

BRITISH GAS PIPELINE
PENTIR - PEN-Y-GROES
ARCHAEOLOGICAL RECORDING
AND MONITORING (G1361)

REPORT NO. 183

Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

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prepared for British Gas

by R. Roberts

illustrated by H. Riley

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Gwynedd Archaeological Trust Report No. 183

ARCHAEOLOGICAL RECORDING AND MONITORING OF SITES ON THE PENTIR - PEN-Y-GROES PIPELINE (G1361)

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1.0 INTRODUCTION

1.1 British Gas are constructing a mains gas pipe between the GVC, to the north-east of Ty'n-llwyn farm, Pentir and a point just east of Cae-moel farm, Llanwnda. An initial archaeological assessment of the line of the preferred route was carried out by Gwynedd Archaeological Trust (Contracts) and a report was produced outlining the archaeological implications of the proposed scheme. This report identified the archaeological resource in the vicinity of the works, evaluated the importance of that resource and made recommendations to avoid or lessen the impact of the scheme on the archaeology. A programme of archaeological recording, including a watching brief to be undertaken once topsoil stripping had commenced was recommended.

1.2 Gwynedd Archaeological Trust (Contracts Section) submitted a Project Design and costing for carrying out the recommended works. These were accepted and the Contracts Section were contracted to undertake the archaeological recording of specific archaeological features in advance of construction and the monitoring of the pipeline during soil stripping. The field work took place between the 21 September and the 30th October 1995.

2.0 BACKGROUND

2.1 An archaeological assessment of the proposed pipeline was carried out in August 1995 and the results published (Gwynedd Archaeological Trust Report No. 178, **British Gas Pipeline, Pentir - Pen-y-groes**, Archaeological Assessment (G1353). Sixty three sites in total were identified within the initial report, ranging in date from the Prehistoric period to the present century. Seven of the sites were considered of regional importance and three of local importance, the remainder being minor or damaged sites.

2.2 Two stages of archaeological response were recommended in the initial report: the recording of sites prior to disturbance, and continuous monitoring during topsoil stripping as part of an archaeological watching brief. Eighteen sites were recommended for recording, and twenty two sites were to be investigated as part of a watching brief.

3.0 SUMMARY OF ASSESSMENT RECOMMENDATIONS

3.1 Recommendations

The following recommendations were made in the initial assessment report:

Sites 29 and 32 - preservation *in situ*, or detailed recording

Sites 3, 6a & b, 21, 33, 34, 36, 41, 42 - record by survey, photographic and written description

Sites 12, 17, 28c, 30, 35, 37, 38, and 43 - record by photographic and written description

Sites 2, 3, 4, 6a & b, 8, 9, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 26, 31, 33, 36, 39, 41, 45, and areas of unknown archaeological potential - watching brief with provision to record.

3.2 Pipeline alternatives and alterations A number of alternative routes for the pipeline were investigated prior to the establishment of the final route. The initial assessment took these alternatives into account, and made recommendations for each of the different routes, although only those sites to be affected by construction work were to be recorded. However, the lateness of one particular revision, that favouring a route between Ysbytty and the Afon Gwyrfaï via Ty-crwn rather than via Hendai, meant that the recording of a number of sites prior to top-soil stripping had already been undertaken, though they would not be affected by the scheme. The results of work carried out on these sites has been included in this report.

The sites affected by alterations to the pipeline route are:

Sites 2 and 19 The final route came very close to sites 2 and 19, but did not directly affect them. No further work was carried out.

Site 6b This site was recorded under stage 1 due to its proximity to the then proposed route. Slight alterations to the actual route has meant that the site was not directly affected by the soil stripping and as a result no further work was carried out.

Site 29 The decision to use the route to the west of the Lletty and Ysbytty reservoirs meant this site would not be affected by the pipeline, and no further work was carried out.

Sites 32, 33, 34, 35, 36, 37, and 38 These sites, following a late revision of the route, were no longer affected by the scheme. The sites have been recorded as part of stage 1, but further archaeological work under stage 2 was unnecessary.

Site 40 This site was affected by the pipeline as a result of an alteration in the route in the Tyddyn Parthle area. The site was recorded as part of stage 1.

4.0 METHODOLOGY

4.1 Stage 1 A photographic record was made of sites 3, 6a & b, 12, 17, 21, 28c, 30, 32, 33, 34, 35, 36, 37, 38, 40, 41, 42, and 43 using 35mm format in black and white negative and colour transparency film. A written record of the above sites was made, using standard GAT monument record forms. The plans of sites 3, 6b, 21, 36, 40, 41 and 42 were recorded using taped offsets. A detailed survey using an EDM theodolite was undertaken at sites 6a, 32, 33, and 34.

4.2 Stage 2 Sites 3, 4, 6a, 8, 9, 11, 12, 13, 15, 16, 17, 18, 20, 21, 26, 31, 39, 41 and 45 were investigated as part of the continuous watching brief. Where remains of archaeological interest were recovered they were recorded using a combination of annotated sketch plans, scaled section and plan drawing, photography in black and white negative and colour transparency film, written description and survey using either taped offsets or EDM theodolite.

4.3 Areas of unknown archaeological potential The identification of additional areas of archaeological interest was achieved by field walking the stripped corridor before the digging of the pipe trench and noting all potential sites, usually visible as areas of burning or stone spreads. These sites were then further examined to ascertain their archaeological potential by a combination of trowelling, hoeing and brushing. Two archaeological sites, a burnt mound and a burnt spread were identified in this manner, a number of trackways were also identified as stone spreads.

4.4 The photographic record All photographs were taken on black and white film (Kodak Tmax 400 ASA). General views were taken to place the feature/structure within its setting. Where appropriate all external elevations were taken as close to a 90 degree angle to each elevation as possible. Detailed views were taken of features where informative. All, besides a number of very general views contain a scale such as a 1.0 or 2.0m ranging rod marked into 0.5m sections. Selected views have also been taken on slide film (Kodachrome ASA 200).

4.5 The written record Written descriptions were made of the site or feature concerned, giving an overall concise and objective description with measurements and sketch plans where appropriate.

5.0 RESULTS

STAGE 1 AND STAGE 2 SITE DESCRIPTIONS

Site 3 Two linear mounds (trackway)

This site has been identified as the remains of an embanked trackway leading from Ty-llwyn farm to the mill of Felin-uchaf to the south-east and is depicted on the first edition 1" Ordnance survey map of 1841. The two short linear mounds, orientated southeast - northwest, are remnants of the low earth and stone banks which delineated the track. The easternmost mound/bank stands up to 0.35m high, has a maximum width of 2.16m and is 8.7m in length.

The bank to the west remains to a maximum height of 0.4m, is between 1.4 and 1.9m wide and is traceable for over 30m. The track itself is approximately 4.5m wide. The track continues to the south as a slight feature, scarped into the south west side of a gently sloping hill, its westernmost side is delineated by a low earthen bank, a continuation of the westernmost of the banks mentioned above.

