
Archaeological Excavation and Recording During the A497 Road Improvement Scheme, Gwynedd



Archaeological Evaluation, Excavation & Watching Brief

GAT Project No. 1692

Report No. 625

November 2007

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Prepared for Cyngor Gwynedd Council

November 2007

By

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A497 IMPROVEMENT: ABERERCH TO LLANYSTUMDWY

ARCHAEOLOGICAL EVALUATION AND MITIGATION (G1692)

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Summary

A programme of archaeological work, including evaluation, excavation and watching brief, has been conducted in advance of, and during, the construction of the A497 Road Improvement Scheme between Abererch and Llanystumdwy. A total of ninety-nine evaluation trenches were opened across the 6.5km length of the scheme. Evidence for archaeological activity within these was mainly limited to post-medieval agricultural activity. Six of the trenches contained archaeology of greater significance, including evidence for Romano-British domestic activity identified at the western end of the scheme; Early to Late Bronze Age burnt mound and funerary activity within the central and eastern portions of the scheme. The Late Bronze Age site included a fragmented vessel made from coarse pottery buried in a small pit. An Early Bronze Age funerary site was excavated towards the eastern end of the scheme, northeast of Afon wen Farm. The site incorporated a large enclosure ditch forming a ring barrow, at the centre of which were two burial pits each containing a cremation urn. Part of an early 19th century turnpike route was also investigated during the excavation phase, revealing a well-built cambered road running between Glan Morfa Farm and Llwyngwyn Farm near the centre of the scheme. The archaeological watching brief followed on from the excavation phase and was conducted across the entire length of the scheme but no further activity was identified during this phase. This project was conducted in tandem with the diversion and realignment of a high-pressure gas main. Both schemes utilised a similar route and large portions of the pipeline cut through land developed for the road improvement. The details of the gas pipeline realignment have been published in a separate report: GAT Project G1858, Report No. 624.

1 INTRODUCTION

Cyngor Gwynedd Council commissioned Gwynedd Archaeological Trust (GAT) to undertake a programme of archaeological works in advance of the partial replacement and improvement of the A497 between Abererch and Llanystumdwy, Gwynedd. The area affected is shown on Figure 1. The assessment and subsequent evaluation work was recommended by Gwynedd Archaeological Planning Service (GAPS), who approved the project design and monitored the subsequent fieldwork on behalf of Cyngor Gwynedd Council. The work was carried out according to recognised Standards and Guidelines produced by the Institute of Field Archaeologists (IFA 2001a and b).

An archaeological assessment, consisting of a desk-based study and walk-over, was undertaken in 1993, and revised in 1996 and 1997 (see section 2.2.1 below). This identified a number of archaeological or historic features on or close to the line of the proposed new road, and recommendations were made for mitigation of these, and for a programme of field evaluation which aimed to locate any archaeological sites not identified by the assessment. The initial mitigation phase involved recording the known features (see Appendix 1). The field evaluation consisted of a geophysical survey of the route carried out to identify buried or hidden features (Stratascan 2004), followed by excavation of trial trenches, which were located both to investigate features revealed as part of the geophysical survey, and as a sample of the whole area (details are given in Appendix 2). The trial trenching programme revealed several sites of archaeological significance, which were subsequently the subject of more intensive excavation and recording, the results of which are described below. A watching brief was carried out during road construction along within those areas that had been identified as of high archaeological potential (Appendix 3).

The road improvement scheme also necessitated the partial diversion and realignment of a high-pressure gas main in three areas along the route. Cyngor Gwynedd Council commissioned Gwynedd Archaeological Trust to undertake an evaluation in advance of this project, followed by a watching brief of selected areas. The results of this project are published in GAT Report 624 (Project G1858), and repeated here if sites were impacted by both schemes.

A wastewater treatment works was built west of the Afon Erch during the course of the scheme, 4.0km along the route and just south of the new road, within the same field as evaluation trenches 74 to 76. Capita Symonds Group (on behalf of Welsh Water) commissioned Gwynedd Archaeological Trust to undertake a desk-based assessment and, subsequently, an archaeological watching brief during construction (GAT Project G1854; Report Nos. 551 and 610 respectively).

1.2 Acknowledgements

Gwynedd Archaeological Trust would like to thank Alex Jones and Chris Lane of Cyngor Gwynedd Council for all their help during the course of the project. All the staff of Mowlem PLC, particularly David Campbell, were very helpful throughout. Thanks must also go to Arnold Jones of Penbryn, Bryn Bachau for helpful discussion and information and to Mr Griffiths of Llwyngwyn Farm and Mr Arthur Parry of Afon Wen Farm for their help and co-operation during the course of the project. Sites 2 and 5 were directed by Jane Kenney. The excavation work was carried out by Tanya Berks, Jessica Davidson, Matt Jones, Peter Jones, Jane Kenney and Chris Lane. Surveying, building recording and report illustration were by Tanya Berks. The project supervisor was John Roberts, and the Project was managed by Andrew Davidson and George Smith.

2. PROJECT AIMS

2.1 Introduction

The overall aim of the project was to mitigate the impact upon the archaeological resource. This was achieved by a staged programme of archaeological assessment, evaluation and mitigation. This report contains the results of the evaluation and mitigation phases of the project.

The purpose of field evaluation is to gain information about the archaeological resource within a given area or site (presence or absence, character, extent, date, integrity, state of preservation and quality), in order to make an assessment of its merit in the appropriate context, leading to one or more of the following:

- The formulation of a strategy to ensure the recording, preservation or management of the resource
- The formulation of a strategy to initiate a threat to the archaeological resource
- The formulation of a proposal for further archaeological investigation within a programme of research

The work programme involved magnetometer survey and trial trenching, which was followed by detailed excavation and a watching brief where necessary. The known archaeological remains were used both to help determine the likely location of, and the character of, new archaeological findings.

The purpose of excavation is to examine the archaeological resource within a given area or site within a framework of defined research objectives, to seek a better understanding of and compile a lasting record of that resource, to analyse and interpret the results, and disseminate them.

The purpose of a watching brief is to allow, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of development or other potentially disruptive works. To provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard.

The whole of the recording, evaluation, excavation and watching brief work was monitored by the Gwynedd Archaeological Planning Service, which carried out site visits and produced written monitoring reports and recommendations on behalf of Cyngor Gwynedd Council.

2.2 Description of the project

2.2.1 Archaeological assessment

An archaeological assessment was undertaken in July 1993 (GAT Report: 60, Project No. G1142), updated in September 1996 (GAT Report: 224, Project No. G1429). Further changes were made to the report in November 1997, to take into account changes to the proposed improvements (GAT Project No.

G1513). The final assessment report formed Part 4 *Archaeology and Heritage*, of Volume 2 of the Gwynedd Council Environmental Assessment Report, 1998 (Volume II: Part 4.0 Archaeology and Heritage).

Recommendations were made within the assessment report for a phase of field evaluation, to include magnetometer survey and trial excavation. Mitigation recommendations included the detailed survey of a number of upstanding features, and a basic record of features of lesser importance.

2.2.2 Geophysical survey

A magnetometer survey along the whole of the route was undertaken in August 2004 (Stratascan Report No. 1899 *Geophysical Report: A497 Abererch to Llanystumdwy, Gwynedd*). This comprised magnetic scanning of the soil along a 30m wide strip following the centre line of the easement, which had been surveyed in by Mowlem. This identified a number of possible archaeological features are areas of archaeological potential, which were then targeted during the subsequent trial trenching.

2.2.3 Trial Excavation and mitigation excavation

A programme of trial excavation was undertaken between September and December 2004, when a total of ninety-eight trenches were opened. The results of this phase of the work are given in Appendix 2 of this report. The trial trenching was carried out on a sampling basis to provide approximately a 5% sample of the area, based on a total length of 4km of easement, 20m wide, requiring 4000sq m of trenches. To achieve the design requirements one trench had to be excavated in every 40m of easement. The trenches were laid out either randomly or to sample the topography e.g. across the slope or along the slope or to sample particular features visible on the ground or identified by the geophysical survey. It was agreed that the overall distribution of trenches could be modified so that rather more trenches were excavated in areas of particular interest and rather fewer in some other areas. A few areas had to be avoided because of environmental concerns or because of inaccessibility in wetter areas. The trenches were normally of approximately 20m by 2m and cut by machine followed by hand cleaning and recording with hand excavation of a 50% sample of features to allow interpretation and evaluation. The positions of the trenches were surveyed in by measurement to the change pegs of the centre line of the road or to adjoining boundaries.

Additional recommendations for mitigation following the programme of field evaluation involved the excavation of five selected sites. This work took place in late December. This was followed by a watching brief along the length of the scheme, which took place between January and September 2005.

2.2.4 Survey and record

The recording phase was undertaken in tandem with the evaluation phase and focussed on a list of twenty sites of archaeological interest identified in Part 4 *Archaeology and Heritage*, of Volume 2 of the Gwynedd Council Environmental Assessment Report, 1998 (Volume II: Part 4.0 Archaeology and Heritage). The location of the sites is reproduced in Figure 1 and the results of the recording phase are reproduced in the Appendix 1.

2.2.5 Post-excavation phase

A post-excavation assessment of the archaeological results from the field evaluation and mitigation phases was produced in March 2005 (GAT Report 573). This report described the results of the individual trenches and the potential of the artefactual and environmental remains and suggested appropriate research guidelines and specialist analyses.

This report was submitted prior to the identification of the Early Bronze Age Funerary Site (Trench 99), which was then excavated in May 2005 and described here. The environmental and artefactual evidence recovered from this site was subjected to specialist analysis, using the guidelines already identified in Report 573.

The archive resulting from the excavations, including paper records, drawings, photographs and artefacts will be stored and available for consultation at Gwynedd Archaeological Trust, Craig Beuno, Bangor,

until suitable long term storage facilities are available at the recognised Regional museum for the area at Gwynedd Museum, Bangor.

A summary of the excavation results will be published in the Council for British Archaeology (Wales) journal *Archaeology in Wales*.

3. BACKGROUND INFORMATION

3.1 Geology and topography

The geology of the study area is mostly Ordovician sedimentary rocks with igneous intrusions, such as that forming the Penychain peninsula to the southwest (Bassett & Davies 1977, 19). Grey slates and mudstones of the Tremadoc series underlie the area, with the most intrusive rocks being rhyolites (Smith & George 1961, 28; Roberts 1979).

The soils comprise mainly typical brown earths with a concentration of alluvial gley soils at the southwestern end of the scheme (1:250,000 Soil Map Series: Sheet 2, Wales).

The study area lies on the periphery of the coastal plain overlooking Cardigan Bay and comprises mainly enclosed, undulating farmland located on a plateau sloping towards the sea to form a coastal flood plain. Within this area are a number of river valleys, bridged by the current A497. Drainage on the farmland is often poor and is usually used for pasture. The main exception is at the eastern end of the scheme where the farmland is devoted to crops. Two specific areas differ from the general topography: an area of marsh below Tanyrallt farm and an overgrown enclosed field north of Hafan y Mor Holiday camp (cf. Fig. 1 for their general location).

3.2 Archaeological and historical background

No settlements or burial sites were known from the prehistoric period within the projected road scheme, though finds from nearby indicated activity within the vicinity. For example, a collection of worked flint (PRN 6787) found on the eroding headland of Penychain (Fig. 1) is probably the remains of nomadic hunters or fishers of the Mesolithic period, dating from the 6th to 5th millennia BC. Mean sea-level at that time was some 5 to 10m below the present and such headlands may have provided a prominent position with views over a coastal plain with rich food resources. A polished stone axe of Neolithic date and two axe hammers of Bronze Age date have been found in the grounds of Broom Hall (PRN 2272). The stone axe can be dated to the fourth or fifth millennia BC while the axe hammers are of the early second millennium BC.

Two perforated stones, possibly loom weights, were found separately near Penbryn Neuadd (PRN 2263), south of Abererch. Also a spindle-whorl was found between Pont Llwyngwyn and Afon Wen Farm (PRN 19627). These could be of the later first millennium BC or even from the Roman period and most probably indicate domestic settlement and activity nearby. There is one area of known settlement of this period, consisting of two round houses just to the north of the road near Pont Llwyngwyn. The absence of more widespread evidence for occupation in this area during the later prehistoric and Roman period, despite the fact that it has some quite good farmland, is likely to be because any remains have been obscured by clearance for agriculture and subsequent ploughing. More evidence was therefore expected to be found during the archaeological work on the road scheme.

There is more evidence available for settlement within the medieval period, which includes historical records of settlements at Bothach, Penarth, Chwilog and Penychain (Gresham 1973). Archaeological sites of this period include the earthworks of the possible township of Bothach (PRN 1825), located within Broom Hall Park; Tomen Fawr ring-work (PRN 1329), a defensive site of probable Norman date, and the medieval hall house at Peniarth Fawr dating from the mid-15th century (RCAHMW 1960, 112-4). The study area includes the parishes of Abererch, Llanarmon and Llanystumdwy, all with medieval churches.

Tomen Fawr now stands in isolation; the associated fieldwork systems have disappeared under modern ploughing. The Tomen itself is a good example of a Norman ring-work, later reused by the Welsh Princes and eventually serving as the centre of the township of Ffriddlwyd. The township was later given

to the Cistercians and became a grange of the Aberconwy Abbey, but returned to the Crown through an exchange. Traces of a possible rectangular structure survive within the ringwork and small depressions in the grass may indicate the positions of gateposts. Documentary evidence refers to Edward I staying in this area on his way to Pwllheli following the Edwardian Conquest of North Wales. The most likely location would have been the township of Penychain, now represented by a farm and headland southeast of Haven Holiday Park (Fig. 1). A sizeable house or hall would have been required for the royal retinue, but no evidence for this has yet been discovered. One possible explanation suggested was that such a building might have been lost to coastal erosion (RCAHMW 1960, 237-8). However, the building is more likely to have been on the higher land above the marshy coastal fringe and so its remains may lie under an existing dwelling such as Penychain farm.

Penychain was a bond township, becoming crown land soon after the Edwardian Conquest in the late 13th century. In 1590 there were 91 people living in 16 dwellings in Penychain (Gresham 1973, 345-6). By 1784, the township belonged to Sir Thomas Wynn, the first Baron Newborough of Glynllifon, and the numerous small holdings were rationalised into larger farms; a single farm called Penychain included much of the original demesne land (*ibid*, 350).

The bridge of Bont Fechan, a Grade II listed building is thought to date from the early 17th century although altered and repaired in the 18th and 19th centuries.

There have been relatively few changes to the area since the 18th century and some of the early buildings survive along with the general layout of the fields and roads. The present A497 is approximately along the line of a route which has been used since at least the 12th century and was improved in 1803 by the Porthdinllaen Turnpike Trust (Bassett & Davies 1977, 78; 164-166). John Evans' map of North Wales of 1795 shows the main road here on the same line as the present route. Minor improvements have taken place along the road; between 1839 and 1889 (i.e. between the publication of the parish tithe maps and the First Edition 25" Ordnance Survey Map), the A497 appears to have been straightened.

The general pattern of settlement, consisting of scattered farmhouses and cottages dating from the 18th century or later, is little altered from that shown on the map produced in 1840 to accompany the Abererch Tithe Apportionment of 1844. This slow rate of change is, in part, due to the lack of raw materials for industrial development, though small-scale industries were developed. For example a small area of surface coal, probably lignite, was quarried at Bryn Bachau farm east of Pont Llwyngwyn. A lease for 31 years to search for 'coal, stones, ores and minerals' there and on two other farms in the area had been granted by Lord Newborough in 1839 (Gwynedd Archives XD2/6432). In 1862 the lease was re-assigned to Trustees of the Bulkeley Coal Iron Stone and Fireclay Co. for 'fields called Caepwllglo and Werglodd Pwll y glo, part of a farm called Brynbechau' (Gwynedd Archives XD2/6437). The coal was used to fuel a small brickworks, the bricks of are known to have been used to build at least one local cottage in Llanystumdwy and presumably many others (A. Jones, pers. comm.). There was also a corn mill by the river at Afon Wen at the time of the 1889 Ordnance Survey, later developed into a large and well-known commercial laundry, which still operates in new buildings nearby today. The development around Afon Wen was probably encouraged by the construction of the Caernarvonshire branch of the London and North Western Railway in 1867. This crossed the route of the road at Afon Wen by means of an embankment and bridge but the latter was dismantled after the line was closed in 1967.

The presence of the railway also influenced the construction in 1939 of an extensive naval training camp, HMS Glendower, south of Afon Wen, housing 8,000 recruits, who must have had a considerable impact on such a quiet rural area. The camp was built for the military by Billy Butlin with other ideas in mind and after the war it was turned into a holiday camp and is now the Haven Holiday Park.

4. EXCAVATION RESULTS

4.1 Introduction and Methodology

The locations of the evaluation trenches were, in part, influenced by the results of a magnetometer survey undertaken by Stratascan Ltd. (Stratascan Report No. 1899 *Geophysical Report: A497 Abererch to Llanystumdwy, Gwynedd*). The magnetometer survey was conducted along the length of the scheme, covering a total area of 12ha. The survey was conducted using dual FM256 Fluxgate Gradiometers, manufactured by Geoscan Research, with a typical depth penetration of 0.5 to 1.0m.

The excavation phase ran concurrently with the evaluation programme September to December 2004 and focussed on five sites: Site 2 (Trench 67); Site 3 (Trench 45); Site 4 (Trench 80); Site 5 (Trench 40) and Site 6 (Trench 39a/b). For the location of the individual sites see Figures 1-5.

In addition to these, further excavation was carried out at Site 1 (Trench 99) between May and June 2005. This work was in response to the results of the evaluation phase conducted during the partial diversion and realignment of a high pressure gas main along the route of the road scheme (GAT Project: G1858; Report No. 624). This identified the southern half of a prehistoric circular enclosure ditch. Trench 99 was then opened to the north of this trench, within the confines of the road improvement scheme, to record the remainder of this feature, which proved to be the ditch of an Early Bronze Age burial mound.

The topsoil was removed using a wheeled 180°, backhoe excavator, followed by hand excavation, planning, section drawing, photography and description.

Environmental and artefactual samples were taken where necessary and in some cases sent for specialist analysis. A summary of the results of the specialist analyses are included in the descriptions of the individual excavations, whilst the original specialist reports are included as appendices 4 - 8.

The specialist analyses comprised:

- A report on the prehistoric pottery from the Early Bronze Age burial mound at Afon Wen (Appendix 4).
- A report on the cremated human remains pottery from the Early Bronze Age burial mound at Afon Wen (Appendix 5).
- A report on the charcoal samples including species identification from various excavated areas (Appendix 6).
- A report on the palaeo-botanical remains from various excavated areas (Appendix 7).
- Radiocarbon dating results on samples from various excavated areas (Appendix 8).
- Dendrochronological analysis was also recommended for two sites. This involves comparison of measurements of a series of tree growth ring widths to known, dated series. This can allow precise dating of timbers. The first was for a wooden fireplace lintel recovered from a derelict house, Tan-yr-Allt Isaf (Feature 15). The house was recorded as part of a series of sites of archaeological interest identified in Part 4 *Archaeology and Heritage*, of Volume 2 of the Gwynedd Council Environmental Assessment Report, 1998 (Volume II: Part 4.0 Archaeology and Heritage). The second was for pieces of “bog oak” recovered from Feature 30, a large peat-filled hollow. These samples were studied by Nigel Nayling of the Heritage and Archaeology Research Practice at the University of Wales Lampeter, Ceredigion. However, neither sample could be fitted against existing dendrochronological series and could not be dated so no specialist report is provided or cost invoked. However, the dendrochronological reference series for north-west Wales are sparse and it is possible that the measured timbers can be dated in future.

4.2 Site 1: Afon Wen Early Bronze Age Funerary Site (PRN 19659; Figs 6-9)

4.2.1 Introduction:

The site was located in an enclosed field to the east of Afon Wen farm, at National Grid Reference SH44923772, between 5.71km and 5.75km from the western end of the road scheme (Fig. 5). It comprised a circular enclosure ditch c.28m diameter, in the centre of which were found traces of a small cairn covering two human cremations in pots. The enclosure was unknown when the desktop assessments of the route of the road were carried out in 1993, 1996 and 1997. It was first noted in 2004 by the Royal Commission on Ancient and Historic Monuments Wales as a crop mark on an aerial photograph. It was recorded it as a, ‘Cropmark of a sub-circular enclosure, in the region of 30m in diameter, having a rather

flattened north-west face & giving indications of possible structures within; set on generally level, low-lying ground' (RCAHMW NPRN 401,896, AP895046/10-11, 2004). The site was subsequently given a PRN by the Historic Environment Record: PRN 19659. The enclosure was not identified by the geophysical survey of the road assessment phase because this field was excluded from survey as the new road here was to be simply an improvement of the line of the existing road and only a very narrow strip of the field was due to be affected.

The enclosure ditch was first seen within a trial trench excavated as part of the evaluation for the proposed gas pipeline diversion route along the southern side of the new road. This trench identified the southern half of a large ring ditch or circular enclosure (GAT Project G1858; Report No. 624; Trench 7: Site 1). At this stage there was little evidence to suggest a function or date and it was hoped that further investigation within the proposed route of the road corridor would provide a clearer understanding. A larger area of 560 sq m was subsequently excavated, exposing the whole circumference of the enclosure ditch and revealing several pits and other features. The evidence from the pipeline excavation is incorporated into the present description.

4.2.2. Topographic location

The site lies on a fairly level slight natural terrace at the edge of an area of low undulating land at the point where it dips in a gentle slope towards the coastal plain. This provides good views over the coast and a natural route above the marshy lowland that has long been utilised for a road and may well have been a route originating in prehistoric times. The subsoil is a silt-rich fluvio-glacial till and the soils of the area are rated as land capability Grade 2: moderate to good quality, suitable for intensive pasture with some arable (MAFF 1977, 1988).

4.2.3. Excavation

The excavations undertaken in advance of the pipeline revealed the southern half of what appeared to be a circular enclosure some 28m in diameter. At this stage there was no clear evidence for the function of the enclosure, which, by its size, could potentially have been for burial or settlement although the absence of any building postholes suggested that it was not a settlement. However, a prehistoric date seemed likely. An area of 35m x 16m was then excavated to the north of the pipeline route, within the easement of the road scheme. The remainder of the enclosure ditch circuit was exposed below the ploughsoil horizon, confirming that the ditch was a continuous circle in plan with no gaps. The extreme northern part of the ditch had been cut by a gas pipeline inserted in the 1960's but there was no other evidence for disturbance of the ditch (Fig. 6).

The site was divided into several features: the enclosure ditch; a pit located towards the northern sector of the site (Pit Group I); a group of two pits located towards the southeastern sector of the site (Pit Group II); a group of pits towards the southwestern corner of the site (Pit Group III) and a group of pits towards the centre of the enclosure (Pit Group IV).

4.2.3.1. The enclosure ditch

The enclosure ditch was c. 1.30m wide and 0.80m deep with a shallow v-shaped profile (Fig. 7). Within the road corridor three segments of the enclosure ditch were excavated to investigate its date, function and sequence of infilling. All confirmed a pattern of primary infilling by natural erosion followed by more high-energy infilling suggestive of deliberate human action. This was represented by successive layers of stone-rich material deposited from within the enclosure. The quantity of the stones in these deposits suggested they were the remains of an internal bank. This pattern was similar to that discovered during the excavation of the southern portion of the circle, excavated in advance of the gas pipeline, when five sections were inserted. These also showed initial natural erosion silting followed by probable deliberate backfilling. After backfilling the ditch appeared to have been re-cut as a smaller feature. Two of the segments (Fig. 7, 718 and 743) had some suggestion of silting bias from the inside, like those of the northern area, but the other segments showed fairly symmetrical fills.

On the western side of the circle in the primary erosion deposit at the base of the ditch, was a line of seven small circular features following the curve of the ditch (Figure 6). The holes were equidistant and of similar size, averaging 5cm dia. and 8cm deep, recognisable because each was full of charcoal (Plate 7). These were interpreted as holes for driven stakes that had been burnt *in situ*. They could have been inserted in the ditch when the primary deposit had already formed, probably during the first winter after the ditch was cut, or they could have been contemporary with the ditch cut and the primary deposit formed around them prior to their being burnt.

4.2.3.2. Pit group I - north-western sector

To the north of the stake-holes, the ditch cut an earlier feature: a sub-circular pit (Context 9906) [Plate 07]. The pit contained two fills: Contexts 9904 and 9923 (primary and secondary fill respectively; see Fig. 7). The primary fill contained a high amount of charcoal as well as a single body sherd of coarse pottery. A sample of the charcoal was identified, which consisted of 22 pieces of hazel and 3 pieces of oak (Denne, Appendix 7). It also contained a considerable number of small fragments of burnt clay, possibly the remains of a clay hearth or oven. The nature of the fills indicated that the pit had been deliberately backfilled from the west side (Fig. 7). The enclosure ditch may have just missed the backfilled pit when it was cut but had later eroded back into the edge and upper pit fill of the pit. The upper fill of this ditch contained charcoal and a sample of this was identified, producing 16 pieces of hazel, including one hazel nut shell, and 9 pieces of oak. The similarity with the species of wood represented in the charcoal from the lowest layer of the pit suggested that the charcoal in the ditch derived from the eroding pit-fill.

The single piece of pottery from the pit was a body-herd with no clear identifying features, so the type of pot is unknown, although it had traces of thumbnail impressed decoration so an Early Bronze Age date is likely. The sherd was subjected to specialist study of its fabric (Jenkins and Williams, Appendix 5). This showed it contained grog (re-used fragments of old pots) and had a range of minerals that was foreign to the area, and it was therefore probably an import. Its fabric was classified as similar to pots of Neolithic type in the area. The Food Vessel urn, however, had a dolerite-rich fabric; typical of other Bronze Age vessels from the region and similar to that of another Bronze Age vessel found during the road scheme (see Site 3 below). This difference is significant and notable but difficult to interpret. One might expect that coarser domestic pottery would be made locally while the finer pottery used for the cremation burials would be more likely to be imported, perhaps from a specialist potter. This may have been the case, with domestic pottery showing much wider variations in fabric than funerary. Unfortunately, in north-west Wales there is much evidence about funerary pottery but very little evidence about domestic pottery.

There were a number of other sub-circular features within the western half of the enclosed area. They varied in size and shape but contained a similar fill of light-brown sand-clay-silt. Their general pattern did not suggest a regular overall form, such as a building, and considering that their fill was similar to the subsoil and their lack of artefacts or charcoal they are best interpreted as natural periglacial features. The only genuine archaeological features within the enclosed area were two pits (Contexts 9915 and 9917) and a probable post-hole (Context 9949). Pit 9915 was ovoid in plan, 1.50m long by 0.80m wide and 0.35m deep. Pit 9917 was 0.70m wide by 0.50m wide and 0.25m deep. Both were filled with mid-brown clay silt with occasional stones. Neither pit produced any evidence to help interpret date or function. The probable post-hole was 0.60m dia. and 0.30m deep and contained three large stones that were interpreted as post-packing stones.

4.2.3.3. Pit Group II – southeast

In the southern portion of the enclosure two sub-circular pits were identified: (Contexts 707 and 712) (see Figure 6 for their location). Both pits were sub-circular in shape and cut into a glacial deposit. Context (707) truncated the southwestern end of Context (712) and so was a later feature. The later pit contained extensive charcoal remains in the primary fill, with the base of the pit, reddened by heat, suggesting *in-situ* burning. There was less evidence of *in-situ* burning in the earlier pit, but both were interpreted as hearth pits.

4.2.3.4. Pit group III – southwest

There were also two small, very shallow features on the southwest side of the site, outside of the enclosure ditch (Contexts 730 and 746). Both features had charcoal-rich fills but they did not appear indicative of cremation activity, nor were they hearth pits or postholes. The most likely interpretation was that they were remnants of localised burning, possibly as the result of site clearance. More extensive remains of similar activity were identified during the watching brief phase of the gas pipeline realignment scheme (GAT Project G1858; Report No.: 624)

4.2.3.5. Pit group IV – central

Two pits were identified towards the centre of the enclosure each containing a cremated burial within an inverted vessel.

The earlier pit was cut into the glacial deposit and measured 0.30m wide and 0.30m high. It contained an inverted food vessel that had been used as a cremation urn (Context 9959; SF 4), 0.24m high, with a 0.10m wide base and a 0.24m wide rim (Figure 9) [Plate 39] (see below). The pit had been backfilled with a friable primary fill, 0.12m thick, followed by a gritty secondary fill, 0.18m thick. The pit was overlain by a buried soil that spread towards the northern end of the enclosure (Context 9938). The soil was reddened by heat, suggesting localised burning.

The second pit (Context 9942; SF 3) was cut through the burnt soil, partly truncating the earlier pit in the process (Figure 8; Plate 6). Within the pit was a complete bipartite collared urn, 0.35m high, with a 0.10m wide base and a 0.30m wide rim (Figure 26). The urn had been inverted with the rim resting on the flattened bottom of the pit and was sealed with a friable deposit of sand-silt (Context 9940), covering the vessel as far as the base. The remainder of the pit had been filled with gravel-rich sand that had been originally dug out from the hole (Context 9939). The pit and the burnt soil were covered by a discrete spread of medium to large sized sub-circular stones (Context 9928; Plate 2). The stones covered an area of c.4m², but may have originally covered a larger area as the edges of the spread were diffuse and disturbed.

- **The Urns**

The cremation urn from the earlier pit was a Food Vessel Urn with internal and external decoration (Fig. 9b). The external slope of the rim is decorated with two lines of “stab marks” made with a round pointed stick, with a chevron line of stab marks 75mm below this. The body of the pot is undecorated but was smoothed with a tool. The fabric is hard and well fired, with a pink beige outer surface and a brown/black inner surface. There is also a large rectangular impression on the neck that may be the impression of a piece of straw, burnt out during firing (Fig. 9b) (see Appendix IV for a full description).

The cremation urn from the later pit is a Collared Urn of “typical size, shape and decoration” (Appendix IV). The urn is complete and undamaged. There is no decoration on the inside, nor on the flat top of the rim. The decoration on the exterior of the collar was carried out in twisted cord, creating a diagonal lattice (see Fig. 9a). The neck was decorated with a similar diagonal lattice carried out by incision with a notched stick about 3mm wide. The fabric is hard and well-fired and the surfaces were smoothed with a tool that caused light random scratches. Impressions found on the base are thought to be from grasses or plants. The colour is a brownish beige inside and out. Although both pots are entirely typical of their class, there are few close parallels for either within the locality.

- **The Cremations**

The cremation burials from the two vessels in the barrow were submitted for specialist human bone analysis (Powell, Appendix 6). The collared urn (S.F. 3) contained 2151.7g of cremated bone with fragments ranging in size from 1mm to 111mm, although most were toward the smaller end of the range and only a small proportion were over 50mm in length. The bone was predominantly white in colour with a few grey/white and black and white fragments. Considerable warping and cracking of the bone had occurred, presumably through heat. The identified bone fragments came from all areas of the body and the frequency of the smaller elements (isolated teeth, carpals, tarsals and phalanges) suggests that the collection of the cremated bone was relatively thorough. The skeleton was that of an adult male (identified through the state of epiphyseal closure of the distal radius and the lumbar vertebra and the “robust” appearance of the bones). The food vessel urn (S.F. 4), contained 2491.3g of cremated fragments ranging in size from 1mm to 109.6mm with fewer than 10% greater than 50mm in length. The bone was cracked and fractured from heat whilst pyre debris (in the form of small particles of charcoal) was found mixed in with the layers of bone. The skeletal fragments also suggested an adult male. The post-burning collection of the cremated bone was found to be less thorough in this vessel with fewer fragments of teeth, carpals, tarsals and phalanges.

4.2.4. Dating

Table 1 Summary of radiocarbon dating evidence

<i>Context no.</i>	<i>Description</i>	<i>Charcoal</i>	<i>Dating method</i>	<i>Lab No.</i>	<i>Conventional radiocarbon age</i>	<i>2 Sigma calibration</i>
9904	Primary fill of Pit 9906	Hazel	AMS	Beta-210121	3680+/-40 BP	CAL BC 2190 to

						2170 and CAL BC 2150 to 1940
9913	Fill of stakehole in base of ditch	Oak	Radio metric	Beta- 210122	3670+/-70 BP	CAL BC 2270 to 2260 and CAL BC 2220 to 1880
9958	Old land surface/ Buried Soil	Oak	Radio metric	Beta- 210123	3550+/-70 BP	CAL BC 2120 to 2100 and CAL BC 2040 to 1700
9961	Lower fill of pit with cremation urn SF4	Oak	Radio metric	Beta- 210124	3410+/-60 BP	CAL BC 1880 to 1530

A total of five radiocarbon samples were sent for dating. The results provide dates for several of the main phases, all specific to the Early Bronze Age. The radiocarbon date (2 sigma calibration) for the lower fill of the pit cut by the ring ditch was CAL BC 2190 to BC 2170 and CAL BC 2150 to BC 1940 (Beta-210121); the charcoal from the stake-holes was dated as CAL BC 2270 to BC 2260 and CAL BC 2220 to BC 1880 (Beta-210122); the relict soil cut by the later burial pit and sealing the earlier burial pit had a date between CAL BC 2120 to 2100 and BC 2040 to BC 1700 (Beta-210123); and the date given for the primary fill of the earlier burial pit was CAL BC 1880 to BC 1530 (Beta-210124). (For the specialist report, see Appendix V.)

Whilst some of the dates appear to be in an inverse relationship to the observed stratigraphy, particularly with regards to the primary fill of the earlier cremation burial, there is significant overlap within the statistical margin of error and any discrepancies may be explained by residual or old wood.

The phasing for the enclosure ditch, cremation burials and associated features can be described thus:

- The digging of the enclosure ditch;
- The digging of the stakeholes within the primary fill of the ditch;
- The deposition of the first cremation burial;
- The formation of an agricultural soil over the cremation burial;
- The deposition of the second cremation burial, which was cut through the agricultural soil and localised burning which stained the agricultural soil.

This activity can be placed within the second millennium BC indicative of the Early Bronze Age.

The sub-circular pit (Context 9906) from Pit Group I was stratigraphically earlier than the enclosure ditch. The other features within this group could not be directly phased as there was no artefactual evidence or charcoal which could be used.

A radiocarbon date was obtained for the primary fill of the later hearth in Pit Group II, to the southeast of the cremation burials (Context 704). The date was CAL AD 400 to AD 640 (2-Sigma calibration; Beta 210125), an early Medieval date unlike anything else on the site. The macrobotanical analysis of the carbonised remains from the same context produced cereal grains, including hulled barley (*Hordeum distichon* L./*H. vulgare* L.), oat (*Avena*) and naked wheat (*Triticum aestivum* L./*T. turgidum* L.) (PRS 2005/121), species indicative of a Medieval date.

No dating evidence was obtained for Pit Group III, to the southwest of the enclosure ditch, as the features were too ephemeral and the charcoal samples too small to provide a useful sample for dating.

4.2.5. Discussion

4.2.5.1 The Enclosure Ditch and Cremation Burials

The presence of the central burials suggests the enclosure ditch is best interpreted as the remains of a prehistoric barrow. The ditch itself was too small and shallow to have been a quarry for a significant barrow mound but it would have produced sufficient material for a small mound or a ring-bank. The spread of stones above the two burial urns may have been the remains of a larger mound, removed or levelled during post-medieval ploughing, or they may represent the only capping of the burials. The stony deposits filling the ditch on the west side were indicative of an internal bank that had either eroded or been deliberately used to fill the ditch. However, the lack of similar evidence within the other ditch sections does not confirm this.

The stake-holes at the base of the ditch were either inserted into a primary erosion deposit, suggesting the ditch had been open for some period before the stakes were used or the erosion deposit had accumulated around them. There was a hint that there may have been stake-holes on the pipeline side of the ditch too, where several isolated patches of charcoal were discovered, though there was insufficient evidence to suggest that the stakes continued around the entire perimeter, and their purpose remains unclear.

The relationship between the two cremation urns was interesting because the pit for the later vessel clearly cut the earlier pit, resulting in some damage to the vessel within it. The deposit that spread across the central area of the enclosure appeared to be a relict soil, possibly used for cultivation. This was suggested by the fine, friable nature of the soil, akin to topsoil. The full extent of the soil was unclear and may have been truncated by the machine when the ditch was exposed (thus making the relationship between the soil and the ditch unclear) but it was clear that the pit for the later vessel cut the soil. The area cut by this pit was discoloured suggesting *in situ* burning. The relationship between this activity and the cremation that filled the vessel remained unclear but it does suggest that the cremation took place in this area.

The proximity of the two burials to one another suggests that the presence of one was known when the other was placed. This suggests that not only was it within living memory but that the earlier burial may have been marked in some way. The two burials were quite similar despite the use of different pottery styles. They were pots of similar size and probably of the same fabric. They were inserted in similar pits, both without grave goods, suggesting that the cremation and collection methods were similar. Both pots were buried inverted but with their contents intact suggesting that they both had covers, perhaps of fabric, attached, when buried. The numbers of burials found generally from this period are too few to show that all or most of the population were buried within monuments or in 'special' pots and so it is likely that those that were so buried had some special status.

4.2.5.2 Other features

Several features were identified within the site that were not associated with the cremation burials and enclosure ditch:

- The pit which was cut by the enclosure ditch was the earliest identified feature on site: the presence in the pit of charcoal, burnt clay (possibly from an oven) and a single sherd of pottery together with the presence of a post-hole, suggested that there was domestic activity prior to the construction of the enclosure and the insertion of the burials.
- The posthole (Context 9949) identified within the enclosure was an isolated feature. No other postholes were identified within the area suggesting that it was not part of a structure. Its function within the site was unclear.
- The two pits located to the southeast of the cremation burials (Contexts 730 and 746), were dated to the early Medieval period and were not associated with any other features on the site. They were indicative of domestic activity and were used as hearth pits.
- There were other more ephemeral features within the site that could not be dated nor associated with any specific activity and were thought to be remnants of glacial activity.

4.3 Site 2: Bryn Bachau Late Neolithic/Early Bronze Age Burnt Mound

4.3.1. Introduction:

This site was originally identified in Trench 67 during the evaluation phase in a pasture field belonging to Bryn Bachau Farm (see Appendix I for a description of the evaluation trench). An area of burnt stones was identified within the trench near to a former water channel, which suggested the presence of a ‘burnt mound’.

4.3.2. Topographic location:

The trench lay in a fairly level area of pasture. The evaluation trenching showed that prior to modern culverting, a small stream had run close to the position of the trench. The stream is shown on the 1889 first edition of the Ordnance Survey 1:2500 map.

4.3.3. Excavation:

During the excavation phase the trench was extended from 40m² to 225m² to define the full extent of the burnt mound and identify any associated features.

Several features were identified within the trench: the burnt mound area, four pits and three gullies.

4.3.3.1 The Burnt Mound

The burnt mound (Contexts 275, 280 and 408) covered an area c.25m² in size (Figure 6) and was located to the east of a former stream. The burnt stone defining the “mound” lay in a shallow cut terrace or platform (Fig. 10a) and was deposited on top of a linear spread of (Context 282) identified as a glacial deposit, similar to that identified in Trench 66 to the west. A sample of charcoal was sent for radiocarbon dating.

4.3.3.2 Pit Group

Three pits were found at the southern end of the trench, south of the burnt stone spread (Plate 10). Two of the pits, 404 and 412 (Fig. 10d and e), contained burnt stone, whilst the largest pit 402 contained a charcoal-rich fill and a number of larger unburnt stones (Fig. 10c). They were identified as pits or troughs associated with the burnt mound. A shallow pit (410) was also located to the southeast of the burnt stone spread. This pit did not contain any burnt stone but did have significant amounts of charcoal indicative of localised burning and seemed likely to be contemporary with the burnt stone pits to the west. A sample of charcoal from the primary fill of pit Context 412 was sent for radiocarbon dating.

4.3.3.3 Plough Furrows/Gullies.

A series of linear features were identified crossing the site: Pit 412 was cut by a linear feature (395), identified as a plough furrow or gully. A second gully (277) cut through the spread of burnt stone, whilst a third furrow or gully (396) was orientated perpendicular to the other examples (Fig. 10a). They were identified as modern plough furrows.

4.3.4. Dating:

Table 1 Summary of radiocarbon dating evidence

<i>Context no.</i>	<i>Description</i>	<i>Charcoal</i>	<i>Dating method</i>	<i>Lab No.</i>	<i>Conventional radiocarbon age</i>	<i>2 Sigma calibration</i>
275	Burnt Spread	Hazel and Oak	Radio metric	Beta-204432	3870±70 BP	CAL BC 2550 to BC 2540 and CAL BC 2490 to BC 2140
400	Primary fill of pit 402	Hazel and Oak	Radio metric	Beta-204434	3810±120 BP	CAL BC 2580 to BC 1910

Two radiocarbon samples were sent for dating: the first was from a discrete deposit (Context 275) on the surface of the burnt stone mound. This produced a date at 2 sigma of CAL BC 2550 to BC 2540 and CAL BC 2490 to BC 2140 (Beta-204432). The second was from the primary fill of pit 402 at the southern side of the burnt mound. This produced a date at 2 sigma of CAL BC 2580 to BC 1910 (Beta-204434) (for full results see Appendix 9).

The radiocarbon data gave a date range within the Late Neolithic to Early Bronze Age. There is significant overlap within the dates to suggest that the burnt “mound” and the pits were contemporary and that the pits were associated with the mound.

The dates from both samples overlap so there is no disparity. Context 275 post-dates that part of the burnt mound recorded but on the other hand the mound is probably greatly truncated so Context 275 may once have been within the mound. Taken together the dates indicate use of the mound within the period from the Later Neolithic into the Early Bronze Age and somewhat earlier than the placing of the burials at Afon Wen, Site 1 (above)

The phasing of the site can be divided into two periods:

- The Early Bronze Age burnt mound and associated pits;
- The modern plough furrows.

4.3.5. Charcoal Identification

Five processed samples were sent for charcoal identification (Denne, Appendix 5). Only a few pieces from each sample were identifiable because of the poor condition and small size of the pieces. The charcoal deposit (275) above the burnt stone spread (Fig. 10b) contained 16 pieces of hazel and 3 pieces of oak. Charcoal from the primary fill (286) of a pit 288 of uncertain attribution at the western end of the trench contained six pieces of oak. Charcoal from the primary fill (400) of pit 402, contained 18 pieces of hazel and 2 fragments of oak. Charcoal from the primary fill (411) of pit 412 contained 21 pieces of oak, 10 pieces of hazel and one piece of holly or hazel. Timber for burning would be most easily acquired from young wood. However, most pieces had narrow growth rings, which would suggest slow grown wood and so was likely to be undergrowth from a close-canopy, natural woodland. Hazel would be a natural understorey to oak woodland.

Samples of charred material were also sent for macrobotanical analysis. No ancient seeds or fruits were identified and the samples were limited to wood charcoal (see Appendix 8). This supports the interpretation that the activity was specialised one that involved only heating stones, with no other general cooking, eating or other food processing taking place on site.

4.3.6. Discussion

Although the burnt stone spread was shallow it seems most likely to be the remains of a burnt mound levelled by post-medieval ploughing. Burnt mounds are sometimes associated with neat, sub-rectangular pits or troughs, sometimes with stone or timber lining. However, sometimes they are associated with simple pits (e.g. Kelly 1992), as here, and presumably performed a similar function. The two large pits (Contexts 402 and 412), bore some resemblance to burnt mound troughs in that, although not rectangular they both had fairly level bases and also had ledges at one side (Fig. 10c and e). Such ledges have been found with some rectangular troughs and interpreted as providing access for the user of the trough.

Burnt mounds are relatively numerous and similar examples have been found in many parts of Britain, from the Orkneys to the Midlands and Norfolk in England, as well as in Ireland, although they are not found in some regions, perhaps because of the absence of suitable stones. About 100 are known in north Wales as a whole. Most of them are found in the marginal areas of the uplands of the mainland (e.g. Kelly 1992), with only nine known, until recently, on Anglesey. However, the lack of known sites in the lowlands may be simply a result of poor survival in an intensively cleared and farmed agricultural landscape. For instance, over 300 have been recorded in the undulating lowlands of south and south-west Wales (Williams *et al* 1987, 240). In north Wales, recent survey and excavation in advance of the A55 road scheme in Anglesey identified six more burnt mounds and two others have been identified during pipeline schemes (Davidson 1998). The identification of this example proves that such sites are also present in the lowland of Llyn and another area of a similar activity but of more recent date was also found further to the east during the road scheme (Site 4, below).

