvedon, Essex, included a large grave containing a massive coffin, surrounded by circular slot, 6.6m in diameter. The slot was interpreted as ' the foundation trench for a timber wall' (Rodwell 1975, 28). This feature probably had a narrow entrance to the east and was interpreted as a timber mausoleum. The remains of such structures may have influenced the development of the Anglo-Saxon penannular features.

Penannular enclosures are also occasionally found on early medieval cemetery sites in Ireland. These generally seem to be larger than the Anglo-Saxon examples and surround numerous burials, although smaller examples are known. Again most of these enclosures are ditches, but there are some similarities with Ty Mawr. The large penannular enclosure at Colp, Co. Meath, had a posthole in its entrance, although in this case and that of Westreave, Co. Dublin, the entrances faced roughly west. The latter site had one grave that produced evidence of a timber floor, and others had stones similar to the packing stones in the timber cist graves. There are two known Irish sites of similar size to the Ty Mawr structure. The penannular ditched enclosure at Castle Upton, Templepatrick, Co. Antrim, had an internal diameter of 5.3m, and that at Chancellorsland, Co. Tipperary, was 4m in diameter. Though the former site had an entrance to the west or south west, the latter had an east facing entrance. The interior of the feature was not excavated, so it is not known whether there were any burials within it, but charcoal from the ditch fill was dated to 654-756 AD (1 sigma, 1326+/-53 BP UB 3875) (O'Brien 1999, 182-183).

O'Brien (1999, 183) compares the Irish sites to those in Kent, and suggests that they are the result of an Anglo-Saxon influence. It is possible that the Ty Mawr structure is the result of similar influences, either directly from England, or via Ireland. The parallels with the Kentish examples are not precise, most of the Kent enclosures are small, and enclose a single central grave, but the examples from Ireland suggest that diffusion of the tradition may have caused variation in size. The post in the entrance-way is common to Kent, Ireland and Ty Mawr. All the Kentish and Irish examples are of ditches, but the traces of fences in some of the Kentish sites may indicate that the concept of an upstanding enclosure was already present in the tradition's heartland, and this may have been expanded upon. The Whithorn 'shrine' suggests that this interpretation of the tradition may have been widespread.

Claiming an Anglo-Saxon influence for this feature does not suggest political or cultural affinities between Anglesey and Anglo-Saxon England, but that these ideas were in common circulation at the time, and certain aspects of them may have been adopted for very local reasons. The prominent position of Holy Island on the sea routes between Britain and Ireland, and up and down the Irish Sea,

must have been as relevant in the early medieval period as in any other. It is not improbable that the idea for this structure came directly from the site with the nearest parallel, ie Whithorn, where the general concept, originating in Anglo-Saxon England, had been altered to fit local circumstances.

The later development of the cemetery

It is probable that some of the graves in the southern part of the cemetery are later additions after the penannular enclosure went out of use. The post packing stones in the penannular slot were in disarray. Although enough stones were *in situ* to suggest their function as packing stones, it was impossible to identify the location of specific timbers. This is probably due to the timbers having being removed, rather than rotting *in situ*. If a stone stood in feature 291 it has clearly been removed at some time, and distortions in the cut suggest the pressure exerted by a stone during its removal. Although circumstantial, all this evidence combines to suggest that the penannular enclosure was deliberately dismantled, the central stone removed.

Some of the graves seem to post-date the enclosure. Although the area was disturbed Grave 042 cut the line of the enclosure and the stone patch (95/96), which may indicate the continuation of the foundation slot. Grave 283 lay in the entrance to the enclosure, and can be compared to grave 74 at Capel Eithin, which was located within the entrance of the enclosure around the special grave 66 (White and Smith 1999, 136). In this case grave 74 cuts the special grave, clearly showing that it post-dates grave 66, and may have been deliberately positioned to close the entrance, and therefore decommission the special enclosure. In the case at Ty Mawr it is not known how wide the entrance was, and whether grave 283 could have effectively blocked it. Also possible is the suggestion that grave 283 was added after the enclosure was dismantled. The addition of new graves would have incorporated grave 304 into the system of lines and rows that defines the rest of the cemetery.

It is, therefore, envisaged that by the time the basic plan of the cemetery was complete the circular enclosure had lost is significance, and was dismantled. The cemetery could not expand further east because of boundary ditch 006, so it was extended south incorporating grave 304.

Unfortunately the lack of dating material means that this proposed sequence of development of the cemetery cannot be proved. In fact it is unlikely that even a considerable number of radiocarbon dates would be helpful, as the size of the error at 2 sigma would make changes occurring over a few centuries impossible to detect. High precision dates on well preserved bone or timber might help, and dendrochronological dates on the timber structures in the graves would be invaluable, but finding an early medieval cemetery in Wales with such a high level of preservation seems highly unlikely.

Ty Mawr in context of other sites on Holy Island

Prehistory
(Figure 1)

The Ty Mawr barrow is situated in an area of considerable prehistoric ritual activity. Monuments of the Neolithic and Bronze Age are particularly concentrated in the northern part of Holy Island, where Ty Mawr is located.

The Trefignath Neolithic burial chamber (PRN 2500, SAM A11) lies c.1km to the south-east of Ty Mawr. It was excavated between 1977 and 1979, and proved to be composed of three chambers. These were built in succession from west to east, with the cairn enlarged as each new chamber was built. The earliest chamber resembled a simple passage grave. The central and eastern chambers were box-like structures with portal stones. The tomb overlay evidence of domestic occupation of the site dating to the early fourth millennium BC (HAR 3932 5050+/-70 BP, 3980-3690 cal BC) (Smith 1987, 45).

Further south is another monument, which has been interpreted as a Neolithic tomb. The Trearddur monument (PRN 2504) survives as one large upright stone, with another slab at its foot, located on a low mound, at least some of which may be formed by a cairn (RCAHM 1937, 23). The monument has often been mistaken for a standing stone, but it has been traditionally known as a cromlech and called Coetan Arthur (Arthur's Quoit) (Llwyd 1833, 208). Smith (1987, 19) suggests tentatively that this

monument may have been a simple passage grave, like the first phase of Trefignath, but Lynch (1991, 305) lists the site under her 'Monuments so ruined as to be unintelligible'.

There are four further sites on which the previous existence of a cromlech has been claimed. The term 'cromlech' was used fairly consistently by antiquarians to refer only to Neolithic burial chambers. In the 19th century Stanley records that the tomb at Morawellan (PRN 2510) had been destroyed, and only a few stones remained from the tomb at Rhoscolyn (PRN 2008) (Stanley 1870, 58). This means that Stanley did not see enough of these monuments to confirm their identification as cromlechs, but they seem to be fairly well attested.

The other two sites are much more dubious. Jones (1855, 25) describes the alleged cromlech at Plas Feilw (PRN 3800) as 'doubtful', and nothing resembling a tomb can be seen there now. R Lloyd Hughes (1942, 42-3) had heard of a cromlech near Fynnon Gorllas, but failed to find it and the farmer had never heard of it. No trace has been discovered since. It is perhaps best to discount the last two sites unless further evidence is forthcoming.

The four sites that can be accepted as Neolithic tombs formed a line running almost north-south down much of the length of the island. The significance of Ty Mawr's close proximity to this line is not at present clear. The presence of Peterborough ware both under the Ty Mawr barrow and at Trefignath could indicate a link between the two sites.

The Bronze Age monuments are accounted for by standing stones and cairns. Of the eight standing stones recorded on the island, three (PRN 1751, 2014, 3807) were mentioned by Jones and Stanley in the 19th century, but there is no trace of them now. Stanley (1867, location map) marks the Kingsland menhir (PRN 3807) at a location roughly 1km north-west of Ty Mawr, but the site is now under houses. The stones at Stanley Mill (PRN 2009) and near Penrhos Beach (PRN 7169) survive, but there is some doubt about their prehistoric date; the former might be a glacial erratic, and the latter could be a later cattle rubbing stone. There is no doubt about the antiquity of the pair of stones standing 3.25m apart at Plas Meilw (PRN 2748).

The Inventory (RCAHM 1937, 24, no. 13) records a standing stone approximately 200m north-east of the Plas Meilw stones. This locates it at roughly SH22848110. At the time of the survey for the Inventory the condition of the stone was good, but it is not recorded in the SMR. It is possible that this stone was connected with the 'doubtful' cromlech reported from this area (Jones 1855, 25).

Lying about 400m south-south-east of the present excavation is the Ty Mawr standing stone (PRN 2501, SAM A12). The stone is an attractive piece of schist with swirling bedding planes, and an almost anthropomorphic shape, standing c. 2.5m high. Baynes (1911, 71) states that it faces the summer solstice sunrise, and that an alignment from here to the burial chamber at Trefignath is within one degree of the winter solstice sunrise. Without the farm buildings the stone would have been visible from the Ty Mawr barrow. The standing stone and the Trefignath tomb are intervisible, as, probably, are Trefignath and Trearddur, if some intervening trees were removed. This gives an indication that existing Neolithic monuments may have had some continued relevance into the Bronze Age. Considering the Kingsland *maen hir* and the Morawellan burial chamber, also in this area, Ty Mawr seems to be in the centre of a ritual landscape with equal importance in the Bronze Age as in the Neolithic.

Holyhead Mountain is very prominent from all these monuments, and it may be of significance that there was a Bronze Age barrow located on the summit (SH 219 829), though little can be seen of it now (RCAHM, 1937, 23, no. 7). There were at least six other barrows on the island, although three of those formed a cemetery at Porth Dafarch (PRN 1772, 1773, 1774). These are of particular interest in reference to Ty Mawr, because four early medieval burials were inserted in them. The cairn at Garn (PRN 3804) is situated on the cliff tops on the western side of Holyhead Mountain, near Capel Lochwydd (Llwyd 1833, 208). The Inventory (RCAHM 1937, 23) records a second cairn close to Garn, but this has not been located since. Gorsedd Gwlwm (PRN 3798) had a kerb of recumbent stones and three upright stones close to the centre, presumably the remains of a cist.

Two Bronze Age cists have been recorded, and these were presumably originally under barrows (Lynch 1991, map 3, 157-9). The rock cut grave with a cover stone found at Pen y Bonc in 1828 (PRN 3802) contained early Bronze Age artefacts including a jet necklace and 2 urns (Way 1867, 257). Jones

(1855, 21-2) reported a cist located on the coast between Yr Henborth and Porth y Gwyddel (PRN 3796), but it has not been located since.

Stanley (1867, 238) mentions the tradition of a cist having been found between the stones at Plas Meilw (PRN 2748). This was said to have contained bones along with spearheads and arrowheads, but there remains no trace of the cist. A possible Beaker cist may have been located underneath Porth Dafarch barrow I, but this had been previously robbed and disturbed (Lynch 1991, 130).

It is very noticeable that all the other known barrows are located in the western part of the island, and the Ty Mawr barrow is the only one in the east. This is probably due to differential survival and discovery. Most of the cairns are still upstanding, or were until recent times, because they are on rocky, unimproved ground. Before its excavation there was no suggestion of the existence of the Ty Mawr barrow. Other improved fields in the lower eastern part of the Holy Island may also conceal unknown barrows.

Locating the settlements, which were associated with this mainly ritual landscape, is not simple. Peterborough ware found in the blocked entrance to the final phase chamber at Trefignath suggests middle Neolithic activity (Smith 1987, 33), but this is more likely to be ritual in nature than domestic considering its location. There are numerous hut groups in the area, including the other Ty Mawr, Holyhead (PRN 1755). Most of the evidence suggests that these are approximately Romano-British in date (Lynch 1991, 149), although their occupation could extend both earlier and later. Some of these may have been the sites of Bronze Age settlements, but there is at present no proof of this. Flints eroding out of the cliff at Brynglas, may indicate Neolithic activity on the headland (Smith 2001, 24-25). As there is little ploughed land on the island locating settlement sites by field walking is unlikely to be successful, so these sites are only likely to be found by chance on rescue excavations in advance of development.

The early medieval period
(Figure 1)

Holy Island is rich in medieval religious sites, but few can be securely identified as early medieval in origin. The most important of these sites, which gave the island its Welsh name, Ynys Gybi, is the *clas* site of Caer Gybi (PRN 1828). This is traditionally said to have been founded by St Cybi around 540 AD (Hughes 1930, 355), although Lewis (1818, quoted in Owen 1951, 321-322) reviews documentary sources dating St Cybi's activities between 364 and 650 AD. The *clas* was presumably located within the Roman fort (Hughes 1930, 355), although no remains have yet been recovered. The monastic community was large enough to attract the attention of the Vikings in 961 (Edwards 1986, p24, Jones 1952, 8). By 1291 it had become a collegiate church, and was suppressed in about 1547 (Knowles and Haddock 1953, 331). A second church within the cemetery, Eglwys y Bedd, may mark the site of the saint's grave (Davidson 1997, 21). The present parish church originates from the 13th century, although some stones reset in the wall of the south transept date from the 12th century (RCAHM 1937, 28-31). The existing structure of Eglwys y Bedd dates from the 14th century, but archaeological monitoring around the chapel suggested the presence of an earlier building (GAT 1992).