A small sub-circular boulder feature located further to the south and thought to be a clearance cairn does not lie within the easement corridor and as a result has not been examined further.

The watching brief during soil stripping allowed further investigation into the make-up of the track and the low earth and stone banks on either side. This confirmed the dimensions of the features, ie. that the banks were c. 1.8m wide and c. 0.35m in height and were constructed of earth and stone thrown up from the excavation of the track bed. The track (c.1.6m in width) was constructed of compacted clay and gravel, forming a hard and dry surface. No finds were recovered and it is thought that the trackway is probably an 18th/19th century agricultural feature.

Site 4 Terrace with possible features

Topsoil stripping through this area revealed no features of archaeological interest and the terrace proved to be a natural glacial feature. No detailed recording was undertaken.

Site 6a & 6b Low linear banks (see fig. 1)

At least two low linear banks were affected by the scheme. These are aligned northwest - southeast; the eastern most and more clearly defined of the banks is 1.5m wide at its top and widens to 3.3m at its base, the bank stands to a maximum height of 0.6m. The ditch to the west is up to 0.25m deep and approximately 1.95m wide, that to the east is up to 0.35m deep and 2.25m wide. This bank adjoins a further bank which runs southwest-northeast between a short length of track at the south-west and the Ty-mawr moated site (site 47 in GAT 178).

This last bank appears to overlie the outer earthwork bank of the moated site and is therefore likely to post date it. The more ephemeral bank to the west stands to a height of 0.25m from the base of the accompanying ditches, the bank is c. 2.0m wide and the ditches c. 1.2m in width. It is possible to trace this feature from the area of the marshy hollow to the south-west to a point where it joins the more clearly defined bank to the east.

The exact relationship between the moated site and the two linear banks is however uncertain; in area 6a the remains of ridge and furrow appears to largely respect the banks, while in area (6b) to the east of the earthwork (site 47), aerial photographs indicate that the plough marks cut diagonally across other banks located south-east of the Ty-mawr enclosure.

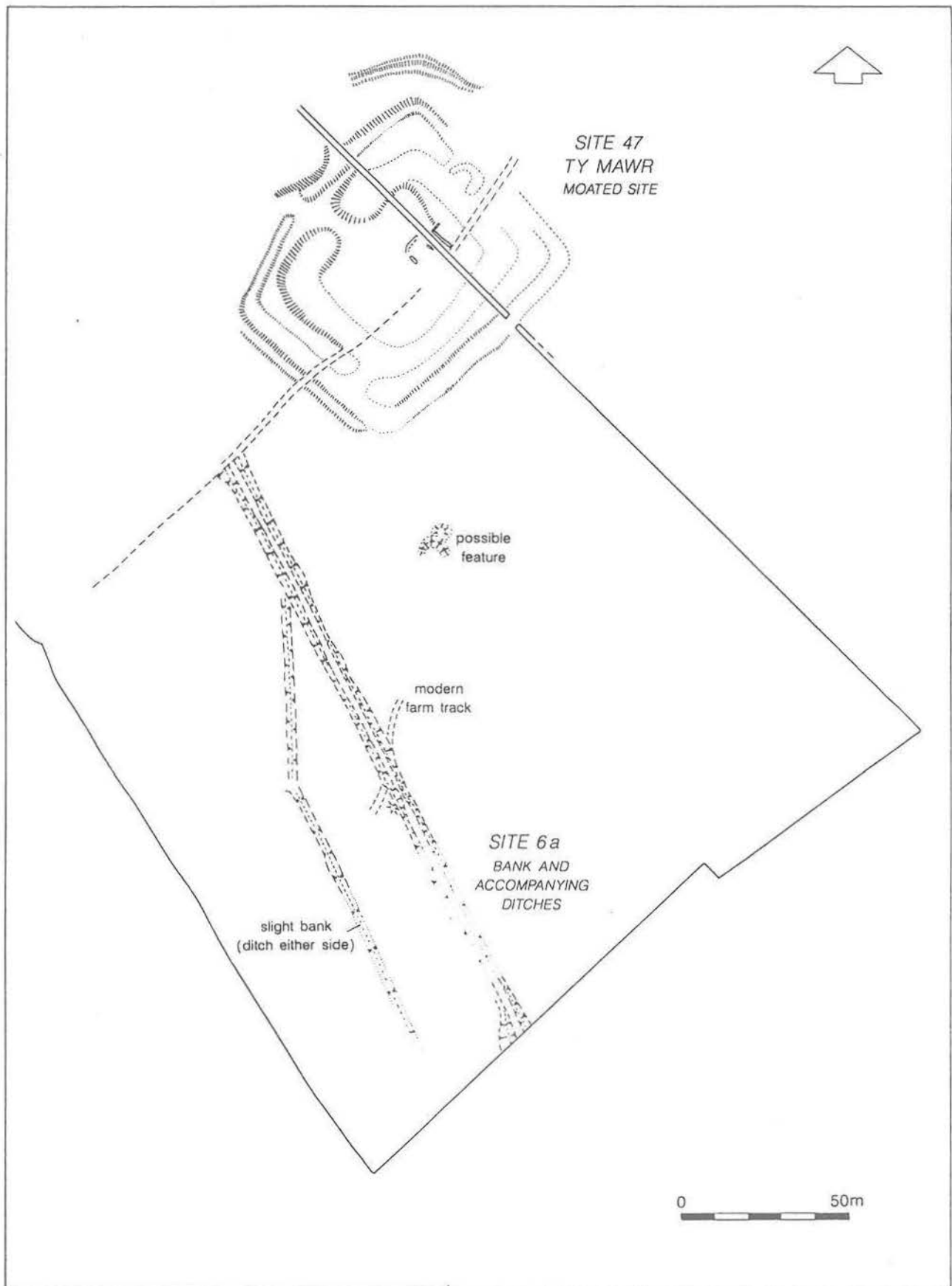


Fig. 1 Site 6a - Low linear banks at Ty Mawr.

There are also the remains of two, possibly three small rectangular enclosures and what appears to be a low wall enclosing a small pond at the western limits of area 6b. These enclosures are arranged along the south-east side of a ditch extending towards the moated site.

The pipeline crossed the linear features of site 6a south of where the features cross an area of marshy ground and become less obvious on the ground, though easily visible to either side; as a result the features were impossible to trace across the corridor during the top soil strip and did not appear in section. No additional recording was undertaken during stage 2.

Sites 8 and 9 Possible burnt mounds

These features have now been identified as spoil tips associated with small scale manganese mining, possibly dating from the early 20th century, and therefore of limited archaeological interest. Detailed recording was not undertaken as it would have offered little useful information.