Burnt mounds have been located quite widely in Britain and Ireland and the majority, when dated, prove to belong to the second millennium BC. They are not fully understood, but consist of a pit or pits into which water was introduced and then heated by the insertion of stones heated in a fire close by (Barfield and Hodder 1987). This is believed to have been for communal cooking of joints of meat and the efficacy of the method has been proved by experiment (O’Kelly 1954). The repetition over many episodes of the heating process and the discard of shattered stones leads to the accumulation of a mound or spread of burnt stones. These features provide the main evidence for domestic activity in the second millennium BC.

4.4 Site 3: Llwyngwyn Farm Late Bronze Age Domestic Activity

4.4.1 Introduction:

This site was originally identified in Evaluation Trench 45, at the edge of a pasture field close to the existing A497 road, south of Llwyngwyn farmhouse (see Appendix I for a description of the evaluation trench). The evaluation phase identified two small pits towards the northern end of the trench, which contained numerous fragments of coarse pottery thought to be prehistoric in date. The pottery appeared to come from a single vessel that had been broken prior to its inclusion in the pits, rather than the result of later activity. The provenance of the vessel was not fully understood but it was interpreted as a redundant domestic vessel rather than a ritual vessel evident of funerary activity.

4.4.2 Topographic location:

This trench was located to the east of Trench 44, just below the crest of a south sloping hill. The trench was aligned north to south. It was not located in response to the magnetometer survey but was positioned between the field boundary wall to the north and the route to the south. The surrounding area was poorly drained and a modern culvert was located several metres to the east of the trench. The soil was clayey silt and poorly drained.

4.4.3 Excavation:

During the excavation phase the trench was extended from 20m² to 40m² to examine in greater detail the area surrounding two small pits and identify any associated features.

Several features were identified within the trench: a pit group comprising two Early Bronze Age pits with fragments of coarse pottery and post-medieval drainage.

4.4.3.1 Pit Group

A stone-rich hollow was located at the northern end of the trench (Context 314). The feature did not appear to be a deliberate cut but was thought to be a natural hollow (Plate 27). Cutting into this hollow was a small, shallow linear feature (Context 270), into which were cut two small pits/postholes, both of which contained fragments of a very coarse ceramic pottery (Context 264).

The function of the linear feature was unclear as it was too short and amorphous in shape to be a ditch cut. The two pits were located at the northern end of the linear feature, c.0.05m apart. Both pits were 0.50m wide and 0.30m deep, with steep sides and a rounded base. The fill of both pits (Context 263) appeared to be very similar; with each containing a clay/silt deposit mixed with pottery fragments, charcoal and sub-rounded stones. The pottery in each pit was distributed randomly, suggesting the fragments were thrown in with the charcoal and stones. Due to the similarity in the size of each pit and the similarity of the fills, the two pits were thought to be contemporary.

4.4.3.2 Drainage Features

A series of modern drainage features were identified to the east and west of the pit group representing modern landscaping.

4.4.4 Dating

Table 1 Summary of radiocarbon dating evidence

<i>Context no.</i>	<i>Description</i>	<i>Charcoal</i>	<i>Dating method</i>	<i>Lab No.</i>	<i>Conventional radiocarbon age</i>	<i>2 Sigma calibration</i>

264	Pit Fill	Hazel, Oak, Holly and Pomoideae	Radio metric	Beta- 204431	3870±70 BP	CAL BC 1360 to 1360 and CAL BC 1320 to 970
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Charcoal from the fill of one of the two pits containing the pottery fragments was sent for radiocarbon dating (2 Sigma calibration; Beta-204431). This produced a date of CAL BC 1360 to 1360 and CAL BC 1320 to 970 (Appendix 9). This date range covers the Middle to Late Bronze Age and agrees well with the stylistic attribution of the pottery.

The phasing of the site can be divided into two periods:

- The Middle to Late Bronze Age pits with fragmented pottery remains;
- Post-medieval agricultural drainage.

4.4.5. Charcoal Identification

Charcoal from the fill of the pit containing the pottery was submitted for species analysis, with a total of 36 pieces identified: 26 pieces of oak, 15 pieces of holly, 2 pieces of hazel and 1 piece of Pomoideae (genus which includes apples, pears, hawthorn, rowan and whitebeam) (see Appendix 7). One sample (Sample 17: Context 236) was submitted for macrobotanical analysis but did not identify any seeds or fruits to complement the results of the charcoal identification (see Appendix 8).

4.4.6. Pottery Fragment Analysis

The pottery was submitted for specialist analysis, which showed that the fragments were from a single vessel (Appendix 4). The rim diameter was calculated as 240mm, the base diameter *c.*115mm and the height of the vessel suggested as 240mm. The suggestion was that the vessel was already broken prior to it being placed in the feature. The significant features of the vessel were described as the hard, coarsely gritted fabric, the rounded rim with internal groove, lack of decoration, flat base and probably vase-like profile (Fig. 12). These characteristics indicated that the pot was of Middle to Late Bronze Age date. Similar examples were cited as Pen Llystyn, Gwynedd, thought to be from a domestic Context; an urn from a burial/ritual Context at Pennant Mellangell, Montgomeryshire (which has a Middle Bronze Age date); pottery fragments from a hearth at Llandygai, Gwynedd (which had a Late Bronze Age date) and an undated bucket urn with a perforated rim from Capel Eithin, Ynys Mon where other coarse sherds are associated with radiocarbon dates equating to the Late Bronze Age. (For a more detailed discussion of the above, see Lynch, Appendix 4).

4.4.7. Discussion

The two pits containing the pottery fragments were dated to the Middle to Late Bronze Age. The pottery analysis suggested that the fragments were from a single vessel and that only about half of a complete pot was present (para. 4.4.6 and Appendix 4). There was no further evidence to suggest the function of the two pits or the reason behind the deposition of the pottery fragments, but the random distribution of the fragments within each feature suggested they had been dumped with the charcoal and stones in an attempt to fill the pits (the pits may also have been dug to deposit the items).

There was no distinct evidence for activity associated with a cremation burial and the scattering of the fragments within the pits suggests casual domestic deposition rather a more formal “ritual” deposition. There were no other features associated with the two pits identified within the surrounding area.

It was not possible to confirm whether the activity represented a domestic or ritual site, as no other associated features were identified. The function of the linear feature (context 270) cut by the small pits containing the pottery was unclear. Examination of the immediately surrounding area produced no further useful evidence although this was made difficult by the disturbance by modern drains. Nor was any evidence of prehistoric activity was found in the neighbouring trenches: Trench 44 to the west and Trench 46 to the east. The area was also monitored during the watching brief phase (see below), but no further prehistoric activity was identified. As far as is known then, the pit containing the Late Bronze Age pottery was an isolated feature. Such an isolated feature would be more typical of burial than domestic activity and more particularly typical for the period in question, when complex burials, for instance with a covering mound, were no longer the norm. However, a cremation burial would be normally accompanied

by a complete pot. Here the pot was fragmented and no evidence of a cremation was found during flotation of the pit-fill or during analysis of the carbonised remains. However, the absence of actual cremated remains does not disallow the possibility that such remains were sparse and did not survive. The variety of charcoal in the pit is interesting and suggests domestic activity since a pyre for a cremation burial would be more likely to contain single species of mature wood. Study of the pottery fragments (Appendix 4) suggested that only about half of the complete pot was present in the pit. It was also scattered within the pit (Fig. 11b) and this too suggests casual domestic deposition rather than a complete pot truncated and disturbed by modern ploughing. The pit was also irregular and it may have been itself just a tree-hole or casually dug, whereas a burial pit would be dug with greater care. If the pottery was domestic it seems likely to have been from activity very close by since the pot itself was of an unusually coarse fabric that would have been fairly fragile. The culvert nearby is likely to have replaced an earlier natural water channel and this water source may provide an explanation for the presence of the broken pot. The pit lay on a slope and the settlement associated with it is likely to have been on the more level ground to the north, now occupied by the modern road, or beyond.

4.5 Site 4: Glanllynau Middle to Late Bronze Age Domestic Feature

4.5.1. Introduction:

This site was located towards the eastern end of the road scheme in a field belonging to Glanllynau Farm (Figure 5). Trench 80 was opened in response to an apparent pit alignment identified on the geophysics survey (Donaldson, KT Geophysical Survey Report: Abererch to Llanystumdwy, Gwynedd, Stratascan Report Job Ref. 1899, August 2004). The majority of the alignment was outside the road scheme. A large pit was identified in the trench, c.2.0m across (Context 342). It was filled with a brown/black silt rich in sub-rounded heat fractured stones (Context 341). There were no signs of extraneous burning around the pit, suggesting the feature may have been dug as a refuse pit for the stones. The pit was cut into a stone-rich grey silt layer (Context 355). On the eastern side of the pit the grey silt was charcoal-flecked, but not on the western side; suggesting the eastern side was the main focus for associated activity. The trench was subsequently extended eastwards, c.6m and the grey silt layer was investigated further (see below paragraph 4.1).

4.5.2. Topographic location:

The trench was located on fairly level ground at the base of an east-west slope, with the ground rising more gently to the west. There was no evidence of any natural water courses nearby. The field was used for arable farming and had good drainage.

4.5.3. Excavation:

During the excavation phase the trench was extended from 40m² to 80m² to examine in greater detail the area surrounding the pit and identify any associated features, as well as a more thorough investigation of the stone-rich grey silt layer (Context 355).

4.5.3.1. Stone-Filled Pit

Excavation of the pit showed it to be sub-circular in shape, c. 2.2m diameter and 0.5m deep with steep sides and a fairly flat base. The bulk of the fill was angular, heat fractured stone in a mid-dark brown silt (layer 341), with patches of charcoal and there were a few intact sub-rounded stones. On the base of the pit was a thin layer of stone-free grey-black silt (layer 343), which contained a high proportion of charcoal. A more detailed investigation of the pit proved there was also a stake-hole cut into the side of the pit. The stake-hole was 0.20m deep and was cut vertically into the north side of the pit.

4.5.3.2. Stone-Rich Grey Silt Layer

The stone-rich grey silt layer sealed a deposit of concentrated sub-rounded stones (Context 389). The stones were most likely an artefact of ploughing, but ploughing that *predated* the pit. A poorly defined gully ran along the northern end of the trench (391), cutting the deposit of sub-rounded stones. The gully contained a fill of heat fractured stone.

There was no artefactual evidence from any of the features.

4.5.4. Dating

Table 1 Summary of radiocarbon dating evidence

<i>Context no.</i>	<i>Description</i>	<i>Charcoal</i>	<i>Dating method</i>	<i>Lab No.</i>	<i>Conventional radiocarbon age</i>	<i>2 Sigma calibration</i>
343	Lower Pit Fill	Hazel	Radiometric	Beta-204433	2920±50 BP	CAL BC 1280 to BC 970

Environmental samples were taken from the pit for specialist analysis.

Charcoal from the lower layer in the pit (Context 343) produced a radiocarbon date of CAL BC 1280 to BC 970 (Beta-204433) (see Appendix 9 for full dating results). This was bulked charcoal sample so may contain some old wood. However, the bulk was hazel and all was likely to be young wood, if the coppice interpretation is correct. The possible date range falls mainly within the Middle to Late Bronze Age period, within the same range as the date for the pit at Site 3, Llwyngwyn, about 1 kilometre to the west. While the two sites are too far apart to be connected, they could be part of a contemporary pattern of settlement activities.

The phasing of the site can be divided into two periods:

- The digging of the pit (Middle to Late Bronze Age);
- The cultivation of the soil through ploughing

The cultivation of the soil predated the digging of the pit. It was not possible to date this activity.

4.5.5. Charcoal Identification

The charcoal identification analysis of a sample from the upper fill of the pit (Context 341), contained 15 pieces of hazel, 7 pieces of oak and 1 piece of holly; whilst the lower fill of the pit (Context 343), contained 38 pieces of hazel, 9 pieces of oak and 8 pieces of holly (see Appendix 7 for full specialist report). The similarity in the species in the lower silt layer and within the stony fill of the pit shows that they derive from similar activity. The variety of wood species being used and the predominance of hazel is interesting. The oak and holly were small pieces, while the hazel was in large chunks. The hazel also had wide rings suggesting that it was fast grown and therefore possibly from coppice (Denne, Appendix 8). That is, the woodlands were being used systematically and repeatedly.

The macrobotanical analysis of samples of the carbonised material did not contain any evidence for ancient seeds or fruits (see Appendix 8 for full specialist report). This suggests that the activity was specialised and separate from more varied domestic activities.

4.5.6. Discussion

If the pit, stake-hole and gully are to be seen as contemporary (as the stratigraphy suggests), then the site could be interpreted as a domestic site related to burnt mounds. The pit was not a typical burnt mound 'trough' but it had a flat base and could have been used as such. This is also supported by the presence of the charcoal-rich silty layer on the base of the pit. This was not an erosion deposit as it was thin but of fairly even depth (Fig. 13b) and so could have accumulated while the pit was water-filled. The former presence of water was not obvious because of the lack of a modern water-course nearby but it was indicated by the presence of the small gully leading into the north side of the pit. The stake-hole in the side of the pit is difficult to understand. Burnt mound pits often have stake-holes around them, interpreted as supports for leather or fabric shelters but the stake-hole here is in a different position. Although the area around the pit contained a large amount of stone, there was no burnt mound or a spread of burnt stone that might indicate a mound that had been levelled by ploughing. The most likely interpretation is that this was where only a short-lived episode of activity had taken place. Without long-lived or repeated burning no mound would have built up and the small amount of burnt stone was used to infill the pit and gully.

Three other evaluation trenches were excavated within the same field: Trenches 81, 82 and 83, but these did not reveal any further archaeological evidence of prehistoric activity. The entire field was also monitored by a watching brief during the road construction phase but no further evidence was found. Moreover, the area to the immediate south of the road scheme within this field was evaluated and

monitored as part of the gas pipeline realignment scheme (GAT Project G1858; Report No.: 624). This again did not reveal any features to explain the “pit alignment” group of anomalies identified by the geophysical survey and it seems best to interpret it as a combination of one genuine archaeological feature, the pit in Trench 80, with other natural glacial features.

4.6 Site 5: Gwinllan Glan Morfa Late Iron Age/Romano-British Settlement Area

4.6.1. Introduction:

This site was originally identified in evaluation Trench 40, which was located to investigate a natural terrace adjoining a stream. The evaluation phase identified a considerable depth of colluvial deposits below the topsoil. Within this sequence were a number of post-medieval field drains running westwards and south-westwards towards a culvert at the base of the field. At the southern end of the trench was a more complicated sequence of events: the colluvium had been dug into to form a terrace and a stone structure had been built from a course of sub-rounded stones. Within the structure was a clay hearth surrounded by a cobbled surface. This area was excavated further during the excavation phase.

4.6.2. Topographic location:

The site lay on a terrace at the base of a broad river valley on the eastern side of a stream. The area surrounding the stream was poorly drained and the evaluation trench identified a number of field drains dug into the *colluvium*. To the immediate north of the trench was the site of a turnpike road, visible as a holloway crossing the landscape (the holloway was designated as Feature 22 within Part 4 *Archaeology and Heritage*, of Volume 2 of the Gwynedd Council Environmental Assessment Report, 1998 (Volume II: Part 4.0 Archaeology and Heritage) and investigated as Site 8; see para. 4.9 below).

4.6.3. Excavation:

During the excavation phase the trench was extended from 40m² to 55m² to examine in greater detail the area surrounding the stone structure in attempt to understand its provenance and identify any associated features.

Several features were identified within the trench: a stone-built structure, a central hearth, a cobbled surface and several external features, including a post-hole and a secondary hearth.

4.6.3.1 Stone-built Structure:

The complete structure had an elongated rectangular shape 3.0m by 3.0m in size, defined by three lines of stones, possibly indicating the base of walls (Contexts 203, 210, 364 and 366; Figure 14), set into a terrace or hollow cut into the natural (Plate 15). At the western end of the trench, these “walls” ran up to two large natural boulders that appeared to have been included in the structure. Any evidence for a complete western wall was removed by a modern land drain (Context 359; Plate 16).

4.6.3.2 Hearth:

In the centre of the structure was a large circular area of partly burnt clay (Context 213), interpreted as a hearth. There were three small hollows (215, 217 and 219) in the surface of the hearth, 0.18, 0.24 and 0.30m in diameter. These did not have a charcoal-rich fill and did not seem to perform a function so may have been simply stone-holes.

4.6.3.3 Cobbled Surface:

A roughly cobbled surface (Context 204), thought to be a floor, surrounded the hearth and extended towards the two large boulders on the western side of the trench. A layer of charcoal (context 220) was mixed into the make-up layer of the cobbles and probably represented one of the primary attempts to fire the hearth. Another layer of charcoal (Context 205) was found on top of the cobbles, deriving from a second phase of burning.

4.6.3.4. External Features

Just outside the structure, to the north-east there was another, smaller hearth represented by a charcoal spread (Contexts 362/363; Plate 17). To the south-east was a small pit c.0.50m wide, and 0.40m deep (Context 354). The pit was lined with stones and was interpreted as a post-hole. Its relationship to the structure was unclear.

4.6.3.5. Land Drains

A series of land drains were located to the west of the structure with one example also cutting through the structure. They were indicative of post-medieval agricultural activity.

4.6.4. Dating:

Table 1 Summary of radiocarbon dating evidence

<i>Context no.</i>	<i>Description</i>	<i>Charcoal</i>	<i>Dating method</i>	<i>Lab No.</i>	<i>Conventional radiocarbon age</i>	<i>2 Sigma calibration</i>
205	Charcoal Spread	Various (see para. 4.6.5.)	Radiometric	Beta-204430	1970±40 BP	CAL 50 BC to CAL AD 110

The function and dating of the structure was not clear from the initial excavation, due to the complete absence of artefactual evidence and the vague nature of the structure. However, the charcoal spread that covered the cobbles surrounding the hearth (Context 205) was sent for environmental processing.

The few larger pieces of charcoal were identified as oak (one piece), hazel (two pieces) and holly (four pieces). These are too few to be meaningful but suggest random collected fuel wood.

The combined charcoal from the sample was submitted for radiocarbon dating and this produced a calibrated date of CAL 50 BC to CAL AD 110 at 2-sigma (Beta-204430).

4.6.5. Charcoal Identification:

The macrobotanical analysis identified tiny pieces of unidentified charcoal, together with a small number of plant remains, including glume bases of spelt wheat (*Triticum spelta* L), fruit stones of raspberry (*Rubus idaeus* L.) and sedge nuts (Reference: PRS2005/121; see Appendix 8). The sedge nuts merely indicate that sedges were growing locally but must have been incorporated in fuel or food preparation. The raspberry may suggest a seasonal aspect to the activity since such fruits will only be ripe in late summer. The presence of Spelt wheat is indicative of an Iron Age or Romano-British date.

4.6.6. Discussion:

There was no evidence of any surviving buried soil and it appeared that any external land surface contemporary with the structure would have been eroded by cattle trampling over time. The natural subsoil was mottled yellow and grey clay above shaley bedrock. It was poorly drained and easily flooded so seems a poor location for a permanent dwelling, so a short-lived seasonal use is most likely.

The structure itself is best interpreted as a flimsy, tent-like hut constructed of branches with a brush covering. The sub-rectangular outline suggests it may have had a ridge, rather than an apex but this is very uncertain. The boulder outline defines the floor surface but was clearly not a wall as such. It may have served as a kerb or footing for the covering on the inside or to hold down the outside. The possible entrance through the large boulders is uncertain since this faces the prevailing wind and it may be that the modern drain that cuts through this side of the hut has removed a continuation of the boulder outline here. There are two gaps in the stone lines at the east side and that at the north-east could account for the external spread of charcoal just beyond it (362).

This is an unusual discovery of such a complete, if damaged and irregular small structure. Although small its size is still sufficient to provide sleeping room for at least two people. The light construction suggests temporary occupation and the poorly drained location suggests summer use. This agrees with the finds of raspberry stones. The presence of cereal grains of Spelt wheat shows that such could be obtained from more permanent settlement elsewhere and known use of this variety matches the radiocarbon date obtained. There is a large, permanent roundhouse that is perhaps more likely to be of the later Roman period, on the east side of the Afon Ddu 750m to the east.

This was a small, temporary domestic structure occupied perhaps for a single season. There is no evidence to suggest the reason for the occupation, but the most likely summer seasonal activity that it could have been concerned with in this location would be cattle pasturing on the coastal marshes. This

would indicate that the permanent settlement was at some distance away, such as on the hills on the north of Llyn where there were several hillforts, the nearest on Garn Bentyrch, 5km distant.

The ensuing watching brief of this area (see Appendix 3 below) did not identify any other features due to the shallow depth of the topsoil strip during the road construction phase.

4.7 Site 6: Late Iron Age/Romano-British Transient Occupation Area, North-east of Glan Morfa Bach

4.7.1. Introduction:

This site was originally identified in Evaluation Trench 13 located at the edge of a flood plain (Appendix I, below). The evaluation phase identified three small hearths at a depth of 0.78m below a mid-grey natural silt and above a dense stone-rich horizon thought to be glacial in origin. There was no artefactual evidence to suggest any dating for the hearths but a flint flake was recovered from the topsoil, suggesting prehistoric use.

4.7.2. Topographic location:

The site was in a fairly level, low-lying area at about 5m OD on the edge of the flood plain of the Afon Ddu. The field was pasture but would have been marsh before modern drainage.

4.7.3. Excavation

During the excavation phase the trench was extended from 20m² to 40m² to examine in greater detail the area surrounding the three hearths and identify any associated features.

No other archaeological features were identified.

4.7.3.1. Hearths

The hearths comprised a small area of charcoal (Context 124) c. 0.50m in diameter. and two areas of burnt, fractured stone, c. 1m and 1.5m diameter (Contexts 134 and 136, respectively) (Fig. 15; Plate 18). The hearths were shallow spreads on top of the stony natural, not constructed features or pits. No artefactual evidence was found in the hearths but one flint waste flake was recovered from the material removed during machining. However, further intensive searching did not identify any more worked flint.

The stony layer on which the hearths lay was a clean pebbly deposit most like a storm beach shingle, which had no associated soil horizon before it was buried by the deep layer of clean, homogenous grey silty clay. Excavation through the stony shingle showed that it lay on a deposit of cobbles and small boulders in a clay matrix, probably a fluvio-glacial till.

Samples were taken from Context 124 for palaeo-environmental processing and radiocarbon dating (samples 1 and 2).

4.7.4 Dating

Table 1 Summary of radiocarbon dating evidence

<i>Context no.</i>	<i>Description</i>	<i>Charcoal</i>	<i>Dating method</i>	<i>Lab No.</i>	<i>Conventional radiocarbon age</i>	<i>2 Sigma calibration</i>
124	Fill of Hearth	Hazel and Oak	Radio metric	Beta-205207	3870±70 BP	CAL AD 70 to AD 380

The depth of the hearths, under a considerable amount of silt, at first suggested that the features may have had an early post-glacial date, possibly Mesolithic or Early Neolithic, when the post-glacial rise in sea-level was reaching its maximum and the coast-line was approaching that of the present and this seemed to be supported by the presence of a flint flake. However, the charcoal from the hearth (Context 124)

produced a radiocarbon date of CAL AD 70 to AD 380 at 2 sigma (Beta-205207). The hearths must therefore belong to the Romano-British period, or possibly a little earlier.

4.4.5. Charcoal Identification

The wood charcoal analysis identified 20 pieces of oak, and 8 pieces of hazel (Appendix 7, below). It was suggested that these probably derived from small branches or twigs.

The macrobotanical assessment of the finer carbonised material (Appendix 8, below) identified a few fragments comprising sedge (*Carex*) nuts, stems and leaves of cross-leaved heath (*Erica tetralix* L.) and grass (Poaceae) caryopses (seeds).

4.7.6. Discussion

The three hearths appeared to be the remains of small campfires built on an open shingle storm beach. These were then buried by a deposit of clay that probably formed after changes in sea-level that created a lagoonal environment along this part of the coast. These lagoons developed into marsh, which was drained and used for pasture during the post-medieval period.

The three hearths could have belonged to separate burning episodes, over a short period of time. The shingle storm beach would be on the upper part of the contemporary beach, above the normal tidal range and therefore suitable for temporary occupation. The occurrence of the hearths on the beach suggests seasonal exploitation of coastal resources, such as fishing or shellfish collecting. However, the macrobotanical remains included Cross-leaved heath from Context 124 (Sample 2; Trench 13), a species that typically grows in wet heaths and moors, and bogs. Its presence in this deposit might be explained by importation in peat that was being used as fuel. There is a possibility then that there were some peat-filled lagoonal areas already present nearby. If so then other activities such as wild-fowling are possible.

4.8 Site 7: Tanrallt-Isaf Sub-medieval House

4.8.1. Introduction:

This was a small ruinous house with added lean-to pigsties and a later single storey annexe. It was extant in 1889 and in 1918, shown on 1:2500 Ordnance Survey maps, when its name was Tanrallt Isaf, but had long been abandoned by 2003. Its last use in post-war years was probably as store and animal sheds. All the accessible external walls were recorded by photography, measurement and detailed drawing.

4.8.2. Topographic location:

The house lies at the foot of the scarp edging the coastal plain but a little way up the slope and cut into it, only a little way above the flood plain of the Afon Ddu, which meanders from east to west in front of it. Tanyrallt Isaf means 'Under the hillslope Lower', which suits its topographic position.

4.8.3. Description:

The original structure (Fig. 16, Building A), was a small rectangular house *c.* 9m by 6m overall, with walls *c.* 1m wide built from undressed irregular stone rubble with lime-mortar bonding. There were two windows in the south gable, both with large stone slab lintels, the upper window larger than the lower (Fig. 17). The doorway was on the west side, entering into the ground floor with windows on either side, the larger to the north, all with large stone slab lintels (Fig. 18). There was also a low door in the north gable accessed up a flight of stone steps entering by the side of the chimney into the loft of the house (Fig. 19). This doorway was timber-framed and most likely a later insertion to allow separate use of the loft, perhaps a store, from the ground floor. The lower floor of the house may have had a screen separating the main room with the fireplace at the northern end from the rest. Since the window in the southern gable shows that the upper floor was used, there would originally have been a timber stair or ladder to it, perhaps by the side of the chimney.

The building had partly collapsed and the slates had been removed. The wooden rafters and purlins had collapsed into the structure. An inspection of the inside was limited due to this collapse, but the main fireplace was visible, surmounted with a large wooden lintel. An entranceway had been added between the annexe and the main house, from the track at the north, built from stone with a small wooden lintel.

A later addition to this building was a row of three pigsties on the eastern side: dog-leg shaped structures with low-lying pitched roofs (slates no longer present; Figs 20-21). There was another small annexe to the south of these accessed via door from the west leading to the pig pen area, or possibly to a closet (Fig.

22). This had a timber frame, the upright of which contained two sets of initials inscribed into the wood (*DW* and *I (or T)WA*; see Plate 21).

The large annexe to the immediate west (Fig. 16, Building B) was a longer rectangular building *c.* 11 m by 6 m, also built from irregular undressed stone but with narrower walls and harder mortar. No trace of its roof survived and the interior of the house had been used as a dump for building rubble so was inaccessible. However, there had been a small fireplace built into the southern gable, clearly for coal fires. There was an entrance on the east elevation providing a link with the older house and a blocked doorway incorporating some 19th century brick further south in the same wall (Figs 23-4). This annexe was present on the 1889 Ordnance Survey map and may have been the offices of Tanyrallt Nursery described in the Tithe Apportionment of 1845, which describes Tanrallt Isaf as 'House, offices and orchard', associated with the hey-day of Tanrallt Nursery.

A slight terrace was visible spreading from the southern entrance and was presumably the former farmyard, linked to the track. Another irregular and disturbed track running east to west was located to the south of the terrace.

4.8.4. Discussion:

This simple cottage was unusual in design, having a loft accessed through a second door in the gable reached from a trackway on the slope into which the house was terraced (Fig. 19). However, this was fairly certainly a later modification and the house was originally of fairly standard crog-loft pattern. It was also somewhat unusual in that it was built on the edge of the floodplain and built perpendicular to and terraced into the slope. Houses of this design are known as 'platform houses' which are typically of earlier medieval date. The RCAHMW in its discussion of Post-medieval cottages (RCAHMW 1964) suggests that the earlier ones were built perpendicular to the slope. This could mean that the house has quite early origins, although dating is not possible. Dendrochronological dating of the fireplace lintel beam was unfortunately not successful. Presuming, as seemed the case, that the end chimney fireplace was an integral part of the construction then a post-Medieval date is likely, since a medieval platform house would have had an open central hearth. However, it is possible, but not proven, that the fireplace and chimney were later insertions, since they were not definitely an integral part of the original structure, in which case a medieval date is possible.

Tanyrallt Isaf is interesting as one of the earliest dwellings in the area. Gresham did not discuss the actual building itself but noted it as one of the properties within the township of Gogwmwd, part of the Parish of Abererch and showed that the owners of Tanyrallt and Tanyrallt Isaf can be traced back to the late 17th century (Gresham 1973, 294-7). He noted that Tanyrallt Isaf included the holding of Bodriala and that the first record of Tanyrallt Isaf is in a deed of 1680 which includes Griffith Jones of Tanyrallt Isaf. Gresham constructed a pedigree for the family from memorials in the church at Abererch, showing that the land passed by marriage to the Rev. John Roberts, the Rector of Llanbedrog and later Archdeacon of Merioneth. The estate then passed to his son the Rev. Thomas Roberts in 1801 who also had the livings of Llanybi. He bought the adjoining larger farm of Hendre, where he took up residence, establishing plantations and the nursery gardens, which were mentioned by Hyde-Hall *c.* 1810. Thomas Roberts was listed as the owner in the Tithe Apportionment of 1845 and the land to the west and north was listed as 'House, offices and orchard'. The Rev Roberts died childless and, presumably after the death of his widow, the property was purchased to become part of the Broom Hall estate.

The position of Tanyrallt Isaf is marginal in that much of its land was coastal flats but it included the land of Bodriala which had some better drained land and perhaps that became the main residence of the holding. The original occupants of the old house were exploiting the coastal flats here, where there would have been meadows alongside the river, rather than ploughland. The field immediately to the east did have traces of a low bank (Trench 15, Appendix 2, below), but this probably just relates to the orchard, part of the Tanyrallt Nursery established by the Rev. Thomas Roberts. Tanyrallt Nursery was shown, apparently still in operation on the 1889 Ordnance Survey map (Fig. 25). However, by the time of the 1900 map the house at Tanyrallt Nursery to the north had reverted to its original name of Efail Bach (Little Smithy) and the nursery had presumably ceased to operate. A new road was built between *c.* 1900 and 1918, skirting the scarp above the house. This was a diversion of the Pwllheli-Porthmadog road taking it away from the Broom Hall estate wall. By this time the coastal marshes had been drained with the coming of the railway, and much improved.

The last occupiers of Tanyrallt Isaf were perhaps recorded by the initials DW and I (or T)WA found cut into the pine door-post of an annexe at the south end, forming a late addition to the house.

4.9 Site 8: Post-medieval Holloway and Turnpike Road, Northeast of Glan Morfa Farm

4.9.1. Introduction:

There was turnpike road along the line of the A497 and part of it is still visible as a holloway running to the south of the current A497, between the farms of Glan Morfa and Llwyngwyn (Fig. 26). Road improvements during the mid-19th century moved the route to the north, abandoning the turnpike road. The turnpike road in this southern area has therefore survived as a hollow-way, visible as a distinctive linear hollow in the field surface. The holloway was listed as one of the features of archaeological interest (Feature 22) in Part 4 *Archaeology and Heritage*, of Volume 2 of the Gwynedd Council Environmental Assessment Report, 1998 (Volume II: Part 4.0 Archaeology and Heritage) and is described in Appendix 1.

The holloway was the first feature identified during the evaluation and investigated but it was shown that part of the actual surface of the earlier road survived as a well-built cambered cobbled surface, interpreted as a possibly 18th century turnpike improvement along the line of an earlier simple trackway. Also, there seemed to be a possibility of a bridge where the road crossed a stream, the Afon Ddu, and a second, terraced track could also be seen to diverge towards the north where they reached the stream-crossing. Further measured survey, by total station, and excavation was therefore agreed, to provide more information the road and the associated features and information about the road was recorded in Trenches 35, 39a and 39b.

4.9.2. Topographic location:

The road ran along the top edge of the inland scarp where it dipped down towards the coastal plain. At this point it diverged to cross a small valley, cutting diagonally across the slope on both sides of the valley, creating a deep holloway as it did so (Fig. 26).

4.9.3. Excavation:

The holloway was only partly extant in the road development area and was visible crossing from Glan Morfa Farm into Llwyngwyn Farm via a small stream, the Afon Ddu (Fig. 26). The magnetometer survey of the area (Stratascan Report No. 1899) identified another part of the turnpike road to the west of the holloway, within the road improvement scheme. This part of the turnpike road was investigated with an evaluation trench, Trench 35, which contained a cambered roadway, 4.2m wide, built from a succession of sand and gravel layers compacted into a concreted mass (Fig. 27a and b). Trench 39 was opened near the point where the turnpike road crossed the river and identified a similar method of construction to that in Trench 35.

During the excavation phase, to investigate the crossing point further, Trench 39a was opened across an embankment on the west side of the river (Fig. 28), as the embankment appeared to represent a former bridge crossing for the road. Trench 39b was located to investigate an apparent trackway that ran as a distinct terrace on a north-south alignment to the west of Trench 39 (Fig. 28). It was suspected that the turnpike road also crossed the river via a ford to the immediate north of the embankment. This area would also have been investigated during the excavation phase, but a high pressure gas main pipe ran across this point, prohibiting any excavation work.

4.9.3.1 Embankment:

The embankment was investigated within Trench 39a. No structural evidence was recovered to suggest how the embankment was bridged. The road surface was recorded as a stone-rich deposit akin to that identified in Trench 39 (Context 421). This surface was built onto a layer of hardcore that in turn sealed a layer of broken shale. These deposits suggested a single sequence of road building, enhancing a natural embankment to elevate the road above the river (Plate 27). There was no evidence of the repair work undertaken in Trenches 35 and 39, although there was a line of revetting stones within the trench that matched those in Trench 39. Unlike Trench 39 however, the revetting stones were not built onto a layer of hillwash overlying an earlier road surface, but were concurrent with the surface. This evidence suggested the embankment was part of a later phase of road building, contemporary with the repair work in the other trenches denoting the road. The embankment may have superseded an earlier ford across the river. The possible location for the ford was to the north of the embankment, where a continuation of the holloway

was still visible. This area could not be investigated however due the proximity of a high-pressure gas main. The embankment on the opposite side of the river was also inspected, but was not excavated.

The evidence from Trench 39a proved that the embankment was a continuation of the turnpike road. There was no evidence for bridge piers or abutments associated with the river crossing, but these could have been removed by erosion.

4.9.3.1 Cobbled Track to the West of the Holloway:

The surface of the track was constructed from closely packed stones and cobblestones (Context 252) [Plate 28]. There was no evidence for repair but the track had been partly covered by colluvium. This colluvium also covered a narrow linear feature that ran parallel to the track (Context 256), that was filled with stone and slag. The exact function of the linear could not be ascertained within the confines of the trench but it was tentatively identified as a drain. The trench could not be extended further due to the proximity of the gas main. Although artefactual evidence was lacking, the feature was identified as a narrow track of post-medieval date that was truncated by the mid-19th stone bridge to the north.

4.9.4. Discussion:

It appeared that the improved turnpike road had crossed the stream by simple embankments and a trestle bridge. However, the alignment of the road in relation to the stream suggested that it had existed earlier, crossing the Afon Ddu by a ford. Also, there had previously been another track running northwards along the side of the valley towards the north. This is likely to have been the original line of an existing minor road that still continues to the north from the A497 road, passing the medieval house of Penarth Fawr (Fig. 1). This belongs to a network of lanes that probably had its origins in the Medieval period if not earlier. Detailed historical research by Dr Colin Gresham (1973) also suggested that the line of the A497 followed that of an ancient route, with origins probably before the medieval period.

The holloway and cobbled road excavated formed part of the Porthdinllaen Turnpike Trust road, constructed in 1803 and extant on the 1839 Tithe Map of the area. The route is visible also on the John Evans' 1795 map of North Wales, along a similar course, suggesting that the route was well established prior to the construction of the turnpike road. The route was further improved between 1839 and 1899 (when the First Edition 25" Ordnance Survey Map of the area was published), with parts of the road straightened and stone bridges built across the various rivers along the route. This latter phase was still in use as the A497 road until the commencement of the road improvement works in 2004.

4.10 Site 9: Pont Friddlwyd

4.10.1. Introduction:

This was single-arched stone bridge that still formed the crossing of the Afon Wen for the A497 trunk road in 2004. It was to be replaced by a larger structure for the new road and so was recorded by measured survey, photography, and detailed drawing of one face prior to demolition.

4.10.2. Description:

The bridge is *c.* 5.5m wide with a roadway *c.* 5m wide and an arch with a span of 7m (Figs 28a and b). The bridge is constructed from quarried stone: the archway uses rectangular blocks of slate, 0.25m wide, 0.50m deep and 4.0m long, stretching across the width of the bridge (Plate 30). The sides of the bridge are built from courses of sub-angular blocks up to 1.00m by 0.50m in size (width by height), bonded with an orange-white mortar containing sand/gravel inclusions. The bridge has been built onto stone-built abutments, 2.0m high, butting against the riverbank. A weir of sub-angular stones was also built to form a bed for the river on the north side to prevent water erosion from undermining the bridge abutments. The road surface on the bridge was surfaced with modern tarmacadam.

4.10.3. Discussion:

The bridge appears to represent a single phase of construction and is probably of mid-19th century date, preceding the construction of the railway just to the west.

5. DISCUSSION

5.1 Introduction

The evaluation and recording work along the new A497 identified and investigated a number of new sites as well as providing records of other features before their destruction. The details of this work have been described above. They are valuable because they provide some new evidence about the past in Llŷn, an area where there has been relatively little previous archaeological work in any period. This is largely because of its isolated rural position. It had little attention from early antiquaries because the local landed gentry belonged to relatively small working estates, and they were therefore less likely to have leisure to be involved in academic pastimes. The area was visited by Richard Farrington (1772) and Pennant (1783) who noted a few sites, but the first locally focussed work was done by the Rev. J. Daniel in the late 19th century to whom we owe records of several chance discoveries (Daniel 1892).

The majority of the extant prehistoric archaeological remains are to be found on the higher hills of Llŷn where they have survived because they lay outside the area of arable cultivation. Remains there include many hut circles of later prehistoric or Romano-British date as well as several major hillforts. The southern part of Llŷn is of lower land and the predominant soil type in the area is brown earth which, together with the mild maritime climate, produces land that is of Grade 2: moderate to good quality, suitable for intensive pasture with some arable (MAFF 1977, 1988). It can be expected, then, that the area would be attractive for prehistoric settlement. Recent work carrying out aerial photographic survey and evaluation of crop-marks on Llŷn has helped to demonstrate that there exist a range of monuments, both funerary and settlement belonging to the second and first millennia BC that survive only as subsoil features (Ward and Smith 2001). It was to be expected, therefore, that a number of previously unknown archaeological features would be discovered during the course of the work on the road scheme.

5.2 The early environment and coastal change

The whole surface of Llŷn has been affected by the passage of the Irish Sea ice sheet that left, in retreat, thick deposits of drift, fluvio-glacial clay and gravel and these have had a strong influence on soil formation. The glacial boulder clay is exposed in many places in the coastal cliffs and extensive deposits of gravels provide better-drained land in the Graeanog and Bryncir areas. In places features deriving from glacial or near-glacial conditions are to be found and ice-contorted layers have been described in the coastal cliffs at Glanllynau, close to the eastern end of the road scheme (Harris and McCarroll 1990) where peat deposits also occur in relict hollows called kettle-holes formed where blocks of ice left from the ice-sheet melted *in situ*. The peat was thought to belong with the Pre-Boreal period at which time climate ameliorated rapidly towards present day temperate conditions. A possibly similar hollow filled with peat was found during the present work south of Tanyrallt (Appendix 1, Feature 33). The peat contained the remains of several fallen mature trees, probably oaks, which were relics of ancient forest. One was sampled for dendrochronological dating but the tree-ring patterns could not be fitted into any known sequences so could not be dated (Nayling pers. comm.). However, the sequences for north-west Wales are not well recorded at present and the Tanyrallt data may be fitted into a sequence in future.

Despite the scarcity of known archaeological monuments in southern Llŷn, there have been quite a number of chance finds of artefacts, notably of worked flints. These flint findspots are concentrated along the southern coast, notably on headlands. They include material of Early and Later Mesolithic and Neolithic date and have been interpreted as casual scatters left by nomadic hunters who were seasonally exploiting coastal resources such as shellfish. An alternative interpretation is that the scatters derive from flint working close to where flint pebbles used as raw material were available, rather than denoting settlement as such. However, the wide distribution of such finds suggests that they derive from exploitation of food resources rather than just flint. The occurrence of such flints also on the island of Enlli (Bardsey) shows that the coast was being exploited as early as the Later Mesolithic (*c.* 6th millennia BC) by people with sea-going craft.

One significant scatter of flint finds is known in the area of the present work on the headland of Penychain, south of the Haven Holiday Park. Only one worked flint was found during the course of the work. This was a flint blade that came from Trench 13, just east of the minor road to Abererch sands. This flint was an undiagnostic waste piece but likely to be of Mesolithic or Neolithic date. It was not identified *in situ* but appeared likely to have come from a stony surface buried by a deep naturally deposited layer of grey clay. Similar layers of clay have been found at various places around the north Wales coast, sometimes associated with overlying peat deposits. They have been interpreted as estuarine or lagoonal deposits, derived from periods of sea-level transgression and typically associated with a particular mollusc, *Scrobicularia*.

The clay in Trench 13, although a deep natural deposit, overlay a stony surface on which were several discrete small areas of charcoal, which were clearly the remains of small campfires (see Site 6, above). It was thought that these might belong with the worked piece of flint and belongs to somewhere between the 6th to 3rd millennia BC. However, the radiocarbon date obtained from one of the hearths was of CAL AD 70 to 380 at 2 sigma (Beta-20520) and very unlikely to be associated with the worked flint. The find of the hearths and their date is important, not because of the activity that it represents but because it identifies a brief episode that is a fixed horizon prior to the inundation with the deep clay silts. The clay was deposited in a lagoon environment formed along the coast here, either when the mouth of the rivers were blocked by the build-up of offshore bars due to longshore drift, or because of a fairly sudden change in sea-level, or because an exceptional storm deposited a shingle bank (in the same way that the Chesil bank and lagoon (Dorset) formed in historical times). A similar shingle bank to that in Trench 13 was found 40m to the east, in evaluation Trench 14 (see Appendix 1, Feature 13, below).

As it reaches the coastal plain the River Erch runs parallel to the sea here before finding an outlet at Pwllheli. The marsh of Morfa Abererch consists of a former lagoon, partly drained for agriculture. Similar coastal marshes occur along the coast of Meirionnydd at Tywyn, Llanaber and Harlech. In places layers of clay were succeeded by peat development. At Llanaber, Barmouth, animal bones have been found in the clay underlying the intertidal peat there, including shed red deer antlers, mature and immature, as well as red deer and bovid bones (Kelly 1981-4). Nearby a portion of timber trackway that was preserved in a linear hollow in the peat was excavated. This produced radiocarbon dates in the 12th to 14th centuries AD. A nearby tree stump, however, produced a date within the Roman period (Musson *et al* 1989).