There are 7 other possible early church sites:
Capel Lochwydd (PRN 1752)
Capel y Gorllas (PRN 1761)
Capel Ulo (PRN 1765)
Towyn y Capel (PRN 2001)
Capel Lygors (PRN 2016)
Rhoscolyn parish church (PRN 7068)
Capel Gwyngeneu (PRN 2017)

Of these Towyn y Capel and Capel Lochwydd are included on Speed's map of 1610, and the former appears on Saxton's map of 1578 (Davidson 1999, 1). None of these are now visible, although Capel Lochwydd and Capel y Gorllas are described as having extensive ruins in 1940 (Hughes 1942, 42). Capel Lygors had been completely destroyed by 1920 (Baynes 1920, 42). Towyn y Capel, dedicated to St Ffraid, was probably built in the 12th century (Davidson 1999, 4). It was still standing in 1776 (reproduced in Davies and Rowlands 1986, 35), and enough of the foundations survived for Stanley to

plan them in the 1840s (Stanley 1846, 228). The chapel suffered from erosion by the sea and the last traces of it were finally destroyed by violent storms at the beginning of the twentieth century (Davies and Rowlands 1986, 35). The present 19th century church at Rhoscolyn was built on the site of a medieval church, which was completely demolished when the new church was built. There is a 15th century door and font in the modern church, but no traces of the medieval church survive. However, it was described before demolition by Jones (1946, 436, and Glynne 1900, 108). Capel Ulo is known only from documentary sources. Its first appearance is on an estate map of 1769 (Penrhos III.208, map 14). Recent trial trenching in the approximate area of the site failed to reveal any traces of a structure (GAT report 382). Llwyd (1833, 207) briefly mentions Capel Gwyngeneu, which she places to the west of Holyhead, between Capel Gorllas and the Ty Mawr hut group, however, Baynes (1920, 35) more convincingly locates it in near Pont-Rhydpont.

All these are assumed to be early pilgrims' chapels (Jones 1963, 5), but the lack of excavation means that their actual foundation date can only be guessed at. Even Towyn y Capel, associated with an early medieval cemetery of long cist graves, seems to have been built in the 12th century (GAT report 382). Llwyd (1833, 346) claims an early medieval date for the origin of the church on the site of Rhoscolyn parish church, but this is based only on local tradition.

There are also 6 holy well sites:
Ffynnon y Gorllas (PRN 1750)
Ffynnon Lochwydd (PRN 1752)
Ffynnon Ulo (PRN 1766)
St Cybi's well (PRN 1767)
Ffynnon y Wrach (PRN 1770)
Ffynnon Gwenfaen (PRN 2004)

The early date for these is even more insecure than for the chapels. Many still survive and are enclosed in post medieval structures. St Cybi's well was used for healing in the 18th century and Ffynnon Gwenfaen and Ffynnon Lochwydd were in use for healing and ritual purposes into the 19th century. Although holy wells are often assumed to be of considerable antiquity, because of their supposed association with pagan ritual, the date of specific wells is not easily established. Morris (1997, 91) suggests that many wells were not established as holy or Christianised before 1200, with their heyday being between 1200-1500 AD.

More securely datable to the early medieval period are the long cist burials on Holy Island. The largest cemetery is at Towyn y Capel, Trearddur Bay, where the sand mound may originally have contained as many as 400 graves, both long cists and dug graves (Stanley 1846; 1867, 241), before most were lost to sea erosion. In a trial excavation in 1997 (Davidson 1999) the long cists revealed were dated from between AD 555 and 885, and the dug graves comprised a later phase dated to between AD 1030 and 1220. However, only a very small sample of the cemetery was investigated.

Four burials of probable early medieval date were discovered by Stanley at Porth Dafarch, during his excavations in 1875 (Stanley 1878). Two of the graves were long cists and two were dug graves. All were dug into two of the three Bronze Age barrows on the site.

Llwyd (1833, 205) relates how a stone-lined grave was found under the north side of the chapel of Egwyls y Beddi. To the south of the parish church further burials were discovered during the construction of houses. These are described as walled, paved and covered with flags, and were almost certainly long cists. Many graves were said to have been found, demonstrating the existence of an early medieval cemetery of some size near the church. Confusingly quern stones are described as coming from the graves, but perhaps they had been reused as packing stones.

Llwyd (1833, 346) also describes the discovery of burials near Rhoscolyn church, presumably from the original graveyard, but there is nothing to suggest that these were in cists, and they may have been medieval rather than early medieval.

CONCLUSIONS

Although small the Ty Mawr cemetery was excavated to its limits allowing the full development of an early medieval cemetery to be studied. The graves and their linings were well preserved, providing a useful comparison to more damaged sites. Of particular value is the good preservation of some of the timber cists, and the opportunity to identify the diagnostic traces of those that have entirely decayed. Unfortunately the skeletal remains were not equally well preserved, and the only conclusions that can be drawn about the population buried in this cemetery must be made from the size and types of the graves. The site contributes significantly to the study of the association between early medieval cemeteries and prehistoric monuments.

The most fascinating features on the site, however, raise questions rather than answers. The penannular structure may be an important contribution to the investigation of similar features, begun by O'Brien (1999), but the Mesolithic date for charcoal within it still requires an explanation. Equally puzzling is the alignment of the early Neolithic postholes, which hint at a continuity of focus and orientation on the site spanning millennia.

Ty Mawr is a valuable reminder of how much archaeology is still unknown and unidentified. The cemetery did not survive in folk memory or field names, and had never been mentioned in antiquarian reports. Even the barrow, which was probably upstanding into post medieval times, though probably only low, has not previously been noted. The use of the land for pasture provided little opportunity for the graves or ring ditch to be revealed as crop marks on aerial photographs, and the lack of recent ploughing meant that no grave slabs had been accidentally uncovered. In an area as rich in both prehistoric and later sites as Holy Island the unexpected discovery of a major site should not be surprising, and this example should be kept in mind when other development work is undertaken.

Bibliography

Allen MJ, 1995 Before Stonehenge In Cleal RMJ, Walker KE and Montague R *Stonehenge in its landscape; twentieth-century excavations.*

Ashbee P, 1960 *The Bronze Age round barrow in Britain.*

Barclay, G J, 1996 Neolithic buildings in Scotland, In Darvill T and Thomas J (eds), 62-75

Baynes E N, 1910-11 The megalithic remains of Anglesey. *Transactions of the Cymmrodorion Society*

Baynes E N, 1920 The old monasteries, abbeys and chapels of Anglesey, *TAAS, 33-43*

Brassil, K S, 1988 Tandderwen, *Archaeology in Wales*, **28**, 51

Brassil, K S and Meredith, P J, 1986 Square-plan ditches: Dark Age graves at Tandderwen, Denbigh, Clwyd, *Archaeology in Wales*, **26**, 21-2

Brassil, K S and Owen, W G, 1988 Tandderwen, Denbigh *Archaeology in Wales*, **27**, 58

Britnell, W, 1981 Trelystan, *Current Archaeology* **78**, 201-204

Britnell, W J and Savory, H N, 1984 *Gwernvale and Penywyrlod: two Neolithic long cairns in the Black Mountains of Brecknock*, Cambrian Archaeological Monographs No **2**, Cardiff

Carr, A D, 1982 *medieval Anglesey*, Llangefni

Darvill, T, 1996 Neolithic buildings in England, Wales and the Isle of Man, In Darvill and Thomas (eds), 77-111

Darvill, T, and Thomas, J (eds) 1996 *Neolithic houses in Northwest Europe and beyond*, Oxbow

Monograph 57

Davidson, A. 1997 *Welsh Historic Churches Project, Gwynedd Gazetteer, part 1: Anglesey*. Project No. 1184. GAT Report No. **123**

Davidson, A. 1999 *Towyn y Capel, Trearddur Bay, Anglesey, archaeological evaluation*. GAT Report No. **325**

Davies B L, 1972 Geology. In Richards M (ed), *An Atlas of Anglesey*, 9

Davies, J C and Rowlands, J, 1986 *Holy Island Ynys Cybi: a pictorial record*. Holyhead

Dolley M and Knight, J K, 1970 Some single finds of 10th and 11th century English coins from Wales, *Arch Camb* Vol **CXIX**, 80-82

Edwards, N. 1986 Anglesey in the early Middle Ages: the archaeological evidence. *Transactions of the Anglesey Antiquarian Society and Field Club*

Edwards, N and Lane, A, 1992 *The early church in Wales and the West*, Oxbow Monograph **16**

Fox C, 1959 *Life and death in the bronze age; an archaeologist's fieldwork*.

GAT Report 41, 1992 *Investigations at Caer Gybi Holyhead Environmental improvement scheme*, phase 2, 1-22

GAT report 204, 1996 A55 Bryngwran to Holyhead (east section): archaeological evaluation (G1367)

GAT report 382, 2000 Ty'n'rardd, Holyhead. Archaeological evaluation

Gibson, A, 1995 First impressions: a review of Peterborough Ware in Wales, in Kinnes, I and Varndell, G, eds *'Unbaked urns of rudely shape' essays on British and Irish pottery for Ian Longworth*. Oxbow monograph **55**

Glynne S R, 1900 Notes on the older churches in the four Welsh dioceses, Arch Camb Vol XVII, 108

Greig, J R A, 1987 Pollen and plant macrofossils. In *Smith* 1987, 39-44

Grimes, W L, 1951 *The Prehistory of Wales*

Grogan, E, 1996 Neolithic houses in Ireland, In Darvill T and Thomas J (eds), 41-60

Hedges, J forthcoming, Excavations at Arfryn, Bodedern

Hill, P. 1997 *Whithorn and St Ninian, the excavations of a monastic town 1984-91*

Hughes, H H. 1930 Church of S. Cybi, Holyhead, Arch Camb Vol LXXXV, 355-365

Hughes, R L, 1942 Miscellanea: Ffynnon Gorllas, *Transactions of the Anglesey Antiquarian Society*, 42-43

James, H, 1992 Early medieval Cemeteries in Wales, in *Edwards and Lane* (eds), 90-103

Jones, F, 1954 *The Holywells of Wales*, Cardiff, Uni of Wales Press

Jones, H L, 1846 Mona Medieva I-IV, *Arch Camb* Vol **I**, 436

Jones, H L, 1863 Mona Medieva XXVIII, *Arch Camb* Vol **IX**

Keeley H C M, 1987 The soils. In *Smith 1987*, 35-38

Knowles and Hadcock 1953 *medieval Religious Houses*

Lewis, S, 1993a Brenig 45, in *Lynch* 1993, 65-76

Lewis, S, 1993b Brenig 42, in *Lynch* 1993, 47-52

Longley, D, 1995 Excavations at Bangor, Gwynedd, 1981-1089, *Archaeologia Cambrensis* vol **CXLIV**, 52-70

Longley, D, forthcoming, Early medieval burial on Anglesey, In Hedges, forthcoming.

Lynch, F, Lewis, S, and Waddell, J, 1993 Chapter Seven, Major barrows, in *Lynch* 1993, 47-87

Llwyd, A, 1833 *A history of the island of Mona, or Anglesey...: Being the prize essay to which was adjudged the first premium at the Royal Beaumaris Eisteddfod...1832.* London

Longley, D and Richards, A, 19?? *Early medieval burial in Gwynedd: archaeological threat related assessment (G1385)* GAT Report No. **350**

Lynch F, 1969 The megalithic tombs of North Wales. In Powell TGE *et al Megalithic Enquiries in the West of Britain.*

Lynch F, 1991 *Prehistoric Anglesey.* The Anglesey Antiquarian Society

Lynch F, 1993 Excavations in the Brenig Valley

Lynch, F, Aldhouse-Green, S and Davies, J L, 2000 *Prehistoric Wales*, Stroud

MOLAS, 2000 Cuxton, Anglo-Saxon cemetery, *Current Archaeology* **168**, 460-461

Morris, R, 1997 *Churches in the landscape*. London

Miles H, 1975 Barrows on the St Austell Granite, Cornwall. *Cornish Archaeology No. 14*

Newman, R and Parkin, L, 1986 Atlantic Trading Estate, Barry, *Archaeology in Wales* **26**, 55

O'Brien, E, 1999 *Post-Roman Britain to Anglo-Saxon England: burial practices reviewed.* BAR **289**

Owen, H, 1951 *The life and works of Lewis Morris*, Anglesey Antiquarian and Field Club

Price, C, 1987 Atlantic Trading Estate, Barry, *Archaeology in Wales* **27**, 60-61

Proudfoot, E, 1996 Excavations at the long cist cemetery on the Hallow Hill, St Andrews, Fife, 1975-7, *Proc Soc Antiqu Scot* **126**, 387-454

Proudfoot, E and Aliaga-Kelly, C, 1996 Discussion, In Proudfoot 1996, 436-447

Ralston, I B M, 1982 A timber hall at Balbridie Farm. *Aberdeen University Review*, **168**, 238-249

Rennie, E 1984 Ardnadam, *Current Archaeology*, No. **92**, 262-266

Rodwell, K and W, 1975 Kelvedon, *Current Archaeology* **48**, 25-30

Royal Commission on the Ancient and Historical Monuments of Wales 1960 *An Inventory of Ancient Monuments in Caernarvonshire* vol **II**: central

Royal Commission on the Ancient and Historical Monuments of Wales 1937 *An Inventory of Ancient Monuments in Anglesey*

Savory, 1958 The late Bronze Age in Wales, some new discoveries and new interpretations, *Arch*

Camb, vol **CVII**, 3-63

Smith C, 1987 The excavation of the Trefignath burial chambers – 1977 to 1979. In Smith CA and Lynch FM *Trefignath and Din Dryfol, the excavation of two megalithic tombs in Anglesey*. Cambrian Archaeological Monographs No. 3.