Site 11 Linear features

These features, initially located using aerial photographs, produced no evidence of archaeological remains during topsoil stripping; it is likely that the features are either of natural origin or variations in the topsoil caused either by ploughing or animal movements between breaks in the surrounding field boundaries.

Site 12 Area of possible archaeological remains

This is a very disturbed area, which had been partially cleared of boulders. Within the northern half of the area are the remains of a small sub-rectangular enclosure. The enclosure lies just to the south-east of a hut circle, (site 49, PRN 0628) and the scheduled enclosed hut group near Cae Metta (site 50, Scheduled Ancient Monument C168).

The sub-rectangular enclosure to the north of the area is delineated by a ploughed down grassed-over bank of stone and earth, the visibility of which was extremely clear during the recent dry weather. The enclosure is shown on the Ordnance Survey 1:2500 map of 1914 and on more recent Ordnance Survey maps and is likely to have been ploughed out in the last twenty years. The banks remain to a height of 0.2 - 0.3m and are c.3.5m wide. Approximately mid-way along the western bank is a large sub-circular depression some 6m by 4m, containing the blasted remains of a large boulder. Within the enclosure are several smaller sub-circular depressions, where an attempt has been made to break up and remove boulders and outcrops. The area to the south and east also has numerous similar features, many containing the remains of partially removed boulder outcropping.

Monitoring during top-soil stripping showed the visible features were the result of recent field clearance. The ploughed-out banks of the sub-rectangular enclosure were investigated, these were c.0.3m in overall height, of light brown silty clay, lying directly above peri-glacial or glacial material.

Site 13 Field system

The area of the field system was not directly affected. A number of relatively modern field drains were noticed from the surrounding area during the watching brief. No detailed recording was carried out.

Site 15 Possible terrace

This feature was examined during the watching brief, and was found to be an enhanced natural scarp possibly once revetted to form an agricultural enclosure bank. The extremely disturbed feature has indications of once having been roughly faced - a much disturbed wall stub is located close by to the south-east in the dry stone wall bordering the metalled lane and it is possible that this dry stone boundary may have continued along the top of the scarp.

Site 16 Area of archaeological potential

The topsoil stripping in this area revealed a large amorphous spread of burning (Site A) to the west of Penrhyn farm (see map: 3). The feature lies at the north end of a densely overgrown enclosure (gorse scrub and bracken) and measures between 9m and 19.5m north - south and over 24m east - west. A 2m x 4.5m trench was excavated across what was considered to be a possible edge within the southern part of the burnt spread. The feature was found to comprise a layer of shattered burnt stone and charcoal within a matrix of fibrous root material some 8cm in depth. The average size of the angular stone inclusions were 0.6cm x 0.7cm. This horizon overlay a layer 12cm in depth of frost shattered un-burnt and leached stone fragments, similar in size and shape to those in the burnt context above, and set within a peaty horizon. This in turn overlay natural glacial material. The entire area is typified by protruding glacial boulders, some of considerable size.

A fragment of terracotta pottery pipe was found associated with the burnt material hinting at a recent origin for the feature.

Site 17 Area of small fields

The area contains the remains of at least six low field walls which run between the disused railway line and the banks of the Afon Seiont. The banks and walls have been truncated by, and robbed, for the construction of the railway and its enclosing walls. The dry stone constructed wall remains consist of water worn clearance material and orthostatic boulders, most surviving to one or two courses in height. Their details are as follows (see map 3):

Wall (a) Width 1.7 - 1.8m, height up to c 0.5m - 2 courses remain in places.

Wall (b) Width 0.8 - 1.0m, height up to 0.43m - Orthostatic boulders, single course remains.

Wall and hollow way (c) The feature runs to a fording point on the Afon Seiont. The wall along the east side of the track has partially collapsed at the south end into the depression of the trackway. The base of the footings are 2.1m wide and stand 0.27m (max) high above the ground surface of the field to the east. The north extent of the wall stands four courses high (1.2m) and is between 0.5 and 0.6m wide. The track is approximately 2.9m wide and at its southern extent lies in a depression 0.6m deep from the top of the wall footings to east.

Wall (d) At its south end the wall joins a terrace which runs south-east to merge with bank (f). The width of the wall is 1.5 - 3.0m. It remains to a height of 0.5m, and comprises a single course with occasional orthostats.

Old hedged bank (e) Visible as a line of thorn trees in the bracken on a similar alignment to the other banks.

Bank (f) A low curvilinear bank of earth and stone ranged between large glacial boulders and orthostats, the largest is c 3.0m x 3.0m. The feature lies on a break of slope provided by the terrace which bounds the western limits of the area in a loop of the Afon Seiont. The bank is 1.8m wide (max) and up to 0.6m high, and in places comprises 2 courses of boulders.

The watching brief did not reveal any additional features of interest, and no further recording was undertaken. The area forms part of a natural river terrace of glacial and water-born material.

Site 18 Linear feature

This feature was bisected during the topsoil stripping - the bank appears to have been an earthen top soil feature as no remains were visible once the top soil had been stripped. The section of the feature within the topsoil itself was difficult to establish due to the extremely ephemeral nature of the feature which must have been erected directly on top of the ground

surface. The bank is c. 0.8m wide and 0.1m high and is the low ploughed-out remains of an agricultural bank, possibly the site of a fence line.

Site 20 Linear terraces

An agricultural track leads up slope (south) after crossing the stream. The track enters a wedge shaped area at the junction of two linear banks. This is likely to be the remains of a sheep pen originally at the junction of three enclosures. The feature is now visible as two level areas. With the removal of the topsoil it was found that the area had been infilled and levelled with 19th century domestic and agricultural refuse to improve access up the natural scarp. No detailed recording was undertaken.

Site 21 Area of linear features (see fig. 2)

An area of drained boggy land with terracing of boulder faced banks along its eastern edge. Just south of the dry stone field boundary delineating the north-east extent of the field is the grassed over and much ploughed remains of an old bank (1.6m wide by 0.3m in height, maximum) with an accompanying linear depression to the north-east side (1.2m maximum width and between 0.1 and 0.5m in depth). Originally thought to be a possible sunken trackway, the feature is now considered to be the remains of a ditched enclosure. These features are likely to pre-date the surrounding 18th/19th century dry stone field enclosures associated with the regular agricultural landscape of Plastirion. At the northern end of the feature, between the present-day field boundary and the bank is a small low sub-rectangular platform (c. 4.0m by 5.0m and c. 0.6m deep) scarped into the gentle slope. It is not possible to determine if this feature is structural or natural without excavation.