Development of the lagoon environments and their change to marshes clearly took place over a long period and they may have been affected by several phases of sea-level changes or exceptional storms creating shingle storm banks or dune fields. Another feature identified during the assessment proved also to be a shingle bank (Appendix 1, Feature 13, below). The dating evidence from the present project is significant in terms of understanding the geomorphology. It also shows that there was casual exploitation of the coastal area in the Romano-British period, which was further shown by the results from Trench 40 (see below). In geomorphological terms it is important because it shows that major changes took place in the coastal environment here during the Romano-British period. These changes may have been local to this stretch of coast but the indication is that there was a sudden and significant change and this may be relevant to understanding the North Wales coast generally and use of its ports and harbours during this period.

5.3 Neolithic period

There is evidence of scattered Early Neolithic settlement in Llŷn in the form of eight chambered tombs, concentrated towards the southern coast, but the nearest are some way north of the A497 road scheme and it was not surprising that no evidence of Neolithic activity was found during the project.

5.4 Bronze Age activity

The commonest type of monument in Gwynedd representative of the second millennium BC is the burial mound represented chiefly by stone-built cairns. About 50 such burial mounds are known in Llŷn (Fig. 29a). Most of these are located in the upland at the north and east where they have survived well, partly through their stone construction and partly because they lie in areas marginal to agriculture where they have not been affected by cultivation. In the lowland however, below about 250m OD, burial mounds were more likely to be of clay or gravel derived from quarry ditches and very few are known because the above ground remains of most have been destroyed by clearance or cultivation. Recent studies of crop marks on aerial photographs indicate that there may be many burial mounds in the lowland surviving as ring ditches. Most of the evidence of activity in Llŷn during the second millennium BC takes the form of such burial monuments, either as extant burial mounds or the ring ditches of ploughed-down burial mounds. One such ring ditch was found during the road scheme towards its east end at Afon Wen. This proved to be the ditch of a burial mound of Early Bronze Age date and at its centre two cremation burials were found in decorated urns (Site 1 above). The Afon Wen ring ditch appeared originally to have had a small central cairn covering the burials and possibly a ring bank inside the ditch. This is a recognised type of barrow, but not one that has been discovered in north-west Wales previously.

The mound was situated on the crest of a low rise overlooking the coast. This is not a very prominent or distinctive position and quite similar to many low rises in this area. Burial mounds in the upland areas are notable for their prominent positions. However, the discovery of burial mounds in the lowlands here and

elsewhere suggests that they may also be found in other types of topographic setting, perhaps placed to provide a purely local prominence or to be visible from local routes or settlement areas. This is the case with the Afon Wen barrow, which would have been close to a presumed early route approximately along the line of the present A497, but would also have been visible from the coast edge or even from the sea.

Evidence of settlement in Llŷn during the second millennium is very sparse although the evidence suggests that the better soils were being widely exploited by this time. The distribution of chance finds of artefacts of that period, although covering a wide variety of soils, still reflects a preference for freely drained soils. A significant concentration of artefact finds and monuments occurs on the uplands at the east side of Llŷn while it is sparser on the better quality, lower lying land, although the presence of several standing stones suggests that there was early settlement somewhere in the vicinity. Settlement of the second millennium BC has so far only been discovered at one site in Llŷn, that of Meyllteyrn Uchaf, Sarn (Ward and Smith 2001). This was a small settlement of two roundhouses surrounded by two concentric ditches. The discovery at Meyllteyrn Uchaf proves that settlement of that period was present in the area and it is possible that other sub-circular enclosures known from aerial photographs might be of a similar period. It shows what such settlement might look like and demonstrates that such settlement can be identified from the air. When the distribution of all chance finds of bronze tools and weapons, stone axe hammers as well as of cairns, barrows, beakers and urns is taken into account it can be suggested that Llŷn was probably a fairly fully settled landscape by the 2nd millennium BC and this agrees with the environmental information from Meyllteyrn and elsewhere (Caseldine 1990 and 2001). The Meyllteyrn settlement lies on a slope and three other concentric circle enclosures identified during the same project lie on low hill summits. Similar topographic situations can be found widely in the undulating landscapes of Llŷn and there could be many more similar settlements. One possible sub-circular settlement enclosure, c. 30m diameter was identified during the geophysical survey part of the assessment phase of the present project south-west of Llwyngwyn Farm. The edge of this extended into the road easement but could not be traced during the evaluation (Trench 42).

There are several known sites and finds in the vicinity of Afon Wen, which indicate that the area was well-populated during the Neolithic and Bronze Age. These include two Neolithic chambered tombs, three Neolithic stone axes, four standing stones, a stone battle-axe and three stone axe-hammers, all probably of Early Bronze Age date and a bronze palstave of Middle Bronze Age date (Fig. 29b). Some evidence of settlement was found not far to the south-east of Llwyngwyn Farm where fragments of a large coarsely-made, undecorated cooking pot were found in a pit (Site 3 above). This seemed to be an isolated feature with no other evidence of settlement activity. An isolated pot would normally be most likely to be a cremation burial but in this case the pot seemed to have been broken when deposited and no cremated bone was found in the fill of the pit. Charcoal from the pit gave a radiocarbon date of Cal BC 1360 to 1360 or Cal BC 1320 to 970 (Beta-204431).

Other evidence of presumed domestic cooking activity of a broadly similar date was found at Bryn Bachau about 2km to the west (Site 2 above), where several pits were found filled with burnt stones as well as spreads of burnt stone, close to a small stream. These types of site, known as burnt mounds, are quite frequent and are interpreted as communal cooking places, where meat was cooked in pits of water heated by hot stones. However, they are generally found without trace of actual settlement, so that they have sometimes been thought to derive from transient hunting or herding activity. However, it is clear that the places suitable for burnt mounds, being at the side of streams are not themselves suitable for settlement while at the same time it is clear that such sites were not 'temporary' cooking places but used repeatedly over a considerable period. It seems more likely therefore that there was settlement nearby but at a little distance away on higher, better-drained land. Such settlement may be identified in future, by study of crop marks on aerial photographs.

Such sites of burnt mound type are quite frequent in the landscape and were not isolated here either because similar activity, but dating to late in the second millennium, was also found to the east of Afon Wen where a large pit was found filled with burnt stones, radiocarbon dated to Cal BC 1280 to 970 (Beta-204433) (Site 4 above) a date that overlaps with that from the pit with pottery from south of Llwyngwyn (Site 3 above).

5.5 Iron Age and Romano-British period

A substantial round house that is likely to be of this period is known just to the north of the road scheme and just to the east of Pont Llwyngwyn. An area close to it at this point was going to be affected by the re-routing of a gas pipeline but in the event the route was changed to avoid the settlement site. Several

round-houses are also known at Clogwyn Bach, just to the north-west of the road scheme but no other evidence of similar settlement was found during the scheme, perhaps surprisingly since through Gwynedd as a whole such settlement is quite numerous, with about a thousand recorded sites. Also, during another recent road scheme, the A55 across Anglesey, some 17km in length, several areas of such settlement were found. However, existing evidence of settlement of that period in Llŷn is relatively slight and it may be that this area was less densely settled than Anglesey and north-west Gwynedd and more may have been destroyed for agriculture.

Nevertheless, two areas of probable transitory activity in this period were identified, both by radiocarbon dating rather than by diagnostic artefacts. The first consisted of two hearths with no accompanying structures in Trench 13 (Site 6 above). The second was by a stream west of Llwyngwyn Farm in Trench 40 (Site 5 above). This comprised a hearth on a clay floor within a rough sub-rectangular structure defined by lines of stones. This could have been walled structure largely removed by clearance for later agriculture but seems more likely to have been a rough hut of which the stones were simply a foundation or defining line. Whichever, it seems to have been a fairly impermanent structure compared, to the typical round house such as that at Pont Llwyngwyn. The radiocarbon date produced was Cal BC 50 to AD 110 (Beta-204430) and analysis of the charcoal showed the presence of spelt wheat. The date suggests that the structure dates to the Late Iron Age or Early Romano-British period and the spelt wheat was a crop that was grown in both periods.

5.6 Early Medieval and Medieval periods

The peninsula of Llŷn or Llyn, or *Penllŷn*, is thought to take its name from the same root as the Irish tribal name Laigin (as in Leinster), probably reflecting early Irish settlement and influence in the area (Carr, 1972, 69). A large, presumably Iron Age, promontory fort near Nefyn on the north coast, Dinas Dinllaen, incorporates the same root, which also gave its name to the medieval commote or administrative district. However, historically, in terms of administrative areas under the Welsh kingdom, this area comprised two *cantrefs* (hundreds): that of Llŷn to the west, and Eifionydd to the east, in which is the area of the present road scheme. As described in the introduction, above, the area of the road scheme was certainly settled and farmed during the medieval period. The hillfort on the prominent hill of Garn Bentyrch, 5km to the north, which overlooks the area had several phases of rebuilding and the latest has been interpreted as an Early Medieval fortification. There are traces of medieval settlement within the grounds of Broom Hall on the north side of the road scheme area (Fig. 1) and there must have been fields associated with this and other settlements, such as that of Penychain, to the south-east. However, the field pattern was re-organised on a large scale during the 18th century when much of the land became part of large estates. The Medieval ploughland would have been concentrated around scattered individual townships with quite large areas of 'waste' and woodland between. No trace was found of any field boundaries earlier than the 19th century during the project and it seems likely that the explanation is that the area of the road scheme was either waste or woodland during the Medieval period and only cleared for cultivation during the 18th to 19th centuries.

The lack of medieval finds is also partly explained by the topographic line taken by the new road. The eastern part of the route was largely an improvement of the existing road, which runs along the edge of the inland plateau, before it drops towards the coastal marshes. This is likely to be an ancient route, with origins at least as early as the medieval period. This was suggested by Gresham (1973) who noted that the line of the road formed the southern boundary between Demesne land and the medieval townships of Penychen and Ffriwlwyd at the eastern end of the present road scheme. Here, therefore, the new road was running through a landscape on a pre-existing route, and so would not cut through known areas of medieval settlement. The western part of the new road followed a route by-passing the ancient route, which diverged inland through Abererch and instead ran through the fringes of the coastal marshes, an area that would not be expected to have been well-settled or used in the Medieval or earlier periods.

5.7 Post-medieval period

The main finds of the historic period are of evidence relating to the earlier use of the route itself, in the form of actual remains of part of the ancient route itself and the detailed recording of a cottage of early Post-medieval date, which was demolished for the road construction.

The fortunate survival occurred of part of the early road occurred at a point where the early route lay on a slightly different alignment to the modern road, where it passed to the south of Broom Hall. This seems to have happened because the road at this point originally diverged to cross a small valley and to cross a stream. This route was later straightened to cross the valley and stream by a stone bridge, apparently in

association with construction of the estate wall of Broom Hall in the mid-19th century. The earlier route was first identified as a hollow-way that was investigated by further excavation and recorded in some detail (Site 8 above).

The excavations showed that part of the early road survived as a well-built cambered cobbled surface, identified as an improvement as part of a turnpike road in the 18th century but the hollow-way suggested that it had earlier origins, crossing the stream by a ford.

The early Post-medieval house recorded in advance of demolition was that of Tanyrallt Isaf (Site 7 above). This was a small cottage with drystone rubble walls and slate roof. It was single-roomed with an end fireplace and a crog loft upper storey. The crog-loft formed a separate room, accessed via its own door up steps from the uphill end of the house. It could be suggested to be of some antiquity because of its small and simple design and because it was terraced into and built perpendicular to the slope. Such cottages are regarded as early Post-medieval, with origins deriving from medieval platform houses (RCAHMW 1964.).

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1:250,000 Soil Map Series: Sheet 2, Wales

APPENDIX 1: EXTANT SITES OF ARCHAEOLOGICAL OR HISTORIC INTEREST IDENTIFIED IN THE DESK-BASED ASSESSMENT AND RECORDED DURING THE EVALUATION

(As listed in GAT Project No. G1513; Report No.: 60 and Part 4 *Archaeology and Heritage*, of Volume 2 of the Gwynedd Council Environmental Assessment Report, 1998 (Volume II: Part 4.0 Archaeology and Heritage)) For the location of individual features see Figure 1.

Feature 3: Trackway south of Cemlyn Farmhouse (SH39753631)

Description:

The track runs in a south-easterly direction from the current A497 for 140m before turning south to cross the Afon Erch at a fording point and continuing towards the coast. The track is seven metres wide and unsurfaced, used by local farm vehicles to access the fields south of Cemlyn Farmhouse. The road is bounded by *clawdd* walls on either side. A series of modern gates have been built about seventy metres along its length to provide access to the fields either side, proving that the track has been recently altered. The same can be said for the access point onto the road, which has been widened to enable traffic to access and egress the track safely from the main road. The track is associated with the building of the house (constructed c.1888) and is therefore of late-Victorian date.

Impact:

The northern end of the track was removed as part of the road improvement scheme and was monitored during the watching brief phase. The *clawdd* walls on either side of the track were breached c.100m along its length as part of the gas pipeline realignment scheme associated with the road improvement. This was monitored during the watching brief phase of that project (GAT Project G1858; Report No.: 624) and the *clawdd* walls were reinstated at the end of the project.

The watching brief confirmed that the trackway was simple and not surfaced although with some dumped stone consolidation.

Feature 4: Dwelling at Cemlyn (SH39763635)

Description:

A two storey derelict farmhouse south of the current A497 (Plate 31). The house does not appear on any maps before 1888 and is therefore of late-Victorian origin. The house measured 10m wide by 18m long, with two gable ends, five sashed windows (three first floor, two ground floor) and a central ground floor entrance on the south-side. The windows had slate sills and the front door had a small open porch. A gable-ended two-storey extension has been added to the southern end of the house, with one ground floor window and two first floor sashed windows (Plate 32). A damaged iron gate encloses the north-eastern side of the house and a series of small outbuildings, including a coal shed with a corrugated iron roof. A well, which was circular with a rubble lining wall, was also uncovered during a later stage of the new road construction after demolition of Cemlyn house. The well would have been at the north side of the house, adjoining the contemporary road and a pump is marked there on the first edition Ordnance Survey map of 1889.

Impact:

A photographic record was made of the outside of the structure. The interior was not accessible for environmental reasons (the presence of a bat-colony). The house was demolished to make way for the road improvement.

Feature 5: Track Southeast of Cemlyn (SH39773633)

Description:

This was a 40m long track that provided a connection between the farmyard of Cemlyn Farmhouse and the external track to the south, Feature 3. The track is four metres wide with a stone-faced garden wall on the west side and an earth bank on the east side. Both are overgrown. An arched gate opens onto the farmyard of the Cemlyn Farmhouse.

Impact:

The track was removed as part of the road improvement scheme. An evaluation trench (Trench 2) was cut across the track prior to this, but no archaeological features were recorded. A photographic record was also made. The trackway was an unsurfaced hollow-way worn into the natural yellow-buff gravelly silt subsoil. There were no archaeological features and the subsoil surface followed the general north-south land slope.

Feature 10: Track at Bodriala Farm (SH40093639)

Description:

The track runs in a south-westerly direction from the farmyard into an enclosed field. The track is c.50m long and 5.00m wide and is of simple construction comprising flattened ground and is designed to transport local farming vehicles between fields. There is no evidence of any surfacing.

Impact:

The southwestern end of the track has been altered to facilitate access to the new A497 that now runs to the south of the farm.

Feature 11: Track Southwest of Efail Bach (SH40433650)

Description:

A double-walled track runs in a southerly direction from the current A497 to the north bank of the Afon Ddu, covering a distance of 150m. The track is 2.00m wide and is of simple unsurfaced construction. The clawdds on either side are low. The track seems to continue that of a minor road to the north leading to Plas Hendre so may have formed a route from there to grazing on the Morfa coastal plain.

Impact:

A thirty-metre section of the track was removed during construction of the new road. The northern end of the track was also removed as part of the gas pipeline realignment scheme and was monitored as part of that project (Roberts 2006) but this added no further information.

Reference report and describe findings

Feature 12: Enclosure Southwest of Efail Bach (SH40453643)

Description:

A walled enclosure, possibly a former orchard, located to the immediate south of the current A497. The enclosure is defined by a low-lying course of partially demolished irregular, undressed stone, 0.50m high, which forms three of the four sides of the enclosure. The fourth side is formed from the more substantial roadside boundary wall of the A497. The enclosure measures 20m by 40m. The enclosure is no longer used as an orchard and is overgrown.

Impact:

The enclosure was not affected by the new road but was breached as part of the associated gas pipeline realignment scheme and was monitored in that project as part of the watching brief phase (GAT Project G1858; Report No.: 624).

Feature 13: Bank South-west of Gorwel (SH40503638)

Description:

A low ridge in the surface of the pasture field. Investigated by evaluation trench 14. The feature proved to be a natural shingle bank, probably a relic coastal feature from a period of higher sea-levels and related to a similar feature recorded 40m to the west in Trench 13 (see 4.7 Site 6, above).

Impact:

The feature was natural and did not require mitigation.

Feature 14: Track South of Gorwel (SH40653634)

Description:

A 110m long, 4.0m wide unsurfaced track running in a south-easterly direction from the current A497, providing access to a former farmhouse, Tanyrallt Isaf (Feature 15). The entrance to the farmhouse faces onto this track and would have been the primary route for the farmhouse. A fenceline denoted its boundary on either side.

Impact:

The central portion of the track was removed along with Feature 15 to make way for the new road. A photographic record was maintained of this area during this phase.

Feature 15: House South of Gorwel (Tanyrallt Isaf, Fig. 1); SH40653634)

Description:

A derelict post-medieval two storey farmhouse with added lean-to pigsties and a later single storey annexe. The annexe survived as walls only but had been infilled with building rubble from elsewhere. The roof and walls of the original house were partly collapsed, preventing some access for health and safety reasons, so limiting the recording. The surrounding yard walls and any minor features such as gateways had been cleared and levelled much earlier and survived only as grassed-over terraces. Recording was achieved by machining away the tumble from the base of all the walls followed by

detailed sequential perpendicular photographs with scales. These were supplemented by general total station survey and by measured detail and description.

For a detailed description of the building and a historical discussion see 4.8 Site 7, above.

Impact:

The structures were completely removed as part of the road scheme and the terrace and track were also disturbed. The demolition phase was monitored and the fireplace lintel and other timbers were retained. A full photographic and drawn record of the outside of the structures was conducted prior to their demolition, coupled with an EDM survey of the buildings' outlines and the surrounding area.

The original structure was built from undressed irregular stone with lime mortar bonding. It comprised two gable ends with a second storey window on the south-facing side and a window and the main entrance on the northern side, facing onto the track (Feature 14) and a window on the west elevation. There was also a low entrance on the first floor of the north gable. The chimney was also visible on this side. A later addition to this building was a row of pigsties on the eastern side: dog-leg shaped structures with low-lying pitched roofs (slates no longer present; see Plate 20). The annexe to the immediate west was a longer building of irregular undressed stone. There was an entrance on the east elevation. The building had partly collapsed. Neither structure had a roof; the slates appeared to have been removed. The wooden rafters and purlins had collapsed into the structure. An inspection of the inside was limited due to this collapse, but the main fireplace was visible, surmounted with a large wooden lintel. An entranceway had been added between the annexe and the main house, built from stone with a small wooden lintel. Another entrance had also been built onto the southern elevation, again from stone, leading into the pig pen area. The doorframe had partially survived and contained two sets of initials inscribed into the wood - DW and I (or T)WA (see Plate 3). A slight terrace was visible spreading from the southern entrance and was presumably the former farmyard, linked to the track. Another, irregular and disturbed track running east to west was located to the south of the terrace.

Feature 16: Possible Track at Glan Morfa (SH40903632)

Description:

Small landscape feature in an enclosed field north of Glan Morfa Farm, identified during the walkover survey.

Impact:

No trackway was identified; investigated via Trench 17 and interpreted as evidence for modern cultivation activity. Area monitored during initial groundworks phase, but no further features identified.

Feature 18: Enclosed Wood (SH41383643)

Description:

Small triangular-shaped enclosed woodland between Tan-yr-Allt and Tan-y-Clogwyn farms, located on a north south slope leading towards marshland. The enclosure is built from a heavily overgrown fence, with a modern replacement fence. Access is from Tan-yr-Allt farmland.

Impact:

A photographic survey was undertaken prior to the almost complete removal of the enclosure as part of the road building scheme.

Feature 19: Earthworks, south-east of Tancllogwyn (SH41703656)

Description:

An area of apparent earthworks, which may possibly include Medieval house platforms. A scattering of large stones appears to have a linear pattern.

Impact:

The feature was inspected with Trench 27 during the evaluation phase, but no evidence for a platform house was forthcoming: the line of boulders may have delineated a field boundary. The only artefactual evidence was post-medieval pottery, glass and clay smoking pipes that had probably been dumped from Tancllogwyn Farm.

Feature 20: Track at Glan Morfa (SH41883662)

Description:

A sixty metre long, four metre wide track running southwards from the current A497 to Glan Morfa Farm. An unsurfaced track with *clawdd* wall boundaries on either side (Plate 33).

Impact:

A thirty metre wide section of the track was removed as part of the road improvement scheme. A photographic survey of the track was undertaken prior to this.

Feature 21: Demesne Wall of Broom Hall (SH42043672)

Description:

A mid-19th century boundary wall built as for the Broom Hall Estate. The demesne wall, as it currently stands, is located east of the Broom Hall East Lodge, where it runs parallel to the current A497 for 440m (Plate 35), before turning north for seventy metres along a country road and then dog-legging north-west for 170m, encompassing a small part of the Gwinllan Glan Morfa Estate.

The wall stands c.3.00m high and is of tapered construction: 0.70m wide at the base, 0.50m wide in the middle and 0.35m wide at the top (Plate 34). The wall is built from sub-angular stone, with larger stones used for the base of the structure.

Impact:

The wall was not affected by the road improvement scheme.

Feature 22: Holloway northeast of Glan Morfa Farm (Fig. 25; SH42003667 to SH42113671)

Description:

Visible as a distinct landscape feature running eastwards for c.900m into land belonging to Llwyngwyn Farm. It has been identified as part of the Porthdinllaen Turnpike Trust road, which was constructed in 1803. This road was superseded in the mid-19th century by what is now the A497, built by the Broom Hall Estate as a wider, straighter road with a bridge crossing across the local river (Afon Ddu). The holloway is a c.10.0m wide depression in a large enclosed field belonging to Glan Morfa Farm and runs eastwards along a south facing slope, before turning north-eastwards into a shallow river valley (Afon Ddu) and then continuing for a further 400m on the other side of the river, climbing the valley side and continuing in an easterly direction, before disappearing as it nears the current A497. The holloway on this side of the valley has been cut through by a modern high pressure gas main (inserted in the 1960's).

Impact:

A large portion of the holloway on the land belonging to Glan Morfa Farm was outside the road scheme and was not affected. The only areas to be affected were to the immediate east of the trackway leading to the farm and where the holloway crossed the river into Llwyngwyn farmland. The former was investigated by Trench 35 and the latter by Trench 39, both during the evaluation phase (Fig. 25). Both trenches revealed that the turnpike road was c.4.0m wide, with a cambered profile, constructed from a 0.30m thick deposit of sand and gravel, cut into the ploughsoil horizon. Trench 39 revealed evidence for repair work, as the road was at the base of a steep valley side and was subjected to hillwash deposition. A line of revetting stones was laid on the eastern side of the road at this point to prevent further hillwash damage. The holloway was not investigated on the Llwyngwyn side during the evaluation phase due to the high pressure gas main. This part of the hollow-way was buried by a large embankment during the road construction. The topsoil was stripped with archaeological monitoring during the watching brief phase, prior to construction of the embankment. No further evidence for the holloway was forthcoming due to the shallow depth of the topsoil strip. An additional topsoil strip was undertaken south of the area between Trenches 35 and 39, utilising the remaining area of the field for storage during the groundworks phase. The holloway was clearly visible at the eastern end of this area traversing the valley side, but again the shallow depth of the topsoil strip did not reveal any further detail regarding the construction of the road.

Feature 26: Track at Tyddyn Berth Farm (SH43613729)

Description:

The 40.0m length of track to Tyddyn Berth Farm is located south of the current A497, c.500m east of the Afon Wen. The trackway opens onto part of the old roadway now used as a lay-by (the original road having been straightened along this route) (Plate 36). The track is bounded by field walls faced with rounded boulders. The walls are in good repair. The track has been covered with asphalt so none of the original surface is visible. At the gateway, a fairly impressive entrance has been added, consisting of two rectangular gateposts, 1.4m high, each with a quartz set on top. From these, 1.0m high crenellated walls curve out onto the road. The walls and gateposts are made of igneous rock cut into blocks of irregular size. The crenellations are small blocks projecting c.130mm above the top of the wall. The visible mortar is light pink in colour and fairly recent in manufacture. The gateway is possibly 19th century, but could also be early 20th century.

Impact:

The trackway was not affected by the road scheme. The new road is located 20.0m to the north, with the former lay-by redesigned as an extended driveway to Tyddyn Berth Farm.

Feature 28: Former Railway Embankment (SH43803740)*Description:*

The embankment was built for the Caernarfonshire railway line and was constructed in 1867 and dismantled in 1967. The embankment was built either side of what is now the A497, to carry the railway southwards over that road towards the Afon Wen Junction. The embankment is steep sided, c. 4.2m high and 7.80m wide and is heavily overgrown. Where it was possible to inspect the top of the embankment, it appeared that the railway track had been removed. The railway line was carried across the road on a bridge, the south pier of which still survives (Plate 37), with the north pier removed, except for 0.80m high course of masonry at the base. The pier was constructed from an igneous rock, cut into neat blocks of various sizes. The original mortar is a limestone mix, with evidence for later re-pointing. The pier was 9.0m wide.

Impact:

The embankment on the northern side of the road was removed to accommodate the new road and was monitored during the watching brief phase. No evidence for the railway line was recovered, confirming that it had been removed. The pier on the south side was also removed and the embankment cut back. A photographic record was maintained throughout.

Feature 31: Pont Ffriddlwyd (Fig. 28; SH43893757)*Description:*

A single-arched stone-built bridge of mid-19th century date (Plate 29).

Impact:

The bridge was demolished and removed as part of the road improvement scheme. A photographic and written record was made of the structure prior to its demolition and a photographic record made during its demolition (see 4.10, Site 9, above).

Feature 33: Circular Hollow south of Tanyrallt (SH44143766), Chwilog*Description:*

The circular hollow is located c.35.0m south of Tanyrallt farmhouse and appears to be a shallow circular depression at the base of two slopes, one running east and one running west (Plate 38). Dimensions: 22.0m wide by 11.60m long by 0.35m deep. The most obvious function of the hollow could have been as a dew-pond and it was usually full of water (Plate 39).

Impact:

The feature was monitored during the watching brief phase. Visibility was reduced due to waterlogging and no further information was recovered (Plate 40). Three pieces of bog oak were recovered from the subsoil below the feature during the watching brief phase, with one piece submitted for dendrochronological dating. However, the tree ring data could not be fitted with any presently known chronological sequence (Nayling pers. com.). No other features of note were identified within the storage area during the course of the watching brief.

Feature 35: Track at Afon Wen Farm (SH44553771)*Description:*

The track at Afon Wen Farm runs in a northerly direction from the farmyard onto the A497. The track is 80.0m long and has been modernised: the junction onto the A497 has been widened, with the original boundary walls replaced by mid to late-20th century block-work walls, 0.90m with cement bonding (Plate 41). The entrance at its widest point is 11.0m and the narrowest, 4.0m. The original track surface has been replaced by concrete, with a cattle grid set into the path just before the entrance opens onto road. The remainder of the track, leading into the farm has also been surfaced with concrete. A *clawdd* wall runs along either side of the track, surmounted by a small hedgerow.

Impact:

The entrance and part of the track were removed and replaced as part of the road improvement, with the groundworks monitored during the watching brief phase, with no underlying surfaces identified. A twenty metre stretch of the *clawdd* walling was removed either side of the track as part of the gas pipeline diversion scheme (GAT Project G1858; Report No.: 624), with a photographic record maintained throughout.

Feature 37: Tynffridd Farmhouse (SH45273783)*Description:*

Tynffridd Farmhouse is next to the current A497 and Criccieth and Pwllheli. The farmhouse is also approximately 50.0m from the Old Toll House and the junction with the B4353 to Nefyn. The farmhouse

is two storeys and has had extensive work in upgrading and renovation. The main building is pebble-dashed, and a new front porch has been added. The roof has been raised, and five new bay windows, three on the first floor and two on the ground floor. The roof has new slate tiles and two chimneys on both gable ends. The main building is constructed from large stone blocks that appear to be igneous, with a limestone mortar. A western annexe has been built, which has been constructed to blend in with the original stonework (Plate 42). The annexe is ground floor only, 3.50m high with a pitched roof. The stonework here is neat blocks, with modern cement bond. A new annexe is being built on the eastern end of the farmhouse, with modern concrete blocks, and is still under construction. This annexe will be two storeys high on completion, with two large windows facing south. A 0.75m wall runs along the road from the front of the house, westwards for 10.50m.

Impact:

The farmhouse was not affected by the road improvement scheme.

Feature 40: Ford (SH42703677)

Description:

An additional feature, not identified in the desk-based assessment but which became apparent during the initial site clearance by *Mowlem*, was a river ford south of Pont Llwyngwyn, crossing the Afon Ddu (3.2km along the scheme). The fording point involved a widening of the river to make it shallower with wall revetments on each riverbank, running on a north-south alignment. The ford was directly below the bridge and was assumed to be part of the Porthdinllaen Turnpike Trust Road (Feature 22: the Holloway) that was succeeded by the bridge and the realigned road in the mid-19th century. The wall revetments were built from several courses of sub-rounded stone, built in a trapezoidal fashion. The walls were heavily overgrown with trees and were in a dilapidated state (Plate 44).

Impact:

The ford was surveyed using an EDM and a photographic record was made of the area. The ford was removed as part of the road building project and the river culverted to allow the new road to cross via an embankment.

APPENDIX 2: EVALUATION RESULTS – TRIAL TRENCHING

METHODOLOGY

The project took place between the 2nd of September and 16th of December 2004, with further work undertaken between the 23rd of May and the 9th of June 2005.

A total of ninety-nine trenches were inserted in the proposed development area for the evaluation, in response to the geophysical survey, with the trenches placed in the areas of most likely archaeological activity (Stratascan Report Job Ref. 1899, August 2004). Trench 99 was opened in response to the southern half of a large enclosure ditch identified during the evaluation phase of the gas pipeline realignment conducted between February and March 2005 (see GAT Project: G1858; Report No. 624)

The subsequent excavation involved expanding specific trenches to assess the extent of the identified archaeological remains.

A 360° tracked excavator and a 180°-wheeled backhoe excavator were used separately at various stages of the project. Topsoil and unwanted material overlying the archaeological remains were removed by machine. All subsequent features were excavated by hand

Each trench is described separately. Archaeological deposits are numbered within rounded brackets and archaeological cuts within square brackets. An underlined number signifies archaeological structures. Trench size is expressed in square metres. The dimensions of deposits and features are expressed in metres. The dimensions of structural stonework are expressed in millimetres.

For the location and orientation of individual trenches, see Figs 2 to 5.

The Evaluation Phase

The evaluation phase of the project encompassed the entire length of the road improvement scheme, incorporating a varied landscape, with the coastal plain at the western and eastern ends of the scheme and narrow river valleys at the centre of the scheme. The western end of the scheme was mostly limited to examples of post-medieval farming, with only Trench 13 revealing distinctive settlement activity with a hearth dated through radiocarbon dating to between CAL AD70 to AD380 (2 sigma calibration; Beta-205207). The central part of the road scheme included the early-19th century turnpike road (Feature 22) that was visible as a holloway running eastwards across the landscape from Glan Morfa Farm to Llwyngwyn Farm (Fig. 25). Trenches 35 and 39 exposed the turnpike road at two locations, revealing it to be a well-built cambered road, constructed from sand and gravel. East of Trench 39, at the base of the west-facing slope of the local river valley, Trench 40 revealed a discreet rectangular structure with a central clay hearth. South of Llwyngwyn Farm Trench 45 contained a discrete circular pit that contained fragments of suspected prehistoric pottery. Further east, towards the centre of the scheme, Trench 67 contained a truncated burnt mound that appeared to have been levelled by modern farming, whilst Trench 80 contained a wide but shallow pit full of burnt stone. The latter two were indicative of Late Bronze Age activity. There were no datable artefacts from any of these trenches, bar Trench 45 and the finds' assemblage for the evaluation phase was very limited and included an unstratified flint sherd from the spoil heap surrounding Trench 13. There were several trenches with isolated patches of burning, including Trenches 61 and 62 and 77 to 79. The activity within these trenches was identified as post-medieval farming activity. The two major wetland areas, *c.* 2.0 and 3.5km along the scheme respectively, were not evaluated in any great detail due to accessibility problems but were monitored during the watching brief phase (see below).

Recording

Identified features were recorded photographically and by notes, sketches and plans, and were located either by measuring from the field boundaries or by using a total station.

The archive is held by GAT under the project number **G1692**.

EVALUATION TRENCH DESCRIPTIONS

Trench 1

Size: 40m²

Description:

Trench 1 was located in a small field west of a Cemlyn farmhouse, south of the current A497 (Fig. 2). The trench was not excavated because of overhead power lines.

Trench 2

Size: 20m²

Description:

Trench 2 was located west of Cemlyn farmhouse to investigate a hollow-way (Fig. 2). Although feature 5 was identified as a historical feature the trench was recorded as archaeologically sterile.

Trench 3

Size: 40m²

Description:

Trench 3 was situated c.25m east of Cemlyn farmhouse (Fig. 2). The trench was recorded as archaeologically sterile.

Trench 4

Size: 40m²

Description:

Trench 4 was located in a field east of Cemlyn Farm (Fig. 2). One feature was present: a shallow cut, crossing the trench about 7m from the western end (context 102).

Interpretation:

No artefacts recovered but the feature was identified as a post-medieval agricultural feature.

Trench 5

Size: 40m²

Description:

Trench 5 was located c.18m east of Trench 4 (Fig. 2). One feature was present: a shallow drain ran across the trench on a northeast-southwest orientation, c. 4m from the southern end of the trench (context 103) and was of post-medieval date.

Trench 6

Size: 40m²

Description:

Trench 6 was located c.20m east of Trench 5 and c.25m west of the Afon Erch (Fig. 2).

Interpretation:

The trench was recorded as archaeologically sterile.

Trench 7

Size: 40m²

Description:

Trench 7 was located east of the Afon Erch but was not excavated due to inaccessibility caused by extensive waterlogging.

Trench 8

Size: 40m²

Description:

As Trench 7.

Trench 9

Size: 40m²

Description:

Trench 9 was located c.30m south of Bodriala Farm (Fig. 2). Two small, shallow postholes were recorded within the trench (contexts 107 and 109).

Interpretation:

The proximity of the two features (0.86m apart) as well as the similarity of the fills (both contained flecks of charcoal and daub), suggested they were contemporary. No datable artefacts were recovered. A probable tree hole was also located within the trench (context 105).

Trench 10

Size: 40m²

Description:

Trench 10 was located northwest of Glan Morfa Bach Farm (Fig. 2).

Interpretation:

The trench was recorded as archaeologically sterile.

Trench 11

Size: 40m²

Description:

Trench 11 was located east of Glan Morfa Bach Farm (Fig. 2) and contained two narrow linear features, 7.10m apart (contexts 114 and 120 respectively), identified as post-medieval field drains. A 17th-18th century potsherd and a fragment of clay tobacco pipe were recovered from the fill of context [114]. Two shallow ditches located between these two features were identified as drainage ditches of similar provenance (contexts 116 and 118 respectively).

Interpretation:

The features were identified as evidence for post-medieval activity.

Trench 12

Size: 40m²

Description:

Trench 12 was located to the southeast of Trench 11 (Fig. 2). A broad, shallow, linear band was recorded running north-south through the trench.

Interpretation:

The feature was identified as a post-medieval agricultural feature.

Trench 13

Size: 40m²

Description:

Trench 13 was located east of Trench 12 (Fig. 2). The topsoil lay over clean, mid-grey natural silt, which, at a depth of 0.78m, was removed to expose a stone-rich horizon. In this surface, three areas of burning were noted: a small area of charcoal (context 124) and two areas of burnt, fractured stone (contexts 134 and 136, respectively) (Fig. 17; Plate 18). Samples were taken from context 124 for palaeo-environmental processing and radiocarbon dating (samples 1 and 2). A flint flake was recovered from the spoil heap.

Interpretation:

The depth of the hearth, under a considerable amount of silt suggested the feature may have an early post-glacial date, possibly Mesolithic. However, the environmental sample from context 124 was sent for processing with the view to obtaining a radiocarbon date. The 2 sigma calibration radiocarbon date was CAL AD70 to AD380 (Beta-205207), placing the activity within the trench firmly within the Romano-British period rather than the suspected Mesolithic date.

Trench 14

Size: 40m²

Description:

Trench 14 was located east of Trench 13 and was inserted to investigate a northeast to southwest geophysics linear anomaly (Fig. 2). This proved to be a natural shingle bank, presumably part of an ancient shoreline. The bank had previously been recorded as a possible old field boundary.

Interpretation:

No features were identified or recorded.

Trench 15

Size: 40m²

Description:

Trench 15 was located south of Gorwel Farm and was inserted across a low, north-south orientated bank (Fig. 2). The bank proved to be formed by pebbles, well spread, and there was one feature: a narrow linear gully aligned NNW to SSE. No datable artefacts were recovered.

Interpretation:

The trench was recorded as archaeologically sterile.

Trench 16

Size: 40m²

Description:

Trench 16 was inserted to investigate a faint linear geophysical anomaly (Fig. 2). No features were identified in the subsoil.

Interpretation:

The geophysical anomaly was most likely a cultivation feature within the topsoil horizon.

Trench 17

Size: 40m²

Description:

Trench 17 was inserted to investigate a number of geophysical anomalies. No features were identified in the subsoil.

Interpretation:

The geophysical anomalies were most likely cultivation features within the topsoil horizon.

Trench 18

Size: 30m²

Description:

Trench 18 was located north of Glan Morfa Ganol Farm (Fig. 2) and was inserted to investigate a series of geophysical anomalies. No features were identified in the subsoil.

Interpretation:

The geophysical anomalies were most likely cultivation features within the topsoil horizon.

Trench 19

Size: 20m²

Description:

Trench 19 was located northeast of Glan Morfa Ganol Farm (Fig. 2).

Interpretation:

The trench was recorded as archaeologically sterile.

Trench 20

Size: 40m²

Description:

Trench 20 was located East of Trench 19 (Fig. 2).

Interpretation:

The trench was recorded as archaeologically sterile.

Trench 21

Size: 40m²

Description:

Trench 20 was located South of Tanrallt Farm (Fig. 2).

Interpretation:

The trench was recorded as archaeologically sterile.

Trench 22

Size: 24m²

Description:

Trench 22 was located to the south of the current A497 and to the southwest of Tanclogwyn Farm (Fig. 3).

Interpretation:

The trench was recorded as archaeologically sterile.

Trench 23

Size: 24m²

Description:

Trench 23 was located west of Tancllogwyn Farm in response to a geophysics signal identifying a ferrous object. No feature was identified in the subsoil.

Interpretation:

The geophysical anomaly was most likely a feature within the topsoil horizon and therefore of recent provenance.

Trench 24

Size: 32m²

Description:

Trench 23 was located southwest of Tancllogwyn Farm in response to a geophysics signal identifying a former field boundary (Fig. 3). This feature was identified within the trench as a disturbed line of irregular sub-angular and sub-rounded stone, sealed by layers of colluvium. The wall was built to delineate the farmland from the unproductive marshland to the west and had been revetted with a bank of earth. No datable artefacts were recovered within or around the wall. A shallow pit (context 148) was also located within the trench, cutting a horizon of colluvial subsoil. No datable artefacts were recovered.

Interpretation:

The archaeological activity was limited to post-medieval farming activity.

Trench 25

Size: 40m²

Description:

Trench 25 was located to the southeast of Tancllogwyn Farm across a series of geophysics signals denoting ploughmarks (Fig. 3).

Interpretation:

These ploughmarks were not identified within the trench, suggesting they were limited to the topsoil horizon. No other features were identified.

Trench 26

Size: 24m²

Description:

Trench 26 was located within the same area as Trench 25, several metres to the east (Fig. 3). Again, no ploughmarks were recorded, but a shallow field drain was identified (context 150), of probable post-medieval date.

Interpretation:

Post-medieval farming activity.

Trench 27

Size: 46m²

Description:

Trench 27 was located to the east of Tancllogwyn Farm and was inserted as an L-shaped trench to investigate Feature 19: an area of suspected earthworks/medieval platform house (Fig. 3). The geophysics survey identified an area of “magnetic disturbance” within the same location. The earthwork was revealed as a collection of stones of various sizes that could have been a redundant field boundary (context 152), whilst a more disparate collection to the northeast could have been a similar boundary with an east-west alignment (context 153). Context (153) also contained a variety of post-medieval potsherds, window glass and fragmented roof slate. This material was probably dumped here as rubbish in what would have been an uneven piece of uncultivated marginal land, rather than representing the remains of a structure.

Interpretation:

There was no evidence for Feature 19 within this trench.

Trench 28

Size: 24m²

Description:

Trench 28 was located east of Trench 27 across a positive linear anomaly identified in the geophysics survey (Fig. 3). This feature was not revealed in the subsoil, suggesting it was limited to the topsoil horizon.

Interpretation:

No datable artefacts or any other features were recorded in this trench.

Trench 29

Size: 40m²

Description:

Trench 29 was located to the east of Trench 28 (Fig. 3). The trench was not excavated because of overhead power lines. The area was inspected during the watching brief phase of the project.

Trench 30

Size: 30m²

Description:

Trench 30 was located to the east of Trench 29 (Fig. 3) in response to a geophysics signal displaying a “positive linear anomaly”. This signal was not identified within the trench, suggesting it was extant in the topsoil horizon removed during machining. A shallow sub-circular cut was identified within the trench, c.9.0m from the northeastern end (context 163). A post-medieval potsherd was recovered from the fill (context 162).

Interpretation:

The feature was possibly agricultural in nature and may have been caused by field clearance.

Trench 31

Size: 40m²

Description:

Trench 31 was located c.10m to the east of Trench 30 in response to a geophysics signal displaying a “positive linear anomaly” (Fig. 3). The trench revealed a narrow linear feature at the location of the signal (context 159) and was identified as a redundant field boundary. This was later confirmed by reference to the 1st Edition Ordnance Survey Map (1889) of the area, which showed a field boundary crossing the field at this location (Fig. 3). Two small sub-circular features were located either side of the field boundary (contexts 140 and 161). Context [140] contained charcoal but no artefactual evidence. Context [161] was larger in size and was filled with a deposit akin to the topsoil horizon.

Interpretation:

Both features were interpreted as remnants of agricultural activity, possibly field clearance.

Trench 32

Size: 40m²

Description:

Trench 32 was located c.5m east of Trench 30 in response to a geophysics signal displaying a “positive linear anomaly” (Fig. 3). This feature was not revealed in the subsoil, suggesting it was limited to the topsoil horizon.

Interpretation:

No datable artefacts or any other features were recorded in this trench.

Trench 33

Size: 40m²

Description:

Trench 33 was located c.4m southeast of Trench 32, again, in response to geophysics signals displaying a “positive linear anomaly” (Fig. 3).

Interpretation:

The signals were revealed to be natural bands of sand and gravel within the trench, probably resulting from periglacial activity.

Trench 34

Size: 40m²

Description:

Trench 34 was located c.10m north Trench 33 (Fig. 3). A narrow linear feature was identified 7.10m from the eastern end of the trench (context 155).

Interpretation:

The feature was identified as the remnants of the field boundary detailed on the 1st Edition Ordnance Survey Map (1889).

Trench 35

Size: 20m²

Description:

Trench 35 was located on the eastern side of the trackway leading to Glan Morfa Farm and was inserted to accommodate a positive/negative linear anomaly (Fig. 3). This signal was revealed as a distinct cambered roadway, 4.2m wide, built from a succession of sand and gravel layers compacted into a concreted mass, 0.45m deep (context 173) [Plates 25 and 26; Fig. 27]. The road was cut into a thick deposit of subsoil (context 171). Below this subsoil was a natural layer of fluvio-glacial till (context 172), which contained discreet patches of burning. Environmental samples were taken for macrobotanical and dating purposes.