Smith, G, 2001 *Gwynedd Lithic Scatters Project: evaluation of the early prehistoric landscape through lithic finds*, project no. G1590, GAT Report no. **357**

*Spratt, D A, 1982 *Prehistoric and Roman Archaeology of north-east Yorkshire*, BAR **104**

Stanley, W O, 1846 Towyn-y-Capel, and the ruined chapel of St Bride, on the west coast of Holyhead Island, *Archaeological Journal*, 223-228

Stanley, W O, 1867 On the remains of the ancient circular habitations in Holyhead Island, called cyttiau'r Gwyddelod, at Ty Mawr, on the SW slope of Holyhead Mountain. *Archaeological Journal*, 229-242

Stanley, W O, 1868 Ancient internments and sepulchral urns found in Anglesey and North Wales. *Arch Camb* Vol **LV**, 15-293

Stanley, W O, 1870 Recent excavations at Ty Mawr, Pen y Bonc, Twr and Mynydd Gof Du in Holyhead Island, with notices of ancient relics found at Cerrig Ddewi, and at Old Geir, in Anglesey, *Archaeological Journal*, 147-164

Stanley, W O, 1878 Notices of sepulchral deposits with cinerary urns, found at Porth Dafarch, in Holyhead Island, in 1848; and of recent excavations in the sand mounds adjacent in 1875-6. *Arch Camb*, 22-38

Thomas, A and Holbrook, N, 1996 Llandough, *Current Archaeology*, **146**, 73-77

Ward, M and Smith, G H forthcoming The Llyn cropmarks project: aerial survey and ground evaluation of Bronze Age, Iron Age and Romano-British settlement and funerary sites in the Llyn peninsula of North West Wales: excavations by Richard Kelly and Michael Ward. *Studia Celtica*

Way, A, 1867 Notices of relics found in and near ancient circular dwellings explored by the Hon. W O Stanley, MP, in Holyhead Island, *Archaeological Journal*, 243-265

White SI, and Smith G, 1999 A funerary and ceremonial centre at Capel Eithin, Gaerwen, Anglesey. *Transactions of the Anglesey Antiquarian Society*, 17-166

Williams, A, 1952 Clegyr Boia, St David's (Pemb): excavation in 1943, *Arch Camb* **102**, 20-47

Yeoman, P, 1999 The Isle of May: St Ethernan revealed. *Current Archaeology*, No. **161**, 192-197

Cartographic sources

Penrhos estate maps c.1769: Penrhos II. 772 and schedule

Penrhos estate maps c.1769: Penrhos III. 208

Map 14. A plan of Tanyrallt, Cappelylo and Merddyn Poeth in the parish of Holyhead.

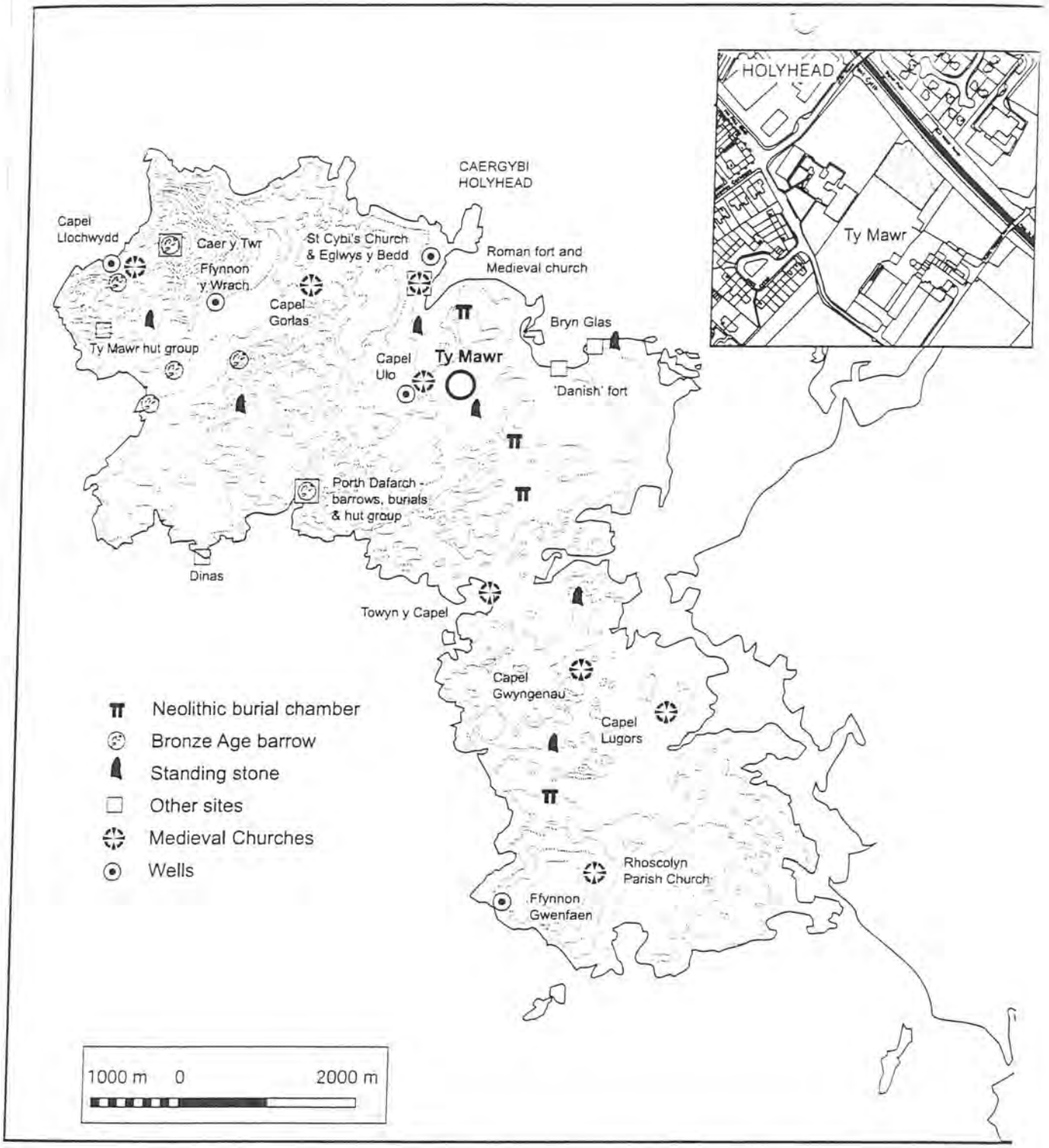
Map 16. A plan of Ty Mawr and Quillets in Tynpwll and Glanygors, Holyhead.

Penrhos estate maps c.1817: Penrhos II. 804, Ty'n y Pwll etc.

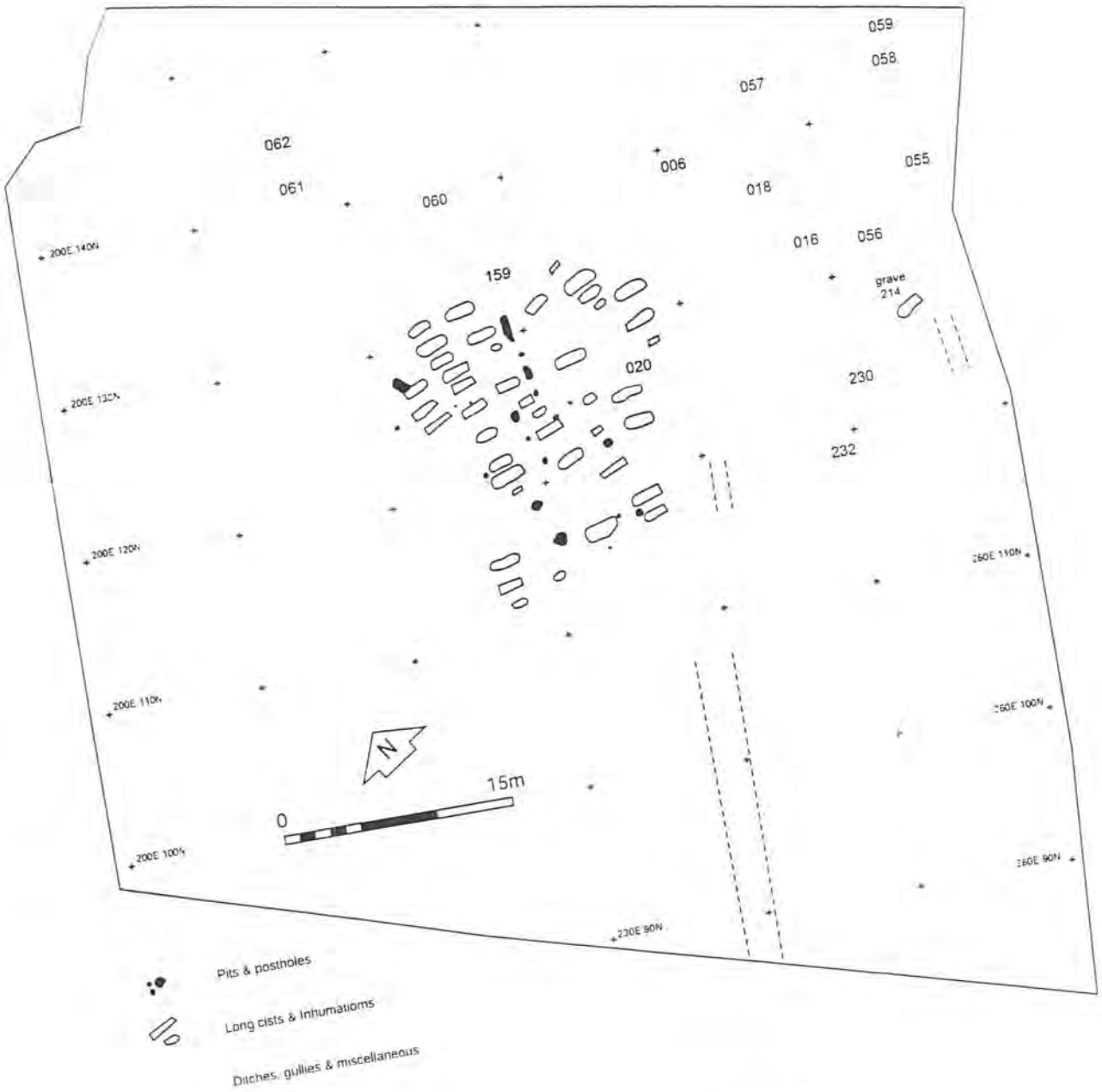
Tithe map for Holyhead parish, c.1840

Geological Survey of Great Britain (England and Wales). Solid and Drift geology sheets 92 and 93, and parts of 94, 105 and 106

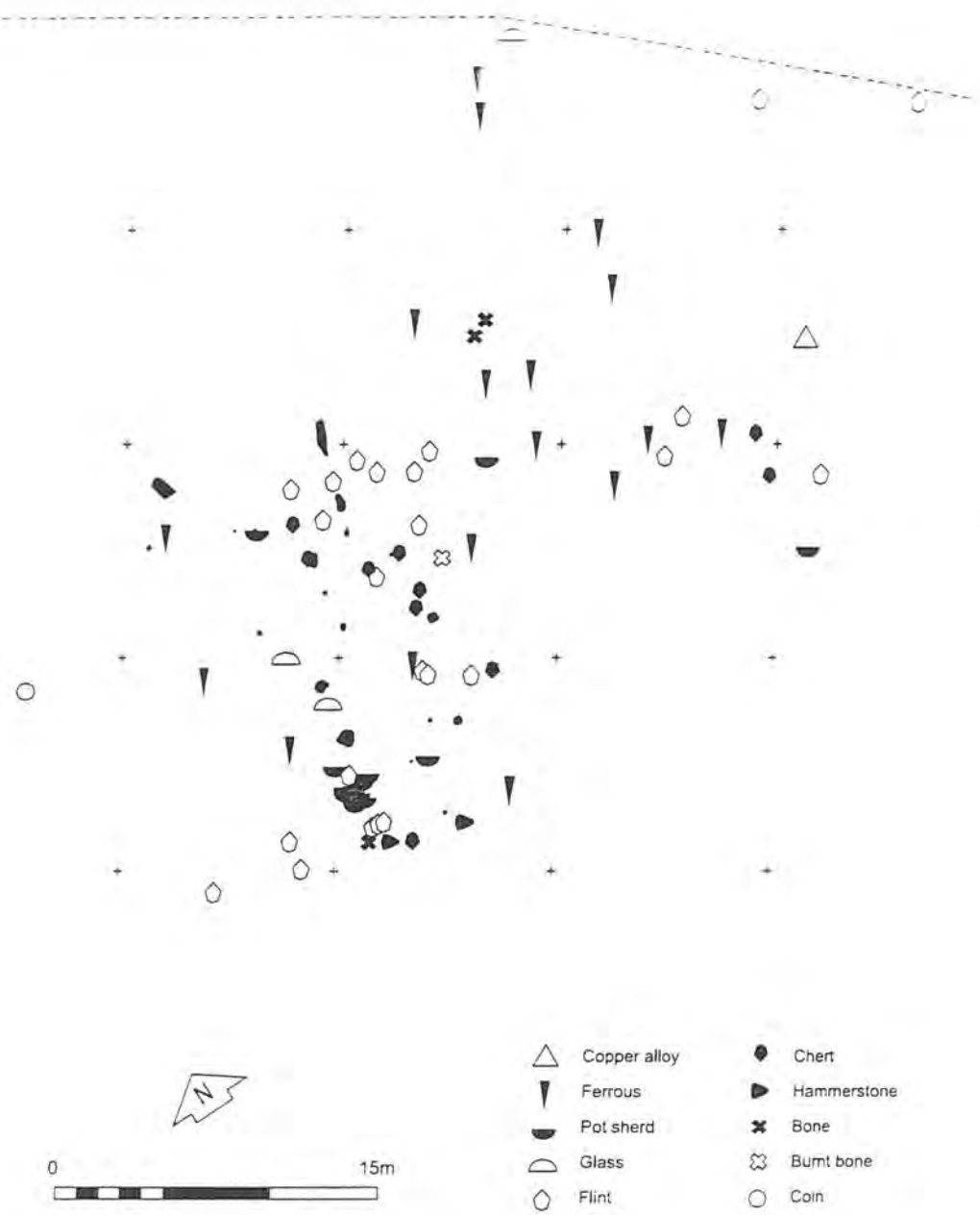
Soil Survey of England and Wales, sheets 93 and 105, and parts of 92, 94, 106, 118 and 119