Adjoining the bank (mentioned above) at right-angles is a further linear ditch; this follows the base of a break of slope for over 80m to the south and is part of a more extensive system of drainage ditches which drain an area to the west. This ditch is between 0.6m and 0.7m deep and tapers from 2.1m to c. 1.0m in width at its base. Ranged along the top of the change of slope to the east of the ditch is the remains of a boulder bank, now partially collapsed over the slope below. The single course boulder bank remains to a maximum height of between 0.3 and 0.4m and varies in width from 2.3m to 2.7m, though at one point boulder tumble extends over some 4.8m, and may indicate an entrance through the bank. The boulder bank, though fragmentary continues beyond the south end of the drainage features to meet up with further redundant field banks; these are not directly affected by the scheme and as a result are not recorded here.

The remains of the old bank and ditch to the south of the dry stone field boundary delineating the north-east extent of the area was examined following topsoil stripping. The bank and the accompanying ditch, although reduced by the action of ploughing, are clearly visible in section. The stone and earth bank was originally stone faced on both flanks. The bank is 0.33m in height and 1.15m across, the boulder facing now largely collapsed and partly out of situ comprises rounded boulders (e.g 30cm x 18cm). The ditch lies 1.16m north east of the boulder faced bank and is c. 0.78m in width at its base and c. 25cm deep.

It was not possible to investigate the terraced and ditched feature to the west as landscaping to allow passage of contractor's vehicles had resulted in the feature being buried.

Site 26 Linear feature

This feature was not affected by the pipeline and closer inspection suggests that it is part of a more extensive modern drainage system. No detailed recording was carried out.

An agricultural track to the east of site 26 was exposed and examined during the topsoil stripping: this is shown on the 1:10,000 map connecting Tyddyn-cae and the agricultural building of site 51; the track is c. 2.25m wide and constructed of glacial cobbling (less than 15cm x 10cm in dimension). There are slight ditches to either side, each approximately 0.75m

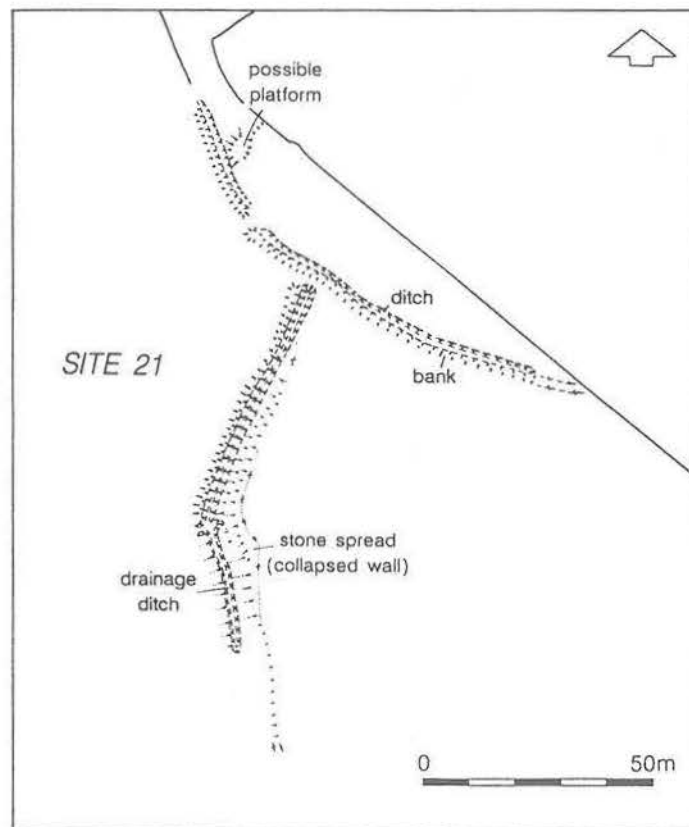


Fig. 2 Site 21 - Area of linear features.

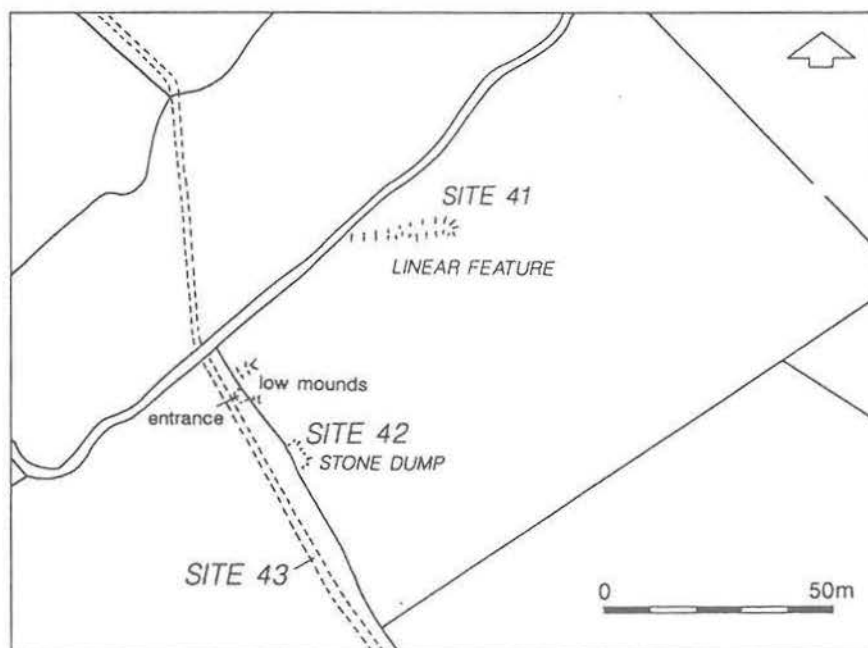


Fig.3 Location of sites 41, 42, and 43.

wide and up to 0.35m in depth and indications of a accompanying low outer earth bank on the north-east side. The track lies along the north-east side of a dry stone field boundary.

Site 28c Enclosure, Prysgol Bach

The enclosure is sub-rectangular of dry stone boulder walling mainly comprised of glacial clearance (ie. water worn) boulders and large orthostatic uprights. Only a portion of the enclosure walls will be affected by the scheme - a representative sample will remain allowing further study of their construction. There are three entrances to the enclosure; one to the west, through the western wall at its south end; another opposite to the east, which has been destroyed by the present scheme, and a third, either widened or made more recently in the south-east end of the north wall. The entrance to the east lies in the eastern wall and extends from the angle formed by the southern wall and measures 2.2m. The walls remain to various heights between 0.5 and 1.15m and vary in width from between 0.9 and 1.3m. A small oval clearance cairn is centrally located to the north of the enclosure, this is 4.0 by 1.5m and 0.35m in height and comprises small glacial boulders thrown into a pile over a large boulder "outcrop".

The enclosure is one of a series associated with the sub-medieval farmstead of Prysgol Bach.