Interpretation:

This road was identified as the turnpike road that pre-dated the current A497 (the present course of that road having been built in the mid-19th century with the coming of Broom Hall Estate). The line of the road could be seen stretching as a hollow-way across the field, away from the current road, following the most favourable topography towards the river.

Trench 36

Size: 40m²

Description:

This trench was excavated to the southwest of Trench 35 (Fig. 3) but did not reveal any further evidence for the turnpike road.

Interpretation:

The trench was recorded as archaeologically sterile

Trench 37

Size: 40m²

Description:

This trench was located northeast of Trench 36 to investigate the proposed access road linking the original A497 to the new road (Fig. 3).

Interpretation:

The trench was recorded as archaeologically sterile

Trench 38

Size: 40m²

Description:

This trench was located at the top of a natural slope, across the projected road (Fig. 3). No features or artefacts were recovered.

Interpretation:

The trench was recorded as archaeologically sterile.

Trench 39

Size: 40m²

Description:

This trench was located on the banks of the Afon Du at the base of a steep slope (Fig. 3). A visual inspection of the area showed a feature (a hollow-way), crossing the landscape and running towards the river in a north-easterly direction; the hollow-way then continued across the other side of the river in an easterly direction, for the length of that field. The feature (identified as Feature 18) was tentatively identified as a turnpike road that was superseded by the A497. The cambered road identified in Trench 35 was recorded as part of the same road. Trench 39 was inserted to ascertain the extent of the road and the technology used. Within the trench, the road was revealed as a 4.5m wide surface of compacted stone and shale (context 322). The road was cut into the natural. A section through the surface of the road revealed evidence for repair, as the original surface of the road had been covered by colluvium from the hillside (context 321). A stone revetment had been built onto this colluvium on the eastern side of the road, presumably to stabilise the surface. Finally, patches of the latest surface for the road were also identified (context 376). This material was very similar to that identified on the turnpike road in Trench 35, suggesting both were repaired during a similar time. A drainage ditch was cut into the western side of the road, possibly concurrent with the other repair work (context 332). At the extreme western end of the trench, a narrow track was identified, terraced into the steep slope. It could be seen running northwards along the base of this slope towards the mid-19th Century bridge crossing the river. A visual inspection to the north of the bridge confirmed that the track continued along the river and also that the bridge truncated the track, suggesting the track was older. The relationship between the track and the road could not be ascertained. Both the trackway and the crossing point of the turnpike road over the river were investigated as part of the excavation phase. The results are described below.

Interpretation:

This trench contained extensive evidence for the 18th Century turnpike road including evidence for structural repair.

Trench 40

Size: 40m²

Description:

This trench was located to the east of Trench 39, across the projected width of the new road, on the opposite side of the river at the base of a steep slope (Fig. 3). It was not located in response to any geophysics but was located where the wide embankment for the new road was located. The hollow-way was clearly visible running to the north of this trench but it could not be investigated due to the gas main. The trench contained a considerable depth of colluvial deposits below the topsoil, which was not surprising considering the steepness of the slope. Within this sequence of hillwash were a number of post-medieval field drains running westwards and southwestwards towards a culvert at the base of the field. At the southern end of the trench was a more complicated sequence of events: the colluvium had been dug into to form a terrace and a stone structure had been built from a course of sub-rounded stones. Within the structure was a clay hearth surrounded by a cobbled surface.

Interpretation:

No datable artefacts were recovered from any of the features or deposits. The southern end of the trench was extended to the west and to the east as part of the excavation phase, to examine the extent of the hearth and the stone structure (see below).

Trench 41

Size: 33m²

Description:

This trench was located to the north of Trench 40 on the crest of the steep slope and was inserted to investigate a geophysics signal (Fig. 3).

Interpretation:

A shallow, narrow linear feature was discovered at the northern end of the trench. It was identified as the geophysics signal and recorded as a post-medieval agricultural feature.

Trench 42

Size: 40m²

Description:

This trench was located in response to a geophysics signal which identified a negative semicircular feature, which appeared to be the remains of a circular enclosure, c. 30m in diameter (Fig. 3). The feature was located mostly outside the proposed road scheme so only the extreme northern end of the feature could be investigated. The trench could not identify anything to match the geophysics signal; the only feature recorded was a shallow, post-medieval agricultural feature (probably a plough-furrow). It appeared that if the feature did exist, it was located outside the road scheme, and therefore, outside the scope of the evaluation.

Interpretation:

No archaeological features were identified.

Trench 43

Size: 40m²

Description:

This trench was located to the south of Llwyngwyn Farm (Fig. 3). It was not located according to a geophysics signal but was located within the limited space between a high-pressure gas main pipe and the southern end of the road scheme. Two wide but shallow linear features were identified in the centre of the trench, 1.20m apart and running north-south (contexts 265 and 266). They were both filled with humic soil and sub-angular stones (unevenly spread).

Interpretation:

The exact function of the linear features could not be ascertained and there were no datable artefacts, but they were tentatively identified as post-medieval agricultural features; possibly silted up drains or culverts.

Trench 44

Size: 40m²

Description:

As with the previous trench, this trench was located according to the parameters dictated by the gas main and the road scheme (Fig. 3). Again, the archaeological evidence was limited to discrete agricultural features; in this instance, a plough-furrow (context 268).

Interpretation:

No archaeological features were identified.

Trench 45

Size: 20m²

Description:

This trench was located to the east of Trench 44, just below the crest of the hill that sloped southwards (Fig. 3). The trench was aligned north to south. It was not located in response to the magnetometer survey but was positioned between the field boundary wall to the north and the gas pipeline route to the south. The surrounding area was poorly drained and a modern culvert was located several metres to the east of the trench. A stone-rich hollow was identified at the northern end of the trench (Context 314). The hollow was identified as a tree hole (Plate 11). Cutting this hollow was a small linear feature (context 270), into which were cut two small pits/post-holes, both of which contained fragments of a very coarse ceramic (context 264; Fig. 20; Plate 12) that was removed for specialist analysis. The trench was then extended to the north, east and west to recover any potential evidence of further activity (for the excavation results, see Site 3 above).

Interpretation:

A potential prehistoric site of uncertain function.

Trench 46

Size: 40m²

Description:

This trench was located at the eastern end of the field, close to the field boundary (Fig. 3).

Interpretation:

No archaeological features were identified except for a possible tree-hole at the eastern end of the trench.

Trench 47

Size: 40m²

Description:

This trench was placed between the northern field boundary and the gas main (Fig. 3).

Interpretation:

No archaeological features were identified.

Trench 48

Size: 40m²

Description:

This trench was placed down the slope from the gas main, across the slope of the hill (Fig. 3).

Interpretation:

No archaeological features were identified.

Trench 49

Size: 40m²

Description:

This trench was placed down the slope from the gas main, along the slope of the hill (Fig. 3).

Interpretation:

No archaeological features were identified.

Trench 50

Size: 40m²

Description:

This trench was located at the western end of the field, close to the field boundary, across a geophysics signal that identified “magnetic disturbance” (Fig. 3).

Interpretation:

No archaeological features were identified, the reason for the signal was not explained.

Trench 51

Size: 40m²

Description:

This trench was located to the southwest of Tan-yr-Allt Farm, at the point of an access road linking the current A497 to the proposed road (Fig. 4).

Interpretation:

No archaeological features were identified.

Trench 52

Size: 40m²

Description:

This trench was located southwest of Trench 51 (Fig. 4).

Interpretation:

No distinct archaeological features were identified.

Trench 53

Size: 20m²

Description:

This trench was located on top of a north-south aligned ridge (Fig. 4). This was outside the land acquired for the road, but was part of the land selected for sand and gravel extraction.

Interpretation:

No archaeological features were identified.

Trench 54

Size: 40m²

Description:

This trench was located south of Tanycoed farm and east of Afon Wen bridge (Fig. 4).

Interpretation:

No archaeological features were identified.

Trench 55

Size: 20m²

Description:

This trench was located west of Trench 54, across a geophysics signal denoting “magnetic disturbance” (Fig. 4).

Interpretation:

No archaeological features were identified, the reason for the signal was not explained.

Trench 56

Size: 40m²

Description:

This trench was located southeast of Tanycoed farm (Fig. 4).

Interpretation:

No archaeological features were identified.

Trench 57

Size: 40m²

Description:

This trench was located to the south of Tan-yr-Allt Farm along a north-south slope leading into a hollow (Fig. 4). The trench was located across a geophysics signal denoting a “magnetic disturbance”.

Interpretation:

No archaeological features were identified, but the signal was interpreted as an extensive spread of small sub-rounded stones that were glacial in origin.

Trench 58

Size: 40m²

Description:

This was located at the south-easternmost end of the field, at the lowest point between two slopes (Fig. 4). The trench contained evidence for post-medieval farming activity, viz., two field drains and two redundant “post” holes.

Interpretation:

The former appear to have been dug to soakaway water running off the surrounding slopes; the latter, the two post-holes, contained modern ceramic building material and were of late 19th or early 20th century date, but their exact function was unclear.

Trench 59

Size: 40m²

Description:

This trench was located southeast of Tan-yr-Allt Farm across a “positive linear feature” identified during the geophysics survey (Fig. 4).

Interpretation:

There were no archaeological features, just a series of sand deposits, possibly related to an old shoreline. A post-medieval potsherd was recovered from the topsoil.

Trench 60

Size: 40m²

Description:

This trench was located to the northeast of Trench 59, across a “positive linear feature” identified during the geophysics survey (Fig. 4).

Interpretation:

No archaeological features were identified.

Trench 61

Size: 40m²

Description:

This trench was located to the east of Trench 60 (Fig. 5). The only feature identified was a small pit at the southeastern end of the trench that contained evidence for in situ burning. There were no datable artefacts but a sample of the charcoal was taken for palaeoenvironmental analysis and radiocarbon dating.

Interpretation:

The pit was interpreted as evidence for modern field clearance but awaits sampling and dating to confirm this.

Trench 62

Size: 40m²

Description:

This trench was located to the northeast of Trench 61 (Fig. 5). At the eastern end of the trench a group of features were identified: a circular cut, possibly a post-hole (context 240); a shallow ditch with a square post setting (contexts 233 and 242 respectively) and a small stake-hole containing charcoal and daub. The square post-setting appeared modern. There were no datable artefacts from any of the other features.

Interpretation:

Their exact function and provenance were unclear, but they were all interpreted as agricultural features.

Trench 63

Size: 40m²

Description:

This trench was located in a field opposite Hafan-y-Mor holiday camp (Fig. 4). The field was being used for pasture. It appeared that a narrow stream running through the centre of the field had been culverted, but overall the field was noted for its poor drainage. A modern sump was located at the western end of the field. Trench 63 was located to the east of this sump, across two geophysics signals denoting a “positive linear anomaly”. Glacial boulder clay was identified at the western end of the trench and bedrock at the eastern end. There were various hollows within both the bedrock and the boulder clay, but they were too indistinct to be examined further. The geophysics signals were not identified.

Interpretation:

No specific archaeological features were identified.

Trench 64

Size: 40m²

Description:

This trench was located to the east of Trench 63 (Fig. 4).

Interpretation:

No archaeological features were identified.

Trench 65

Size: 40m²

Description:

This trench was located to the northeast of Trench 64 towards the centre of the field, along the slope leading towards the culverted stream and was inserted across two geophysics signals denoting a “positive linear anomaly” (Fig. 4).

Interpretation:

These signals were identified as modern drainage cuts. No other features were identified.

Trench 66

Size: 40m²

Description:

This trench was located to the north of Trench 65 (Fig. 4). The trench was not fully excavated due to extensive waterlogging.

Interpretation:

The area that was opened contained glacial deposits but no archaeological features.

Trench 67

Size: 40m²

Description:

This trench was located to the northeast of Trenches 65 and 66, on the other side of the culverted stream (Fig. 4). It was located in response to a geophysics signal denoting a “magnetic disturbance” (Donaldson, KT Geophysical Survey Report: Abererch to Llanystumdwy, Gwynedd, Stratascan Report Job Ref. 1899, August 2004). This signal was identified as the remains of a possible burnt mound, suggested by a spread of heat fractured stone, located in the centre of the trench (Plate 08). To identify the full extent of the burnt mound, the trench was extended (for excavation results, see below).

Interpretation:

(See paragraph 4.1)

Trench 68

Size: 40m²

Description:

This trench was located to the northeast of Trench 67 (Fig. 4).

Interpretation:

No archaeological features were identified.

Trench 69

Size: 60m²

Description:

This trench was located c.20m east of Trench 68, across two distinct geophysics signals denoting a positive linear anomaly (Fig. 4). Only one feature was identified within the trench: a narrow linear cut; possibly a plough-furrow. The other geophysics signal may have been limited to the topsoil and/or the ploughsoil.

Interpretation:

No specific archaeological features were identified.

Trench 70

Size: 40m²

Description:

This trench was located at the easternmost end of the field (Fig. 4).

Interpretation:

No archaeological features were identified.

Trench 71

Size: 40m²

Description:

This trench was located in an enclosed field to the east of the field containing Trenches 63 to 70 (Fig. 4). The field was devoted to pasture farming. An inspection of the 1889 25” Ordnance Survey Map (1st

Edition) showed that the field boundaries had not been altered (although the main road had been realigned through the southern end of the field during the 20th century).

Interpretation:

No archaeology was identified within the trench.

Trench 72

Size: 40m²

Description:

This trench was located to the northeast of Trench 71 (Fig. 4). It was located across a geophysics signal denoting a positive linear anomaly. This was identified as a shallow gully.

Interpretation:

No specific features were located within the trench.

Trench 73

Size: 40m²

Description:

Trench 73 was not excavated, as it was located over a geophysics signal that turned out to be outside the projected road scheme (Fig. 4).

Trench 74

Size: 3.24m²

Description:

This trench was located over a series of geophysics signals identified in the *Stratascan* Report as possible plough scars (Fig. 4). The size of the trench was limited to a hand dug trench c.2m by 2m in size. It was hand dug at the request of *Mowlem* due to the proximity of a water main. The plough furrows were not located in the trench and may have been limited to the topsoil/ploughsoil.

Interpretation:

No archaeological features were identified.

Trench 75

Size: 2.88m²

Description:

This trench was located to the east of Trench 74 (Fig. 4). It was also hand dug due to the restrictions imposed by the water main. The trench was positioned over a series of geophysics signals denoting positive and negative linear features.

Interpretation:

No archaeological features were identified. The geophysics signals were most likely limited to the ploughsoil. This signal was identified within the trench as a bank of sand and gravel that was glacial in origin.

Trench 76

Size: 8.00m²

Description:

This trench was located east of Trench 75 across a geophysics signal denoting an area of “magnetic disturbance”, possibly a redundant field boundary (Fig. 4).

Interpretation:

No evidence for this feature was identified within the trench.

Trench 77

Size: 40m²

Description:

This trench was located opposite a house called “Tyn Lon” in a field belonging to Afon Wen Farm (Fig. 5). The house was formerly a tavern and the area was formerly the location for a local market. This suggested the possibility for archaeological evidence related to small-scale industrial activity and/or evidence related to the market. The field was presently used for arable farming and suffered from poor drainage. The geophysics survey was dominated by the signal locating the high-pressure gas main that ran across the field within the proposed road scheme. This stricture meant placing the trenches within a narrow corridor between the northern field boundary and the gas main. Therefore, only three equidistant trenches were placed within the field.

Interpretation:

Trench 77 contained no archaeological features.

Trench 78

Size: 40m²

Description:

Trench 78 contained some evidence for general burning in the area probably related to tree clearance (Fig. 5). The patches of charcoal in the trench seem mostly to have been brought down by roots or by animal burrows.

Interpretation:

No archaeological features.

Trench 79

Size: 40m²

Description:

This trench contained a shallow sub circular feature with patches of burning (Fig. 5).

Interpretation:

The feature was interpreted as further evidence for tree clearance but an environmental sample was taken for palaeoenvironmental analysis and possible radiocarbon dating.

Trench 80

Size: 80m²

Description:

This trench was located towards the eastern end of the road scheme in a field belonging to Glanllynau Farm (Fig. 5). Trench 80 was opened in response to an apparent pit alignment identified on the geophysics survey (Donaldson, KT Geophysical Survey Report: Abererch to Llanystumdwy, Gwynedd, Stratascan Report Job Ref. 1899, August 2004). The majority of the alignment was outside the road scheme. The trench was located at the base of an east-west slope, with the ground rising more gently to the west. The field was used for arable farming and had good drainage. A large pit was identified in the trench, c.2m across (context 342). It was filled with a brown/black silt rich in sub-rounded heat fractured stones (context 341)[Plate 13]. There were no signs of extraneous burning around the pit, suggesting the feature may have been dug as a refuse pit for the stones. The pit was cut into a stone-rich layer of grey silt (context 355). On the eastern side of the pit the grey silt was charcoal-flecked, but not on the western side; suggesting the eastern side was the main focus for associated activity. The trench was subsequently extended eastwards, c.6m and the grey layer was investigated further (see below paragraph 4.1).

Interpretation:

See below paragraph 4.1

Trench 81

Size: 80m²

Description:

This trench was located to the northeast of Trench 80 (Fig. 5). A possible ditch was located in the southwest corner of the trench (context 337). It did not contain any datable artefacts.

Interpretation:

This trench was interpreted as revealing evidence for post-medieval farming activity.

Trench 82

Size: 40m²

Description:

This trench was located, along with Trench 80, to investigate the pit alignment suggested by the geophysics survey (Fig. 5).

Interpretation:

No features matching the alignment were identified.

Trench 83

Size: 40m²

Description:

This trench was located to the east of Trench 81 (Fig. 5). A large ditch was discovered running east-west along the north side of the trench, which was then cut by a north-south aligned trench. A large sewer pipe then cut this trench.

Interpretation:

This trench was interpreted as revealing evidence for modern drainage activity.

Trench 84

Size: 40m²

Description:

This trench was located within a proposed link road between the A497 and the B4354 (Fig. 5). The field was used for pasture and had poor drainage. The trench was cut across an area identified in the geophysics containing “magnetic disturbance”. The trench exposed a fairly homogenous fluvio-glacial sand and gravel layer. There were several small hollows at the eastern end of the trench, but they were dismissed as animal burrows.

Interpretation:

No archaeological features.

Trench 85

Size: 40m²

Description:

This trench was located directly to the north of Trench 84, within the same area of “magnetic disturbance” (Fig. 5). The only features discovered were remnants of ridge and furrow farming. The ridge and furrow ran on an east-west alignment, parallel to the present field boundary. Along the northern edge of the ridge and furrow was a more prominent ridge and bank, which, when it was sectioned, proved to be composed entirely of ploughsoil.

Interpretation:

Archaeological evidence limited to post-medieval farming activity.

Trench 86

Size: 40m²

Description:

The location for Trench 86: over a positive linear anomaly identified from the geophysics survey, turned out to be outside the proposed road scheme and was therefore not opened (Fig. 5).

Trench 87

Size: 40m²

Description:

This trench was opened at the northern end of the link road (Fig. 5).

Interpretation:

No features were identified. The evidence was limited to animal disturbance at the western end.

Trench 88

Size: 40m²

Description:

This trench was located c.300m east of Trench 83, within a field north of a Scheduled Ancient Monument, identified as a medieval fortified site (Fig. 5). It was hoped for some evidence for field systems or any other activity associated with the fortified site. The geophysics survey showed evidence of plough-furrows. Unfortunately, the majority of the signals were outside the proposed road scheme.

Interpretation:

The trench did not contain any archaeological features.

Trench 89

Size: 40m²

Description:

This trench was located to the east of Trench 88, in a neighbouring field (Fig. 5). A c.1.5m wide ditch and a shallow gully were discovered running along the western end of the trench.

Interpretation:

The ditch was identified as a redundant field boundary. The provenance of the ditch could not be ascertained due to a lack of datable evidence.

Trench 90

Size: 40m²

Description:

This trench was located within land belonging to Tyddyn Berth Farm and was positioned in response to a topographical feature extant as a subtle bank on the brow of an easterly slope (Fig. 4).

Interpretation:

No archaeological features were identified within the trench.

Trench 91

Size: 40m²

Description:

This trench was located to the east of Trench 90, along the slope (Fig. 4).

Interpretation:

No archaeological features were identified within the trench.

Trench 92

Size: 40m²

Description:

This trench was located at the western end of an overspill car park belonging to Hafan-y-Mor Holiday Park (Fig. 4). The location of the trenches in the car park was restricted by the close proximity of several utility pipes.

Interpretation:

No archaeological features were identified within the trench.

Trench 93

Size: 40m²

Description:

This trench was located at the eastern end of the overspill car park (Fig. 4). The location of the trenches in the car park was restricted by the close proximity of several utility pipes.

Interpretation:

No archaeological features were identified within the trench.

Trench 94

Size: 40m²

Description:

This trench was located in a field to the east of the car park and to the west of Bryn Bachau Chapel (Fig. 4). The field had not been exploited for farming for some time and had become overgrown. One explanation may have been the extensive waterlogging within the field. The location of the trenches was restricted by the proximity of a gas main. The trenches were located towards the southern end of the field. This trench was located by the entranceway into the field.

Interpretation:

Two linear cuts were located within the trench and were identified as post-medieval drainage features.

Trench 95

Size: 40m²

Description:

This trench was located to the east of Trench 94, in the centre of the field; two drainage cuts were located within the centre of the trench (Fig. 4). Both trenches showed evidence for drainage suggesting attempts were made to drain the field for cultivation.

Interpretation:

An inspection of an aerial photograph of the field showed these drainage cuts on a greater scale. An inspection of the tithe schedule for the field proved that attempts were made in the mid-19th century to drain the field.

Trench 96

Size: 40m²

Description:

This trench was located to the southeast of Trench 88 to investigate the plough-furrows evident from the geophysics survey (Fig. 5).

Interpretation:

The plough-furrows were not evident cutting the subsoil and were restricted to the ploughsoil horizon. No other features were identified.

Trench 97

Size: 40m²

Description:

This trench was located to the south of Trench 89 to investigate evidence for ferric objects identified in the geophysics survey (Fig. 5).

Interpretation:

No evidence was found in the trench, suggesting the features were too ephemeral to be identified and were also most likely only extant in the topsoil/ploughsoil horizon.

Trench 98

Size: 40m²

Description:

This trench was inserted at the eastern end of the field containing Trenches 89 and 98 and was located over a geophysics signal identified as “magnetic disturbance” (Fig. 5). This signal was found to be evidence for extensive topsoil dumping and spreading on the field. The topsoil contained a variety of plastic rubbish proving it happened very recently.

Interpretation:

There were no archaeological features.

APPENDIX 3: WATCHING BRIEF RESULTS

Methodology

The watching brief took place between January and August 2005 and was instigated in response to the results of the evaluation and excavation phases of the project, monitoring the groundworks as the scheme progressed. The road scheme was divided into “chainages”, which were distance markers located along the length of the scheme at 100m intervals. These chainages were also used in the watching brief as a convenient way of dividing the scheme into smaller areas (Fig. 30). The ground works involved a topsoil strip across the entire length of the scheme. The strip was usually 30m wide and involved a variety of machines, including 360°-tracked excavators and tracked blading machines. The topography and the project design affected the amount stripped, both in width and depth, especially where the new road had to cross river valleys, which were culverted and crossed using extensive embankments. Other deviations from the standard topsoil strip included the various junctions and roundabouts incorporated into the scheme, which covered wider areas, and also, the various dumping areas located along the length of the scheme required for building materials. The wetland areas at chainages 1750 to 2050 (1.75km to 2.05km along the scheme) and chainages 3530 to 3730 (3.53km to 3.73km along the scheme) were stripped to the glacial clay without a preliminary topsoil strip.

Results

The watching brief phase was conducted in response to the results of the evaluation and excavation phases, enabling a more comprehensive overview of the landscape covered by the scheme and, more specifically, of the areas that contained prehistoric and later archaeology. The watching brief was intended to identify any traces of extraneous activity surrounding the areas examined during the earlier phases, as well as to inspect the wetland areas that were not previously evaluated. The two wetland areas did not reveal any archaeology of interest: the wetland area *c.*2.0km along the scheme revealed deposits of peat atop boulder clay, whilst the wetland area *c.*3.5km along the scheme revealed wetland grasses atop subsoils sealing boulder clay. The latter had been partially evaluated with Trenches 91 and 92, with the former containing evidence of post-medieval drainage. No other activity was identified during the watching brief phase. The areas containing Trenches 40, 45, 67, 80 and 99 were monitored, but no further activity was identified. The area around Trenches 39a and b was monitored, with further evidence for the turnpike road identified (Feature 22) and the full extent of the trackway discovered in Trench 39b recorded south of the local bridge. No other activity was identified along the scheme during this phase.

Chainage: 0000 to 1750

Trenches 2 to 13

The only area monitored was at Chainage 800, where an additional topsoil strip was made for a small dumping area. No archaeological activity was identified.

Chainage: 1750 to 2050

Trenches 22 and 23

This area was only partially evaluated, as it comprised mostly wetland making machine access impossible. Only the fringes of the wetland area were evaluated by Trenches 22 and 23 (*q.v.*). The watching brief monitored the removal of the extensive peat-rich deposits that comprised the wetland, which was removed down to the glacial clay (Plate 43). No archaeological features were identified within the peat deposits.

Chainage: 2150 to 2200

Trenches 26 to 28

This area incorporated Feature 19, a possible earthwork thought to be a former medieval platform house. The feature was investigated by Trench 26, which did not reveal any evidence for the platform. The watching brief monitored the topsoil strip

Chainage: 2400 to 2960

Trenches 35 to 45

The aim of the watching brief in this area was to monitor the extent of survival of the turnpike road, identified in Trenches 35 and 39, and visible as a holloway crossing the landscape between 2.4 and 2.7km along the scheme and also to investigate the area surrounding Trench 40, 2.57km along the scheme, which contained evidence for Romano-British activity and Trench 45, 2.88km along the scheme, which contained Late Bronze Age pottery. The area was stripped using a combination of 360° tracked excavators and tracked blading machines. It became clear that the topsoil strip was not deep enough to expose any potential archaeology as the majority of the area, certainly from 2.5km to 2.9km, was going to be embanked to enable the road to cross the river valley without the need for a bridge (the river was culverted below the embankment). The only area where more detailed analysis of the turnpike road was possible was on the westbank of the river where the turnpike road had been investigated by Trench 39 (*q.v.*). This enabled a closer examination of the possible bridge crossing/fording point where the turnpike was assumed to have crossed the river. No further information was forthcoming during the topsoil strip, however, but the strip did reveal the narrower, north-south track identified in Trench 39b in greater detail. This track, which ran along the valley bottom, could be clearly seen running north, towards the existing road bridge of mid-19th century date. A photographic record was made of its full extent. The areas surrounding Trenches 40 and 45 were monitored, but the topsoil strip did not reveal anything further. An additional strip was made between 2.4km and 2.5km along the scheme, utilising the remaining area of the enclosed field belonging to Glan Morfa Farm for storing material associated with the groundworks. The area was topsoil stripped and monitored during the watching brief. No archaeological features were noted, even though the holloway was clearly visible traversing the field in this area. This again reflected the shallow depth of the topsoil strip. The area had already been evaluated as part of the gas pipeline realignment scheme, with five trenches placed across the length of the field (GAT Project G1858; Report No.: 624; Trenches 20 to 24; the pipeline route was redesigned so this area was never used for that project). No archaeological activity was recorded in the trenches except for post-medieval farming, whilst most of the trenches contained bedrock at a shallow depth. A photographic record of the groundworks was maintained for the archives.

Chainage: 3300 to 3500

Trenches 92 to 93

The evaluation proved that there was no potential archaeology in this area; it having been stripped and levelled when turned into the Haven Holiday car park. The northern half of the car park was monitored for the gas pipeline realignment scheme, with similar results (GAT Project G1858; Report No.: 624).

Chainage: 3530 to 3730

Trenches 94 to 95

The field had been evaluated by Trenches 94 and 95 (*q.v.*), which identified mid-19th century field drains towards the centre of the field, cut into glacial clay. The watching brief monitored the removal of a 30m wide strip that ran the length of the field (Plate 47). No archaeological activity was identified at this stage, but the watching brief phase of the gas pipeline realignment within the same field (GAT Project G1858; Report No.: 624), identified further mid-19th century field drains across the length of the field.

Chainage: 3800 to 4000

Trenches 64 to 70

Trench 67, was located 3.29km along the scheme and contained evidence of Later Neolithic or Early Bronze Age burnt mound activity (see Site 2 above). The watching brief monitored the field containing the trench due to the potential for further prehistoric activity. No such activity was identified and the

prehistoric activity within the area was limited to the location of Trench 67. A photographic record of the groundworks was maintained for the archives (Plate 48).

Chainage: 4000 to 4550

Trenches 71 to 72

No archaeological activity was identified during the watching brief.

Chainage: 4550 to 4640

Trenches 74 to 76

No archaeology was identified within this field, the subsoils being limited to glacial sands and gravels. The southern half of the field containing these three trenches was monitored as part of the watching brief for the Afon Wen Wastewater Treatment works, which was constructed at the same time as the road scheme; no archaeological activity was recorded (GAT Project G1854; Report No.: 610).

Chainage: 4700 to 4800

Trenches 53 to 54

No archaeological activity was identified during the watching brief.

Chainage: 4800 to 5000

Trenches 51, 52, 55 to 58

A storage area was created between 4.8 and 5.0km along the scheme and had been evaluated using Trenches 51 to 58. The watching brief was an opportunity to investigate Feature 31 further: the suspected dew pond, 4.93km along the scheme was removed and three pieces of bog oak were recovered from the subsoil, but no further insight was given into the feature due to extensive waterlogging

Chainage: 5000 to 5130

Trenches 59 to 60

No archaeological activity was identified during the watching brief.

Chainage: 5130 to 5200

Trenches 61 to 62

No archaeological activity was identified during the watching brief.

Chainage: 5380 to 5625

Trenches 77 to 79

A number of amorphous burnt patches were identified in the same field as Trenches 77 to 79 during the pipeline watching brief but the features were random in their distribution with no datable artefacts, so no pronouncement could be made about their exact origin or function (similar features were found in Trenches 78 and 79), although they were thought to be either rubbish dumps or associated with localised farming activity (GAT project G1858, Report No. 624, Trenches 1 to 18).

Chainage: 5700 to 5900

Trenches 80 to 83 and Trench 99

The field containing Trench 80, 5.78km along the scheme was monitored for potential prehistoric activity, but, as with Trench 67, no further activity was identified. (As part of the gas pipeline realignment scheme the area to the immediate south of Trench 80 was evaluated followed by a watching brief but revealed little more than post-medieval ploughsoils and glacial activity; GAT Project G1858; Report No. 624, Trenches 1 to 5.) The area surrounding Trench 99, 5.75km along the scheme, was monitored during the watching brief to investigate any further evidence of Middle Bronze Age activity associated with the burial site/ring ditch identified in Trench 99. No further activity was identified. A 600m long, 20m wide stretch east of Afon Wen Farm, 5.3km along the scheme, was monitored as a watching brief for the pipeline diversion project, which ran parallel to the road scheme on its southern side. The topsoil strip was much deeper than on the road scheme, exposing the glacial subsoils and enabling a more detailed look at the general area. The southern half of the Middle Bronze Age ring ditch was incorporated into this area, but the watching brief confirmed there were no associated features within close proximity to the site.

Chainage: 6000 (North)

Trenches 84, 85 and 87

No archaeological activity was identified during the watching brief although a photographic record was made of the topsoil stripped area as part of the archive.

Chainage: 6000 to 6500

Trenches 88, 89, 97 and 98

The final 0.6km of the road scheme was monitored during the watching brief phase because of the close proximity of the medieval ringwork to the south (Feature 39). The ringwork was outside of the scheme but the potential was there for associated activity, such as redundant field systems. An extensive area was stripped south of the current A497 leading eastwards Glanllynau Farm (Plate 49). The evaluation trenches did not reveal any medieval activity, whilst the topsoil strip during the watching brief phase exposed a large area of glacial sands and gravels but no archaeological activity. A photographic record was made of the topsoil stripped area as part of the archive.

APPENDIX 4: PREHISTORIC POTTERY REPORT

by
Frances Lynch

Site 1: Two Early Bronze Age Burial Urns from a round barrow at Afon Wen, Chwillog, near Pwllheli.

These two urns were found during excavations (GAT Project No. G1692) associated with the new A497 crossing the Llyn coastal plain towards Pwllheli. Afon Wen farm stands on a slight rise (at 10m OD) a short distance east of the mouth of the Afon Wen (SH 447 376).

The urns were found in inter-cutting pits at the centre of a circular ditch, *c.* 25m in diameter, covered with a small remnant spread of stone. The old ground surface under the stone appeared to have been burnt and this layer was clearly cut by the second pit (9942). The earlier pit (9959), however, was sealed by the burnt soil, suggesting a certain interval between the two cremations. Both pots contained a substantial quantity of bone, but no grave goods.

Find 4 from pit 9959 is a Food Vessel Urn (Fig. 9b). The pot has been damaged: there is a hole in the shoulder on one side and the base has caved in. The damage to the side seems to have been caused when the pit for the second burial was dug. The base, as so often, probably broke under the weight of covering materials when the content settled as the pot was inverted, although surprisingly little of the base was found inside.

The diameter of the shoulder and to the outside of the rim is 260mm; the diameter of the base may be estimated as 110mm and the overall height is likely to have been 300mm. The thickness of the wall varies from 11 to 15mm.

The profile of the rim is quite complex. There is a concave inner bevel 38mm deep decorated with close-set lines fairly lightly incised with a thin point. These run at a reasonably consistent angle but they have been carelessly drawn and there are several overlaps and interleaving lines. The external slope of the rim is decorated with two lines of stab marks made with a round pointed stick, probably rather thicker than that used to decorate the inside, but the difference may be simply due to deeper penetration. The neck hollow below the rim is undecorated but at 75mm from the rim there is a pinched-out ridge decorated with a chevron line of stab marks. The shoulder, at 110mm below the rim, is similarly pinched-out and decorated. In both these chevron lines the upper line of stab-marks is more deeply impressed and more widely spaced; the lower ones are more scratched than stabbed. Presumably this is due to the different angle of approach with the tool and may suggest that the pot was turned upside down to be decorated. The body of the pot is undecorated but has been smoothed with a tool that has left some random scratch marks on the surface.

The fabric is hard and well fired. The outer surface is pink beige and the inner one is brown/black. The clay includes a medium quantity of well-crushed stone grit, which includes some mica and possibly some quartz.

Find 3 from the later pit 9942 whose digging is judged to have damaged the Food Vessel Urn, is a Collared Urn of typical size, shape and decoration (Fig. 9a). The urn is complete and undamaged.

The diameter of the rim is 240mm, of the shoulder 260mm and of the base 116mm; the height is 315mm. Because the pot is complete it is not possible to be sure of the thickness of the walls, but on the rim and neck it varies from 11 to 13mm.

The collar is 55mm deep, slightly concave and overhangs the neck by 10mm. The inside profile follows this overhang but there is no sharply defined moulding. There is no decoration on the inside, nor on the flat top of the rim. The decoration on the exterior of the collar is carried out in twisted cord, 2mm thick and evenly twisted. In one or two places it is possible to see that the two threads are themselves twisted. Though the cord is of high quality it has not been applied very carefully. It is obvious that the intention was to create a diagonal lattice and at the beginning this was maintained quite well, but the angle gradually became flatter and in the last quarter the lines are almost horizontal. The neck is decorated with

a similar diagonal lattice carried out by incision with a notched stick about 3mm wide. This panel is also rather carelessly executed and does not maintain regular spacing nor parallel alignment. There is no formal boundary to either panel of decoration and no special treatment of the shoulder ridge.

The fabric is hard and well fired and the surfaces are smoothed with a tool that caused light random scratches. The colour is a brownish beige inside and out. Few grits appear on the surface, but those that do are of medium size and include a black and white speckled rock (see Appendix 5 below). The greater weight of this pot, even allowing for the loss of some of Urn 4, would suggest that this one is more heavily tempered with stone than the Food Vessel Urn.

Impressions on the base of Urn 3 may be from recognisable grasses or plants and there is a large rectangular impression on the neck of Urn 4 which may be a piece of straw, burnt out during firing.

Although both pots are entirely typical of their class, there are few close parallels for either.

At Tandderwen, near Denbigh there are two vase-shaped Food Vessel Urns with everted rims and double shoulder ridges decorated with repetitive chevron patterns (Brassil 1991); the urn from Cerrig Dewi, Llangwyllog, Anglesey (Lynch 1990, Fig 53.7) has similar characteristics, but all three have a much higher shoulder, a more sharply everted rim and more extensive decoration covering the whole of the upper part of the pot. The concave and ridged rim of Afon Wen 4 is better paralleled at Trelystan, near Welshpool, where the damaged Food Vessel Urn (P24) from Barrow 1 (Britnell 1982, Fig. 20) has a similar profile and double shoulder ridges, though, like the other quoted parallels, the shoulder is higher and the chevron decoration more extensive. The straighter profile of Afon Wen 4 is matched by the urn from Clocaenog, on the Denbigh Moors (Savory 1961 and 1980, Fig. 59), but that has triple shoulder ridging and uses twisted cord and bird bone impressions to create the chevron decoration. Extending a search beyond Wales, the same situation is found: all the elements of shape and decoration are common, but they are combined in slightly different ways.

The Collared Urn, Afon Wen 3, has an upright rim, a fairly broad, slightly concave overhanging collar and a well-defined shoulder. Rather roughly executed lattice decoration fills both the collar and neck, using impressed cord and incision. Such a pot would belong to Longworth's Secondary Series (Longworth 1984, 19-35) and in other schemes would be judged to belong to a Middle group (Lynch *et al* 2000, 119-20) since the rim is upright, without an internal slope, the internal moulding is present but not sharp, but the decoration has moved away from the small scale patterns favoured by Early urns and there is no decorative emphasis on the shoulder. Again, although the elements are all typical of the style, there are few close parallels for this particular combination. The closest similarity lies with the large urn from Letterston, Pembrokeshire (Savory 1949 and Savory 1980, Fig. 66) where a rough lattice is used on both collar and neck, but is executed entirely by incision, whereas the Afon Wen urn employs twisted cord on the collar.

A glance at the finds lists in the Caernarfonshire Inventories of the Royal Commission shows that Caernarfonshire, and especially Llyn, have been very unlucky in the loss of antiquities discovered during the nineteenth and earlier twentieth centuries (RCAHMW 1956, lxiii; 1960, xlvii-xlix and 1964, xxix). Very few of the Bronze Age burial monuments or of their contents have survived and recent discoveries, such as those at Eithinog Wen, Llanllyfni (Lynch 1986, Fig. 10, 5-6), Blaen y Cae, Dolbenmaen (Lynch 2004) and this present site, have been made by chance. Excavation of other ring ditches judged to be the remains of ploughed out barrows, did not produce pottery containers (Ward and Smith 2001, 40-42; 46-54). The burial pottery that does survive, however, from Beakers to late Collared Urns, demonstrates that styles popular in this area were similar to those in other parts of the country.

The debate about the primacy of Food Vessels or Collared Urns and the reasons for their continuing distinction (Lynch *et al* 2000, 118-9) is likely to remain unresolved but it is interesting to note that here the Food Vessel Urn accompanies the earlier burial. However the interval is unlikely to have been long since the centre of the monument remained accurately identifiable and it is arguable that no covering mound had been put in place before the second burial was made. Radiocarbon dates (Beta 210121 - 210124) from the old ground surface, from stakes driven into the primary silt of the ditch and from the fill of the Food Vessel Urn (Find 4) all fall within the Early Bronze Age (they span from 2200 to 1500 cal BC) but the dates do not correspond exactly with the stratigraphy. Such a situation would confirm the impression of a compressed sequence of events.

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Site 3: A Middle to Late Bronze Age vessel from Llwyngwyn, Chwilog, near Pwllheli

Sherds from a single undecorated vessel were found in two adjacent hollows interpreted as postholes in Trench 45 of excavations associated with the widening of the A497 near Pwllheli (G1692. T45.263). No other artefacts were found and other shallow hollows in the trench made no coherent pattern but the context is judged to be domestic. It lies on a south-facing slope, just below the crest of a low hill not far from the present coast, just behind the rocky peninsula of Pen y Chain (NGR SH 424 367). It is thought that other features might have been lost to earlier road works.

All the sherds appear to belong to one vessel. A few featureless pieces have a separate number but they do not seem to be significantly different. The rim diameter may be confidently calculated as 240mm; the base diameter less confidently as 115mm; the height is unknown but may be about 270mm (Fig. 12). Wall sherds vary in thickness from 13mm to 16mm. The relatively narrow base suggests a vase-like profile rather than a barrel or bucket-shaped one. Some 2/3 of the rim is present (10 sherds); it is gently rounded with a slight groove formed with the thumb around the inside. Only two small pieces of base survive; it is quite well-formed and not significantly flared. Some 42 wall sherds and 180g of crumbs are present, none with any marked change of angle. The total weight of sherds (1150g) suggests that perhaps half of the pot was present, already broken, when it found its way into the pits or postholes.

The clay is pale buff on the outside, very hard and well-fired, containing a great deal of temper: large angular grits. The density of tempering varies around the circumference; in places the grits stand proud of the surface, elsewhere clay is smoothed over them creating a lumpy rather than rough texture. The interior is black and well smoothed with little grit showing near the rim but other sherds show that stone does occasionally break the inner surface. A hard encrustation covers part of the inner surface but without analysis it is difficult to know whether this is the remnant of some content, or a post-depositional iron-pan.

The significant features of this vessel are the hard, coarsely gritted fabric, the rounded rim with internal groove, lack of decoration, flat base and probable vase-like profile. Such characteristics are tiresomely unspecific but can be found in several assemblages of broadly Late Bronze Age date (Lynch *et al* 2000, 199-201).

A close geographical and stylistic parallel may be cited from Pen Llystyn, Dolbenmaen, where a single broken vessel was found in a hollow stratified below the barracks of the Roman fort (Griffiths 1959). As

at Llwyngwyn, the context is assumed to be domestic though an early Bronze Age cremation cemetery had been found a few hundred metres away in the early 19th century and a few sherds of Beaker and Encrusted urn were also found during the recording of the fort. The vessel under discussion is described as 'buff in colour, very coarse with many large grits'. It is 210mm in diameter at the rim which is flatter than Llwyngwyn but has a similar groove on the interior; the base diameter is 120 but the height and profile of the pot is unknown but was judged to be approximately bucket-shaped; the walls are 10mm thick. Griffiths compared it to Covesea or Flat-rimmed pottery current in the north and west of Britain in the later Bronze Age.

An urn from a burial/ritual context beneath the church at Pennant Mellangell, Montgomeryshire, may be usefully cited because it is associated with a Middle Bronze Age radiocarbon date: 3180±60 BP (CAR - 1309) calibrating to 1540-1119 BC (Gibson in Britnell 1994, 84-5, 91). This pot has a diameter of 175mm at the rim with a slight internal ridge or groove; the paste is described as well-fired with abundant angular stone inclusions which frequently break through the surface. The full profile was not present but it was judged to be bucket-shaped and was compared by Gibson to other pottery of Middle to Late Bronze Age date in the Welsh marches: Glanfeinion, Four Crosses and Bromfield, though these assemblages contain pots with some rudimentary decoration (Britnell *et al* 1997, Warrilow *et al* 1986 and Stanford 1982).

The pottery from the 'squatters' hearth' in the silted ditch of Henge B at Llandegai near Bangor is coarsely gritted (though the inclusions are smaller) and has an internal ridge below the rim, but the rims are slashed and perforated. This pottery is associated with a radiocarbon date of 2890±30 BP (GrN-26821) calibrating to 1130-1000 BC (Lynch and Musson 2001, 73-5). An undated bucket urn with a perforated rim (C14) comes from Capel Eithin in Anglesey where other coarse sherds are associated with radiocarbon dates which are broadly comparable to those from Llandegai (White and Smith 1999). The application of radiocarbon dating is demonstrating that pottery in post-Collared urn traditions is commoner than previously thought and that, within a generally dull and utilitarian style, there may be quite a range of variation in detail.