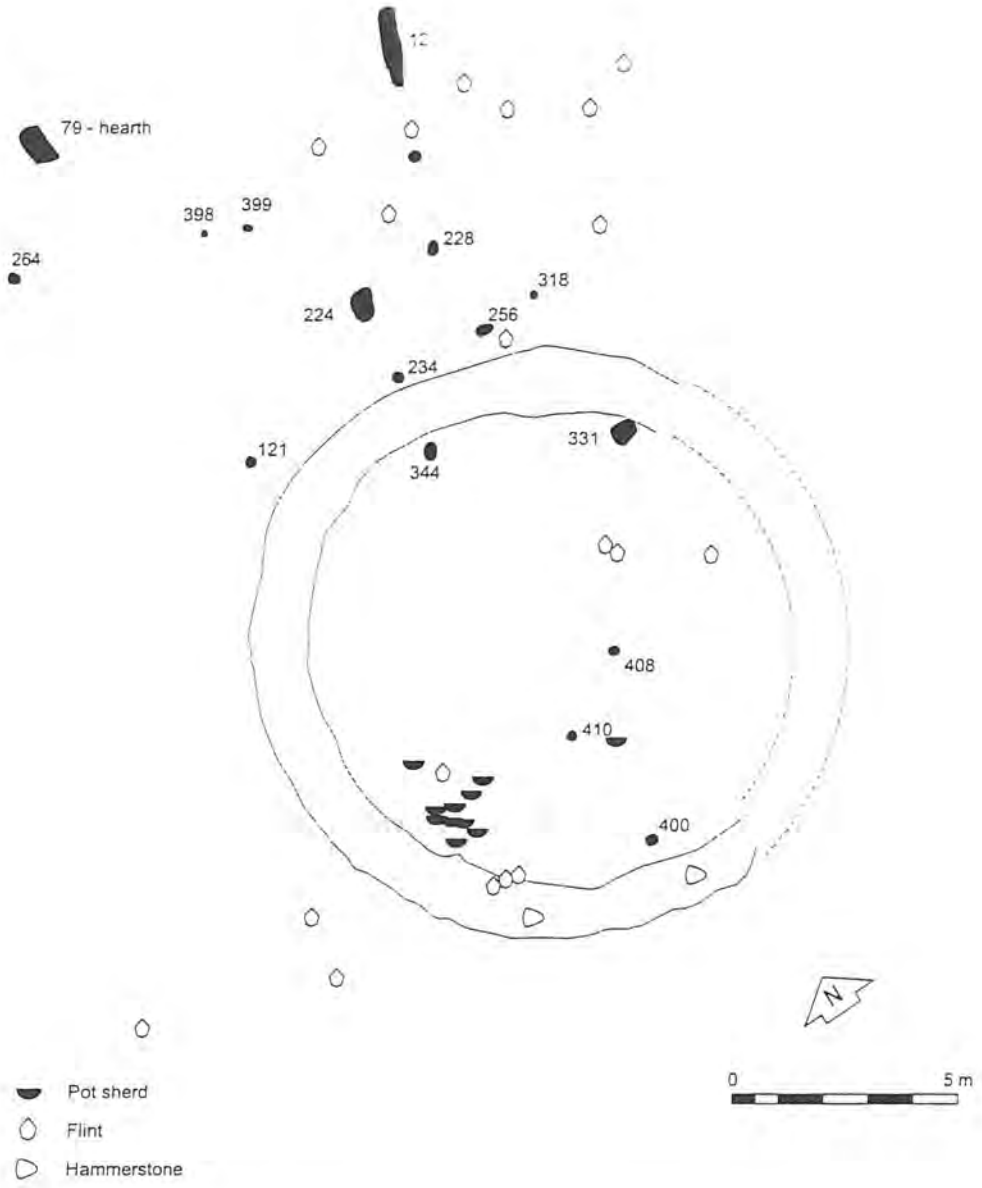
TY MAWR : Fig. 1 - Location of sites on Holy Island



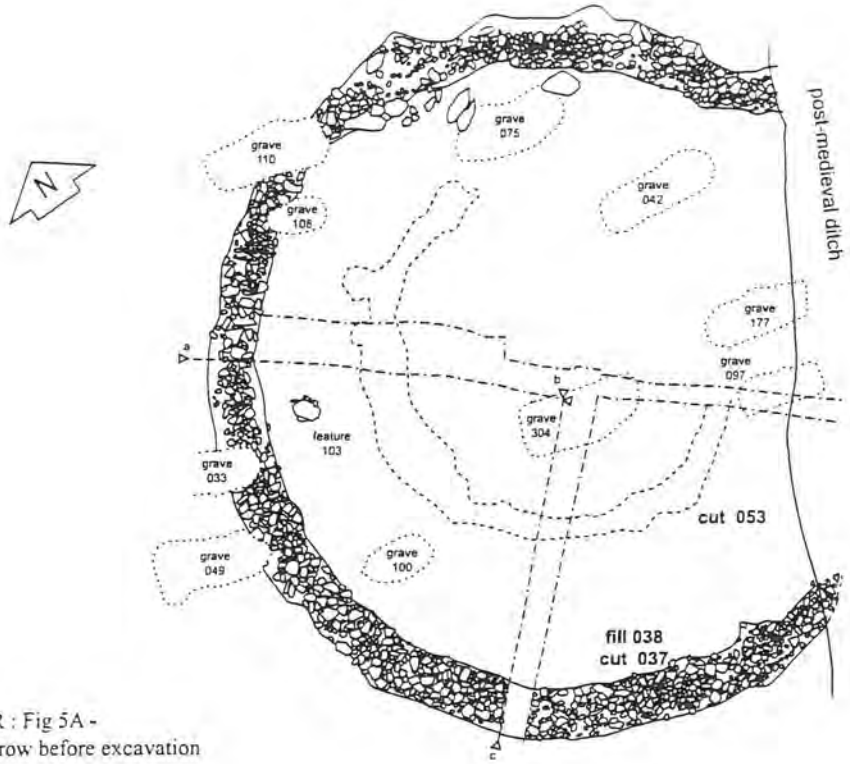
TY MAWR : Fig. 2 - Plan of the site at Ty Mawr.



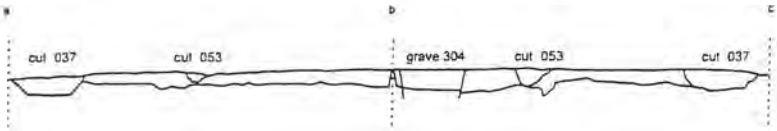
TY MAWR : Fig. 3 - Finds plot.



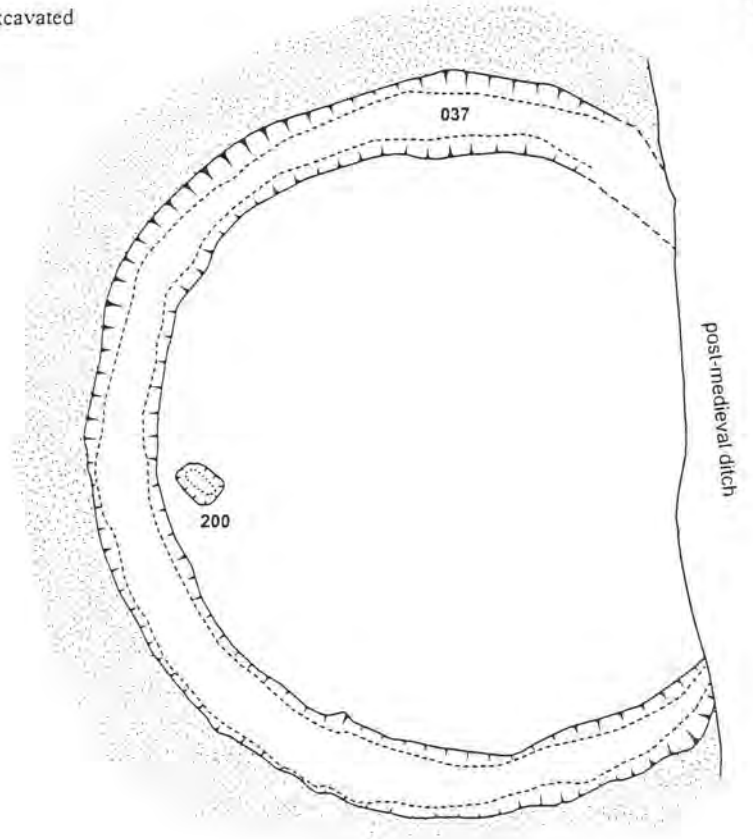
TY MAWR : Fig. 4 - Pre-barrow features and associated finds distribution