Site 30 Raised pathway, S of Lletty

The pathway between Lletty and Ysbytty cuts across an irregular shaped field situated immediately to the south-east of Lletty it then follows the south-east side of the field boundary and is raised from here onwards as it approaches the boggy south-west end of the field. At the end of the field the path turns in an abrupt curve to the south-east to where a stile, and formerly an iron kissing gate, gave access through a small copse of black thorn bushes to the enclosure to the south-west. The footpath regains its original course, running in a south-westerly direction beyond the stile and eventually disappears in an area of gorse to the west of Ysbytty reservoir. The line of the path is shown on the Ordnance Survey 1:2500 map of 1914.

The raised pathway is of boulder construction, with the appearance of well laid wall footings, being a single boulder's course in height and of two boulders in width, and standing between 0.15 and 0.18m high and on average c. 1.10m in width.

Site 31 Linear features

These slight linear banks are topsoil agricultural features, and are indistinguishable in section from the topsoil itself; they are probably the ephemeral remains of ridge and furrow.

Site 32 Hendai farmstead and platforms (see fig. 4)

This site was recorded in some detail, but was ultimately not affected by the pipeline.

The site forms the ruinous remains of a Post-medieval farmstead possibly situated on earlier remains. Immediately to the north and east of the ruined farm is a series of platforms with possible building scoops, probably of medieval or earlier date. To the south of the farmstead are 2 possible semi-circular hut scoops. The fields to the south contain numerous low field banks and ditches. The 1841 Tithe map of the area shows the building at Hendai extending further to the north east, suggesting that some part of an earlier structure was still extant.

There are at least three roughly rectangular platforms which stand proud of and are ranged down the gentle north-west facing slope immediately north of Hendai. The lowest two platforms have faint indications of structural remains; the upper has two sub-rectangular areas, each approximately 8.0m by 14.0m separated by a slight gully, and the lower has a possible circular structure with an internal diameter of c. 4.0m. Projecting from the north-west corner of the platforms is a low grassed-over "L"-shaped bank with indications of a slight ditch

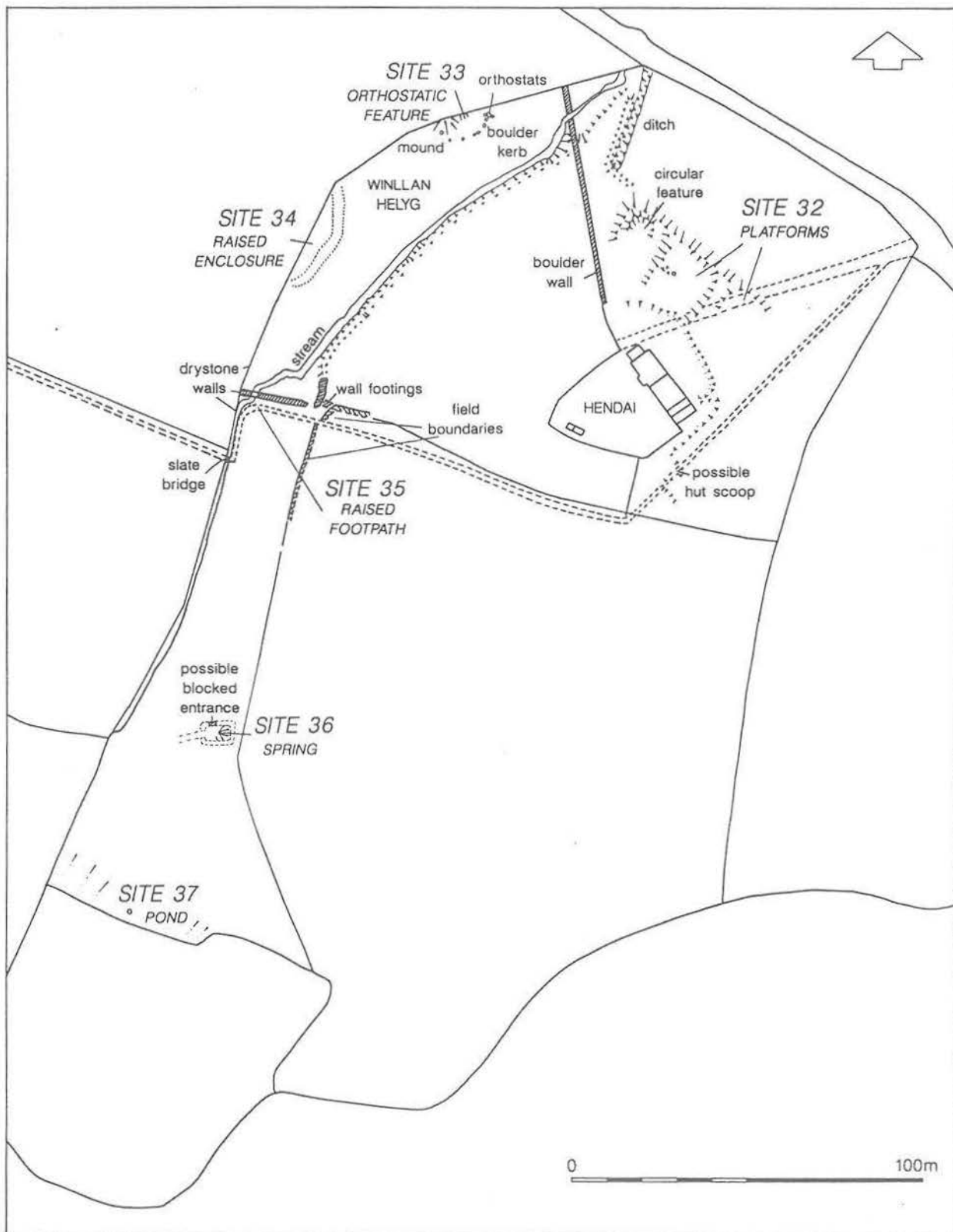


Fig. 4 Hendai farmstead and associated sites.

running along its eastern side and beyond towards the dry stone field boundary to the north (see fig. 4). The bank is between 2.5 and 3.0m wide and varies in height from 0.15 to 0.3m (maximum height at its north end). This feature runs for some 24.4m diagonally towards the break of slope above a revetted stream terrace.

The stream was originally revetted on either side along its length by a single course of glacial boulders, the feature has been largely eroded by livestock and only remains intact for short stretches, that to the west of the field boundary which runs east towards the buildings at Hendai is a good example. The revetted channel is between 0.4 and 0.7m in width and 0.2m below the surrounding ground level, the dimensions of the boulders used in the revetting varies, the largest is 0.6m wide and up to 0.5m high and projects above ground level. The stream cuts a channel 1.6m wide through the well built boulder wall mentioned above, which still stands to 1.7m at its north-west end.