All these comparisons suggest a Middle to Late Bronze Age date for the Llwyngwyn pot but its similarity to Pots F and G from the east chamber at Dyffryn Ardudwy should also be discussed. At the time of excavation and publication these two pots, tempered with abundant large grits, with a straight perforated rim and a flat base, were compared to the Class II jars from the Neolithic site at Lough Gur in Ireland (Powell 1973, 46). This comparison was carried forward to the single very similar sherd (Vessel Q) from Trefignath (Smith and Lynch 1987, 78). Several sherds of Pot F were stratified beneath a stone bank which crossed the front of the forecourt and was believed to represent the final stage of chamber blocking, so a Neolithic context was judged secure. Other sherds from G and F were found in the disturbed fill of the east chamber and amongst the upper levels of its inner blocking (Powell 1973, 18-9). The sherd from Trefignath was unstratified. However since then, the Neolithic date of Lough Gur Class II has been re-evaluated and the status of the bank at Dyffryn Ardudwy has been questioned. It has been suggested that it belongs to the lynched field system which appears to overlie the cairn (David Field pers com). Perhaps the time has come for a re-evaluation of the post-Neolithic history of the tomb at Dyffryn Ardudwy which might be another example, increasingly common, of a renewed interest in megalithic monuments by late prehistoric peoples (Lynch *et al* 2000, 213).

It may be relevant to recall that it had been suggested that the micaceous dolerite and welded tuff in Pot F might have come from Gimlet Rock, Pwllheli (Rast in Powell 1973, 44) so its similarity in appearance to the pots from Pen Llystyn (first noted by Alcock 1960, 135) and Llwyngwyn may be an indication of its true age, rather than a long-standing geological choice.

Pottery of any kind from Llŷn is rare but it should be noted that the assemblage from Phase 1 at Castell Odo (Alcock 1960), which many believe should be Late Bronze Age in date, is not comparable to the Llwyngwyn vessel. At Castell Odo the reddish pottery is well gritted, but with small inclusions and the jars have everted rims and rounded shoulders. The single small pot from excavations at Meyllteyrn Uchaf, Sarn, with similar radiocarbon dates to Llwyngwyn, was also of a quite different style and fabric.

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APPENDIX 5 THE PETROGRAPHY OF THREE PREHISTORIC POTS FROM LLANYSTUMDWY

By

David Jenkins and John Ll. W. Williams

Summary

Three sherds recovered from two trenches cut during the new A473 road development at Llanystumdwy have been analysed petrographically together with sediments from the trenches. Two of the sherds (45/1 & 99/4) are similar and are typical of Bronze Age urns previously analysed from North Wales. They are heavily (13 % & 39 vol.%) and selectively (>95%) tempered with clasts of an altered dolerite (*i.e.* *Class 3c*: Williams & Jenkins 2000): similar dolerites are present in small concentrations (*ca.* 5%) in the local glacial sediments but which are otherwise dominated by rhyolitic material and shales/slates. These two sherds were therefore probably made from local materials. By contrast the third sherd (99/5) has a finer fabric and carries equal proportions of grog and clasts (*i.e.* *Class 2/3*), the latter being of a rock type (andesite) also reported in the local geology. This sherd shows affinities with some of the transitional late Neolithic-Early Bronze Age pottery (*e.g.* Beakers from Brenig) examined from North Wales and it was probably also made locally.

1. Methodology

Standard thin-section preparation of resin-impregnated samples was preceded by dividing the respective sherds into two halves, one half being fired in an oxidising atmosphere at 500°C to remove dark carbonaceous matter from the matrix. This, together with a final polishing of slides with 1µm diamond paste, facilitated petrographic analysis. The sections were examined with a polarising microscope and a point-count analysis was undertaken (400+ points) with a Swift point counter to provide quantitative data for a number of standard components (Voids >20µm; Matrix <63µm; Grains 63-630µm; Grog >630µm; Clast types >630µm). The texture and fabric of the matrix together with the presence of any bioliths was also noted. Full slide microphotographs were obtained directly using a Nikon Coolscan IV (Figure 1): microphotographs of selected features at higher magnifications (Figure 3) were obtained with a Leitz Ortholux-pol / Nikon 990 system.

The pottery samples involved are referred to in this report as

45/1	Trench 45	Pit 264	Context 263	Find No. 1
99/4	99	9959	9958	4
99/5	99	9906	9904	5

Reference samples of the local sediments were also examined from trenches **T45** and **T99**. From these the 0.6-2.0mm fractions were separated and resin-impregnated and thin-sections prepared in the same manner as for the sherds. A petrographic analysis of clasts was made (% of a total of 100-120 grains) for each, the information so obtained being relevant to identifying the material available locally for use as a filler in the production of pottery.

2. Analytical Results

Detailed fabric descriptions and petrographic analyses for the five thin-sections are appended, and results summarised in the Table below.

3, Discussion

The petrographic analytical data can be used to (a) characterise the sherd fabrics in terms of prehistoric pottery generally, and (b) suggest the provenance of the materials used for both the matrix and clasts in the pots.

(a) General fabric.

Within the broader spectrum of prehistoric pottery fabrics in north western Wales (Williams & Jenkins 2004), the data tabled above indicate that the two vessels **45/1** and **99/4** from these excavations have fabrics typical of those previously recorded from Bronze Age urns in the area (Fig.2) in terms of porosity (low -5-10%) and clast content (coarse – 26/36%). The compositions of 45/1 and 99/4 place them in **Group 3** of the classification proposed by Williams & Jenkins (2004), *i.e.* fabrics heavily gritted with rock clasts. More specifically they fall within **Sub-group 3a** in which clasts are predominantly (>95%) of mafic igneous rocks with minor clasts of other rock compositions, although the rock clasts in 99/5 are supplemented by minor amounts of grog (1%) of similar fabric. However, the non-reignited section of 45/1 contains one particularly large clast (9mm) whose inclusion would bring the clast content up to nearly 40%: this illustrates the sampling error inherent in petrographic analysis and this clast has been excluded from the point count analysis, although its effect is indicated by the arrow on 45/1 in Figure 2a. Nevertheless it can be seen that the fabrics of these two samples fall well within the area established for Bronze Age urns in north Wales generally, and data for urns 4 & 6 from the nearest site 5km to the north at Bryncir (G1653: Williams & Jenkins 2005) have been added to Figure 2a for illustrative purposes.

TABLE 1: Analytical data for the 3 sherds and 2 reference sediments recovered from the Llanystumdwy Road excavations (G1692)

Sample	Sherds			Sediments	
				(0.6-2.0mm)	
Trench/Find No.	45/1	99/4	99/5	T45	T99
Lab. TS No.	2222	2223	2224	2225	2226

Colour – outer	2.5YR6/4	2.5YR5-6/4	5YR6/4
Inner	2.5YR4/2	2.5YR4-5/2	5YR5/3
re-fired	2.5YR6/4-6	2.5YR6/4-6	5YR5/3
Width (mm)	10-13	12	9

Petrographic data	(Vol.% from counts)			(% of count)	
	No. counts	400	428	247	109 119

Void	8.2	9.8	8.0	c - clay * f-s – fine sand l - loam	
Matrix	72.7	57.7	79.7		
<i>Textural class</i>	c/c	c/f-sc	f-sc/l		
Grains	1.0	3.0	3.2		
Grog	-	0.2	4.8		
Clasts (below)	18.0	29.1	4.0	(100.0)	(100.0)
<i>Dolerite</i>	17.5	28.0	<i>p</i>	7.3	3.4
<i>Andesite?</i>	-	-	1.8	?	<i>p</i>
<i>Rhyolite A</i>	-	-	-	11.9	9.2
<i>Rhyolite B</i>	-	-	-	11.9	4.2
<i>Rhyolite C</i>	-	-	-	5.5	0.8
<i>Rhyolite D</i>	-	-	-	4.6	17.6
<i>Rhyolitic tuffs</i>	-	-	-	13.8	9.2
<i>Siltstone</i>	0.5	0.7	2.0	20.9	14.0
<i>Sandstone</i>	-	0.2	-	8.3	2.5
<i>Welded sandstone</i>	-	-	0.4	-	<i>p</i>
<i>Slate</i>	-	-	-	3.0	11.2
<i>Quartz/mica schist</i>	-	0.2	<i>p</i>	5.5	4.2

<i>Glaucophane schist</i>	-	-	-	-	0.8
<i>Vein quartz</i>	-	-	<i>p</i>	4.6	20.2

Fabric coordinates (Figure1)			
Voids	8.2	9.8	8.0
“Clay”	73.7	60.8	83.2
“Filler”	18.0	29.4	8.8

Classification (Williams & Jenkins 2004)			
	3a	3a	2/3

N.B. “-“ = not detected, *i.e.* < 0.2%; “*p*” = observed, but not in point count, *i.e.* < 0.2%

One interesting unusual feature of these fabrics is the presence of distinctive small (50-150µm) oval voids within an otherwise featureless matrix, which are prominent in 45/1 in particular (Figure 3a). These might be physical in origin or represent burnt out inclusions of cylindrical organic material such as roots; however, no other bioliths (phytoliths, diatoms, *etc.*) were detected in the matrices which would suggest that the “clay” came from a sterile source such as a deposit of glacial clay. However, this fabric should not be confused with the “clast-void” fabrics of Neolithic pottery (Williams & Jenkins 2004).

By contrast with these two sherds, the data for the denser, finer sherd **99/5** place it just outside the area for Bronze Age urns, and in an area occupied by Neolithic sherds from north Wales that have been analysed (Figure 2a). However, the voids in this sherd are “constructional” rather than the “clast voids” which distinguish the Group 1 Neolithic pottery. Sherd 99/5 also contains a significant proportion of grog (Figures 3e/f) in addition to rock clasts, and this places it in the separate **Group 2/3** (Figure 2b), the nearest comparable samples with these proportions being Beakers 51.73 & 51.155a from Brenig.

(b) Provenance of components.

With regard to **clasts**, there is a similar dominating mafic igneous rock material (dolerite) in sherds **45/1** and **99/4**. This is an ophitic dolerite in which the clinopyroxene is fresh in places and absent in more heavily altered parts where a fibrous pale green amphibole is developed, more often brown where oxidised (Figure 3b). The pyroxene encloses plagioclase laths, which are mostly heavily altered to clinozoisite/epidote/zoisite and micaceous material. There are small differences in that the dolerite in 99/4 contains apatite, which is absent from 45/1: these differences could, however, be contained within a single dolerite intrusion. Sherd **99/5** again differs in containing far fewer clasts, which are of siltstone/sandstone although it also contains a single large rounded clast of a distinctive volcanic rock containing phenocrysts of feldspar (*i.e.* andesite, Figure 3d).

By contrast to the “fillers”, the composition of the matrix/grains which reflects the “clay” used for the three pots is relatively uninformative petrographically. The matrices are fine grained and lacking any diagnostic rock or mineral types other than the ubiquitous quartz accompanied by fragments of the rock clasts, and of ophitic dolerite in 99/4 in particular.

As to the provenance of these materials, the **solid geological map** (BGS 1994) shows Llanystumdwy is an area underlain by Ordovician (Llanvirn-Caradoc) shales/slates sandstones, and fine-grained silicic volcanic rocks (rhyolitic tuffs and lavas) within a faulted synclinal structure. In places, the rhyolitic rocks also incorporate bands of a darker, more mafic rock with feldspar phenocrysts (*i.e.* andesite), and intrusions of dolerite are present 5km to the west at Pwllheli (Roberts 1979, pp.74-77). Such geology could provide a local source for most of the rock clasts observed in all three sherds. These rock types were subsequently redistributed by glaciation, which covered the solid geology on the coastal lowlands with extensive glacial deposits. The indications are that the ice was moving southward in this particular area, and Pwllheli lies just within the influence of the “Irish Sea Ice” which brought in additional material from Arfon, Anglesey and the Irish Sea. This is highlighted in the presence of occasional schist fragments (from the Mona complex on Anglesey) in both the sediments and in the sherds 99/4 and 99/5 (Figure 3c), and in particular of the rare glaucophane schist in sediment T99. This material was in turn re-sorted and transported south by glacial processes, the area involved having been described as a zone of “an ice-marginal melt-out and flow till” (Thomas *et al.*, pp.30-35 in Addison *et al.*, 1990), Such resorted sediments could have provided the relatively pure sterile “clay” materials apparently used for the three sherds.

4. Conclusions

In archaeological terms the two sherds **45/1** and **99/4** are both typical of Bronze Age urns from north west Wales in terms of fabric and the selective use of mafic igneous clasts as filler, (Williams & Jenkins 1999) placing both in **Group 3a** of Williams & Jenkins (2004). Such material was probably selected from glacial deposits available on site or within the immediate area, the filler having been obtained by the crushing of individual cobbles. This would account for the minor differences between the angular dolerite clasts in sherds 45/1 and 99/4. Alternatively the clasts could arise as a by-product of other processes such as the production of hammer stones and the use of boiler stones, for both of which dolerites were again specifically preferred. However, it is also possible that the pots were manufactured at some site close to, or on, an exposure of dolerite such as that at Pwllheli. The

particular dolerites used show mineralogical features that are typically found in north Wales, consistent with a local provenance for the materials used and suggesting local manufacture of the urns, a possibility reinforced by the occasional schist clasts also observed.

The third sherd (**99/5**) has a contrasting, finer, fabric, with both grog and rock clasts having been used for the filler, with rare dolerite among the rock clasts, but including andesitic material which is available locally (Roberts 1979 p.71). This sherd falls into **Group 2/3** of Williams and Jenkins (2004) which contains comparable Late Neolithic- Early Bronze Age pottery.

However, if the three pots were of local manufacture, it is remarkable that other distinctive rock types abundant in the local sediments, such as the distinctive varieties of rhyolites, are notably absent from both the clast and clay fractions. This would require the careful selection of only mafic material for the former in the Bronze Age urns, and of well-sorted clay deposits for the latter.

Acknowledgements

The helpful petrological comments of Dr B Roberts are gratefully acknowledged

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Slide descriptions:

Trench 45, Find No.1 (“45/1”; TS 2221)

The “filler” comprises angular/sub-angular rock clasts varying in size from 0.63 up to 4.0mm in the ignited sample on which the point count analysis was carried out. The original sample, however, was dominated by a single clast 9mm in size and if this section were included the clast content would be raised from 13 to 39%. The predominant clast component (97%) is derived from a much altered mafic igneous rock - an ophitic dolerite (Figure 3b) in which some of the original pyroxene constituent is replaced by a fibrous pale green (often oxidised to brown) amphibole and chlorite. The plagioclase laths carry secondary mica, clinozoisite and epidote and there is patchy but extensive development of iron oxides. Two clasts of an iron-stained siltstone were also noted, but no grog filler was seen.

The grain fraction of the “clay” is very sparse (1%) and comprises sub-rounded clear quartz. The matrix is homogenous and dominated by clay size material with only a small silt/sand component (*i.e.* clay-loamy clay), but in patches shows moderate to strong aggregate birefringence revealing a streaky fabric in places; no bioliths were seen. The fabric is moderately dense (8% voids) with occasional larger vughs and irregular cracks and smaller arcuate fine voids, unusually there are also common smaller (50-150µm) oval voids (Figure 3a).

Trench 99, Find No.4 (“99/4; TS 2222)

The “filler” comprises mainly common angular/sub-angular rock fragments (29%), between 0.63-4.0mm in size: Rare sub-rounded grog particles (2.0%) of a similar fabric are also present in the re-fired sample and are distinguished by both darker and paler pigmentation. The principal clast component (96%) is derived from an ophitic dolerite in which the colourless/pale pink-brown (titaniferous?) clinopyroxene encloses laths of highly altered plagioclase carrying mica and clinozoisite/epidote and zoisite, and there is much development of fibrous green and oxidised brown amphibole and chlorite together with ferric oxides. These are accompanied by occasional clasts of an

iron-stained siltstone (0.7%) and quartz sandstone (0.2%), and by a single sub-rounded clast of mica schist (0.2%; Figure 3c).

The grain fraction of the “clay” is sparse (3%) being represented by rare rounded grains of quartz and more common angular fragments of the dolerite – feldspar, clinopyroxene, *etc.* The matrix is homogenous and clay-rich with sparse fine sand (*i.e.* clay-fine sandy clay), developing moderate to strong aggregate birefringence revealing streaky patches in the fabric, and there is evidence of marked iron redistribution post burial: no bioliths were seen. The fabric is moderately dense (10% voids) containing large irregular vughs and elongated construction cracks and shrinkage voids surrounding clast fragments. There are a few small (*ca.* 20 µm) oval voids, some (in the original sherd section) carrying remnants of a lining (*i.e.* organic?).

Trench 99, Find No.5 (TS 2223)

The content of “filler” is relatively low (9%) comprising equal proportions of rock clasts and grog fragments. The former are mostly of small size (up to 400µm) although in the non-reignited sherd section (not included in the point count analysis) a clast of 5mm is present. The clasts comprise a variety of rock types including iron-stained siltstones and sandstones, welded sandstone, quartz/mica schist, and silicic and mafic fine-grained igneous material. The latter includes the 5 mm clast of a porphyritic fine-grained quartz/feldspar rock with rare clinopyroxene, the phenocrysts being plagioclase feldspar (*i.e.* an andesitic rock? Figure 3d). The common grog fragments are generally paler and darker versions of the host sherd fabric, but also include some darker isotropic fragments (*i.e.* vitrified? Figure 3e) and fragments of sandier (+ quartz, feldspar, siltstone) texture (Figure 3f); two generations of grog are also occasionally present.

The grain fraction of the “clay” is low comprising both angular and highly rounded quartz, one of the latter including orientated overgrowth reminiscent of Triassic material. Grains of schistose and possible rhyolite/chert (?) composition are also present. The sherd matrix is mostly fine sandy clay in texture, but is heterogeneous containing paler fine sand rich laminae; no bioliths were seen. Aggregate birefringence and preferred orientation is moderately developed, and there is evidence of marked redistribution of iron after sherd burial. The fabric is moderately dense (8% voids) with irregular vughs, and thin linear cracks around clasts: rare voids resulting from the removal of clasts (“clast voids”) may also be present.

T45 reference sediment (0.6-2.0mm: TS 2224)

The coarse sand clasts (0.6-2.0mm fraction) in the trench sediment are dominated (60%) by rhyolitic material. Various types can be distinguished including: (A) fine grained porphyritic lavas, (B) a clearer coarser grained quartz/feldspar mosaic, (C) devitrified types showing a well defined spherulitic structure or perlitic cracks, and others (D) with a distinctive dusty granular (devitrified?) structure. In addition there are tuffs, often strongly sericitised, some showing devitrified vitric structures grading into streaky welded tuffs. These are accompanied by argillaceous rock clasts showing cleavage developed to varying degrees (*i.e.* shales and slates), some with distinctive larger chlorite grains, together with siltstones and sandstones. Occasional clasts of altered dolerite (7%) and vein quartz are also present.

T99 reference sediment (0.6-2.0mm: TS 2225)

The clasts generally include the same range of rock types as present in the sediment from Trench 45 above but in different proportions, there being more of rhyolitic variety “D” and of slate and vein quartz. One clast is of particular interest in that it consists of glaucophane schist.

APPENDIX 6: REPORT ON HUMAN CREMATIONS
By Adrienne Powell

Site 1

Small Find 3

This urn contained 2151.7g of cremated bone with fragments ranging in size from 1mm to 111mm, although most were toward the smaller end of the range and only a small proportion were over 50mm in length. The bone is predominantly white in colour with a few grey/white and black and white fragments as well as some blue patches, although the latter could be staining. Considerable warping and cracking of the bone has occurred. Upper layers of deposit within the urn contained particles of charcoal up to ca 10mm in size; no other pyre debris was present.

Identifiable fragments come from all areas of the body (Table 1) and the frequency of smaller elements such as isolated teeth, carpals, tarsals and phalanges suggests that collection of the cremated bone was relatively thorough. Where the state of epiphyseal closure could be determined (including distal radius and lumbar vertebra) all were closed and a section of sagittal suture was closed but not obliterated, therefore this skeleton belonged to an adult; in addition, the generally robust appearance of the bones as well as a femur fragment exhibiting a prominent linea aspera suggests the individual may have been male. No evidence of pathology was observed.

Table 1: Anatomical distribution of identifiable human bone fragments.

<i>Element</i>	<i>Δ3</i>	<i>Δ4</i>
Cranial fragments	27	26
Maxilla		2
Mandible	4	3
Isolated teeth	11	4
Atlas	1	1
Axis		1
Cervical vertebrae		2
Thoracic vertebrae	3	6
Lumbar vertebrae	4	1
Sacrum	2	
Vertebral fragment	5	2
Rib	2	9
Clavicle	2	4
Humerus	1	7
Radius	4	3
Ulna	1	3
Pelvis	2	2
Femur	1	1
Tibia	1	3
Carpals	8	2
Tarsals	1	2
Metapodials	11	7
Proximal/medial phalanges	13	7
Distal phalanges	2	1
Long bone shaft	26	78

Small Find 4

This urn contained 2491.3g of cremated fragments ranging in size from 1mm to 109.6mm with fewer than 10% greater than 50mm in length. Again the bone is predominantly white in colour with a few grey/white and black and white fragments and some blue patches. Considerable warping and cracking has occurred and the bone in this cremation appears to be more fragmented than that from Δ3. Pyre

debris in the form of small particles of charcoal occurs in most layers within the urn and a calcined, unfused distal epiphysis from a sheep/goat humerus is also present.

All parts of the body are represented by the identifiable fragments, however, fewer of the smaller elements are present than in **A3**, suggesting post-burning collection of the cremated bone was less thorough. All recordable epiphyses (including distal ulna, calcaneus and thoracic vertebrae) are closed and the third molars have erupted and hence this skeleton is also an adult. The mandible exhibits a gonial angle of 123° suggesting this individual is also male. One instance of pathology was noted: the ante-mortem loss of the right P¹ with subsequent remodelling of the vacant alveolus.

APPENDIX 7: REPORT ON CHARCOAL SAMPLES

By Dr Pat Denne

European Plant Science Laboratory, Parc Menai, Bangor

Many pieces were too small or too distorted by incineration to identify. Where samples contained a large number of pieces of identifiable size a random selection of a minimum of 30 pieces were identified.

Trench number 13

Sample 3. 11 pieces identified: 5 pieces oak, 6 pieces hazel.

Comment: these fragments were slow grown, having very narrow growth rings. They are likely to have been from small branches or twigs.

Sample 4. 17 pieces identified: 15 pieces oak, 2 pieces hazel

Comment: these fragments were very slow grown, having very narrow growth rings.

Trench number 35

Sample 9. 12 pieces identified: all were oak

Comment: These samples had an extremely slow growth rate, mainly having extremely narrow growth rings.

Trench number 40.

Sample 24.

28 pieces identified: 18 pieces oak, 10 pieces hazel.

Comment: These samples appeared to be from small branches up to about 2 cm diameter.

Sample 24. (Second sample)

7 pieces identified: 1 piece oak, 2 pieces hazel, 4 pieces holly

Comment:

Trench number 45

Sample 14. 20 pieces identified:

12 pieces oak, 2 pieces hazel, 15 pieces holly, 1 piece Pomoideae*

Comment: large sample, about 20% of the larger pieces identified. Many of the larger pieces were holly. Samples tended to be crumbly and flaky.

*Pomoideae include apples, pears, hawthorn, rowan, and whitebeam.

Sample 17. 15 pieces identified: all were oak

Comment: These pieces were in poor flaky condition.

Sample 17. (Second sample). 1 piece identified: oak

Comment: only a few pieces in bag, all but 1 too small for identification.

Trench number 67.

Sample 18, Context 275, Burnt mound 280

11 pieces identified: 2 pieces oak, 9 pieces hazel

Comment: The growth rings were narrow (less than 2mm wide). The pieces were in a poor flaky and crumbly condition, several being too incinerated for identification.

Sample 18, Context 275 (second sample).

8 pieces identified: 1 piece oak, 7 pieces hazel.

Sample 20, Context 286, Pit 288.

6 pieces identified: all oak

Comment: narrow rings

Sample 25, Context 400, Pit 402.

About 20 pieces sampled, all being hazel except for 2 small fragments of oak.

Comment: most pieces had narrow growth rings (less than 1mm wide). These pieces were hard to identify, having a crumbly texture embedded in a concrete-like matrix.

Sample 27, Context 411, Pit 412.

4 pieces identified: 3 pieces oak, 1 piece probably holly, possibly hazel.

Comments: only a few pieces present, mainly too small for identification.

Trench number 80.

Sample 22. Context 341. 23 pieces identified: 7 pieces oak, 15 pieces hazel, 1 piece holly.

Comment: Hazel pieces were mainly large chunks, the oak and holly pieces small fragments.

Sample 23. Context 343. 29 pieces identified: 4 pieces oak, 20 pieces hazel, 5 pieces holly.

Comments: many of the hazel pieces had relatively wide rings, may have been from hazel coppice.

Sample 23. Context 343. (second sample) 26 pieces identified:

5 pieces oak, 18 pieces hazel, 3 pieces holly.

Comments: large sample, about 25% of larger pieces identified.

Trench number 99

Sample 08

Context (9904)

Hazel 22 pieces

Oak 3 pieces

Comments: total 25 pieces identified: this included all the larger pieces in the sample. Many smaller pieces not identified. Variable ring widths.

Sample 06

Context (9905)

Hazel 16 pieces

Oak 9 pieces.

Comments: part of a hazel nut also found in the sample. Variable ring widths.

Sample 05

Context (9913)

Oak 25 pieces

Comments: the sample appeared to consist entirely of oak. Ring width varied between about 2mm and 4mm, so was relatively wide.

Sample 12

Context (9939)

Oak 23 pieces

Willow 1 piece

Too incinerated for identification 1 piece.

Comments: Ring width varied between about 2mm and 4mm, so was relatively wide. Charcoal fragments small and fragile.

Sample 15

Context (9958)

Oak 30 pieces identified

Comments: A large bag of pieces, all appeared to be oak. . Ring width varied between about 2mm and 4mm, so was relatively wide.

Sample 16

Context (9960)

Oak 10 pieces identified

Comments: a small sample, all other pieces too small for identification. . Ring width varied between about 2mm and 4mm, so were relatively wide.

Sample 17

Context (9961)

Oak 25 pieces

Comments: the sample appeared to consist entirely of oak. Ring width varied between about 2mm and 4mm, so was relatively wide.

APPENDIX 8: PALAEOBOTANICAL REPORT

Palaeoecology Research Services

PRS 2005/121

Assessment of plant remains from excavations at various sites encountered during improvement works to the A497, Abererch to Llanystumdwy, Gwynedd, Wales (G1692/G1858)

by

Örni Akeret

Summary

Archaeological excavations were undertaken by Gwynedd Archaeological Trust at various sites along the route of the A497, between Abererch to Llanystumdwy, Gwynedd, Wales, as part of works associated with a road improvement scheme. Plant remains recovered from samples of nine deposits, representing six of the excavated trenches, were submitted for an assessment of their bioarchaeological potential.

Of the nine contexts, only five contained low concentrations of ancient plant macrofossils other than unidentified charcoal. Cereal remains were recovered from two deposits, with spelt wheat recorded from one and grains of hulled barley, oats and naked wheat from the other. One of the samples contained material which suggested the possible use of peat for fuel. A few fragments of non-charred remains from two of the deposits were considered to be of modern origin.

Given the small quantities of ancient plant remains recovered, and their poor state of preservation no further study is warranted.

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Introduction

Archaeological excavations were undertaken by Gwynedd Archaeological Trust (GAT) in advance of the partial replacement and improvement of the A497 between Abererch and Llanystumdwy, Gwynedd, Wales, between September and December 2004, with further work carried out during April and May 2005.

The initial evaluation exercise involved the excavation of 98 trenches located following the results of a geophysical survey. Five of the trenches were subsequently extended to assess the extent of the archaeological deposits in these areas. Remains from samples from six of the 98 trenches were examined, and these were recovered from a range of features including a possible burnt mound of late Neolithic to early Bronze Age date, a Middle Bronze Age ring barrow, pit features of mid to late Bronze Age and ?hearth features with associated domestic debris of Romano-British date.

Nine sediment samples were processed by the excavator. Some of the resultant fractions (the 'flots' hereafter termed 'washovers' and one of the residues) were submitted to Palaeoecology Research Services Limited (PRS), County Durham, UK, for an assessment of their bioarchaeological potential.

Methods

The sediment samples were processed by GAT prior to delivery to PRS, and the remains recovered submitted for assessment. 'Flotation' was carried out using 300 micron mesh for the washover and 1000 micron mesh for the residue. There was some confusion over the finer mesh sheets, and, as a result, some 500 micron mesh may have been used instead of 300 micron. For Context 343 (Sample 23; Trench 80) only the residue was submitted to PRS, because all of the charred remains from the washover had been used for radiocarbon dating.

Plant remains were identified using a reference collection of modern seeds and fruits; cereals were identified according to Jacomet (1987). Nomenclature for plant species follows Stace (1997).

Results

The results are presented in trench and context number order. All of the plant remains listed below were charred unless noted otherwise. Charcoal fragments were largely excluded from the current assessment as this component had already been reported by another specialist and identifiable fragments submitted for radiocarbon dating. With the exception of Trench 7 (G1858), all of the sampled trenches were assigned to project code number G1692.

Trench 7 (NGR SH 4503 3775)

This trench was located to the south of the A497, in a field belonging to Afon Wen Farm. The features revealed were interpreted as the southern half of an enclosure ditch of a Middle Bronze Age ring barrow. Charcoal from one of the pit fills (Context 704) has been submitted for radiocarbon dating for confirmation of the date (results pending).

Context 704 [small pit with charcoal-rich fill within barrow/ring ditch, possibly burial related activity] Sample 1 (6 litres sieved to 1 mm by the excavator with 300/500 micron washover)

Other than charcoal, the washover produced a few dozen cereal grains, mainly hulled barley (*Hordeum distichon* L./*H. vulgare* L.), but also some oat (*Avena*) and naked wheat (*Triticum aestivum* L./*T. durum* Desf./*T. turgidum* L.). Additionally, there were several weed 'seeds' of black-bindweed (*Fallopia convolvulus* (L.) Á. Löve) and knotweed (*Persicaria*).

Trench 13 (NGR SH 4044 3638)

Located south east of Aberech village, this trench produced three 'hearth' type areas and two areas of burnt fractured stone. Originally thought to be of possible Mesolithic date, charcoal from one of the hearth deposits (Context 124) produced a Romano-British date of CAL AD 70 to CAL AD 380 (2-sigma calibration; Beta-205207).

Context 124 [hearth with Roman period radiocarbon date buried under lagoon silts; ?transient cooking activity]

Sample 2 (6 litres sieved to 1 mm by the excavator with 300/500 micron washover)

All of the plant remains in the washover were very small, with most being tiny unidentified charcoal fragments. A few other fragments were identified, including sedge (*Carex*) nuts, stems and leaves of cross-leaved heath (*Erica tetralix* L.) and grass (Poaceae) caryopses.

Trench 40 (NGR SH 4207 3668)

This trench was located across the projected width of the new road and encountered features that were interpreted as a hearth within an area of domestic activity. Charcoal from Context 205 (a charcoal spread) returned a radiocarbon date of CAL 50 BC to CAL AD 110 (2-sigma calibration; Beta-204430).

Context 205 [layer associated with hearth and stone structure with a late Iron Age – early Romano-British radiocarbon date; domestic activity?]

Sample 11 (7 litres sieved to 1 mm by the excavator with 300/500 micron washover)

The washover consisted mainly of tiny pieces of unidentified charcoal, together with a very small number of other charred plant remains, including glume bases of spelt wheat (*Triticum spelta* L.), fruit stones of raspberry (*Rubus idaeus* L.) and sedge nuts. Additionally, there were some uncharred conifer needles which were almost certainly of modern origin.

Trench 45 (NGR SH 4234 3673)

Trench 45 was situated on farmland belonging to Llwyngwyn Farm to the south of the A497. Excavation provided limited evidence, in the form of a linear feature and two pits or postholes, for prehistoric activity. Charcoal from Context 263 returned a 2-sigma calibrated radiocarbon date of CAL BC 1360 to BC1350 and CAL BC 3260 to BC 2920 (Beta-204431).

Context 263 [fill of isolated small pit with pot and mid to late Bronze Age radiocarbon date]

Sample 17 (0.25 litres sieved to 1 mm by the excavator with 300/500 micron washover)

The washover produced a small quantity of minute unidentified charcoal fragments, but contained no seeds or fruits.

Trench 67 (NGR SH 4326 3717)

This trench was located near Pwllheli, to the northwest of Haven Holiday Park. Several pits containing burnt stone were uncovered, together with a possible fire site and a discrete spread of heat fractured stone. Some of the features may have been the remains of a burnt mound that had been almost completely destroyed by ploughing.

Context 409 [pit associated with burnt mound type activity]

Sample 26 (18 litres sieved to 1 mm by the excavator with 300/500 micron washover)

Only small charcoal fragments were present in the washover and no ancient seeds or fruits were recorded.

Context 411 [pit associated with burnt mound type activity]

Sample 27 (9 litres sieved to 1 mm by the excavator with 300/500 micron washover)

Apart from the many modern rootlets present, there were some tiny charcoal fragments but, as with the other sample from this trench, there were no seeds or fruits.

Trench 80 (NGR SH 445 380)

This trench was located at Glanllynau Farm towards the eastern end of the road scheme. A large pit filled with burnt stone was encountered, with evidence for possible 'activity' (grey charcoal-flecked silt) to one side of the pit. The function of the pit was not clear.

Context 343 [fill of large pit containing burnt stone]

Sample 23 (14 litres sieved to 1 mm by the excavator with 300/500 micron washover)

The only bioarchaeological remains from the residue submitted for examination were some small unidentified charcoal fragments.

Trench 99 (NGR SH 4503 3775)

Features within this trench (which was located to further investigate the ring ditch or circular enclosure found in Trench 7) provided evidence for the remains of a ring barrow, with two collared urns, a post-hole, a pit (cut by the circular ditch) and stake holes.

Context 9904 [larger pit cut by ring ditch, possibly pre-burial settlement activity]
Sample 8 (15 litres sieved to 1 mm by the excavator with 300/500 micron washover)

Other than fine unidentified charcoal, only a small number of charred plant macrofossils were present. These included seeds of fat-hen (*Chenopodium album* L.), hazel (*Corylus avellana* L.) nut shell fragments and caryopses of fescue or rye-grass (*Festuca/Lolium*). In addition, there were three achenes of hemp (*Cannabis sativa* L.) which were uncharred.

Context 9958 [relict soil cut by cremation burial pits at centre of barrow, possibly remnant of cremation pyre]
Sample 15 (13 litres sieved to 1 mm by the excavator with 300/500 micron washover)

Only a single seed of the pea family (Fabaceae) was identified, the remainder of the washover consisting of small unidentified charcoal fragments and a few modern rootlets.

Discussion and statement of potential

Of the nine samples examined, four contained very small numbers of ancient seeds and/or fruits, whilst four gave only small unidentified charcoal fragments. Context 704 (Sample 1, Trench 7), the fill of a small pit within the barrow/ring ditch was the only deposit to produce a slightly larger quantity of ancient plant macrofossils.

In general, the plant remains were preserved by charring, with just two exceptions; conifer needles from Context 205 (Sample 11; Trench 40) and hemp achenes from Context 9904 (Sample 8; Trench 99). These are very likely to be modern contaminants, as the material showed no other characteristics associated with waterlogged deposits or other conditions that would preserve uncharred remains. Cereal remains, presumably intended for use as food or fodder, were only found in two contexts. The occurrence of spelt wheat in Context 205 (Sample 11; Trench 40) accords well with the Roman date (provided by radiocarbon dating) for this deposit, whilst the suite of cereal remains from Context 704 (Sample 1; Trench 7) is more likely to indicate a post-Roman date (Greig 1991), although this deposit is currently thought to be of the Middle Bronze Age.

Cross-leaved heath, the charred remains of which were identified from Context 124 (Sample 2; Trench 13), is a species that typically grows in wet heaths and moors, and bogs. Its presence in this deposit might be explained by importation in peat that was being used as fuel.

The low frequency or, in some cases, total absence, of ancient plant macrofossils precludes a detailed reconstruction of the environment or of plants used by people. Further study is unlikely to add significantly to the information already obtained for the contexts examined.

Recommendations

Other than the larger charcoal fragments reported elsewhere, ancient biological remains recovered from these deposits were restricted to small quantities of poorly preserved seeds and fruits. No further analysis of the remains is warranted.

Retention and disposal

All of the recovered remains should be retained as part of the physical archive for the site.

Archive

All material is currently stored by Palaeoecology Research Services (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham), along with paper and electronic records pertaining to the work described here.

Acknowledgements

The author is grateful to George Smith, of Gwynedd Archaeological Trust, for providing the material and the archaeological information.

References

- Greig, J. R. A. (1991). *The British Isles*, pp. 299-334 in Van Zeist, W., Wasylikowa, K. and Behre, K.-E (eds), *Progress in Old World palaeo-ethnobotany*. Rotterdam: Balkema.
- Jacomet, S. (1987). *Prähistorische Getreidefunde. Eine Anleitung zur Bestimmung Prähistorischer Gersten- und Weizenfunde*. Basel: Eigenverlag.
- Stace, C. (1997). *New Flora of the British Isles: second edition*. Cambridge: Cambridge University Press.

Appendix 9

Mr. Andrew Davidson

Report Date: 6/13/2005

Gwynedd Archaeological Trust

Material Received: 4/25/2005

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)	
Beta - 204430 SAMPLE : G1692205/1 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal BC 50 to Cal AD 110 (Cal BP 2000 to 1840)	2000 +/- 40 BP	-27.0 o/oo	1970 +/- 40 BP	TI (S S PC
Beta - 204431 SAMPLE : G1692263/14 ANALYSIS : Radiometric-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal BC 1360 to 1360 (Cal BP 3310 to 3300) AND Cal BC 1320 to 970 (Cal BP 3260 to 2920)	2990 +/- 60 BP	-28.5 o/oo	2940 +/- 60 BP	TR FE CE PC 4
Beta - 204432 SAMPLE : G1692275/18 ANALYSIS : Radiometric-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal BC 2550 to 2540 (Cal BP 4500 to 4480) AND Cal BC 2490 to 2140 (Cal BP 4440 to 4090)	3890 +/- 70 BP	-26.2 o/oo	3870 +/- 70 BP	T S B F
Beta - 204433 SAMPLE : G1692343/23 ANALYSIS : Radiometric-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal BC 1280 to 970 (Cal BP 3230 to 2920)	2940 +/- 50 BP	-26.0 o/oo	2920 +/- 50 BP	TR PI B S
Beta - 204434 SAMPLE : G1692400/25 ANALYSIS : Radiometric-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal BC 2580 to 1910 (Cal BP 4520 to 3860)	3810 +/- 120 BP	-25.1 o/oo	3810 +/- 120 BP	T FIL PIT

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)	
Beta - 204435 SAMPLE : G1746/189/1 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 540 to 660 (Cal BP 1410 to 1290)	1460 +/- 40 BP	-25.7 o/oo	1450 +/- 40 BP	
Beta - 204436 SAMPLE : G1746/189/2 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1670 to 1780 (Cal BP 280 to 170) AND Cal AD 1800 to 1950 (Cal BP 150 to 0)	110 +/- 40 BP	-24.8 o/oo	110 +/- 40 BP	
Beta - 204437 SAMPLE : G17500/1 ANALYSIS : Radiometric-Standard delivery (with extended counting) MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal BC 2290 to 1870 (Cal BP 4240 to 3820)	3690 +/- 80 BP	-26.3 o/oo	3670 +/- 80 BP	
Beta - 205207 SAMPLE : G1692(24)/2 ANALYSIS : Radiometric-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 70 to 380 (Cal BP 1880 to 1570)	1840 +/- 60 BP	-27.1 o/oo	1810 +/- 60 BP	TR13 SUB-CIRC- FEATURE

Mr. Andrew Davidson

Report Date: 11/30/2005

Gwynedd Archaeological Trust

Material Received: 11/1/2005

Sample Data	Measured Radiocarbon Age	$^{13}\text{C}/^{12}\text{C}$ Ratio	Conventional Radiocarbon Age(*)
Beta - 210121 SAMPLE : G1692990408 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal BC 2190 to 2170 (Cal BP 4140 to 4120) AND Cal BC 2150 to 1940 (Cal BP 4100 to 3900)	3710 +/- 40 BP	-26.9 o/oo	3680 +/- 40 BP
Beta - 210122 SAMPLE : G1692991305 ANALYSIS : Radiometric-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal BC 2270 to 2260 (Cal BP 4220 to 4210) AND Cal BC 2220 to 1880 (Cal BP 4170 to 3830)	3660 +/- 70 BP	-24.3 o/oo	3670 +/- 70 BP
Beta - 210123 SAMPLE : G1692995815 ANALYSIS : Radiometric-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal BC 2120 to 2100 (Cal BP 4060 to 4050) AND Cal BC 2040 to 1700 (Cal BP 3990 to 3650)	3560 +/- 70 BP	-25.4 o/oo	3550 +/- 70 BP
Beta - 210124 SAMPLE : G1692996117 ANALYSIS : Radiometric-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal BC 1880 to 1530 (Cal BP 3830 to 3480)	3430 +/- 60 BP	-26.2 o/oo	3410 +/- 60 BP

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-27;lab.mult=1)

Laboratory number: Beta-204430

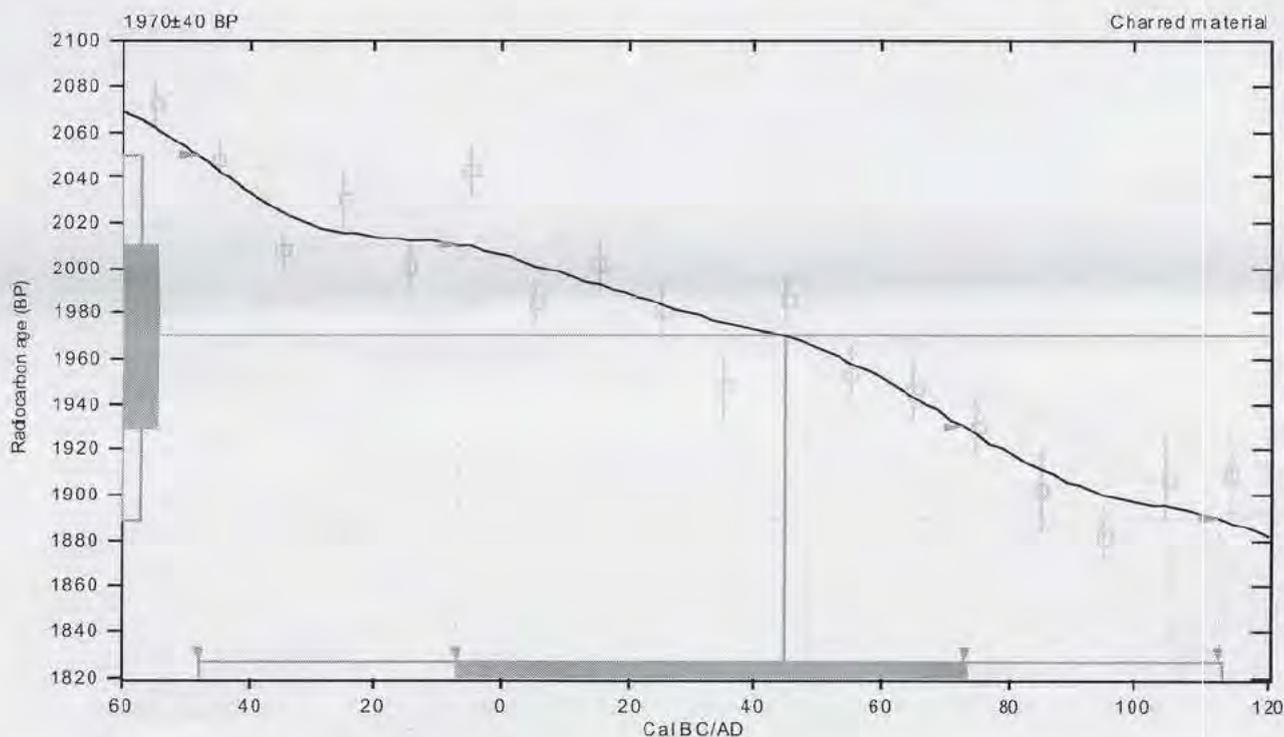
Conventional radiocarbon age: 1970±40 BP