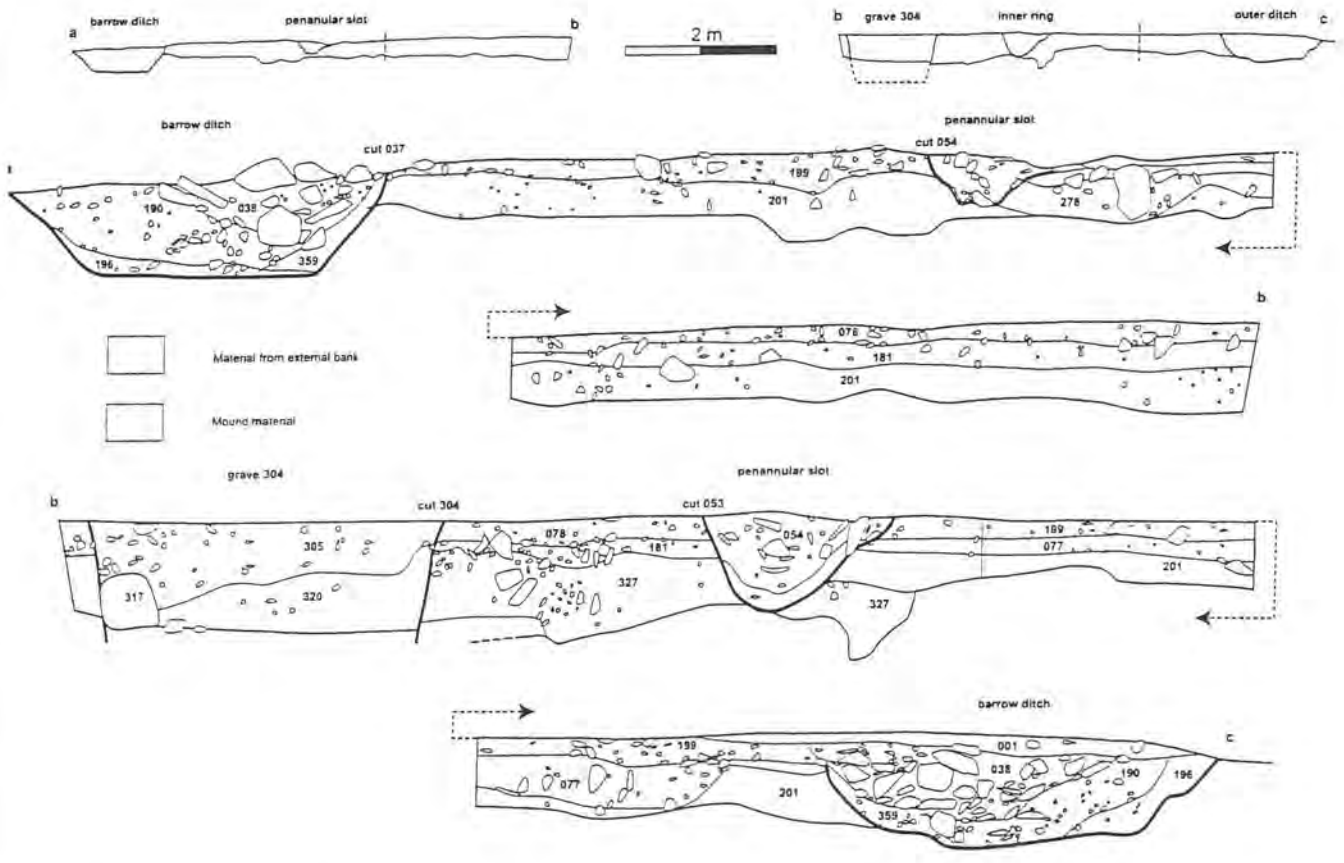


TY MAWR : Fig 5A -
Plan of barrow before excavation



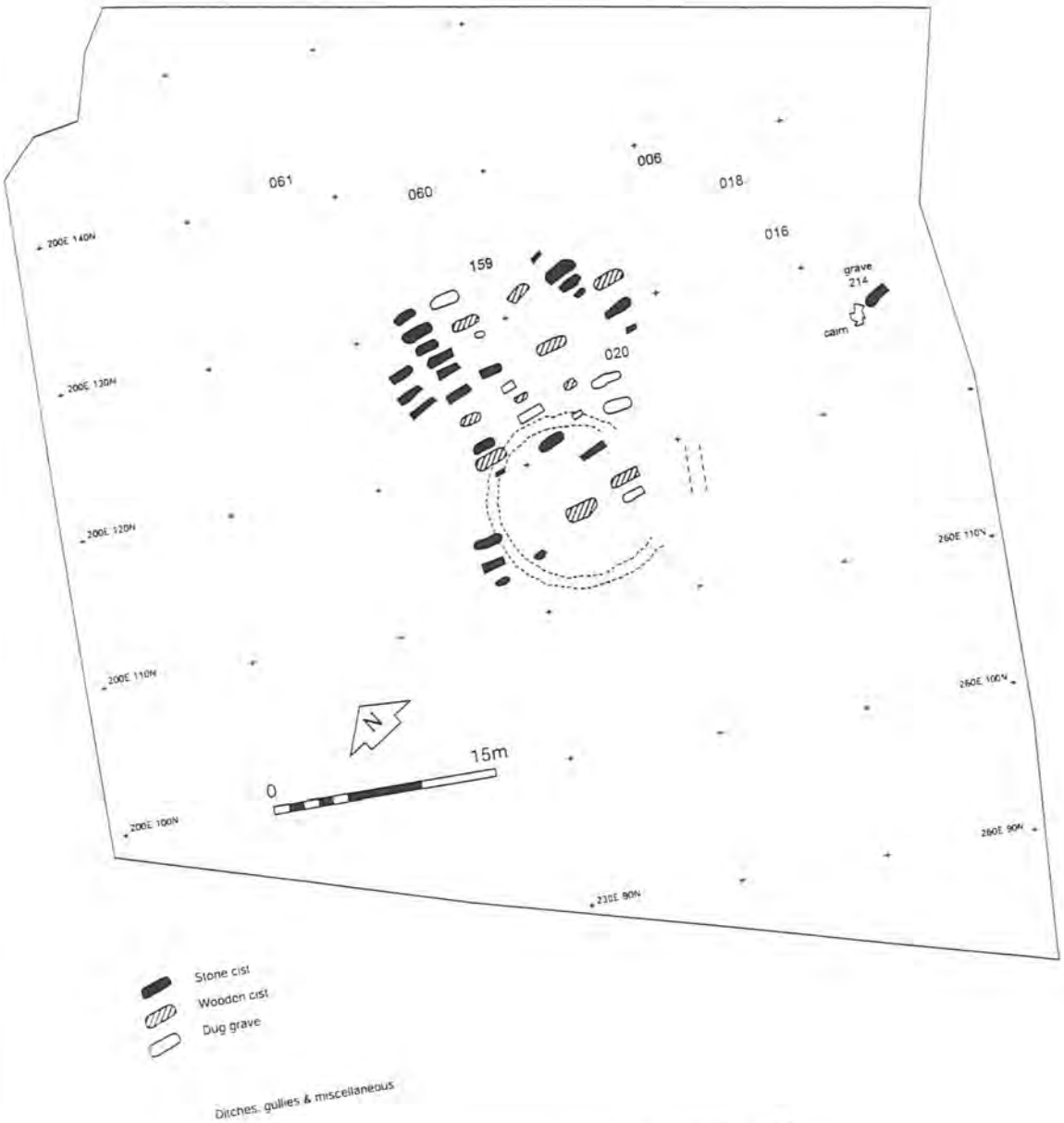
TY MAWR : Fig 5B -
Plan of barrow fully excavated



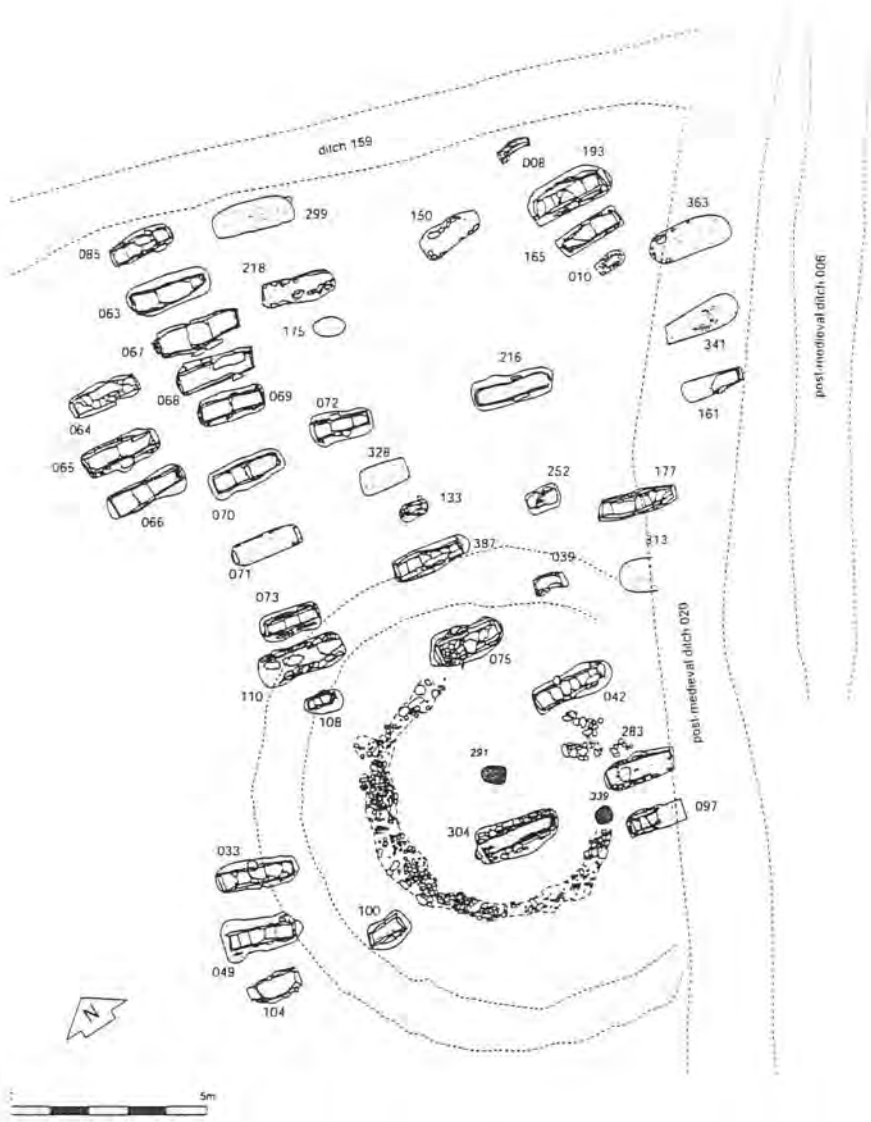


50 cm 0 50 cm

TY MAWR : Fig 6 - Sections through barrow (see fig.5A for locations)

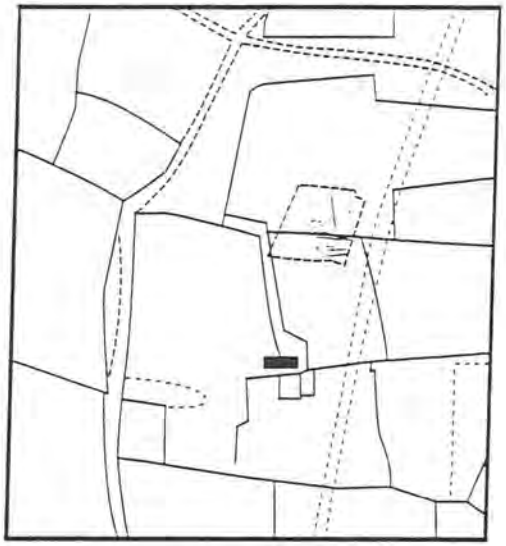


TY MAWR : Fig. 7 - Early medieval features.

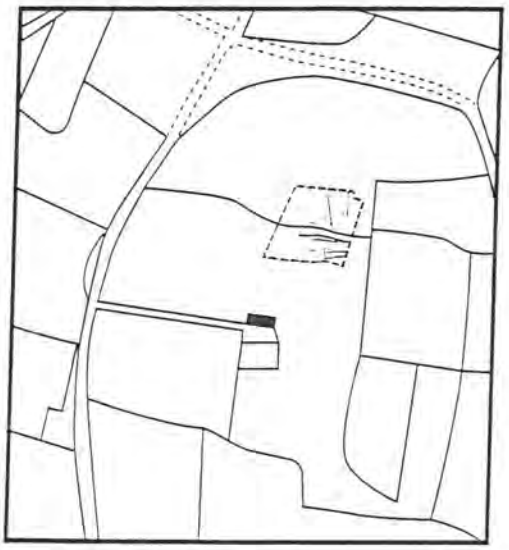


TY MAWR : Fig. 8 - The early medieval cemetery.

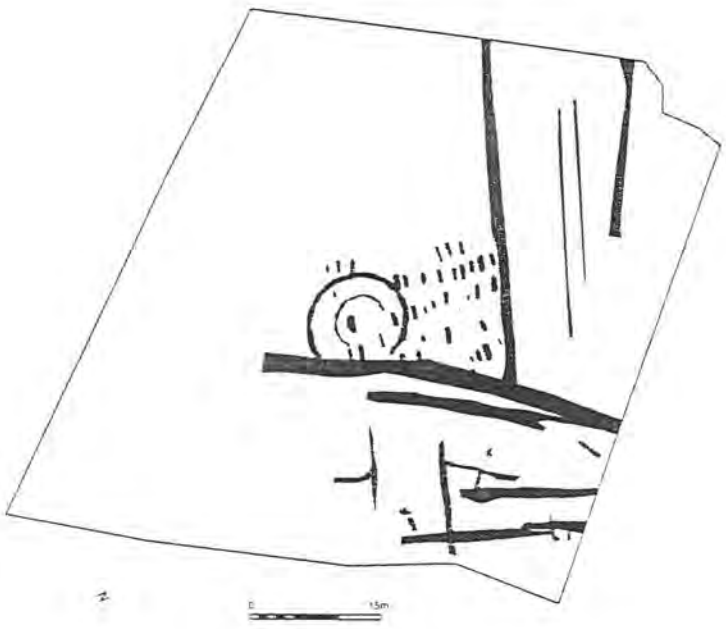
1769 Estate map



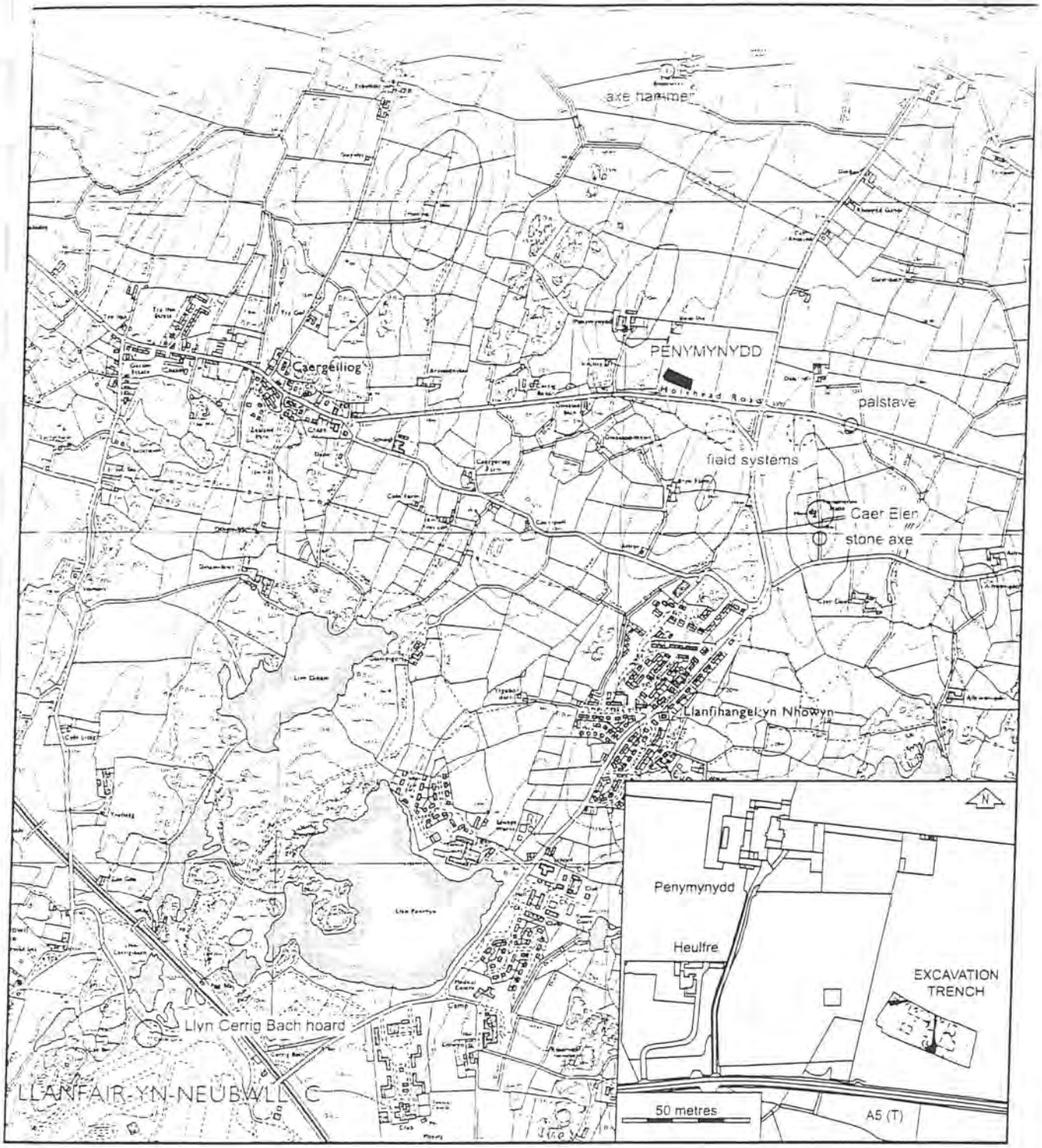
1817 Estate map



1840 Tithe map



TY MAWR : Fig 8 - Comparative period maps of the Ty Mawr environs



PENYMYNYDD : Fig. 1 - Location and local topography.