Site 33 Orthostatic feature, NW of Hendai (see fig. 4)

A curvilinear spread of large boulders and the remains of a slight mound in a low lying marshy area up against the south-east side of a dry stone field boundary. A possible indication of the dimensions and structure of the feature remains preserved in section within the field boundary: two large closely placed (0.85m apart) and upright orthostats (the northern - 0.78m tall and 0.86m wide, the southern - 0.96m tall and 0.99m wide) mark the north-eastern extent of the feature; the interior is visible as large horizontally laid sub-rectangular boulders, the south-western extent is covered by the remaining slight mound (10.2m in length, 5.4m wide and remaining to a height of c.0.5m max) and two further large orthostats, now horizontal, appear to mark the end of the feature in this direction. The orthostats may be the remnants of boulder kerb and appear to tie in well with the alignment of the remaining boulders which form the curving stone spread east of the boundary. The total length of the feature is at least 16.1m to the boulder orthostats embedded within the wall, and 6.9m wide to the edge of the boulder spread. A possible outer ring or kerb is detectable at the furthest edge of the stone spread. This kerb is less easy to trace, possibly due to robbing and animal disturbance, however if this is in fact an outer kerb then the feature could be as much as 20.5m in length and 9.6m in width from the field boundary.

The site lies on the boundary of a field named as Cae Garnedd on the 1841 Tithe map - the name, 'Cairn field' is of interest, and may indicate a possible explanation of this feature's form and nature.

Site 34 Raised enclosed area, W of Hendai (see fig. 4)

The site is enclosed by a low boulder bank which stands c. 0.28m in height and varies in width from 2.8m to 3.0m. and extends in a curvilinear form for over 32.5m. The bank encloses an area of land against the existing field boundary, the interior of which is at a higher level than the stream terrace to the east. The bank was once possibly boulder revetted and is topped by the remains of a blackthorn hedge, now with the appearance of a small copse, which delineates the extent of the area. The feature lies in an enclosure given the name Winllan helyg - 'Vineyard of the willows' on the Tithe map of 1841.

Site 35 Raised footpath, W of Hendai (see fig. 4)

The well preserved remains of a raised footpath which is part of the route connecting Hendai with Ty-crwn. The feature straddles the damp stream terrace to the west of the farmstead at Hendai, then follows the stream and dry stone field boundary for a short distance to the south-south-west before ending at a slate slab bridge, which crosses the stream to a stile. The feature, which comprises glacial boulders set down in a fashion similar to wall footings, stands a single boulder course high (between 0.15m and 0.18m above ground surface) and 2 boulders width (1.1m in overall width). The course of the footpath is shown on the 1914 Ordnance Survey 1:2500 map and due to its proximity to Hendai was included with the surveying undertaken there.

Site 36 Enhanced spring, S of Hendai (see fig. 4)

The spring is scarped into a natural break of slope on the eastern side of a stream terrace and its outflow stream runs down a gentle slope to the boggy area to the south-west, where it eventually supplies the artificial pond (site 37). The spring itself has been enclosed within a small rectangular structure or enclosure, which survives as low grassed-over stone and earth banks above and below the scarp. The rectangular enclosure which has its main axis arranged down slope, measures 9.9m by 6.7 externally and c. 7.0m by 4.4m internally, its banks remain to a height of 0.45 - 0.5m and are on average 1.1m wide. In the north-west bank, near its south-west end is a small possible entrance some 1.5m in width. Arranged centrally in its south-west side is the outflow point for the spring - a gap 1.9m wide. There is a possibility that the feature was once at least partly roofed - the remains of roofing slates were noted among the tumble.

Site 37 Artificial pond, SW of Hendai (see fig. 4)

An embanked pond, apparently recently enlarged or repaired. The feature mainly comprises a wide grassed over earth and stone bank, probably created by the excavation of the pond, which now forms a barrage on the down slope to the south. This bank remains to a maximum height of between 0.4 and 0.5m at its eastern end and is as much as 0.7m high to the west where it has recently been repaired. The bank varies in width from between 1.6 and 3.0m. The north part of the site contains a noticeable sharp break in slope. The pond is depicted as a kink on the Ordnance Survey 1:2500 map of 1914.

Site 38. Terraced trackway, Afon Gwyrfa

A disused terraced trackway below Cae-mawr. The feature lies on the steep wooded slopes on the south side of the Afon Gwyrfa. The track is scarped into the north-east facing slope and is c. 1.10m in width and has a slight bank thrown up along its north-east side which is c. 0.3 - 0.4m wide and remains up to c. 0.25m in height. The track, which runs down the slope in a south-easterly direction, probably leads to a crossing point on the Afon Gwyrfa.

Site 39b Possible terracing

The area thought to contain possible terracing is largely unaffected with only its westernmost extent crossed by the pipeline - at this point the feature is interrupted by an agricultural trackway to the south and otherwise appears to be of glacial origin in the form of natural terraces along the course of the Afon Gwyrfa.

Site 40 Sheep pen (see fig. 5)

A small semi-circular enclosure situated against a dry stone field boundary which forms its north-western side. The feature lies on a boulder strewn and gentle north-east facing slope in an area overgrown with bracken bramble and scrub. The curved wall is of rudimentary construction and comprises short stretches of dry stone glacial material which utilises the large *in situ* glacial boulders as orthostatic supports. The field boundary is of a smaller construction and more solidly built than the semi-circular enclosure, and is c. 0.5m in width and between 0.5 and 0.9m in height. The semi-circular enclosure is c. 5.0m wide (SSW - NNE) and c. 6.7m in length (NNW - SSE), its walls stand to a maximum height of c. 0.75m and are between 0.6 and 0.7m in width. The interior of the feature slopes at the same angle as the surrounding hill side and does not appear to be levelled in any way. It is most likely that the site is an agricultural feature, such as a small sheep pen.

Site 41 Curvilinear bank (see fig. 3)

A slightly curving low grassed-over bank which runs south-east from the north-west field boundary of a mainly boggy enclosure. The feature, which is difficult to see in part, can be traced for some 25.6m and appears to terminate in a slight mound. It stands to a maximum height of 0.5m and is approximately 2.5m in width, though possibly wider.