2 Sigma calibrated result: Cal BC 50 to Cal AD 110 (Cal BP 2000 to 1840)
(95% probability)

Intercept data

Intercept of radiocarbon age
with calibration curve: Cal AD 40 (Cal BP 1900)

1 Sigma calibrated result: Cal BC 10 to Cal AD 70 (Cal BP 1960 to 1880)
(68% probability)



References:

Database used

INTCAL 98

Calibration Database

Editorial Comment

Stuiver, M., van der Plicht, H., 1998, *Radiocarbon* 40(3), p. xii-xiii

INTCAL 98 Radiocarbon Age Calibration

Stuiver, M., et al., 1998, *Radiocarbon* 40(3), p. 1041-1083

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2), p. 317-322

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-28.5;lab. mult=1)

Laboratory number: **Beta-204431**

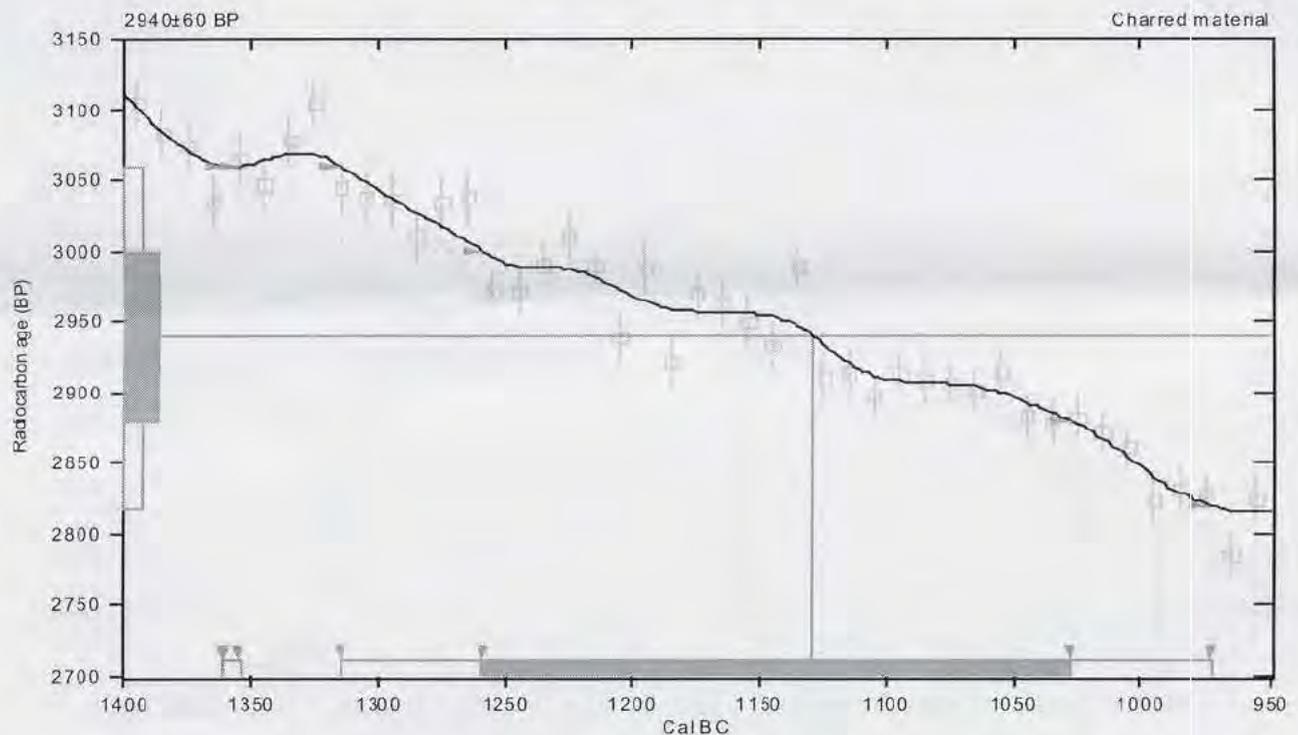
Conventional radiocarbon age: **2940±60 BP**

**2 Sigma calibrated results: Cal BC 1360 to 1360 (Cal BP 3310 to 3300) and
(95% probability) Cal BC 1320 to 970 (Cal BP 3260 to 2920)**

Intercept data

Intercept of radiocarbon age
with calibration curve: **Cal BC 1130 (Cal BP 3080)**

1 Sigma calibrated result: Cal BC 1260 to 1030 (Cal BP 3210 to 2980)
(68% probability)



References:

Database used

INTCAL98

Calibration Database

Editorial Comment

Stuiver, M., van der Plicht, H., 1998, *Radiocarbon* 40(3), pxi-xiii

INTCAL98 Radiocarbon Age Calibration

Stuiver, M., et al., 1998, *Radiocarbon* 40(3), p1041-1083

Mathematics

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.2;lab. mult=1)

Laboratory number: **Beta-204432**

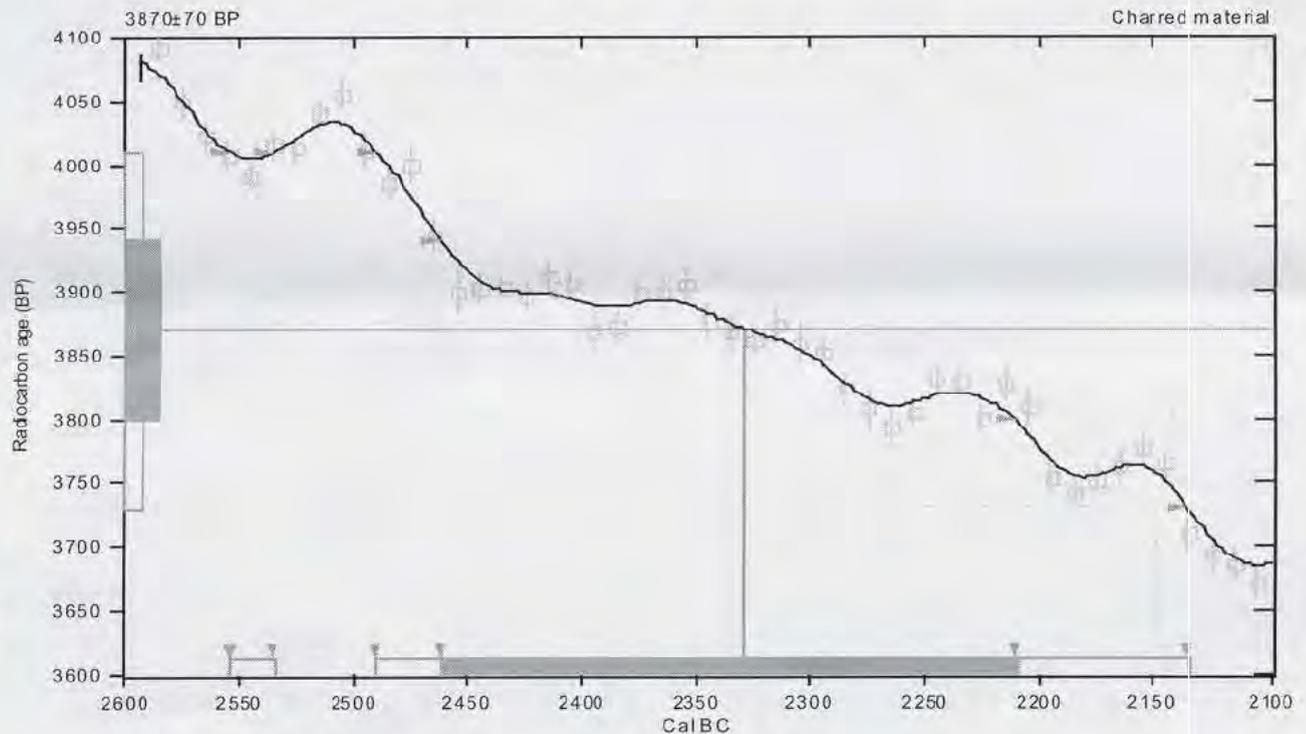
Conventional radiocarbon age: **3870±70 BP**

2 Sigma calibrated results: **Cal BC 2550 to 2540 (Cal BP 4500 to 4480) and
(95% probability) Cal BC 2490 to 2140 (Cal BP 4440 to 4090)**

Intercept data

Intercept of radiocarbon age
with calibration curve: **Cal BC 2330 (Cal BP 4280)**

1 Sigma calibrated result: **Cal BC 2460 to 2210 (Cal BP 4410 to 4160)**
(68% probability)



References:

Database used

INTCAL 98

Calibration Database

Editorial Comment

Stuiver, M., van der Plicht, H., 1998, *Radiocarbon* 40(3), pxi-xii

INTCAL98 Radiocarbon Age Calibration

Stuiver, M., et al., 1998, *Radiocarbon* 40(3), p1041-1083

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2), p317-322

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26:lab. mult=1)

Laboratory number: **Beta-204433**

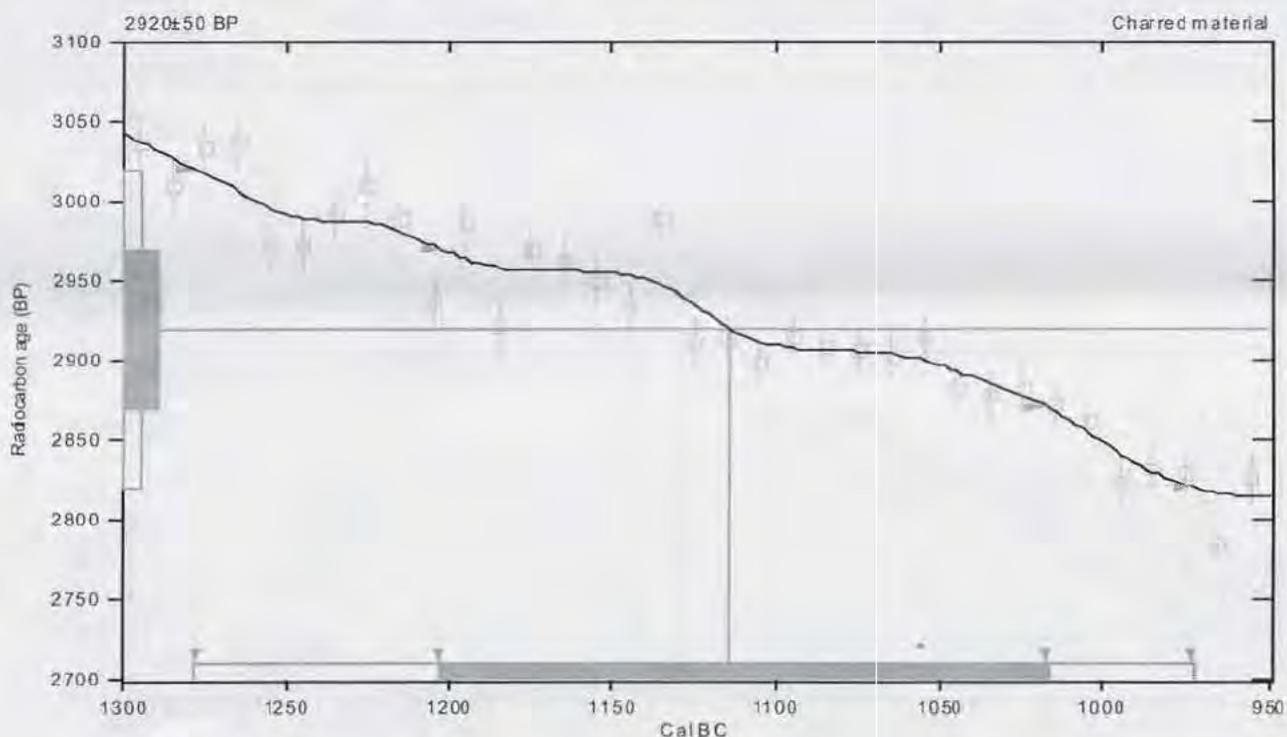
Conventional radiocarbon age: **2920±50 BP**

2 Sigma calibrated result: **Cal BC 1280 to 970 (Cal BP 3230 to 2920)**
(95% probability)

In intercept data

Intercept of radiocarbon age
with calibration curve: **Cal BC 1110 (Cal BP 3060)**

1 Sigma calibrated result: **Cal BC 1200 to 1020 (Cal BP 3150 to 2970)**
(68% probability)



References:

Database used

INTCAL98

Calibration Database

Editorial Comment

Stuiver, M., van der Plicht, H., 1998, *Radiocarbon* 40(3), pxi-xiii

INTCAL98 Radiocarbon Age Calibration

Stuiver, M., et al., 1998, *Radiocarbon* 40(3), p1041-1083

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2), p317-322

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-27.1;lab. mult=1)

Laboratory number: **Beta-205207**

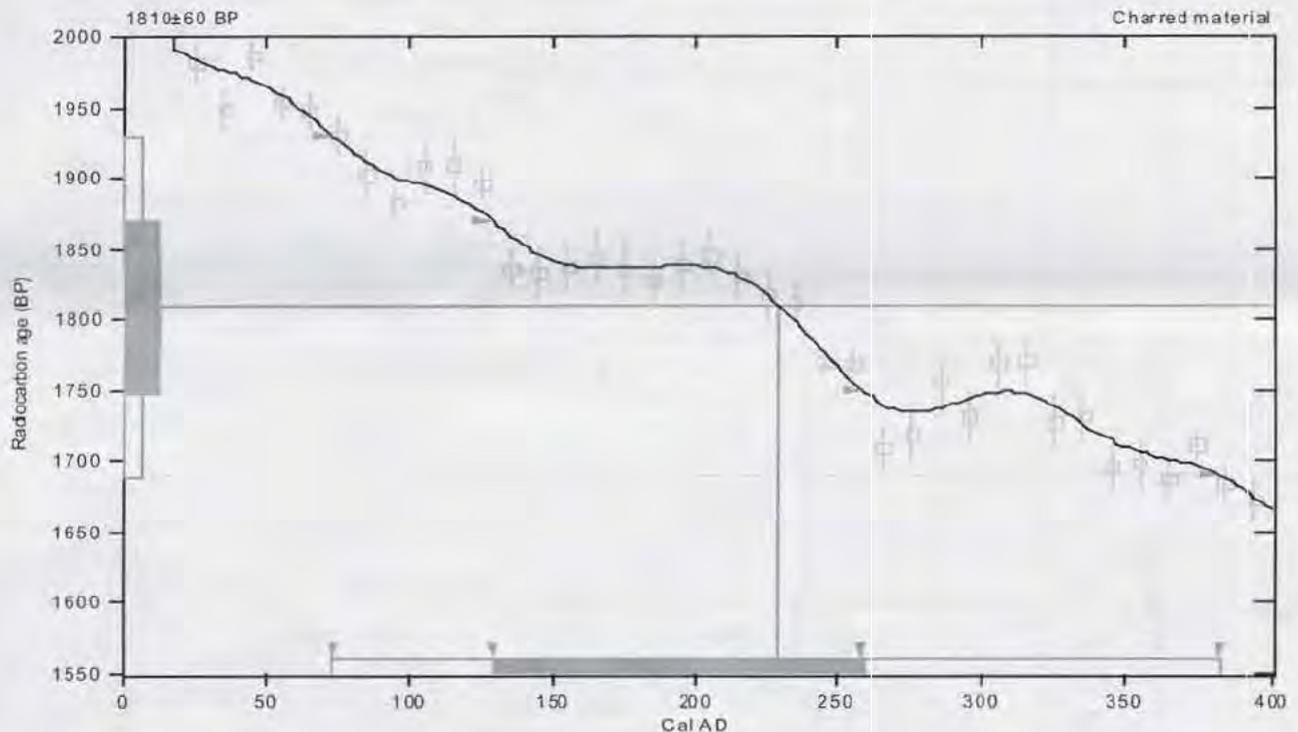
Conventional radiocarbon age: **1810±60 BP**

2 Sigma calibrated result: **Cal AD 70 to 380 (Cal BP 1880 to 1570)**
(95% probability)

Intercept data

Intercept of radiocarbon age
with calibration curve: **Cal AD 230 (Cal BP 1720)**

1 Sigma calibrated result: **Cal AD 130 to 260 (Cal BP 1820 to 1690)**
(68% probability)



References:

Database used

INTCAL98

Calibration Database

Editorial Comment

Stuiver, M., van der Plicht, H., 1998, *Radiocarbon* 40(3), pxi-xiii

INTCAL98 Radiocarbon Age Calibration

Stuiver, M., et al., 1998, *Radiocarbon* 40(3), p1041-1083

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2), p317-322

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.9;lab. mult=1)

Laboratory number: **Beta-210121**

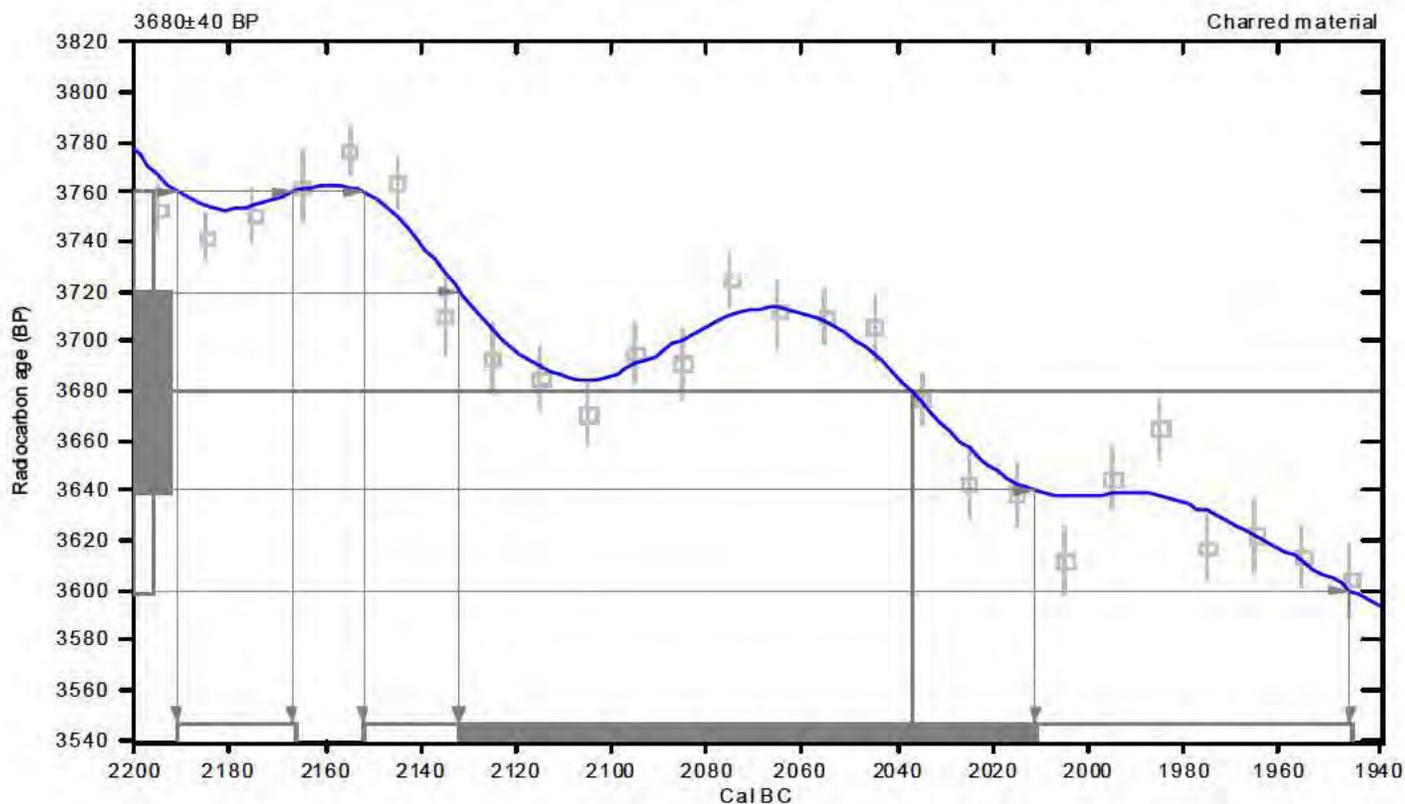
Conventional radiocarbon age: **3680±40 BP**

2 Sigma calibrated results: **Cal BC 2190 to 2170 (Cal BP 4140 to 4120) and
(95% probability) Cal BC 2150 to 1940 (Cal BP 4100 to 3900)**

Intercept data

Intercept of radiocarbon age
with calibration curve: **Cal BC 2040 (Cal BP 3990)**

1 Sigma calibrated result: **Cal BC 2130 to 2010 (Cal BP 4080 to 3960)**
(68% probability)



References:

Database used

INTCAL98

Calibration Database

Editorial Comment

Stuiver, M., van der Plicht, H., 1998, Radiocarbon 40(3), pxi-xiii

INTCAL98 Radiocarbon Age Calibration

Stuiver, M., et al., 1998, Radiocarbon 40(3), p1041-1083

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-24.3:lab. mult=1)

Laboratory number: **Beta-210122**

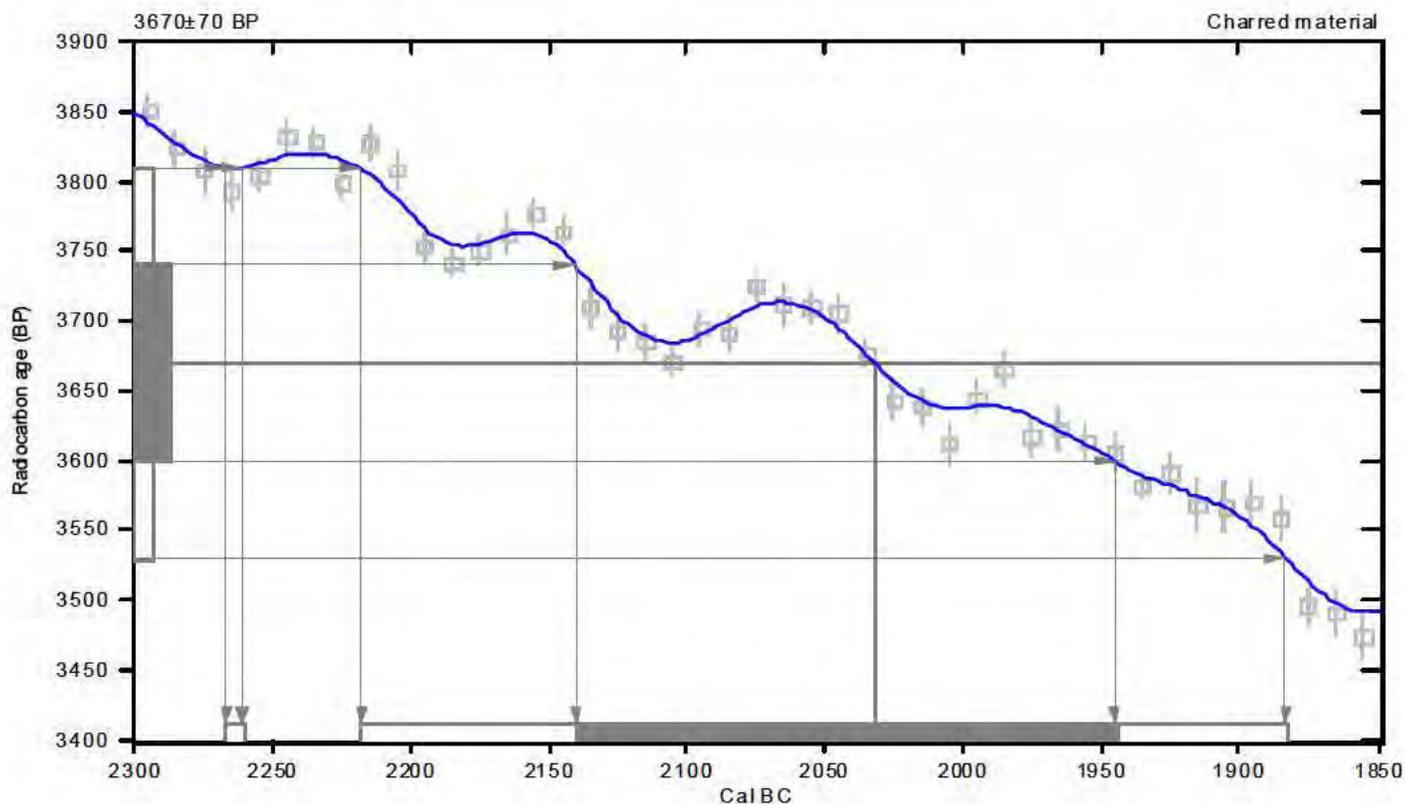
Conventional radiocarbon age: **3670±70 BP**

2 Sigma calibrated results: **Cal BC 2270 to 2260 (Cal BP 4220 to 4210) and
(95% probability) Cal BC 2220 to 1880 (Cal BP 4170 to 3830)**

Intercept data

Intercept of radiocarbon age
with calibration curve: **Cal BC 2030 (Cal BP 3980)**

1 Sigma calibrated result: **Cal BC 2140 to 1940 (Cal BP 4090 to 3900)**
(68% probability)



References:

Database used

INTCAL98

Calibration Database

Editorial Comment

Stuiver, M., van der Plicht, H., 1998, Radiocarbon 40(3), pxi-xiii

INTCAL98 Radiocarbon Age Calibration

Stuiver, M., et al., 1998, Radiocarbon 40(3), p1041-1083

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-25.4:lab, mult=1)

Laboratory number: **Beta-210123**

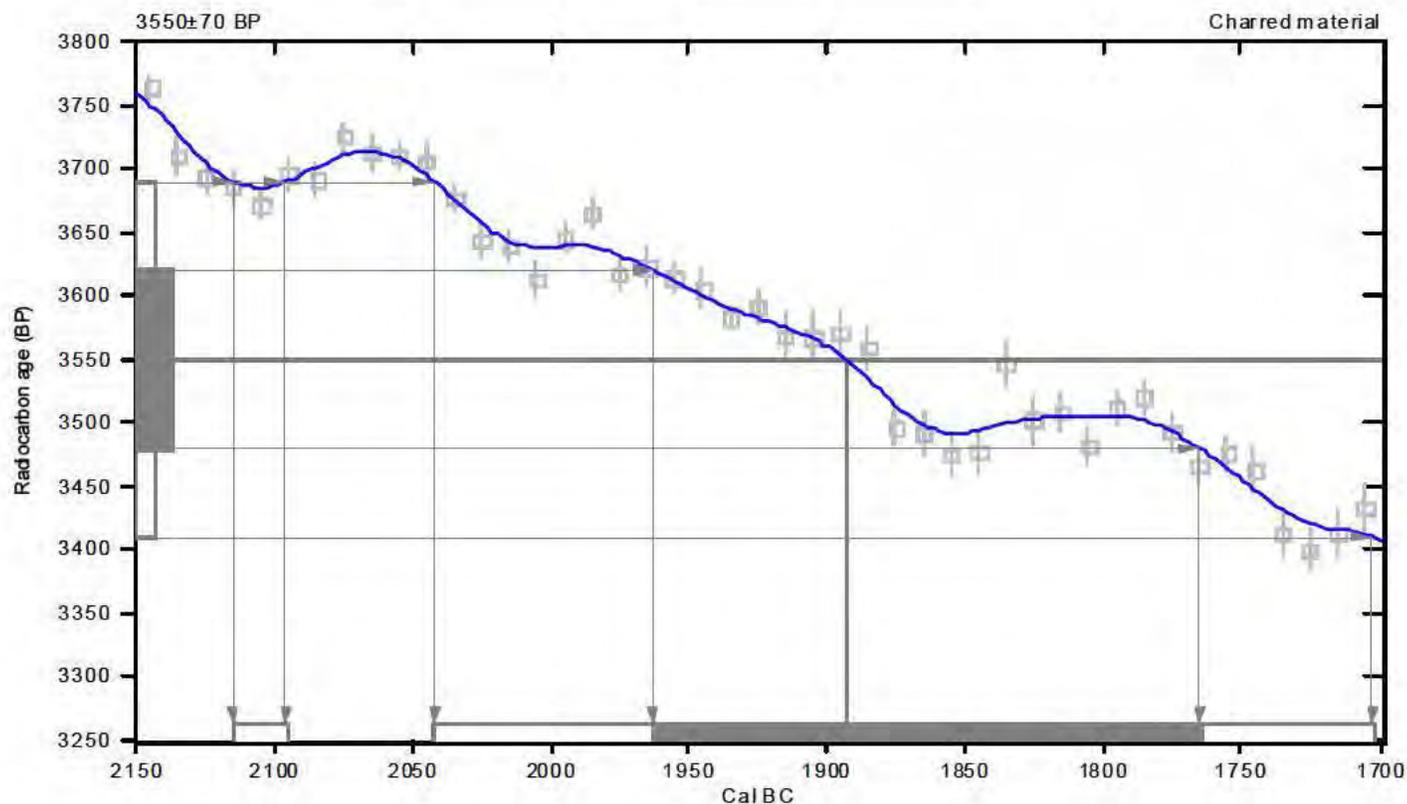
Conventional radiocarbon age: **3550±70 BP**

2 Sigma calibrated results: **Cal BC 2120 to 2100 (Cal BP 4060 to 4050) and
(95% probability) Cal BC 2040 to 1700 (Cal BP 3990 to 3650)**

Intercept data

Intercept of radiocarbon age
with calibration curve: **Cal BC 1890 (Cal BP 3840)**

1 Sigma calibrated result: **Cal BC 1960 to 1760 (Cal BP 3910 to 3720)**
(68% probability)



References:

Database used

INTCAL98

Calibration Database

Editorial Comment

Stuiver, M., van der Plicht, H., 1998, Radiocarbon 40(3), pxi-xiii

INTCAL98 Radiocarbon Age Calibration

Stuiver, M., et al., 1998, Radiocarbon 40(3), p1041-1083

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A Simplified Approach to Calibrating C14 Dates

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.2:lab. mult=1)

Laboratory number: **Beta-210124**

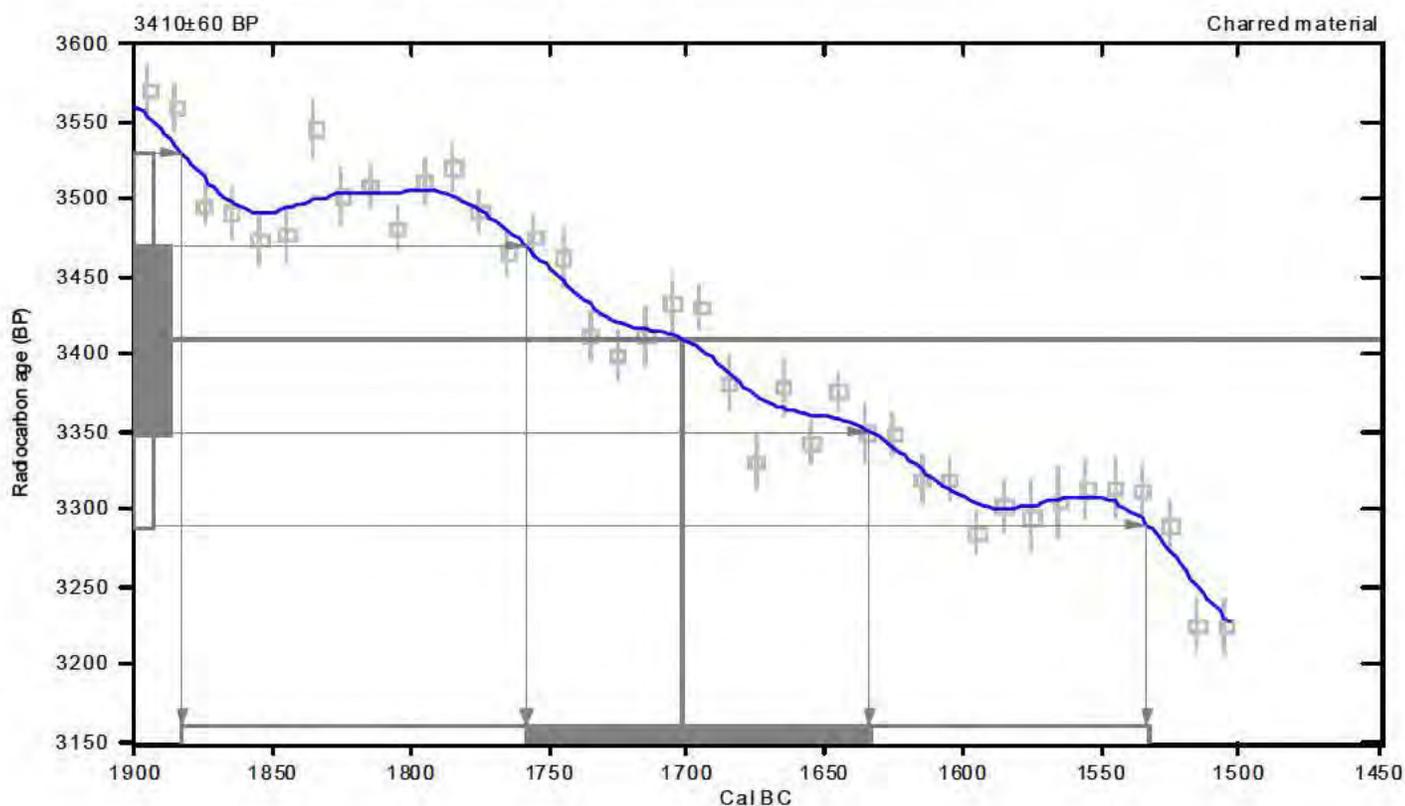
Conventional radiocarbon age: **3410±60 BP**

2 Sigma calibrated result: **Cal BC 1880 to 1530 (Cal BP 3830 to 3480)**
(95% probability)

Intercept data

Intercept of radiocarbon age
with calibration curve: **Cal BC 1700 (Cal BP 3650)**

1 Sigma calibrated result: **Cal BC 1760 to 1630 (Cal BP 3710 to 3580)**
(68% probability)



References:

Database used

INTCAL98

Calibration Database

Editorial Comment

Stuiver, M., van der Plicht, H., 1998, Radiocarbon 40(3), pxi-xiii

INTCAL98 Radiocarbon Age Calibration

Stuiver, M., et al., 1998, Radiocarbon 40(3), p1041-1083

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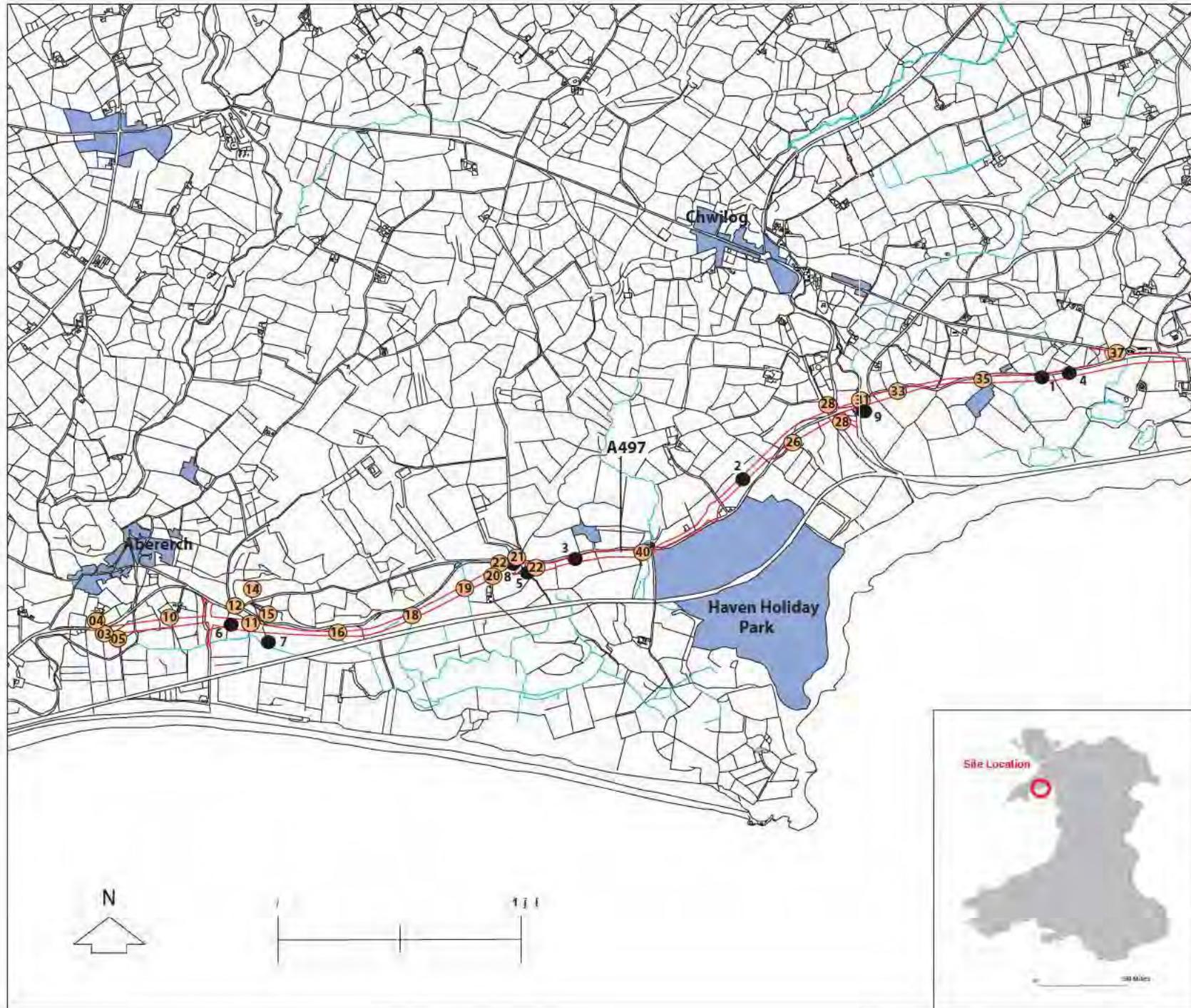


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ARCHAEOLEGOL
GWYNEDD



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Craig Beuno, Ffordd y Garth, Bangor, Gwynedd. LL57 2RT
Ffon: 01248 352535. Ffacs: 01248 370925. email: gat@heneb.co.uk



- Road improvement easement
- Extent of archaeological or historical features described
- Site of additional excavation or recording

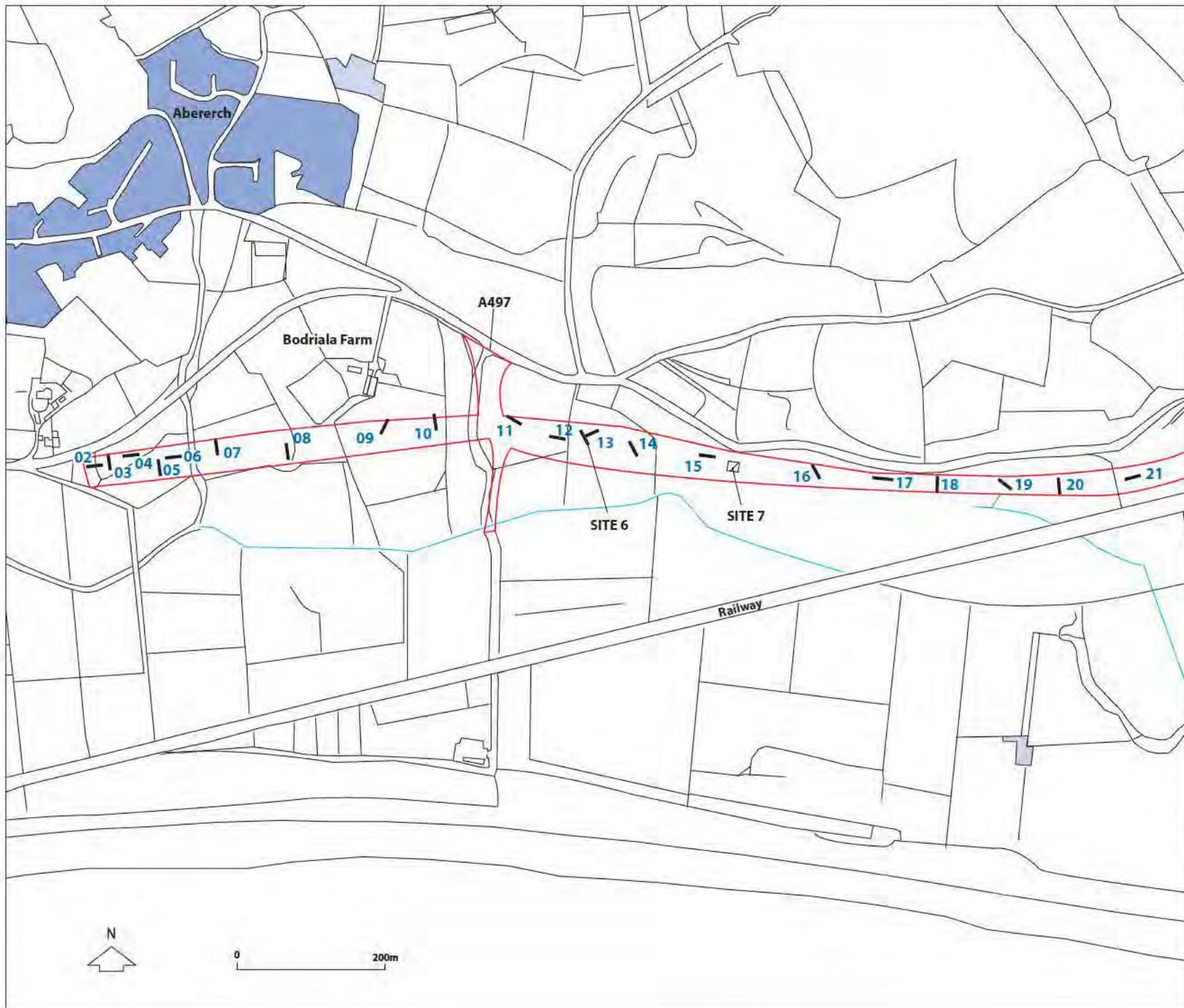
- Extent of archaeological or historical features described**
- 03 Trackway South of Cemlyn Farmhouse
 - 04 House at Cemlyn
 - 05 Track Southeast of Cemlyn
 - 10 Track at Bodriala Farm
 - 11 Track Southeast of Efail Bach
 - 12 Enclosure Southwest of Efail Bach
 - 14 Track South of Gorwel House, Tanyralit Isaf
 - 15 Possible Track at Glan Morfa
 - 16 Enclosed Woodland
 - 18 Earthworks Southeast of Tanclogwyn
 - 19 Track at Glan Morfa
 - 20 Demesne Wall of Broom Hall
 - 21 Holloway NE of Glan Morfa Farm
 - 22 Track at Tyddyn Berth Farm
 - 26 Former Railway Embankment
 - 28 Pont Ffriddlwyd
 - 31 Circular Hollow S. of Tanyralit
 - 33 Track at Afon Wen Farm
 - 35 Tynfridd Farmhouse
 - 37 Ford
 - 40

- Site of additional excavation or recording**
- 1 Early Bronze Age funerary site
 - 2 Early Bronze Age burnt mound
 - 3 Late Bronze Age domestic feature
 - 4 Late Bronze Age domestic feature
 - 5 Iron Age/Romano-British domestic feature
 - 6 Romano-British hearths
 - 7 House, Tanyralit Isaf
 - 8 Holloway NE of Glan Morfa farm
 - 9 Pont Ffriddlwyd



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 GWYBODAETH ARCHAEOLÓGOL TRUST
 Craig Beuno, Ffridd y Garth, Bangor, Gwynedd, LL57 2RT
 Ffôn: 01248 352535, Ffacs: 01248 370925, email: gwt@gwyt.org.uk

Figure 1: Location Map of recorded features excavated and sites
SCALE: 1:45,000 at A4