Fig 5.1

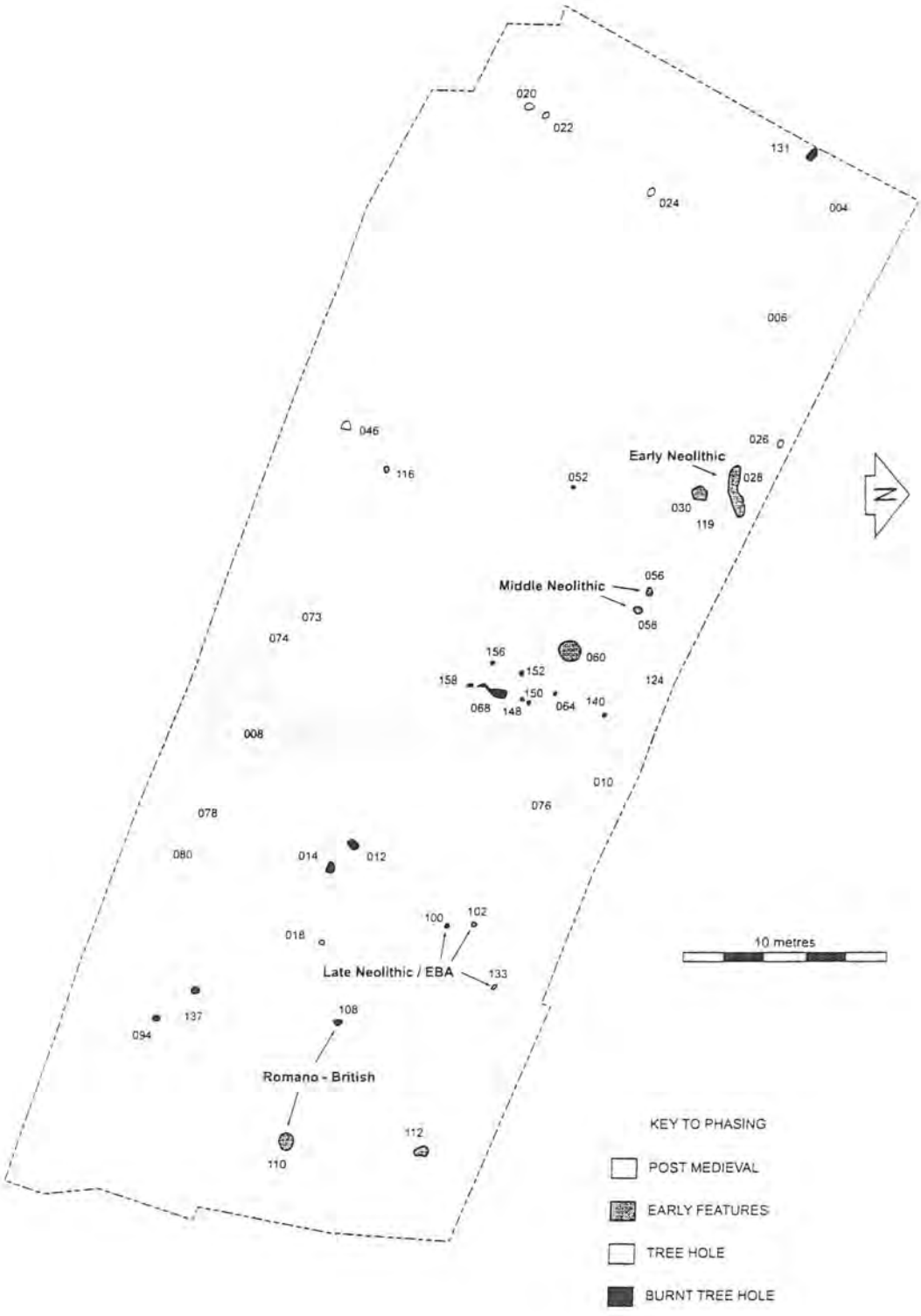
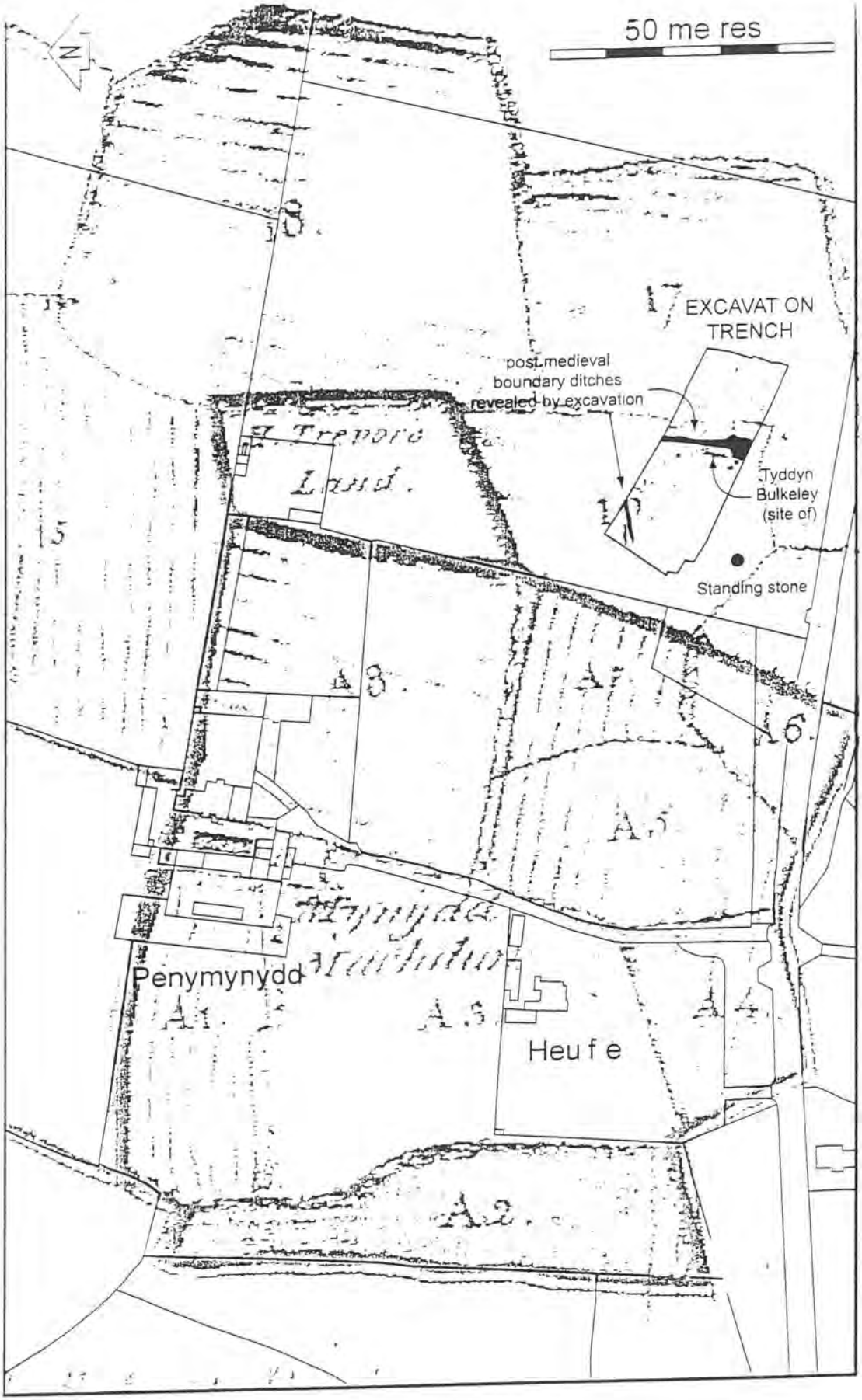


Figure 1: Penmynydd site plan

5.2



PENYMYNYDD : Fig. 0 - Modern boundaries superimposed on 1769 Estate map.

5.2

PREHISTORIC SITE AT PENYMYNYDD, CAERGEILIOG

by Jane Kenney

Contents:

1. INTRODUCTION

1.1 Archaeological background

There are relatively few archaeological sites within the vicinity of Penymynydd (see figure 1). An enclosure, referred to as Caer Elen (PRN 2517), crowned a low hill to the south-east of Penymynydd. Its date is not known, but is assumed to be Iron Age, or possibly Roman. A stone axe (PRN 2575) was found near the enclosure, but is unlikely to be related to the activity there. To the north of Penymynydd, at Bodowyr Farm, a Bronze Age dolerite axe hammer was found (PRN 2524), and to the east a bronze palstave was discovered (PRN 7624), just to the north of the A55. About 2.5km south-west of the Penymynydd site is the location of the Llyn Cerrig Bach Iron Age hoard (PRN 2518) (Fox 1946).

The other remains known from the area trace the development of the agricultural landscape. Faint traces on the northern flank of the hill crowned by Caer Elen may represent the ploughed-down remains of prehistoric lynchets (PRN 5749). Other ridges to the west of this (PRN 5748) are probably part of the medieval ridge and furrow field system.

Prior to the construction of Telford's Holyhead road, completed in 1823, the main road across Anglesey ran through Bodedern (Dodd 1925, 133 and map). The construction of the new road just to the south of Penymynydd farm seems to have been associated with a regularisation of the field layout in the area (Bodedern tithe map). Some of the boundaries shown on this map can still be detected on aerial photographs as faint earthworks running across the modern fields (G1367\1\15). Even fainter traces of some of the 18th century boundaries can also be detected (G1367\1\15, \03\21)

In the 18th century the farm of Penymynydd was part of the Stanleys' Penrhos estate, and appears on the 1769 estate map (Penrhos II 773) as Mynydd Machdun. The farm name was Penmynydd Machno by 1820 (OS first edition 2" map), and Penmynydd by 1848 (Bodedern tithe map). A building associated with two fields, called Tyddyn Bulkeley, is also marked at about (SH 3222 7851) (see figure 2). No earthworks were visible, but some marks were seen in the correct location on the aerial photographs. A geophysical survey of the area was carried out in 1996, but failed to reveal any anomalies.

North of Tyddyn Bulkeley on the estate map is an area called 'H. Trevor's land', a small holding belonging to another landowner, not part of the Penrhos estate. This area is still marked by a dry ditch, although this is no longer in use as a field boundary. The 1769 map does not show any buildings in this holding, but there is one shown on the 1848 tithe map, when the holding was called 'Tyddyn Bach'. Part of the existing structure on the site may be 18th century in origin. The holding is now called 'Tyddyn Bwlch'; perhaps a corruption of 'Tyddyn Bulkeley' borrowed from the neighbouring holding (Davidson 1996, 8).

The farm of Penymynydd is situated about 1km east of Caergeiliog, in Bodedern parish (see figure 1). The excavated area lies to the south-east of the farm, and occupies a sheltered, south facing position at the foot of a low hill. This hill is one of a number of drumlins, which typify this area of Anglesey, and around which settlements tend to cluster. The existence of a spring and a stream also made it a favourable location for settlement. Trial excavations were undertaken to try and locate a building marked on an 18th century estate map (Penrhos II 773). No building remains were found during the evaluation excavations, but the discovery of prehistoric features justified the excavation of a larger area.

1.2 Topographic setting

The site at Penymynydd is situated close to the western coast of Anglesey, with the straits between Holy Island and Anglesey lying about 3km west of the farm. The underlying geology is composed of green-mica-schists of the New Harbour Group. Over this has been deposited a considerable depth of glacial drift, through which the rock protrudes in places to the west of the farm, and around Caergeiliog. In this area the drift has been deposited in numerous, low drumlins, of which the hill the site is located on is typical. The soils formed on these substrates are brown earths of the Trisant series (Geological and soil survey maps). Soils of this series are relatively fertile, and can carry crops or pasture, making them a common choice for prehistoric settlement (Keeley 1987, 35). The map evidence clearly demonstrates that the area was arable cultivation in the post medieval period.

1.3 Acknowledgements

The excavation was directed by Andrew Shalcross, who also carried out the first stage of the post-excavation and writing process. The report was completed by Jane Kenney. The project was managed throughout by Andrew Davidson.

1.4 Methods

The excavation commenced in early March 1999. An area 90m by 35m was stripped by machine, during which features were noted and marked, and subsequently excavated by hand. As there was insufficient time to thoroughly clean the whole trench, areas with the highest density of features were chosen for trowelling. These areas are indicated on the site plan (figure 3) by dashed lines. Long term cultivation had truncated all the remains and obliterated any horizontal stratigraphy, but partial remains of structures and pits survived, together with finds of worked stone and pottery suggestive of domestic occupation during the middle Neolithic period.