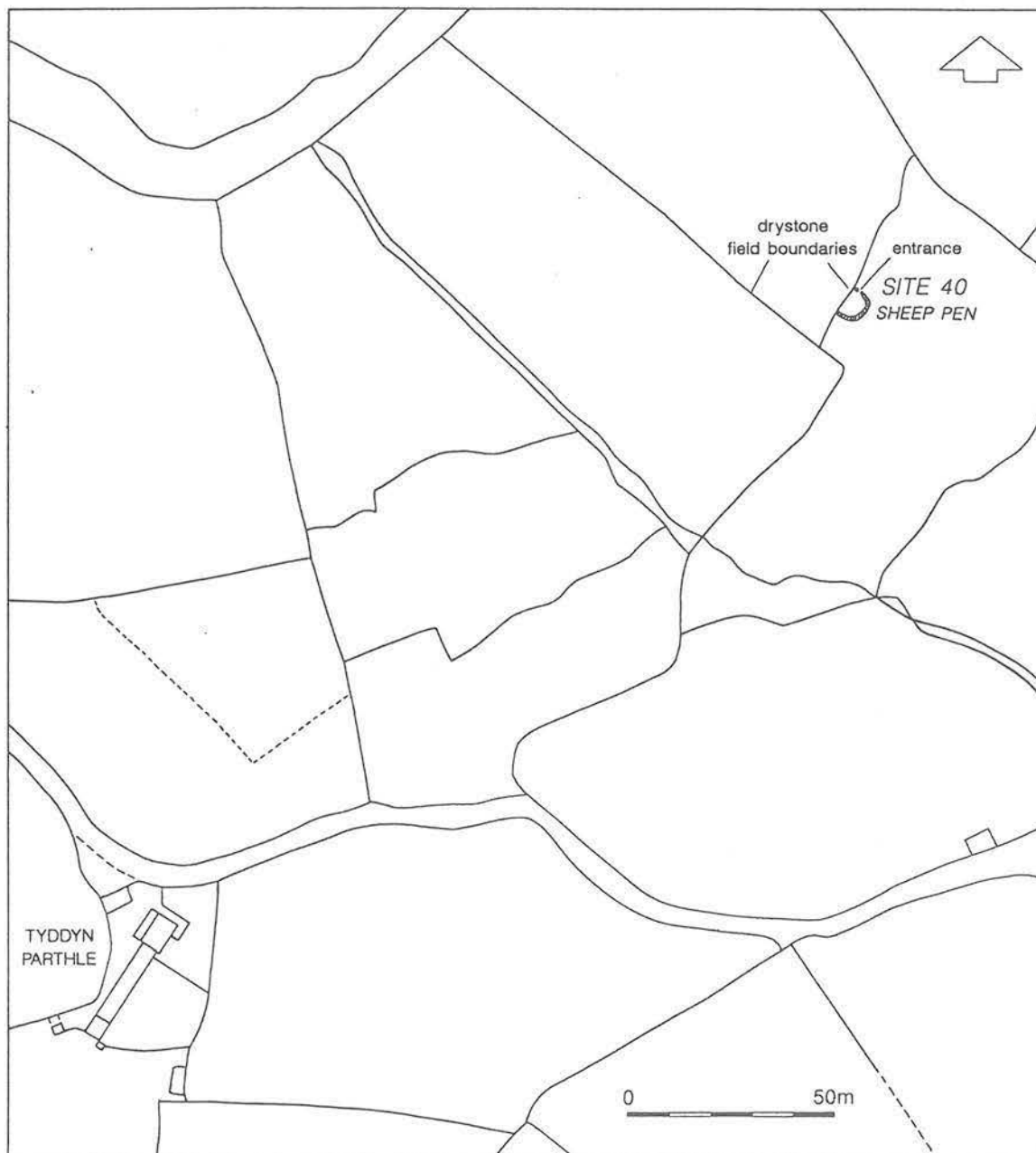


Fig. 5 Site 40 - sheep pen.

Following soil stripping this feature was found to be a raised gravel ridge of natural glacial origin. Immediately to the west and diagonally crossing the pipeline corridor is a 19th/20th century slate covered field drain.

A trackway was located to the east of site 41 (see map: 5) crossing the corridor on a southeast - northwest alignment. The track is some 2.1m in width and comprises a compact linear spread of medium - small (eg.: 30cm x 10cm to 11cm x 7cm) rounded, sub-rounded and sub-angular glacial pebbles.

Site 42 Small rectangular cairn (see fig. 3)

A low sub-rectangular feature comprising a roughly level heap of water-worn boulders, possibly clearance material. The boulder feature, orientated northwest-southeast, is arranged against the north-east side of a stone faced field bank, with the pathway from Cae'r-helygen on its opposite side. The feature survives to a maximum height of 0.4 - 0.5m and is 5.9m in length. Its width varies from 3.4m at its northern end, c.3.0m wide at the centre and swings out to 4.1m at its southern end.

The 2 small mounds flanking the entrance in the field wall were found to be field clearance cairns once soil stripping had been undertaken.

Site 43 Sunken pathway (see fig. 3)

The pathway which runs south from the farmstead of Cae'r-helygen, is depicted on the 1:2500 Ordnance Survey map of 1914. The feature is bounded on its eastern side by a stone faced field bank topped by an overgrown hedge now of mature trees. This bank rises 0.8m above the field to the east and is 1.1m wide. On its western side is a largely ploughed out earthen bank some 3.4m wide and remaining 0.1m in height above the level of the field to the west and 0.5m above the surface of the path. The path itself is set within a linear depression some 3.2m wide and 0.4m deep to ground level.

Site 45 Area of possible archaeological features

Soil stripping in this area revealed a land fill site containing 19th and 20th century domestic refuse and no features of archaeological interest.

Area east of site 57 (Ty-crwn)

The main features of the site were unaffected. The topsoil strip bisected a disused linear stone and earth field bank which parallels the existing dry stone field boundary delineating the northern extent of the wooded hillside. The bank which runs east - west towards the upper buildings at Ty-crwn is c. 1.1m wide and stands up to 0.3m in height. Further down slope is a terraced pathway (dry-stone revetted by large blocks of quarried stone on the down hill south side), this path leads west through Coed Plas-y-bryn and is probably a 19th century ornamental walk associated with grounds of Plas-y-bryn. No other features were noted.

Site B Burnt mound (see map and fig. 6)

This site was located following soil stripping and lies in a level low lying area of glacial boulder outcropping situated in a narrow enclosure to the south of Glan-Seiont farm. The solid geology of the area comprises Ordovician silt and mudstones of the Nant Ffrancon Formation. There are spreads of small to medium sized glacial boulders 10 - 15m to the east and west of the site and damp areas close by to the north and west, now drained by field ditches.