 Road improvement easement

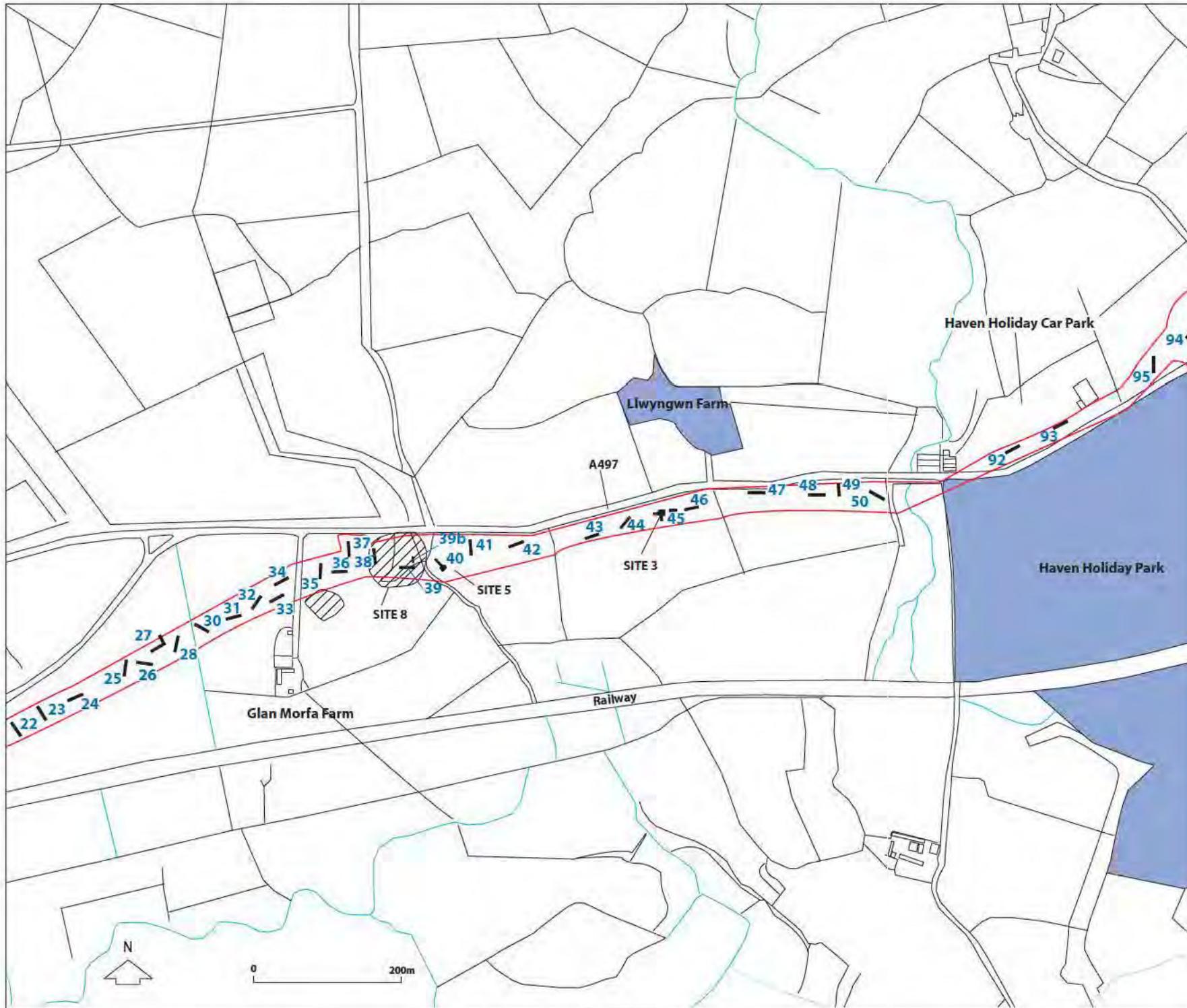
YMOEDDOLAETHY
ARCHAEOLOGAETHY
GWYNGEDD

 GWYNGEDD
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Figure 2: Evaluation trenches and excavation site locations

SCALE: 1:7000 at A4

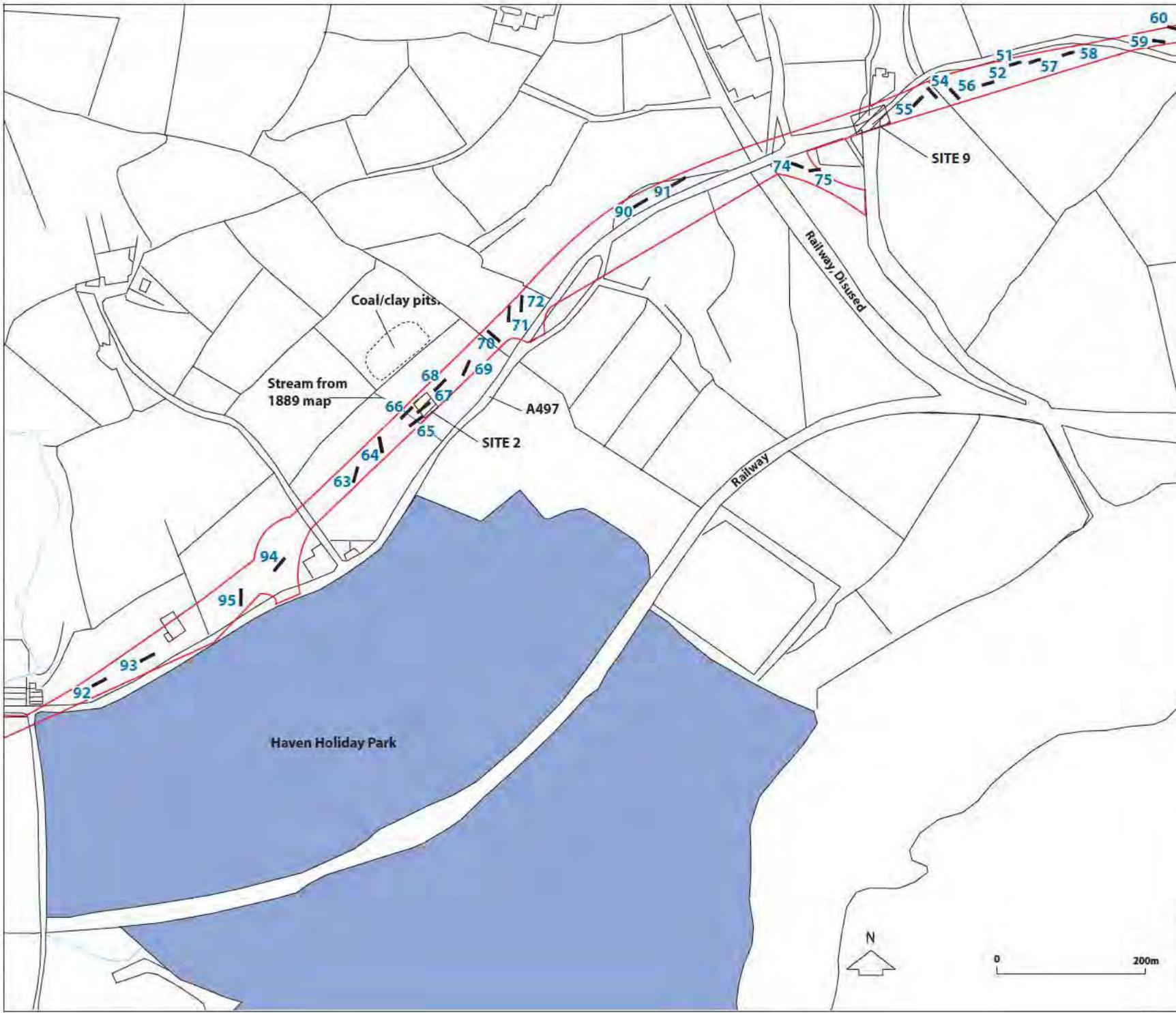


==== Road improvement easement



Figure 3: Evaluation trenches and excavation site locations

SCALE:1:7000 at A4



==== Road improvement easement

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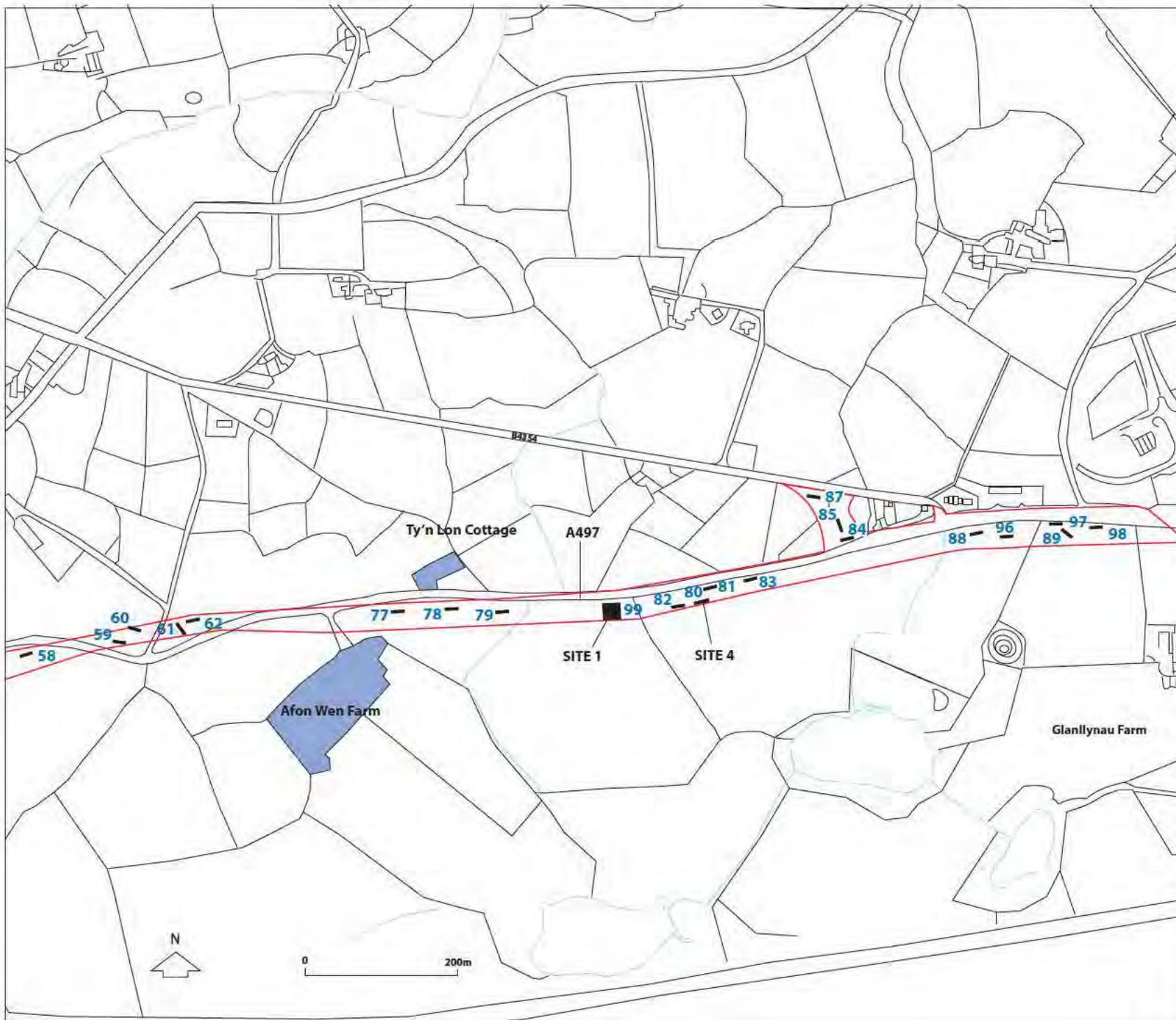


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Figure 4: Evaluation trenches and excavation sites Locations

SCALE: 1:7000 at A4



 Road improvement easement

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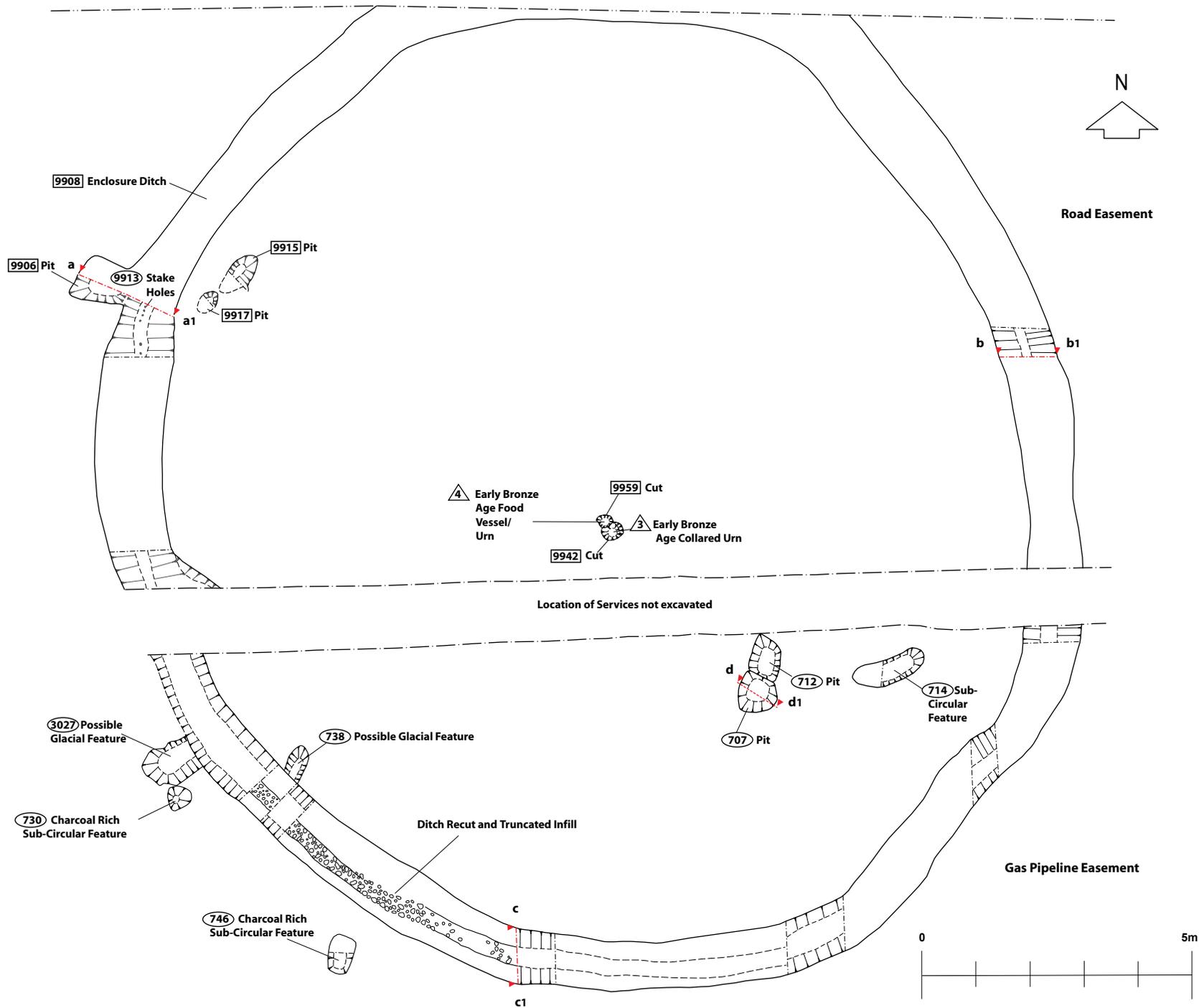


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Phone: 01248 332535. Email: 01248 379025. email: gtr@bann.co.uk

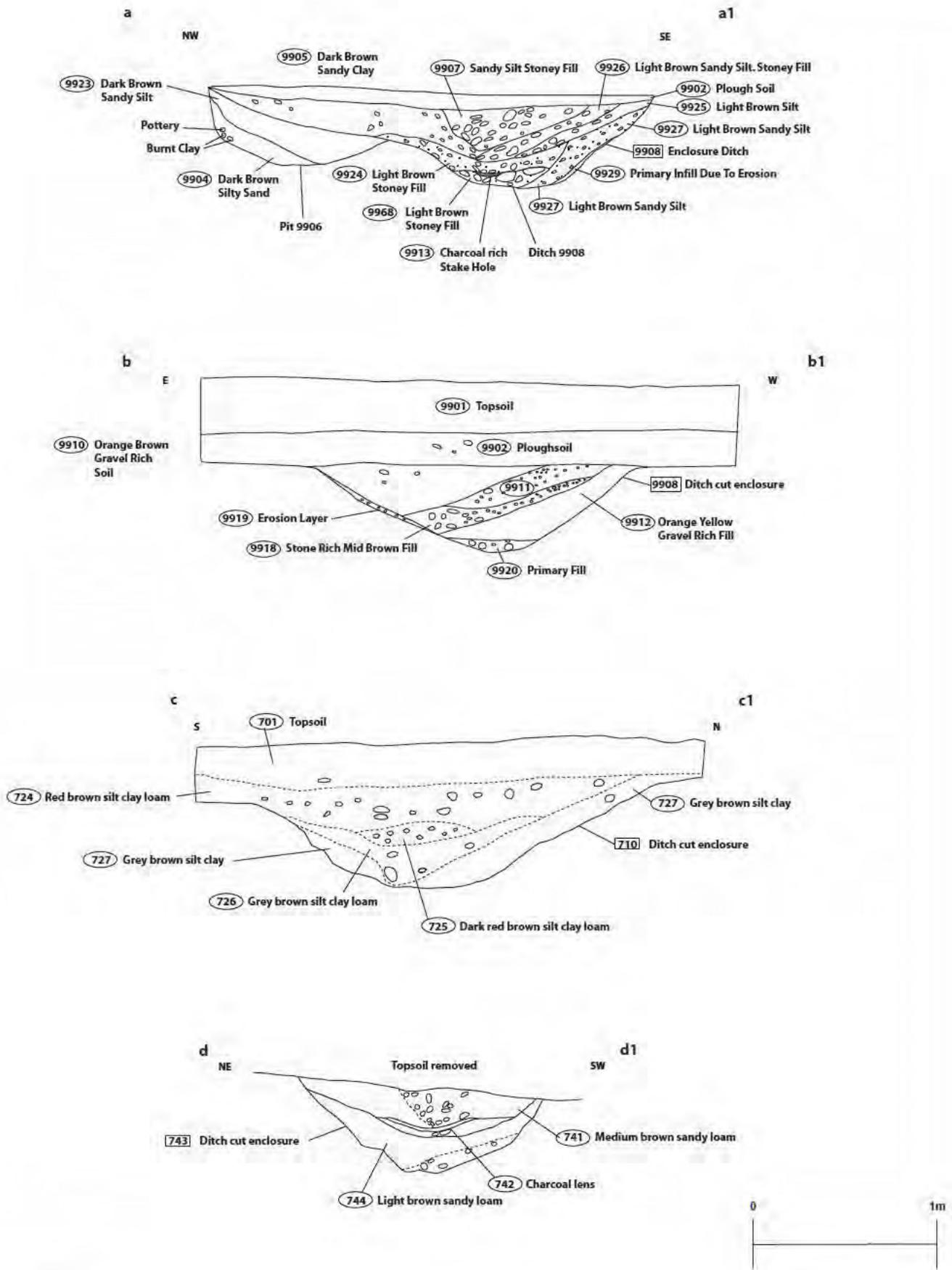
Figure 5: Evaluation trenches and excavation site location

SCALE: 1:7000 at A4



**Figure 6: Site 1 (Trench 99).
Plan**

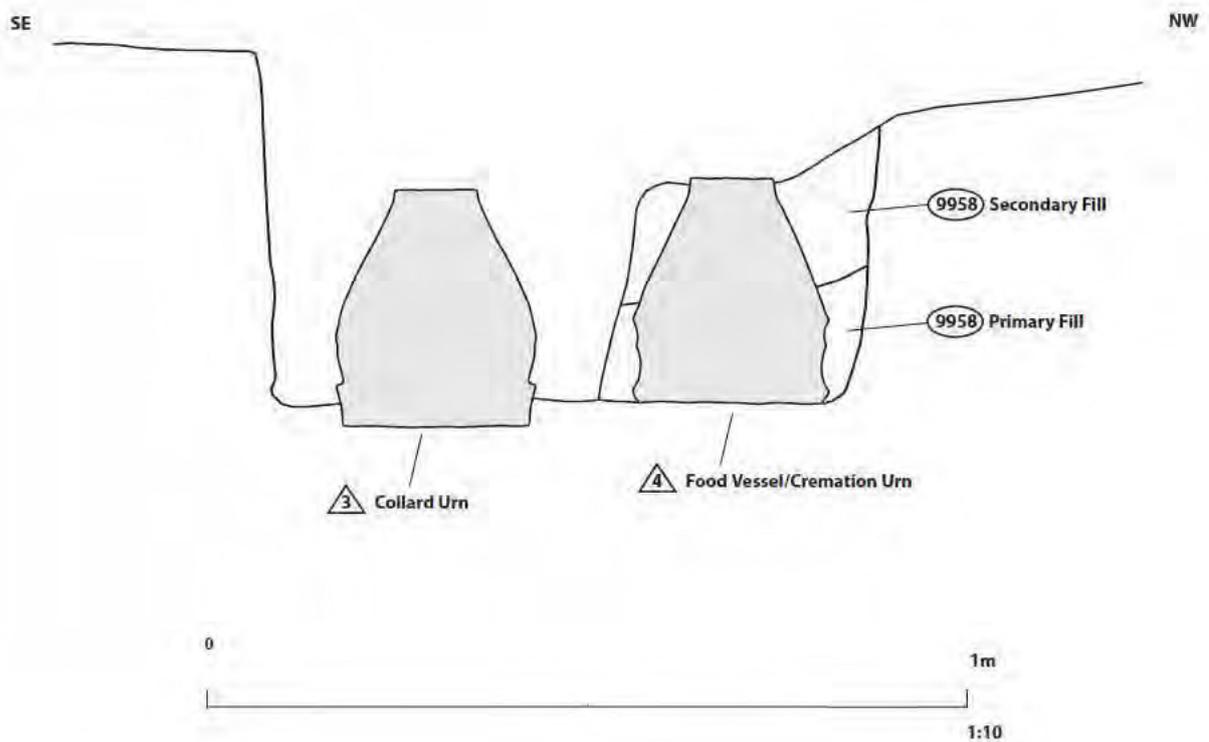
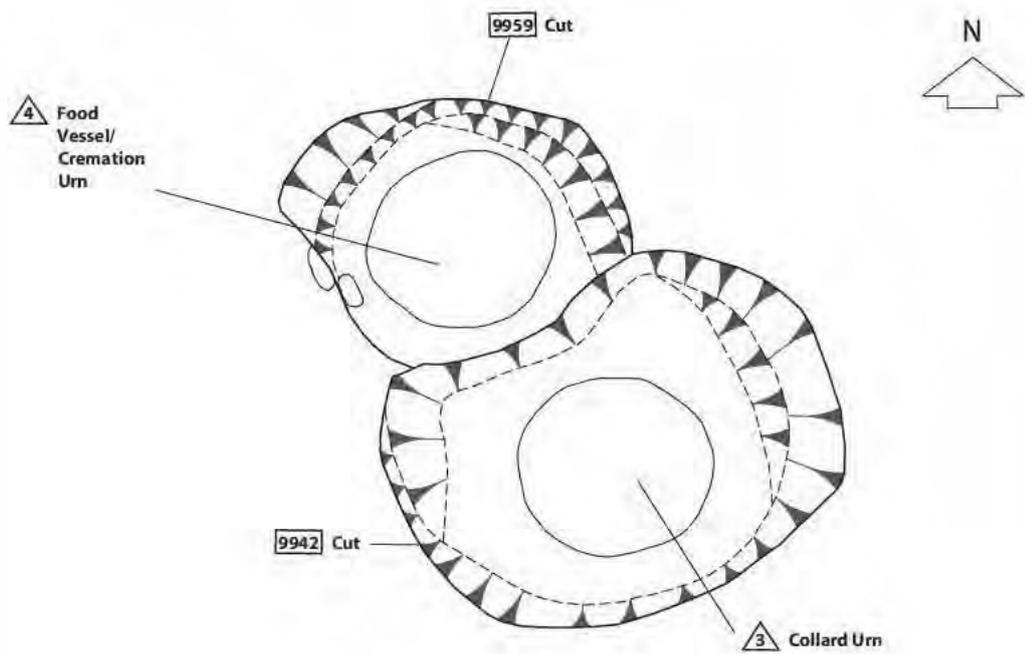
SCALE: 1:100 at A4



**Figure 7. Site 1 (Trench 99):
Enclosure ditch sections**

SCALE: 1:30 at A4





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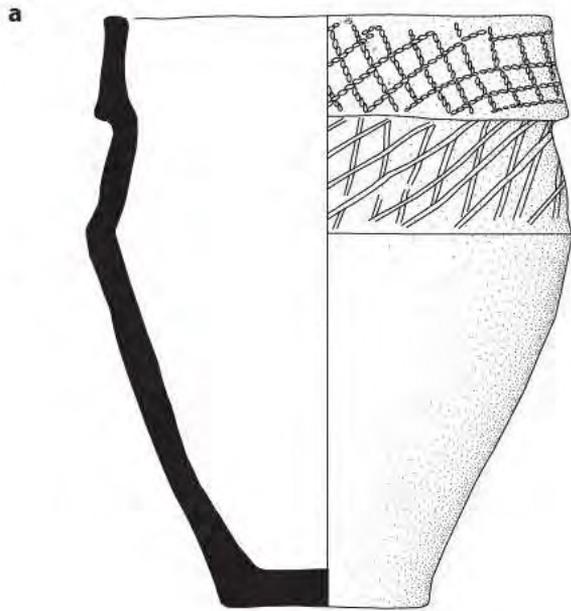


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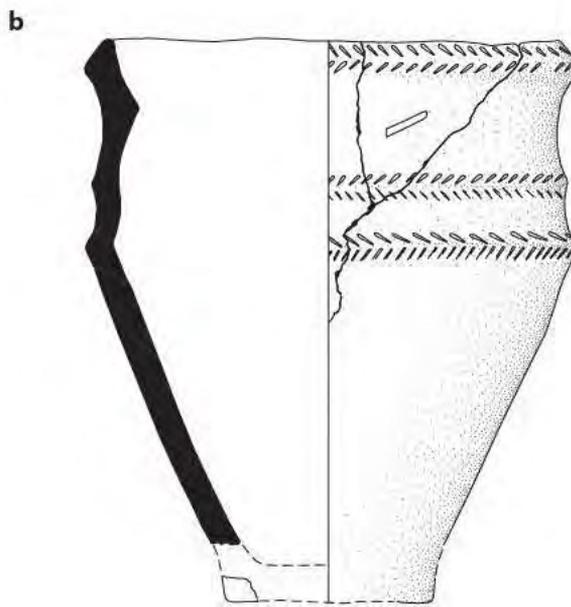
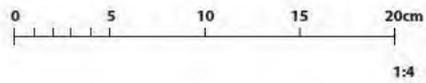
Craig Thomas, Ffynedd y Gadfa, Bangor, Gwynedd, LL57 2EP
Ffôn: 01248 352335 Ffacs: 01248 370925 email: gtw@hemb.co.uk

**Figure 8. Site 1 (Trench 99):
Cremation Urns plan and sections**

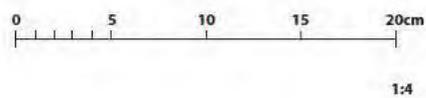
SCALE: 1:10 at A4



S.F. 3



S.F. 4



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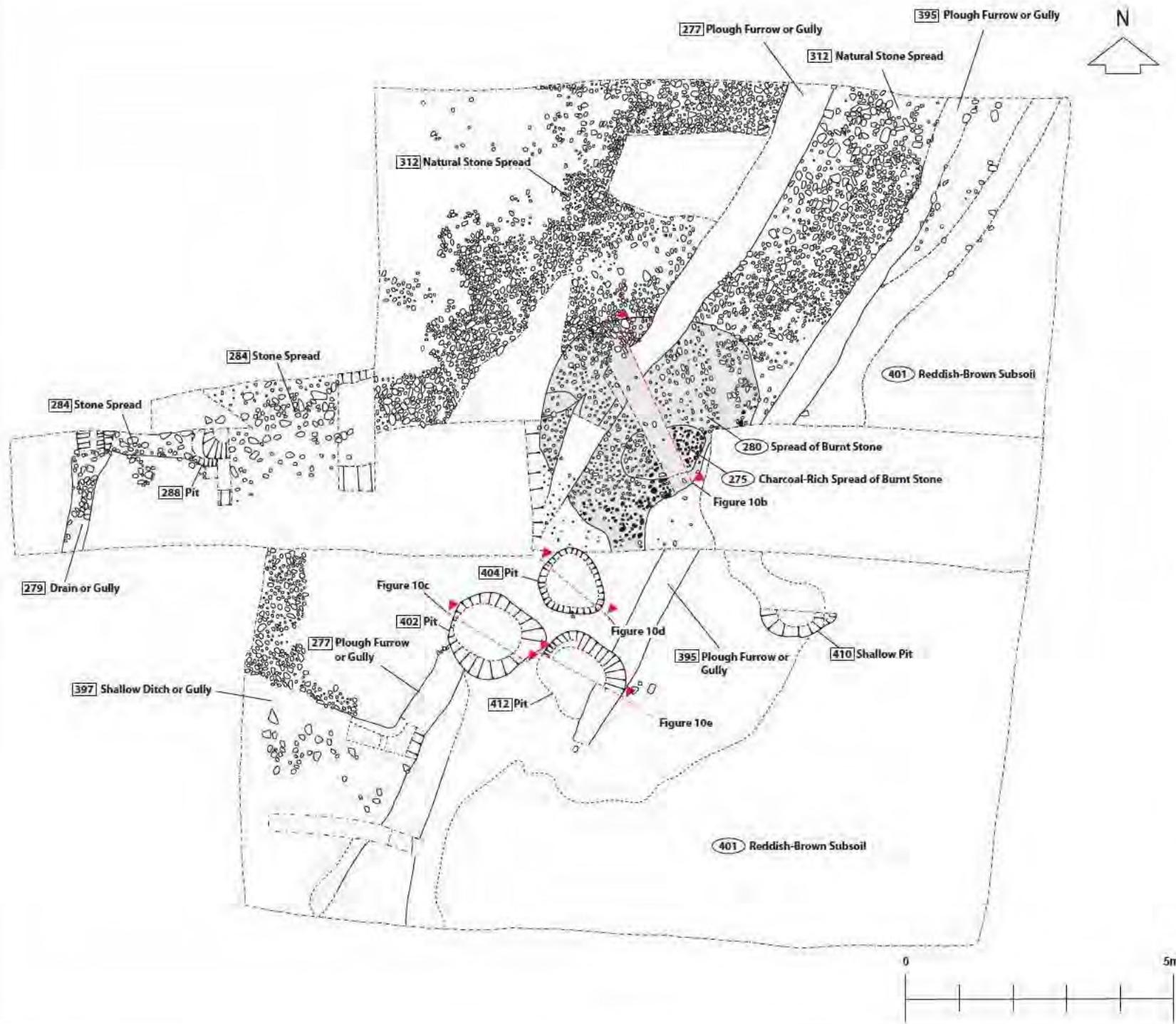


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Figure 9. Site 1 (Trench 99): Bipartite collard urn and food vessel/urn

SCALE: 1:4 at A4



- Extent of Excavation
- Burnt Stone
- # Charcoal

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Figure 10: Site 2
SCALE 1:100 at A4

Figure 10b

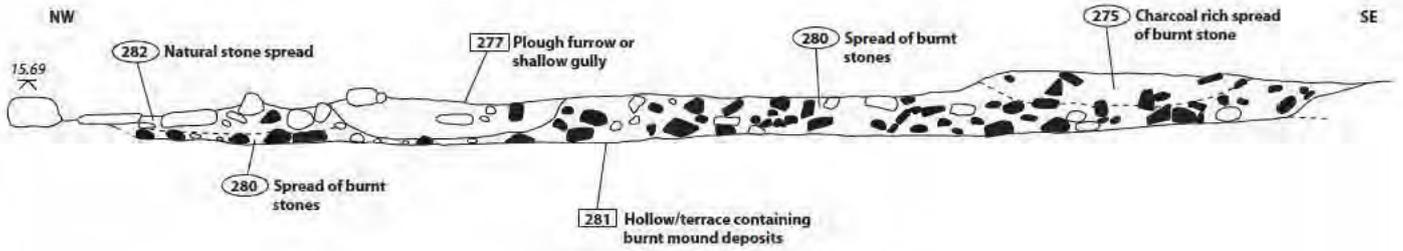


Figure 10c

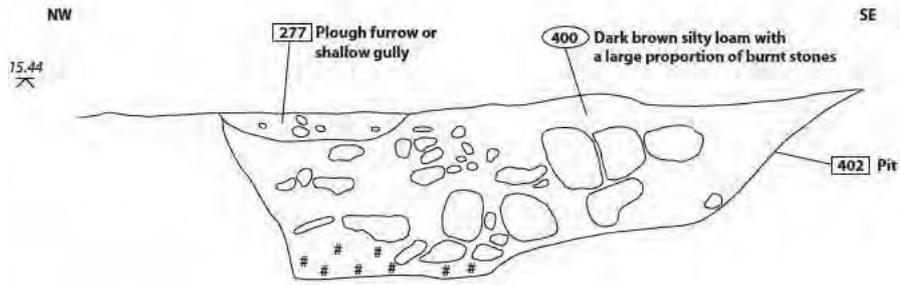
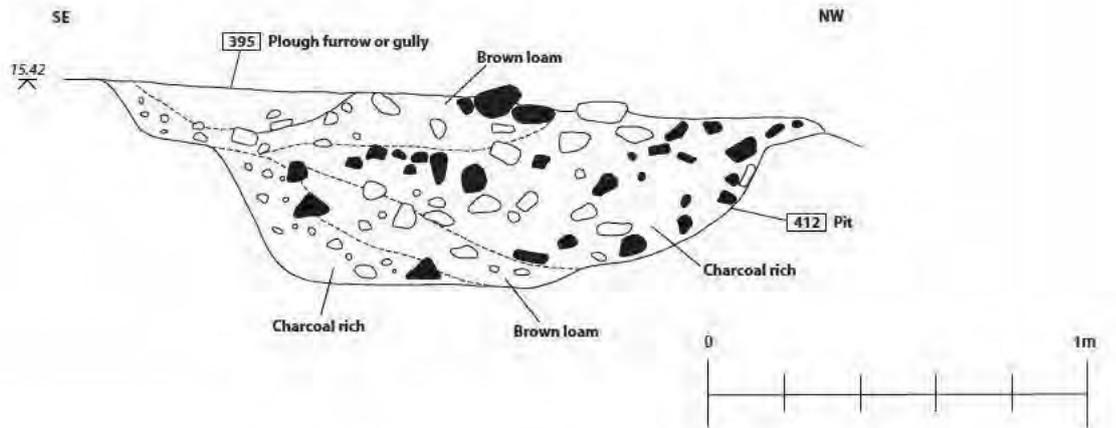


Figure 10d



Figure 10e

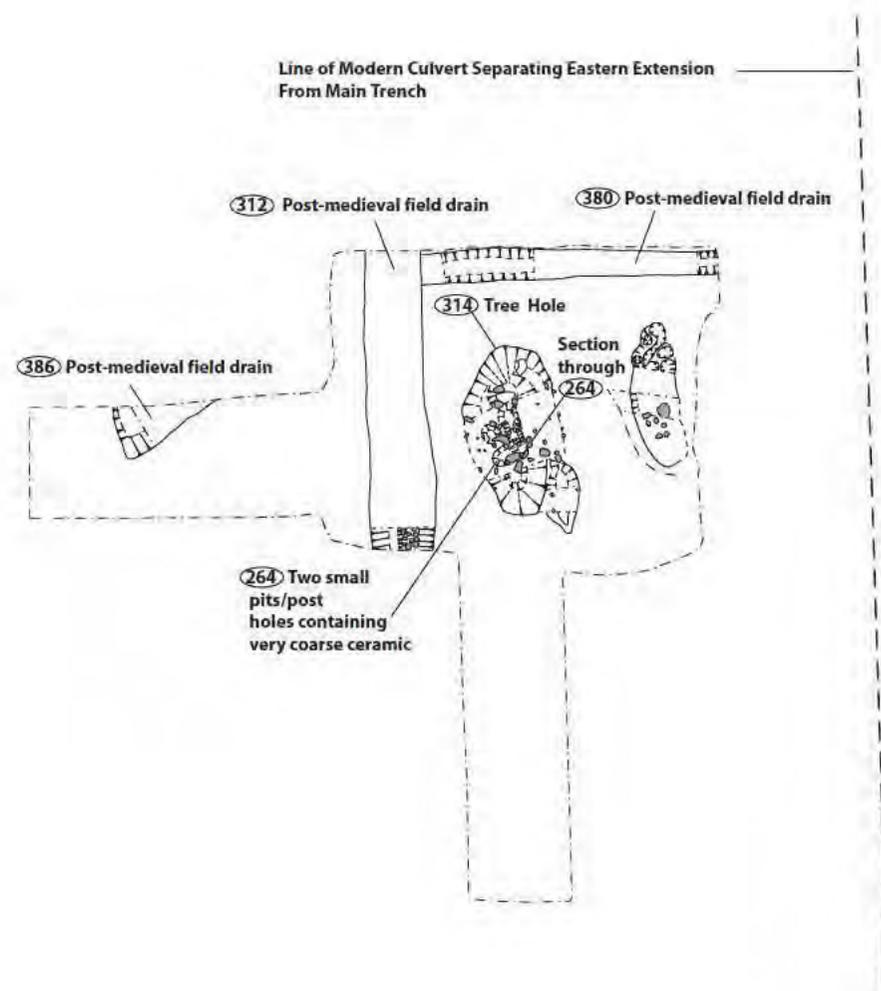
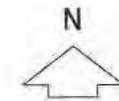


Craig Brown, Fionnuala Garbh, Beagor, Co. Wick, LI15 2E1
 Tel: 01248 332335, Fax: 01248 379925, email: gpa@keshmuseo.ie

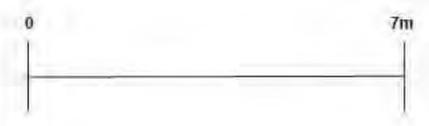
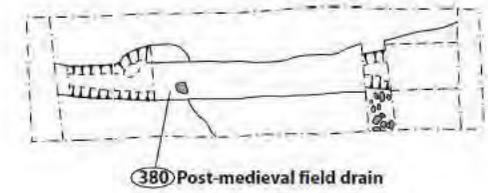
Figures 10 b-e. Site 2. Sections

SCALE: 1:20 at A4

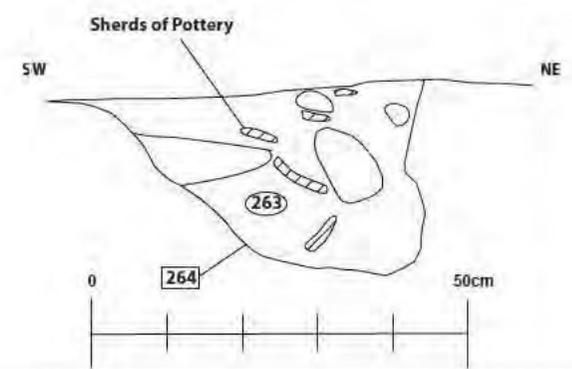
-  Stone
-  Burnt stone



Trench 45 (Eastern Extension)



Section through 264 (Scale 1:10)



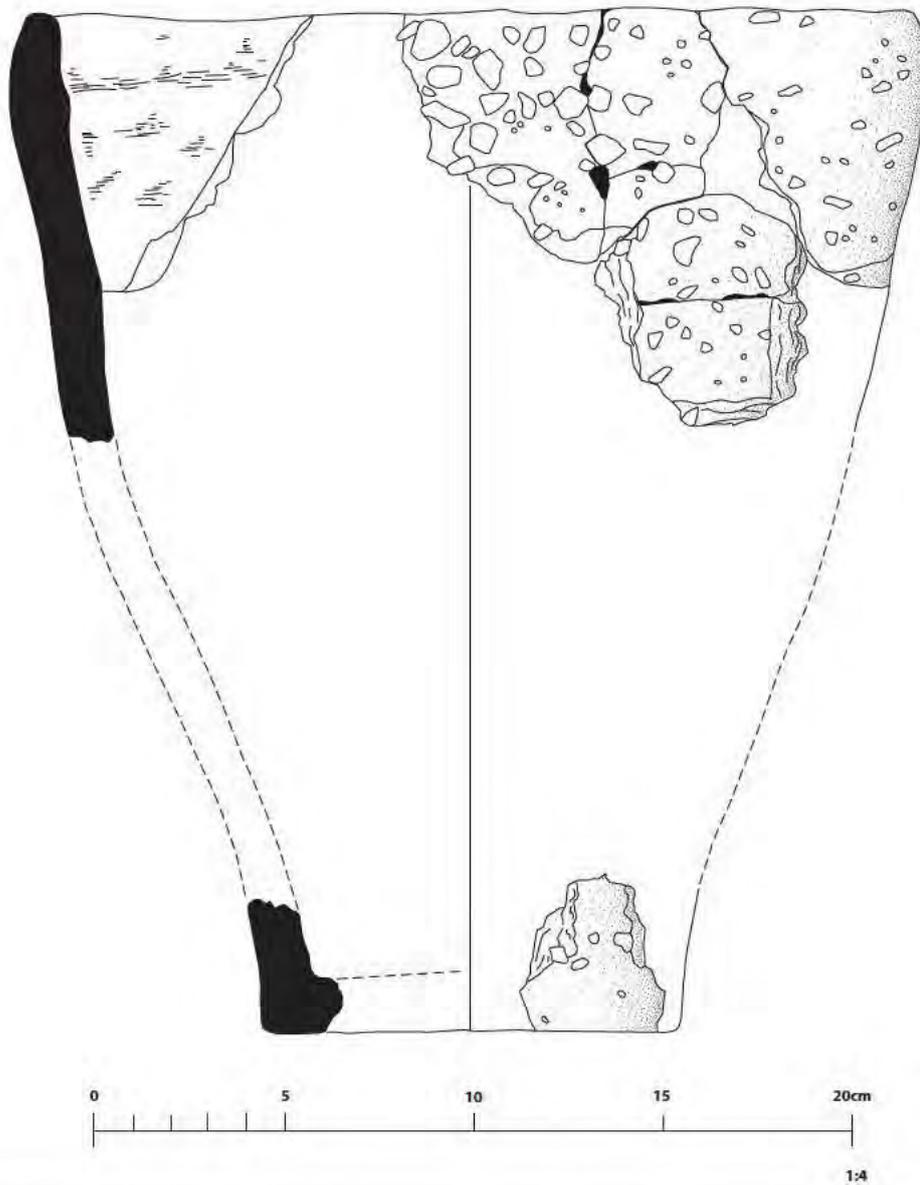
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DWYNOEDD
AESTHROLLOGOL
TREIST

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Figure 11: Site 3.Trench 45

SCALE 1:140 at A4



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**Figure 12: Site 3 (Trench 45).
Pottery**