2. THE ARCHAEOLOGICAL EVIDENCE
(See figure 3)

2.1 Introduction

Ploughing, which had removed all deposits above the glacial till, left very little stratified archaeology on this site. The majority of the features were, therefore, stratigraphically isolated from one another, and an understanding of their relationship relies on the interpretation of spatial distribution, morphology and chronology.
It was initially assumed that the features could be divided into two phases: prehistoric (probably middle Neolithic) and post-medieval (18th century). However, the results of the radiocarbon dating program proved that this view was too simplistic. The prehistoric features appear to date from several different periods, and allocating undated features to specific periods was not possible. The prehistoric features will, therefore, be considered by feature type, rather than by phase. The term 'prehistoric' is used very loosely here, as some of the radiocarbon dates place features within the Romano British period.

2.2 The prehistoric features

2.2.1 Tree hollows

Seventeen irregular hollows were scattered across the site. These varied between 0.6 and 1.2m in length, 0.35 and 0.9m in width, but were never more than 0.15m in depth. Although often roughly circular in plan the edge of the cuts was irregular. The base of the hollows contained numerous hollows. There is little doubt that these features were caused by tree roots. Some of the hollows contained considerable quantities of charcoal, and occasionally the sub-soil had been altered by the heat, proving that the burning had occurred *in situ*. While no later finds were recovered from these features, two burnt treeholes [cuts 56 and 58] produced sherds of Peterborough ware pottery. One of these, cut 58, also produced charcoal, which was dated to:
D30/0/59 Beta-156487 4460+/-50 BP Cal BC 3350-2920
However, charcoal from another burnt treehole, one of the group in the eastern part of the site, was also dated and proved to be Roman or post-Roman.
D30/04/109 Beta-153885 1710+/-80BP Cal AD 130-530
All identifiable charcoal from sample D30/04/109 was of *Quercus*, both heartwood and sapwood, suggesting that the burnt tree was an oak. Sample D30/0/59 also had some *Quercus*, but there was also *Corylus* present (and this was the portion of the sample that was dated), so the charcoal may have originated from the more general burning.
Summary of treeholes
Burnt treeholes: 012, 014, 052, 056, 058, 068, 094, 108, 131, 137
Unburnt treeholes: 018, 020, 022, 024, 026, 046, 135
Treeholes containing Peterborough ware: 056, 058
Treeholes containing other prehistoric artefacts: 012, 022, 137

2.2.2 Occupation activity

There were several features indicative of temporary occupation. Although the function of some features was unclear, others could be securely interpreted as postholes; some contained post-pipes where the post had rotted *in situ*, e.g. 100 and 102. These two postholes were an isolated pair to the east of ditch 008. Both were about 0.25m in diameter, feature 100 was 0.13m deep, whereas 102 was 0.28m deep. Large pieces of Quercus heartwood charcoal were recovered from 102, which may be the remains of a post burnt *in situ*, and these produced a late Neolithic or early Bronze Age date.

D30/09/103 Beta-152578 3460+/-70BP Cal BC 1940-1610

Other postholes were concentrated in a group to the western side of ditch 008 [140, 064, 150, 152, 156, and possibly 148 and 158]. They varied in diameter from 0.23 to 0.39m, and in depth from 0.11 to 0.30m. Adjacent to the group of postholes was a large circular pit [060], 1.6m in diameter, and 0.42m deep. Several of the postholes contained charcoal, which might have originated from woodland clearance, but the oxidation of the subsoil forming the sides of some of these postholes is indicative of *in situ* burning.

No pottery was recovered from the postholes, but some sherds came from feature 133. This was an elongated rectangular pit, measuring 0.49 x 0.21m, but only 0.1m deep. It was located just over 2m north-east of 102, and contained sherds from 2 vessels, one possibly Peterborough ware, the other a collared or cordoned urn (Gibson, this volume). The function of this feature was unclear because it was so severely truncated, but it seems too narrow for the remains of an urn burial.

There were a small number of other significant features; the most enigmatic of which was cut 028. This consisted of two shallow kidney-shaped depressions, aligned east to west, along the same general alignment as the adjacent ploughmarks. Cut into the eastern part of the feature was a trapezoidal feature 0.75m long, up to 0.17m deep, 0.2m wide at the narrow end and 0.38m wide at the broad end. This cut [129] was lined with charcoal (162) and filled with a hard stony deposit (130). The charcoal may represent the remains of the timber lining of a trough, although it seems very small. It was dated and produced an early Neolithic date.

D30/36/162 Beta-152579 4950+/-70 BP Cal BC 3940-3640

Most of the charcoal in the sample was unidentifiable, but 10g was identified as Corylus. If this does represent the lining of the feature, the Corylus implies a basket-type lining, not planks.

Approximately 1m to the south of 028 a possible posthole was associated with several stakeholes. These were discovered in evaluation trench 148, and did not survive well to be investigated in the main excavation. They may have represented some slight stake built structure. Both 028 and the stakeholes were associated with a spread of red silt, which was probably the remains of a preserved soil horizon.

At the eastern end of the site was a shallow hollow [110] filled with a charcoal rich deposit (111). The sub-soil under the feature had been altered by heat, indicating that the burning had occurred *in situ*. This feature measured 1.15 by 0.98m, and was 0.12m in depth. It is interpreted as a hearth, but there were no other structures associated with it, except for a possible stakehole [120] cut into its edge. A sample of the layer of charcoal within the base of this feature produced a Late Roman or Post Roman date.

D30/08/111 Beta-152577 1580+/-70BP Cal AD 340-630

Most of the identifiable charcoal in this sample was *Quercus*, much of it heartwood (Gale, this volume). This is presumably due to oak being used as fuel for the fire.

To the north of 110 was a steep sided, sub-rectangular pit [112], measuring 1.6x1.6m, and up to 0.23m deep. A large stone rested upright against one edge, and it is possible it had contained other packing stones, since removed. However, there was not sufficient evidence to securely interpret this as a large posthole.

There was a small flint assemblage of 24 pieces, of which 22 are worked and of these 2 are secondarily retouched. Eight pieces were also recovered from the evaluation trenches. Most of the pieces came from the interface of the subsoil with the overlying layers rather than in stratified layers or features so their context is uncertain, but one retouched piece came from pit 060, and 2 small flakes from 028. Several of the flints formed a discrete scatter immediately west of features 04 and 06, and may be associated with these features.

The assemblage contains no good diagnostic pieces. Several pieces are consistent with Mesolithic flint working techniques, but are not sufficiently diagnostic to claim Mesolithic activity on the site on this evidence alone. The assemblage can probably be assigned to the early and middle Neolithic activity.

The ratio of flakes to tools demonstrates on site knapping, as does the presence of a hammer stone and a light, flint-working hammer. Both these artefacts came from postholes [64 and 152], supporting the

suggestion that the flints are related to the same activity that created the postholes. A fragment of a polished stone axe came from the burnt tree hollow [56], which also produced Peterborough ware pottery.
The discovery of a lump of slag in possible posthole 158 suggests it is not contemporary with the others, although the slag might have been introduced later by animal activity.
Summary of possible occupation features
Definite posthole: 064, 100, 102, 133, 140, 150, 152, 156
Possible posthole: 030, 034, 048, 054, 078, 116, 148, 158, 177
Pits: 060, 070, 112
Possible pits: 016, 122, 167
Stakeholes: 120, 169
Other features: 028, 110, 129

Features containing prehistoric pottery: 133, 140
Features containing flint: 028, 060
Features containing daub: 070, 102
Features containing worked stone: 152, 064
Features containing slag: 158

2.2.3 Prehistoric ditches

Two shallow, nearly parallel ditches were located in the northern corner of the site. The longest of these [006] could be traced for over 11m. It was 0.7m wide and 0.3m deep, with fairly steep sides and a flat base. In places traces of another ditch seemed to run along the northern side of 006. About 1m north was another shallow ditch [004], 5.2m long, 0.46m wide and only 0.1m deep. This may have converged on 006, rather than running parallel, but insufficient of the feature survived to be sure.
The fills of these features (005 and 007) were reddish brown silt, more similar to the fills of the prehistoric features than the post medieval ones.
To the north of 004 was a small scatter of flints, but no artefacts were found in the ditches themselves. There is no evidence to demonstrate that these features are prehistoric, but they do not seem to relate to the post-medieval agricultural activity, so an early date is a possibility.

2.3 The post medieval features

The features of this phase were much easier to identify and interpret. Several, including ditch 008, contained post-medieval pottery and glass. Ditch 008 was large and well defined. It ran north to south across the site and broadened out at the southern end. Along most of its length the ditch was 2.7m wide, but became about 6m wide at the southern end. Ditch 008 had traces of furrows running parallel to it (010 and 080). The area to the west of 008 had no evidence for tradition ridge and furrow cultivation, but it did have plough marks (119) scarred into the subsoil. These were perpendicular to, and therefore probably contemporary with, 008. It is likely that the remains of the ridges and furrows were removed during topsoil stripping, and only the deepest plough marks remained.
A shallow hollow [074], 1.3m in diameter but only 0.08m deep contained post medieval pottery within its stony fill. It appeared to be part of a spread of stones on the edge of ditch 008, perhaps to consolidate a boggy patch. A deposit of dark soil (73), just north of 74, also contained post medieval material. Although there was no direct evidence for a post-medieval building, window glass and domestic pottery indicated domestic occupation nearby.
Summary of Post-Medieval features
Boundary ditches: 008
Furrows: 010/076, 080
Plough marks: 119, 124
Others: 073, 074

3. DISCUSSION

3.1 The prehistoric features

3.1.1 Tree clearance activity

While the trees in the unburnt hollows may have died naturally and rotted *in situ*, those in the burnt hollows seem to have been set on fire. The creation of a fire of sufficiently high temperature and long duration to burn the trees or their stumps could not have occurred accidentally, and it is likely that the burnt tree root holes indicate deliberate clearance of the land. Probably only the tree stumps were burnt, to aid their removal, and allow ploughing unhindered.
The estate map (Penrhos II 773) indicates ridge and furrow in the post-medieval fields, making the presence of trees in the fields highly unlikely. While the trees must predate the post-medieval field system, they are otherwise difficult to date.
Clearance by burning, often called slash and burn, is a technique used by mobile farming communities in tropical regions today. It has been claimed as the technique by which the first farmers began opening up the climax forest in Britain (Rowley Conwy 1981). However, before the invention of heavy plant machinery burning was the best way to remove stumps prior to cultivation. The burnt treeholes are, therefore, not necessarily of an early date, although similar features are found beneath prehistoric monuments.
The Peterborough ware pottery and the associated radiocarbon date implies that some of the clearance may be middle Neolithic, but the other dated treehole produced a Roman date. It is likely that some clearance was also related to an expansion in agricultural land during the Roman period. Without dates from other burnt treeholes it cannot be assumed that clearance was restricted to these periods alone. It is probable that general, large scale clearance is not represented by these features, but that a few trees were removed at various times since the Neolithic, the same technique being used in each case because of its efficacy at removing the roots and stump.

3.1.2 Occupation activity

The discovery of Peterborough Ware led to the initial interpretation of the site as a middle Neolithic settlement; Gibson (1995, 30) has dated Peterborough ware in Wales to between 3500 and 2500 cal BC. Settlement sites of this period are extremely rare, not only on Anglesey, but Britain, and the discovery of a new example would have contributed significantly to the understanding of the period. However, the site never quite made sense as a coherent whole. This may have been due to the loss of features due to ploughing. The map evidence and the presence of plough scars showed that the site had been extensively ploughed in the post medieval period. Many of the postholes were little more than 0.1m in depth, and a most features must have been significantly truncated. Drip gullies, stakeholes, and the shallower postholes would all have been lost under these conditions, so, if there had been a settlement there the remains would be expected to be very fragmentary.
It should be noted that the date closely associated with Peterborough ware on the site:
D30/0/59 Beta-156487 4460+/-50 BP Cal BC 3350-2920
fits very well with the range of dates from Wales collected by Gibson (1995, 30), adding further strength to his theory that this pottery was only used within a limited time period.
The radiocarbon dates in general suggest that the excavated features are fragmented in time as well as space, distributed amongst the following periods; early Neolithic, middle Neolithic, early Bronze Age and late or post-Roman. The small number of dates done means that this cannot be taken as a definitive statement on the date of the site, but it strongly suggests that the features excavated are a palimpsest of activity from several periods, rather than the truncated remains of a settlement from a single period. Most of the features have neither artefacts nor radiocarbon dates, and their association with the dated features is difficult.
The possible post and stakeholes found in the evaluation trench near feature 28 might suggest some flimsy structure beside this enigmatic feature, dated to the early Neolithic. The proximity of the group of postholes to the treeholes containing Peterborough ware makes their dating to this period tempting, but it is not demonstrable. The early Bronze Age date from one of the pair of postholes to the east of ditch 008 could be seen in connection with the urn sherds from the nearby feature 133, but little more can be said about three isolated features. The treehole [108], which produced the Roman date, is one of the closest to the hearth-like feature [110], the date from which overlaps with the former. This demonstrates some late Roman activity involving tree clearance and burning, but it is not possible to securely assign all the burnt treeholes in this area to the same phase of activity.
The collection of postholes west of ditch 008 formed no clear pattern, and at best might be interpreted as supports for a windbreak, or possibly part of a fence line. However, Darvill (1996, 87) has

interpreted similarly wandering post lines, at Hazleton and Salt's Lot, Gloucestershire, as supports for a pitched roof. Postholes 140, 064, 152 and 156 do form a roughly straight line. If these had supported a ridge pole, they might have been part of a small structure c.3m in length. Feature 068 is not significantly different to other burnt tree holes on the site, but its location close to the postholes make it tempting to interpret it as a hearth.