The area of burnt material was archaeologically cleaned by trowelling back the loose upper surface and its extent recorded by photograph and measured survey. The feature is of the classic crescent shape typical of sites known as burnt mounds - semi-circular with a break or opening, in this case, on its south-eastern side. The curved bank appears to increase in height

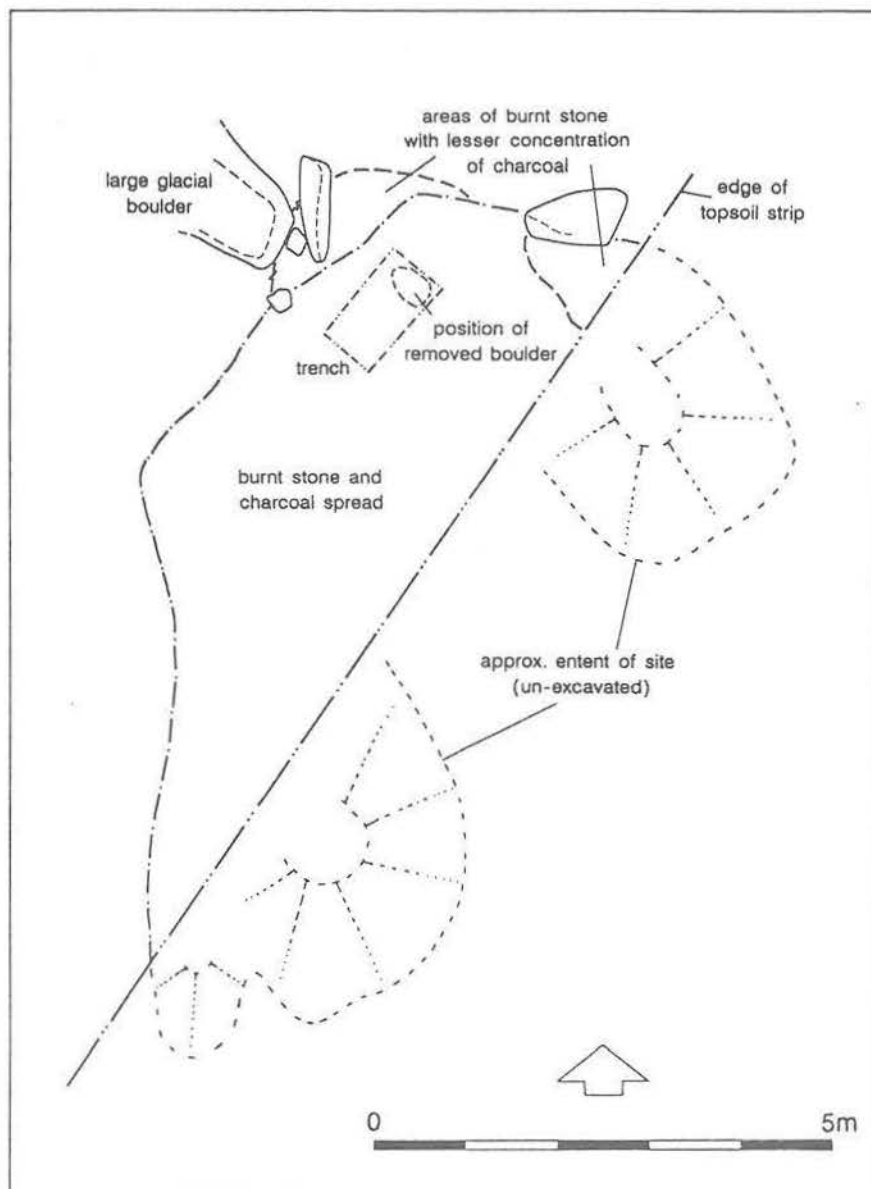


Fig. 6 Site B - Burnt mound - Glan-seiont farm.

towards the opening. The burnt stone spread extends 9.4m northeast - southwest and c. 2.7m into the area stripped of topsoil (ie. northwest-southeast). A large glacial boulder lies at the north corner of the feature. There are two small areas along the eastern edge of the feature where a lesser concentration of charcoal appears within the matrix of the burning. The feature extends beyond the area of the corridor to the south, visible as a low interrupted curvilinear grass covered bank, and indicates that the complete area of burnt material is some 10.2m by 5.8m.

A small trench (1.35m x 0.65m) was excavated across part of site which had been slightly damaged during the topsoil stripping. The burnt deposit comprised angular stone fragments, burnt and fractured rounded glacial pebbles and charcoal set within a dark brown/black humic material. This single deposit was found to vary in depth from 0.2m near the centre of the feature lessening to 0.13m towards its northern edge and found to directly overlie the light grey glacial boulder clays; this suggests that the burnt material lies within a gradiated shallow hollow or scoop either cut or naturally occurring within the glacial ground horizon. No indications of a preserved ground surface or other features were observed beneath the burnt layer within the small area examined. Samples of the burnt material have been retained for petrological analysis.

The site has only been partly revealed by the topsoil strip and its position to one side of the corridor renders it unlikely to be disturbed further. As a result only a limited investigation was undertaken, with an emphasis on preservation in situ.

The feature has been interpreted as a type of site known as a "burnt mound", which consist typically of a mound often crescentic in shape, comprising over 90% burnt and fractured stones, the remainder of the make-up being clay/silt with charcoal inclusions. These mounds are always located close to a water source, such as a stream or spring. An available source of stone and water appears to have been a paramount consideration in the location of the sites and allows an insight into their function or functions. Though the function or functions of these sites is somewhat enigmatic, there is little doubt that the burnt stone is the result of heating stone in a fire, and using the hot stone to heat water in an adjacent pit, trough or cistern. The mounds are formed by stone discarded once fractured as a result of this process.

The size of pits associated with burnt mounds varies; a recently excavated mound at Graianog, near Clynnog (Kelly 1992) had a pit measuring 1.75m by 1.35m by 0.55m in depth. A number of waterlogged sites have produced evidence to suggest that the pits may have been lined in wood. It is commonly thought that hot water produced at burnt mounds was used for cooking, although dying and fulling of textiles and use similar to that of a sauna have also been postulated (Buckley V, 1990, and Hodder and Barfield, 1991). The distribution of burnt mounds in small clusters, is possibly indicative of groups leading a transitory lifestyle based on seasonal hunting and/or herding (Kelly, 1992). The use of burnt mounds dates from the Early Bronze Age (c. 2000 BC) to historic times, although the main period of use tends to be Prehistoric. For example the mound at Graianog showed two concentrated periods of use, one around 2000 BC and the other around 1000 BC.

6.0 SUMMARY

6.1 Nineteen sites were photographed and described, and eleven of those surveyed, prior to the start of construction of the pipeline. The results of the surveys are described in the gazetteer above and the accompanying illustrations.

6.2 Following the start of construction, the route of the gas pipeline running from Pentir to Pen-y-groes was walked after the removal of topsoil. One site of definite archaeological interest, a burnt mound (Site B), was located and examined as a result. Another site, a large burnt spread was also located and examined, though evidence regarding the nature of this site was inconclusive. A number of sites and potential sites of archaeological interest were examined as part of the watching brief undertaken during topsoil stripping; of these nine sites including the area east of site 57 were agricultural features dating from the Medieval period to the present day; two were found to be associated with relatively recent small scale mineral extraction; one site was unaffected by the topsoil strip; while 5 sites were found to be natural features. The area north of Plas Bodaden was confirmed as the result of extensive recent landfill.

6.3 The burnt mound (Site B) was cleaned and subjected to a limited archaeological examination. The feature was found to consist of a single layer of burnt, fractured stone, with inclusions of humic material and charcoal 20 cm in max depth and directly overlying natural glacial clays. Samples were taken to allow further petrological study. A small trench excavated through the layer of burnt material produced no other features or finds.

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