What attracted people to this specific site at such disparate periods cannot be proved, but it had various favourable elements. The land is relatively fertile and water was probably readily available. At the southern end of the field to the west of that containing the excavation trench, there is a natural spring, which was converted into a well by the start of the twentieth century. The presence of a burnt mound just up the hillslope from the spring (Maynard this volume) also demonstrates the availability of water, and contributes to the evidence for Bronze Age activity in the area. The location on the lower south-east slopes of a drumlin may also have provided some shelter from prevailing westerly winds.

3.1.3 Prehistoric ditches

Features 004 and 006 were not quite perpendicular, but close enough to consider that they were contemporary with the boundary ditch. However, the difference in the fills between features 006 and 008 may suggest that they belong to different phases. The ploughmarks are quite accurately perpendicular to 008, and it might be expected that 006 would also be if it was contemporary. Feature 006 does not correspond to any of the boundaries shown on any of the early maps, and seems more likely to be part of a prehistoric enclosure than the medieval or post medieval field systems. With no datable material or artefacts from 006 or 004 this cannot be proved, but the adjacent flint scatter further supports its prehistoric date.

3.2 The post medieval features

The map evidence (see figure 2) shows that the general field layout in this area has remained fairly consistent since the 18th century, but that the modern boundaries were created after the construction of the Holyhead road in 1823 (Dodd 1925, 133). The 1848 tithe map shows the layout to be much as it is today. On the 1769 estate map (Penrhos II 773) the field boundaries are less regular, and with more subdivision of the fields south of the Penymynydd farmhouse, then called Mynydd Machdun. The north-south boundary, on which lay the cottage of Tyddyn Bulkeley, does not appear on later maps, and is, almost certainly, the large boundary ditch found in the excavation [008]. However, it is not possible to fit the map exactly to the excavated features, despite the fact that the map appears to be fairly accurate. Taking into account some errors in the mapping, the location of the cottage corresponds reasonably well with the southern part of feature 008, where it broadens out. It seems likely that the hollow is the yard shown on the map east of the cottage, and that the foundations of the cottage itself lie just under the baulk of the excavation trench. Pit 74, which produced post-medieval pottery, could be a rubbish pit used by the occupants of the cottage.

The estate map does indicate north-south orientated ridge and furrow in the field to the east of 008, which corresponds to the alignment of furrows 010 and 080. The field to the west of ditch 008 seems also to have had north-south strips in 1769, although these are not very clearly indicated. The next field to the west had east-west orientated strips, and the orientation of the ploughmarks (119 and 124) west of 008 suggests that this whole area to the west had once been a single field.

An upright stone was identified during the evaluation stage in advance of the A5 improvement work (Davidson 1996, 9). It was located just to the south of the excavation trench, at SH 3212 7845, and may represent the southern corner of the Tyddyn Bulkeley holding. On an aerial photograph (G1367\03\21) the stone can just be seen, and it does seem to be located on the southern boundary of the holding. The name Tyddyn Bulkeley suggests previous ownership of the holding by the other large landowners in the area, the Bulkeleys of Baron Hill.

4. CONCLUSIONS

While it cannot be claimed that the area excavated included a settlement site from any of the early periods represented, there is a strong suggestion that there may have been settlements nearby. Perhaps most instructive are the remains from the one period when it is certain that there was settlement at this location, ie in the post medieval period. The excavation trench seems to have only just missed the cottage of Tyddyn Bulkeley, yet a pit with a few medieval artefacts in is the only firm archaeological evidence of its existence.

5. BIBLIOGRAPHY

5.1 Secondary sources

Darvill, T, 1996 Neolithic buildings in England, Wales and the Isle of Man, In Darvill and Thomas (eds), 77-111

Darvill, T, and Thomas, J (eds) 1996 *Neolithic houses in Northwest Europe and beyond*, Oxbow Monograph **57**

Davidson, A, 1996 *A55 Bryngwran to Holyhead (east section): archaeological evaluation* (G1367), GAT report **204**

Dodd, A H, 1925 The roads of North Wales, 1750-1850, *Arch Camb*, **LXXX**, 121-148

Gibson, A, 1995 First impressions: a review of Peterborough Ware in Wales, in Kinnes, I and Varndell, G, eds *'Unbaked urns of rudely shape' essays on British and Irish pottery for Ian Longworth*, Oxbow monograph **55**

Fox, C, 1946 *A find of the early Iron Age from Llyn Cerrig Bach, Anglesey*

Keeley H C M, 1987 The soils. In Smith C, 1987 The excavation of the Trefignath burial chambers – 1977 to 1979. In Smith CA and Lynch FM *Trefignath and Din Dryfol, the excavation of two megalithic tombs in Anglesey*. Cambrian Archaeological Monographs No. 3. , 35-38

Rowley Conwy, P, 1981 Slash and burn in the temperate European Neolithic, In Mercer, R, *Farming Practice in British Prehistory*, 85-96

5.2 Cartographic sources

Penrhos II 773, Map no. 36, Bodedern parish 1769

OS first edition 2" map, 1818-1823, revised 1836

Bodedern tithe map c.1848

25" County Series map, Anglesey sheet XII.9, 1924

OS 1:10. 000 Sheet SH 37 NW, 1979

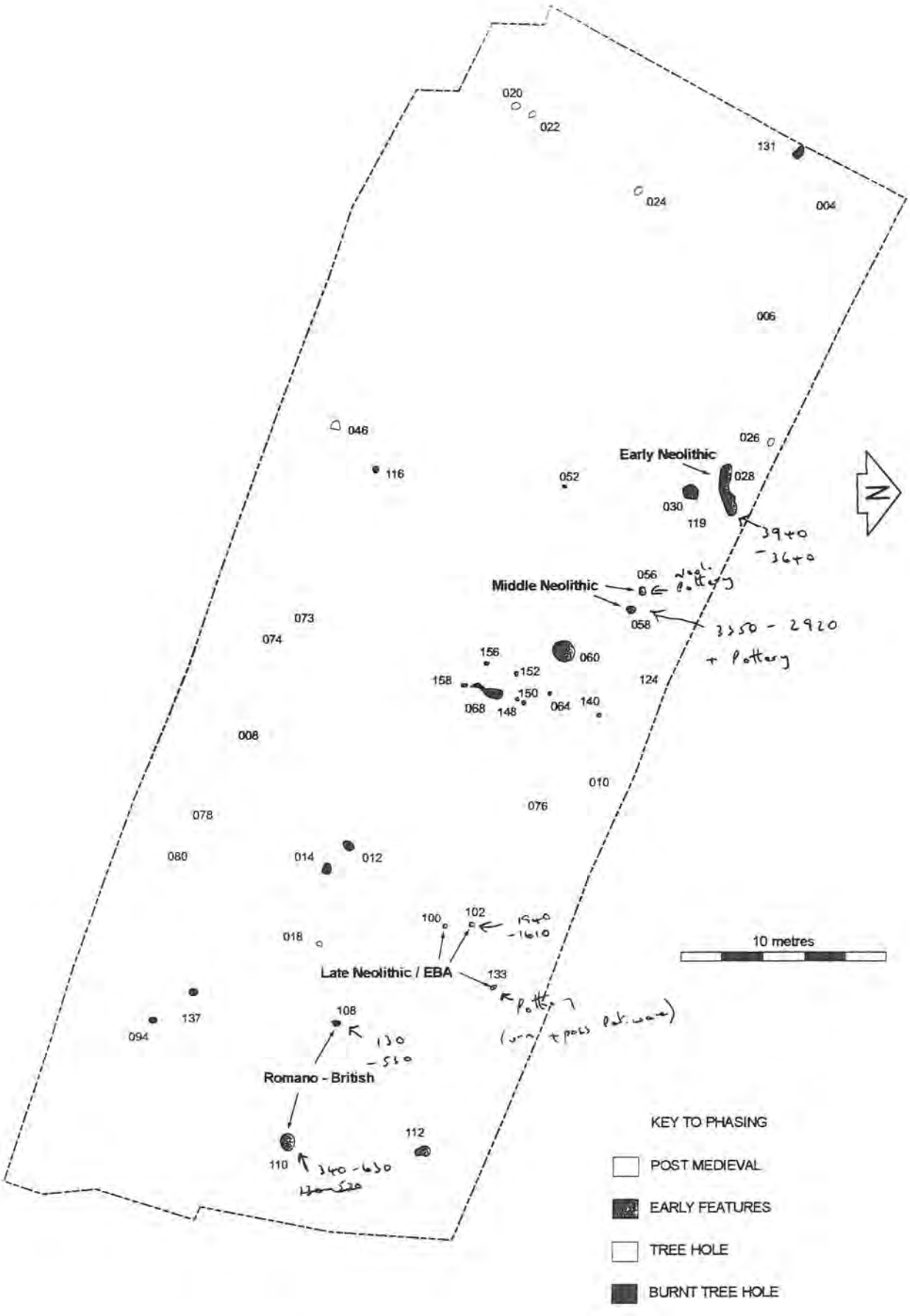
Geological Survey of Great Britain (England and Wales), Solid and Drift geology sheets 92 and 93, and parts of 94, 105 and 106

Soil Survey of England and Wales, sheets 93 and 105, and parts of 92, 94, 106, 118 and 119

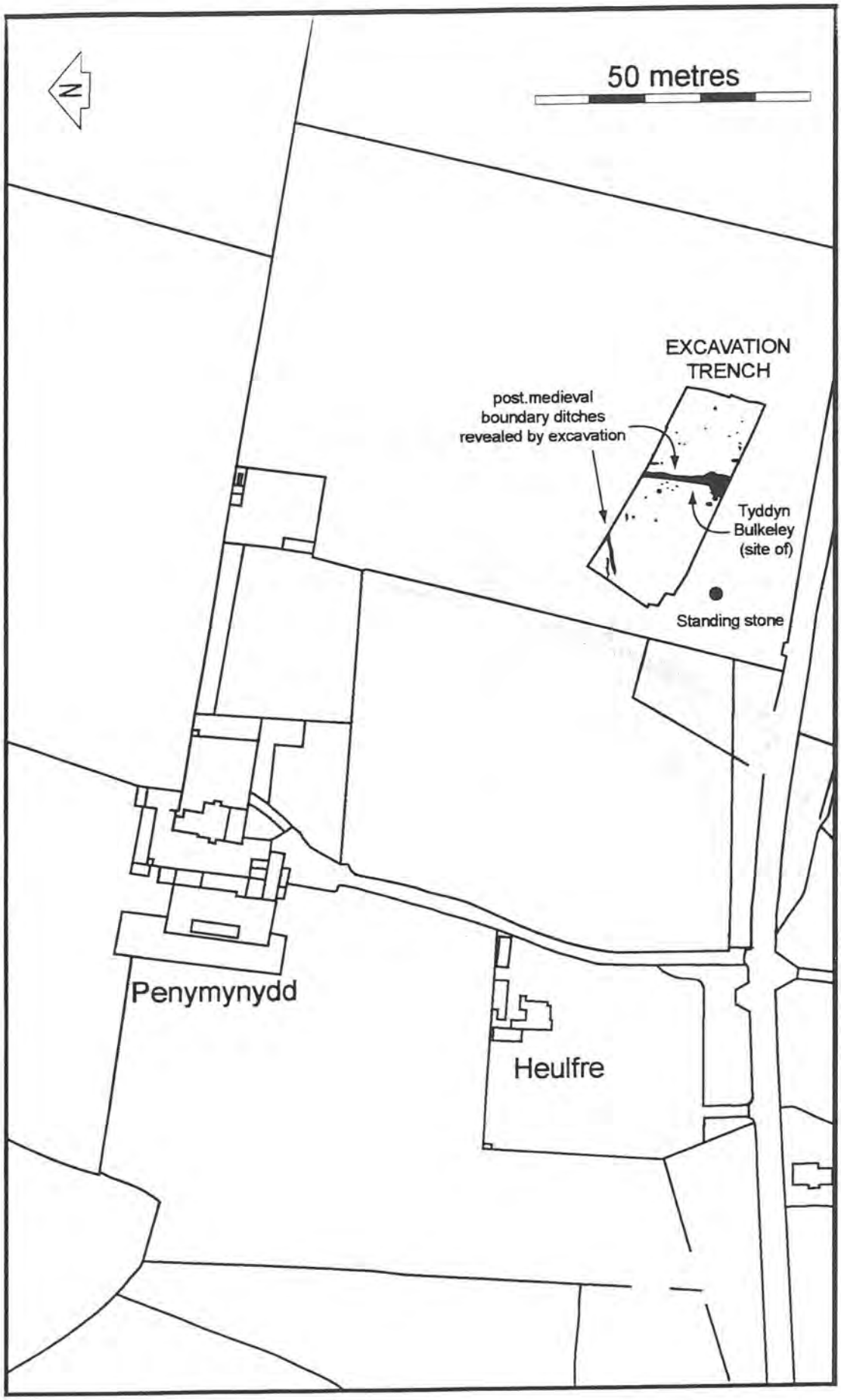
5.3 Aerial photographs

Gwynedd Archaeological Trust, taken under project number G1367, archived under project G1550

PENYMYNYDD : Fig.1 - Location and local topography.



PENYMYNYDD : Fig. 2 - plan of excavated area.



PENYMYNYDD : Fig. 3 - Modern boundaries superimposed on 1769 Estate map.