SCALE: 1:4 at A4

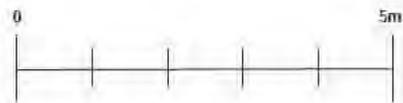
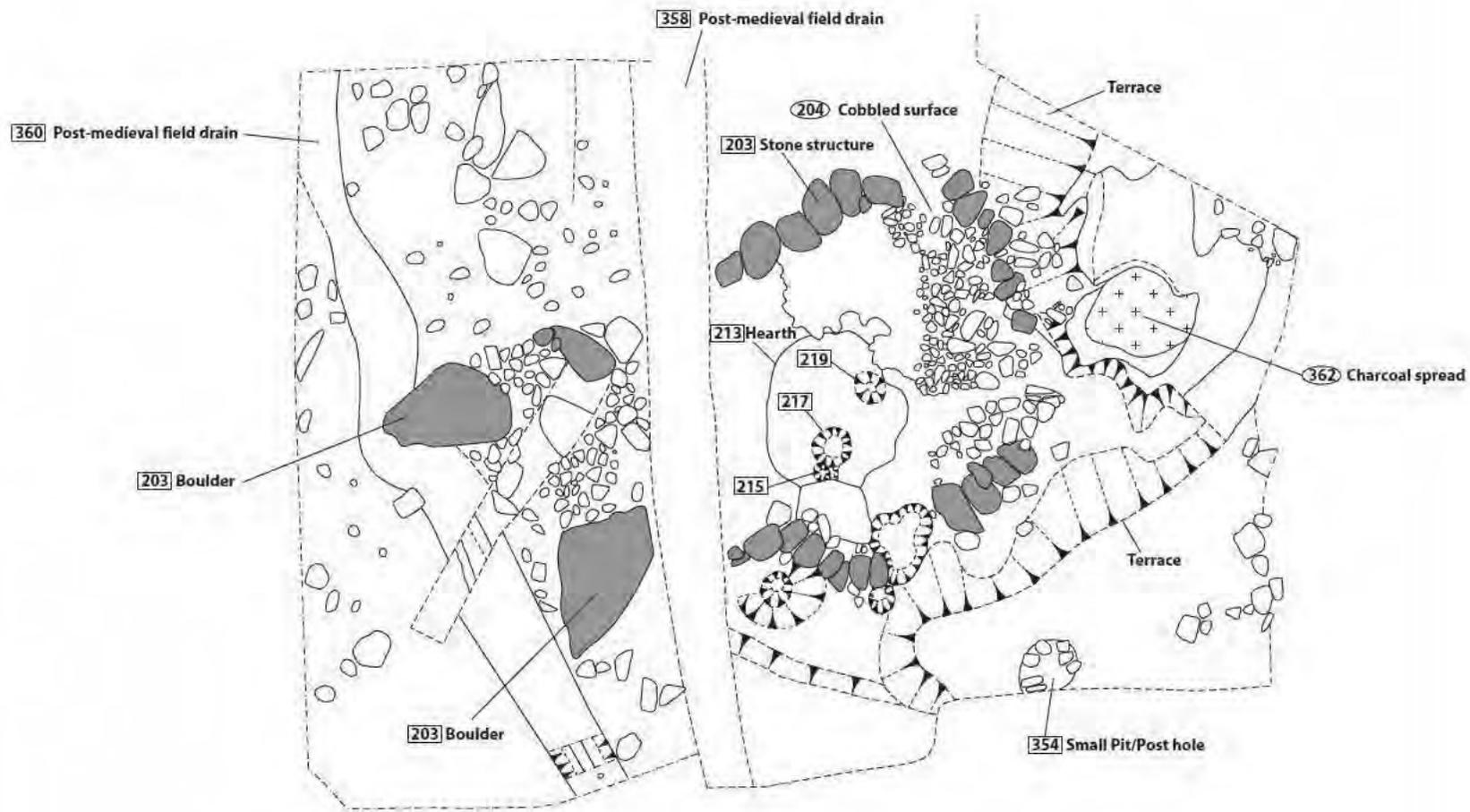


Figure 14: Site 5 (Trench 40)

SCALE: 1:100 at A4

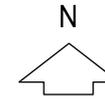
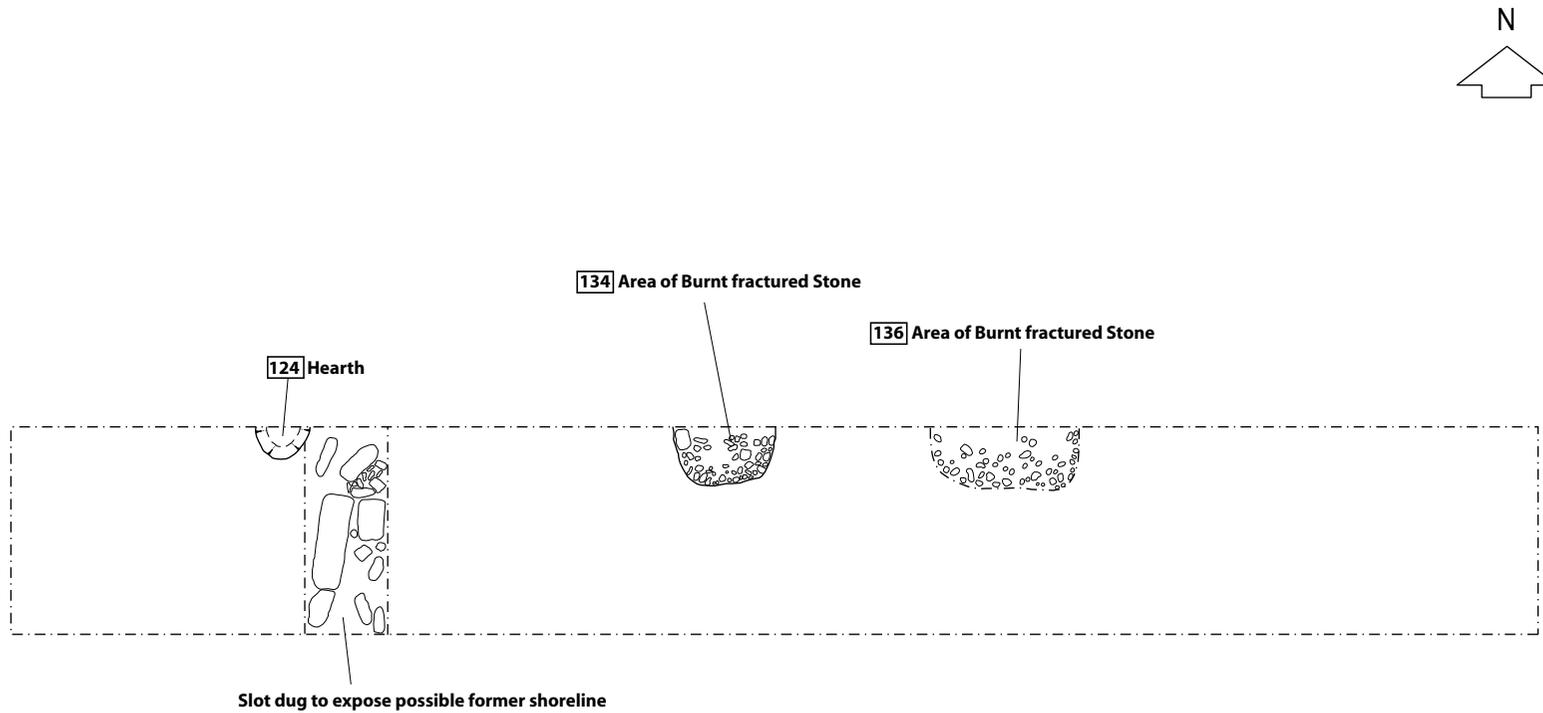
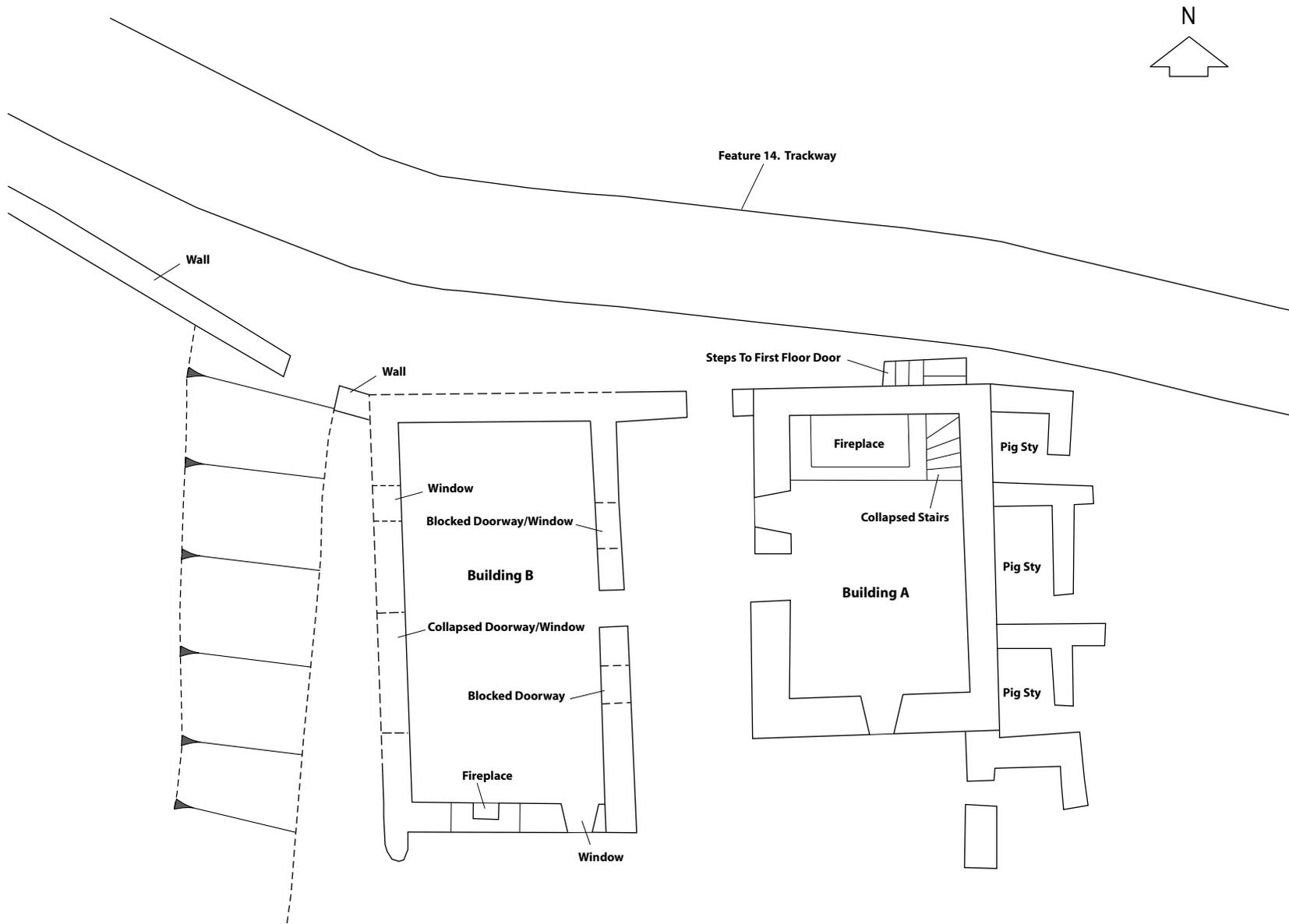
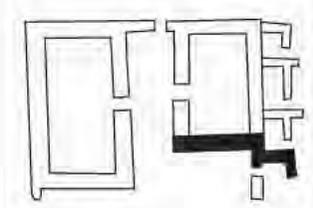
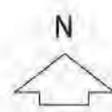
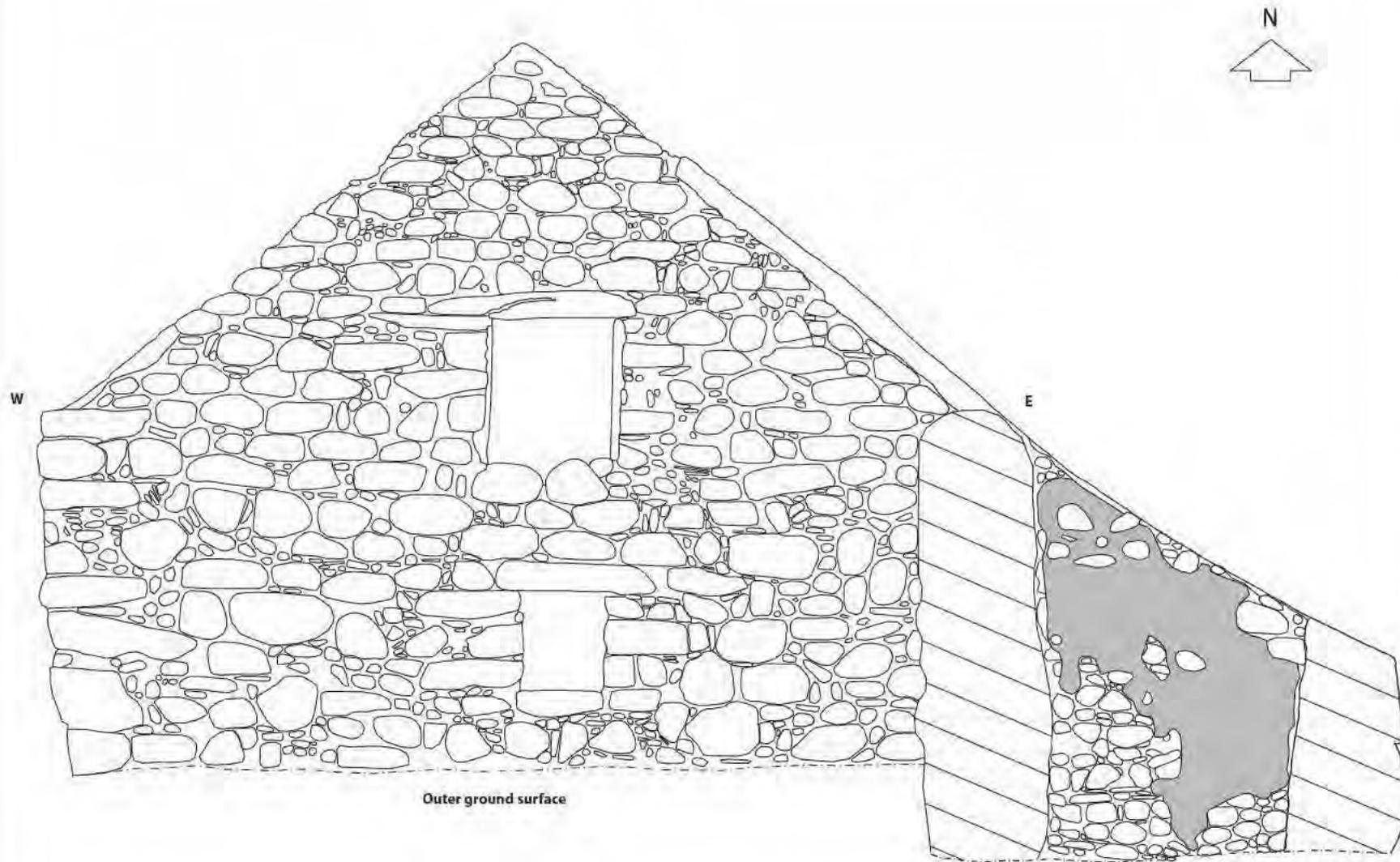


Figure 15: Site 6 (Trench 13)

SCALE: 1:60 at A4





-  Render
-  Wall Return
-  Extent

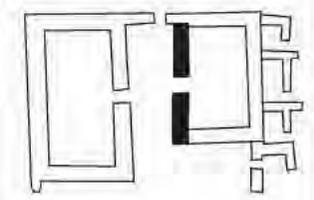
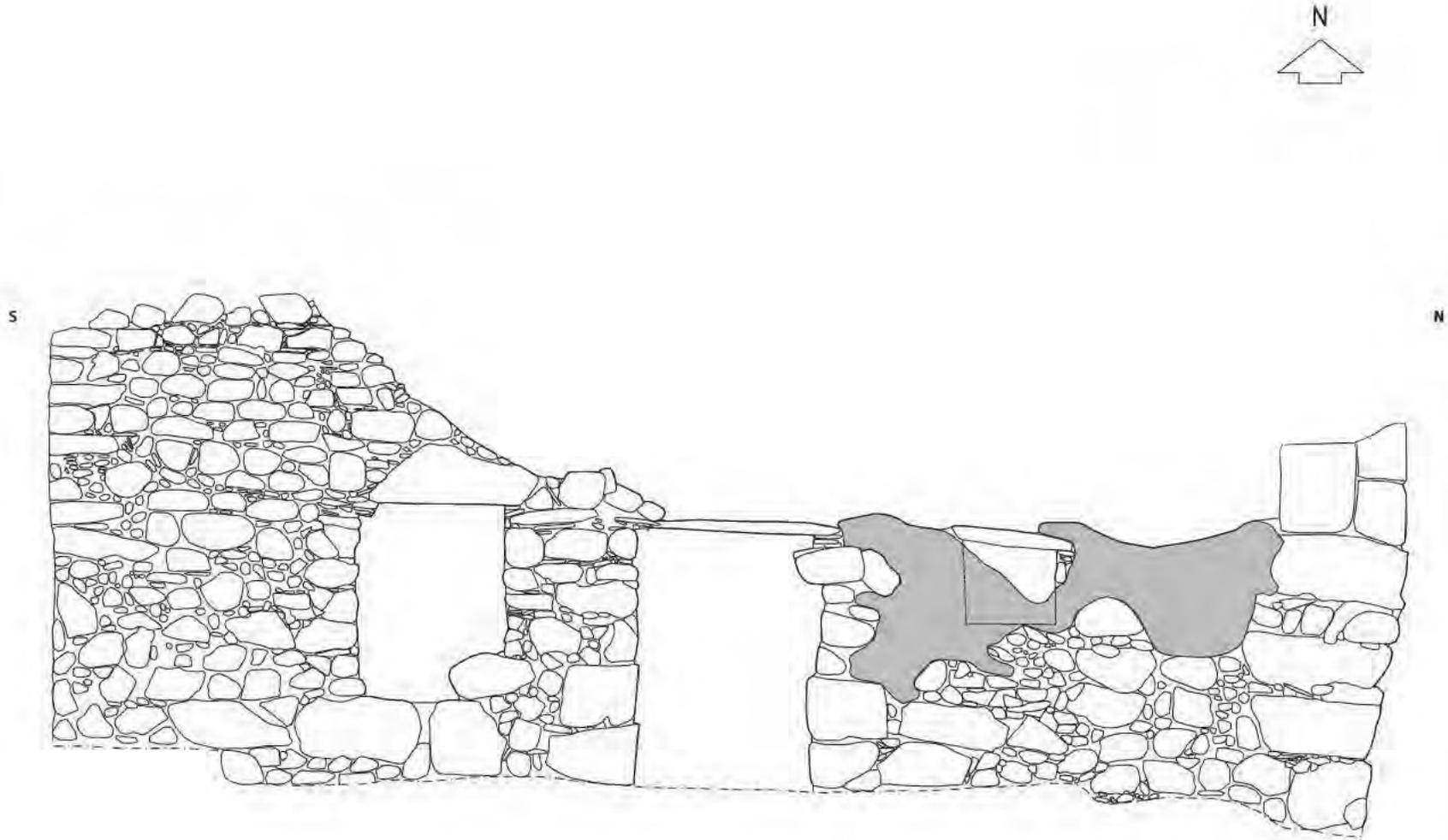
Outer ground surface



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Figure 17: Site 7. South facing elevation of building A

SCALE: 1:40 at A4



-  Vegetation
-  Presumed Extent of Window
-  Extent



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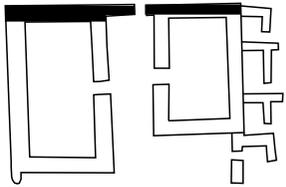
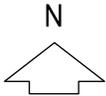
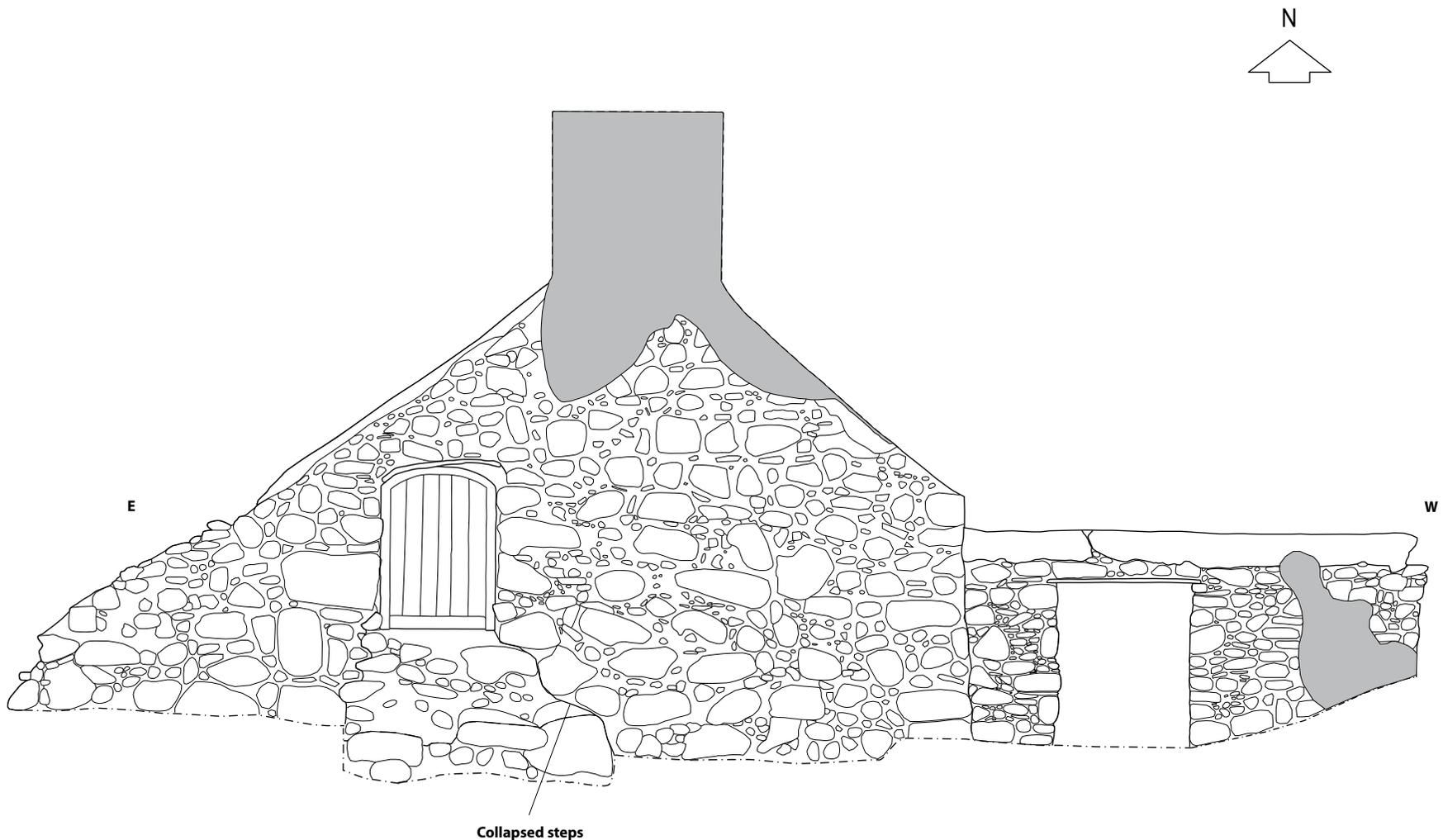


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Figure 18: Site 7. West facing elevation of building A

SCALE: 1:40 at A4



-  **Vegetation**
-  **Collapsed Steps**
-  **Extent**

Collapsed steps



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Figure 19: Feature 15. North facing elevation of building A

SCALE: 1:40 at A4

Figure 20: Feature 15. East facing elevation of building A

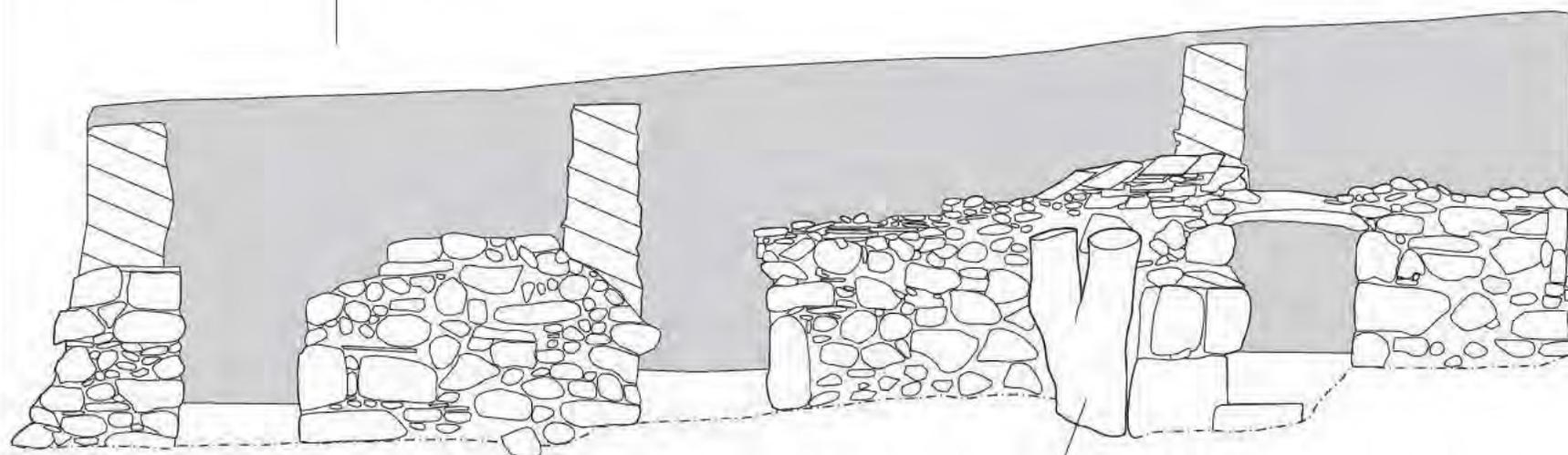
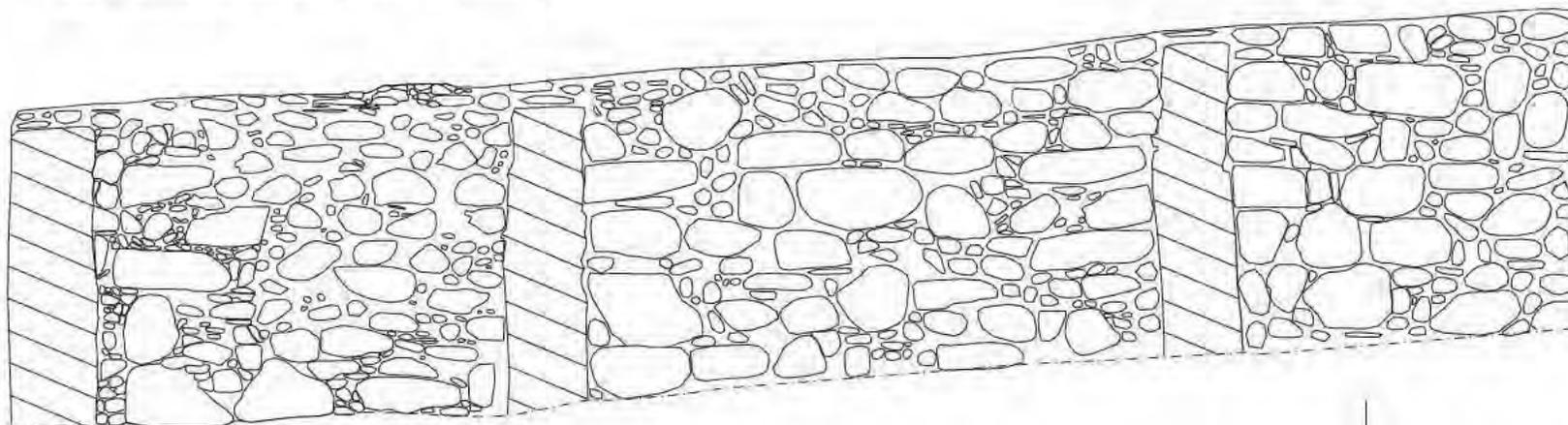
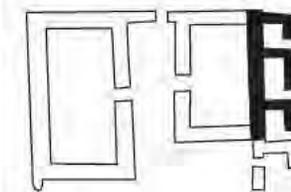


Figure 21: Feature 15. East facing elevation of pigsties



-  Vegetation
-  Collapsed Steps
-  Extent

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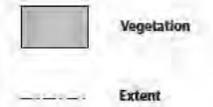
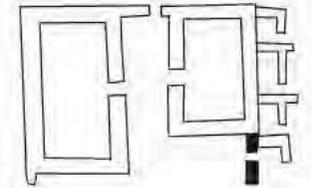
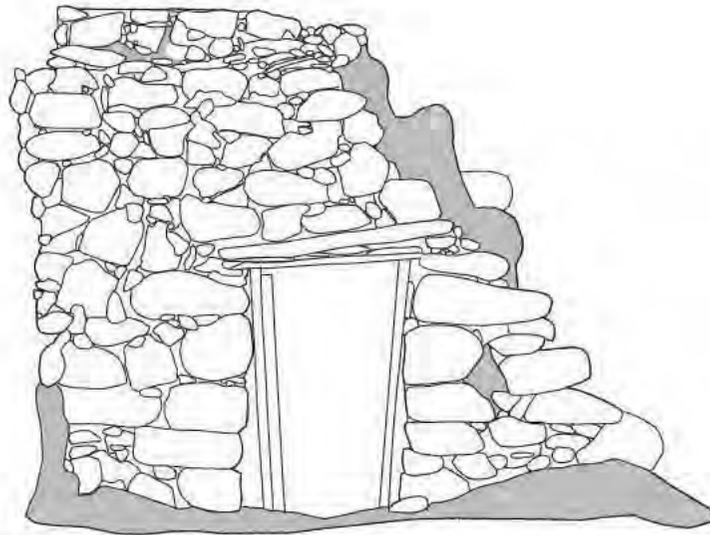
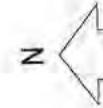


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Figure 20 & 21: Feature 15.
 East facing elevation of
 building A

SCALE: 1:40 at A4

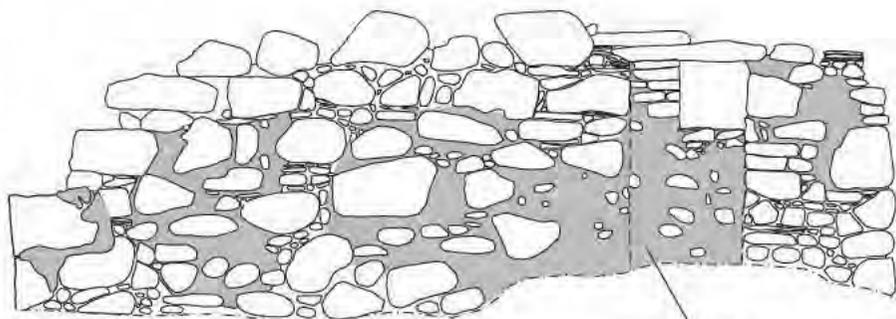


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Figure 22: Feature 15.
West facing elevation of
building A

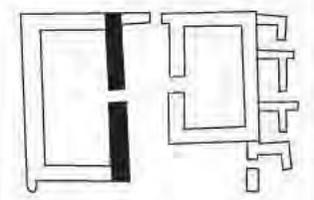
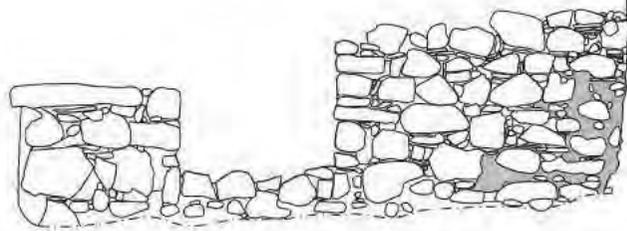
SCALE: 1:40 at A4

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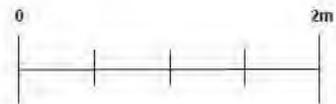


Blocked doorway

N



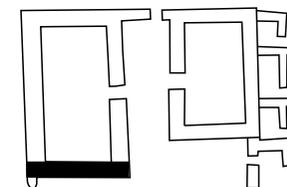
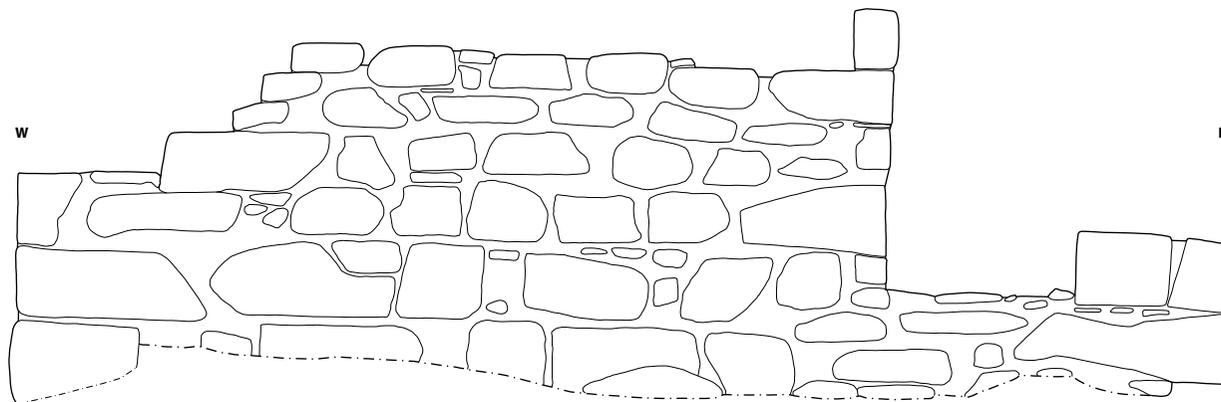
-  Render
-  Blocked Doorway
-  Extent



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Figure 23: Feature 15.
East facing elevation of
building B

SCALE: 1:50 at A4



--- Extent



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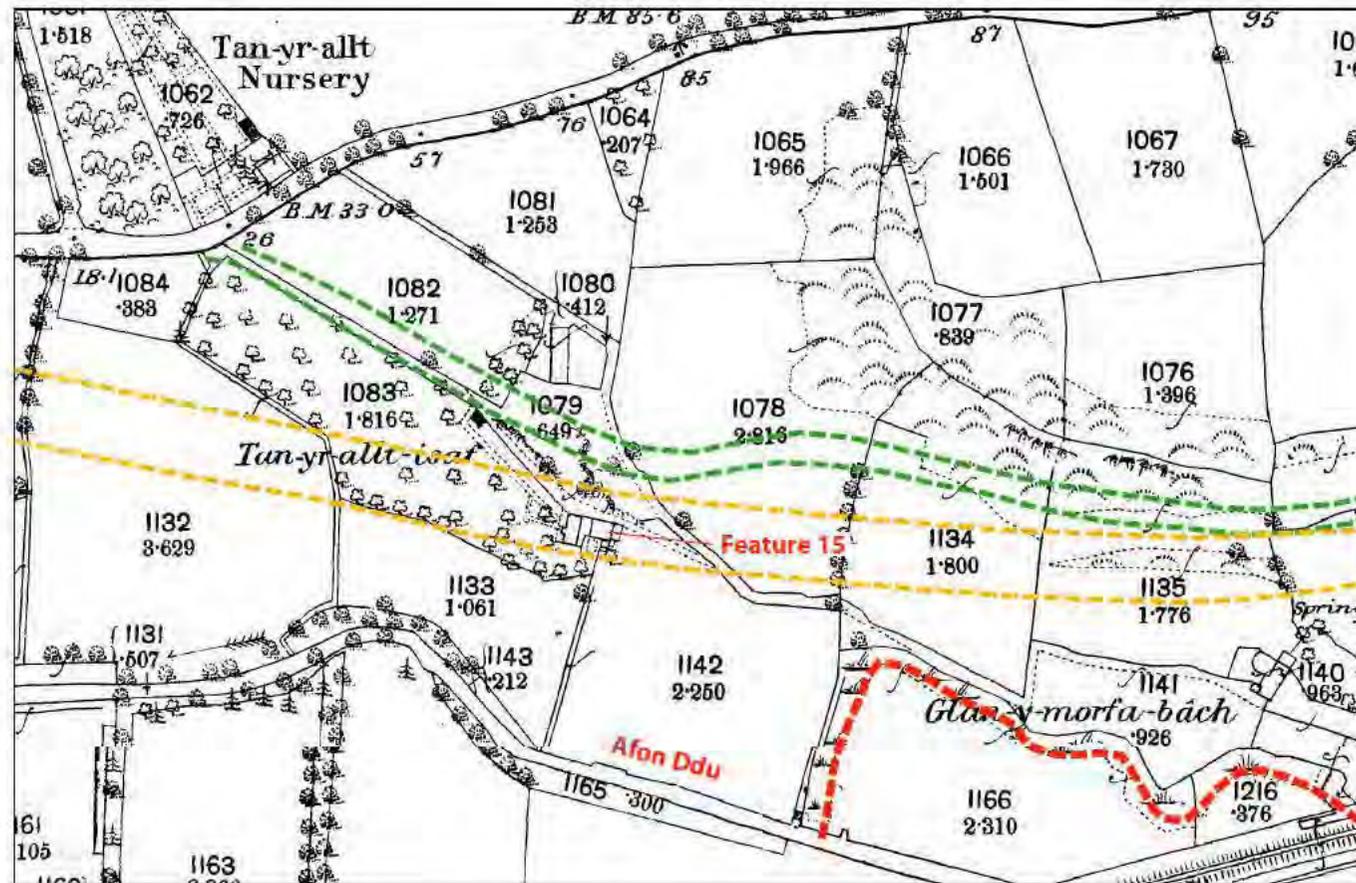


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Figure 24: Feature 15.
South facing elevation of
building B

SCALE: 1:40 at A4



- - - - Line of Afon Ddu before mid 19th century canalisation
- - - - Line of A497 road after AD 1900
- - - - Line of new A497 road

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 Cymru

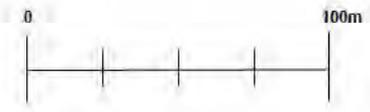


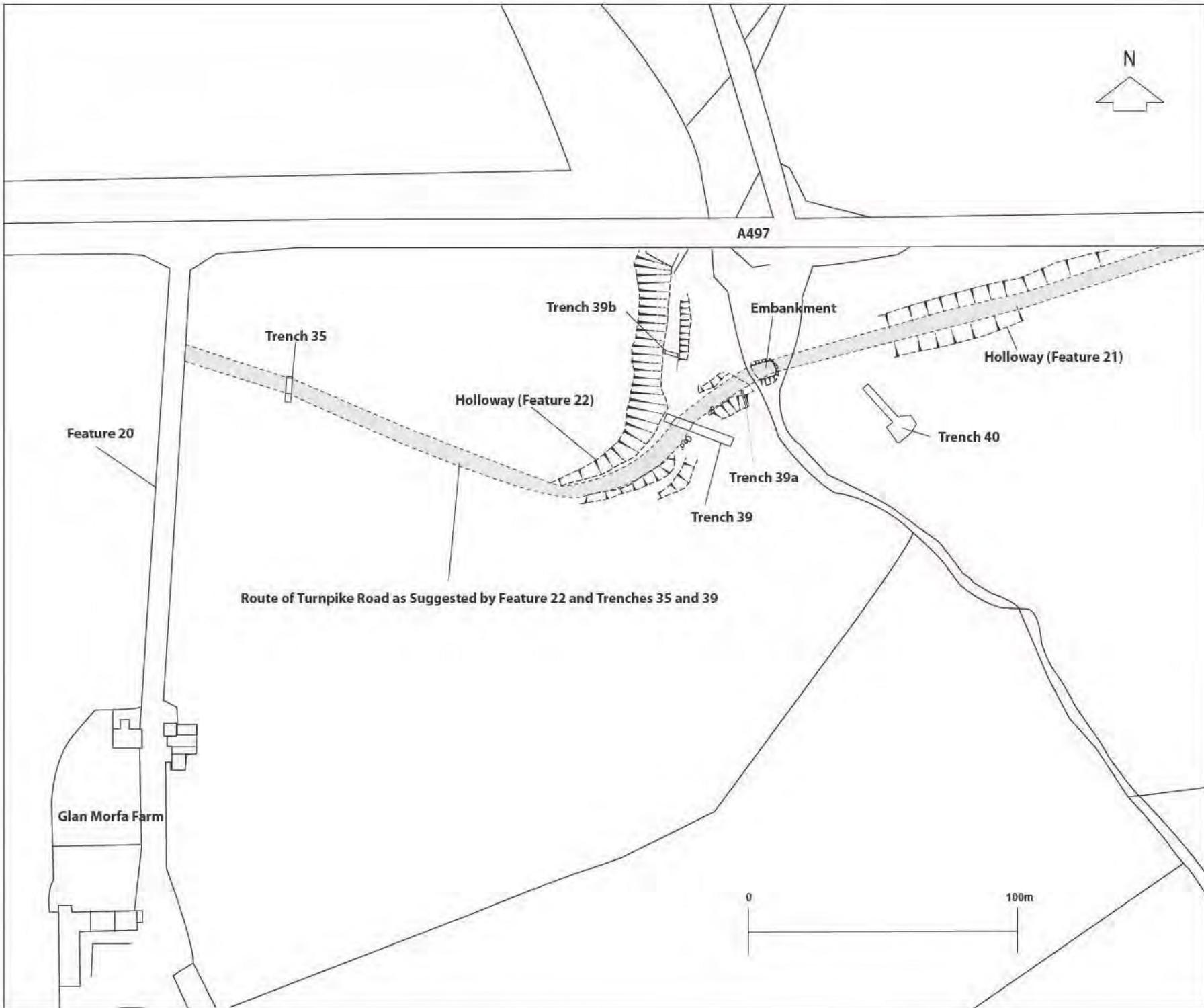
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 ANFURFODUR
 Cymru

Croy Rhondda Iffordd y Castell, Bangor, Gwynedd, LL57 2BT
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Figure 25: Feature 15. Aberrech 1889. Ordnance survey

SCALE: 1:2500 at A4





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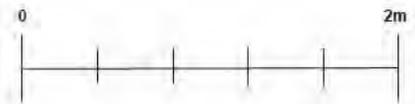
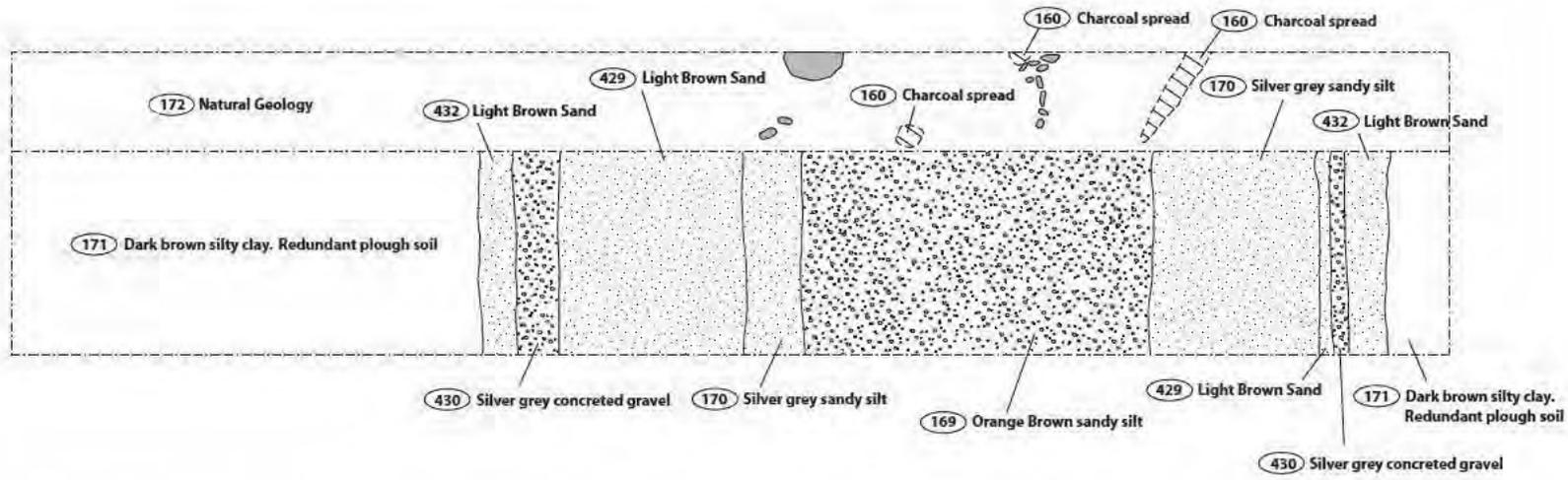
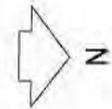
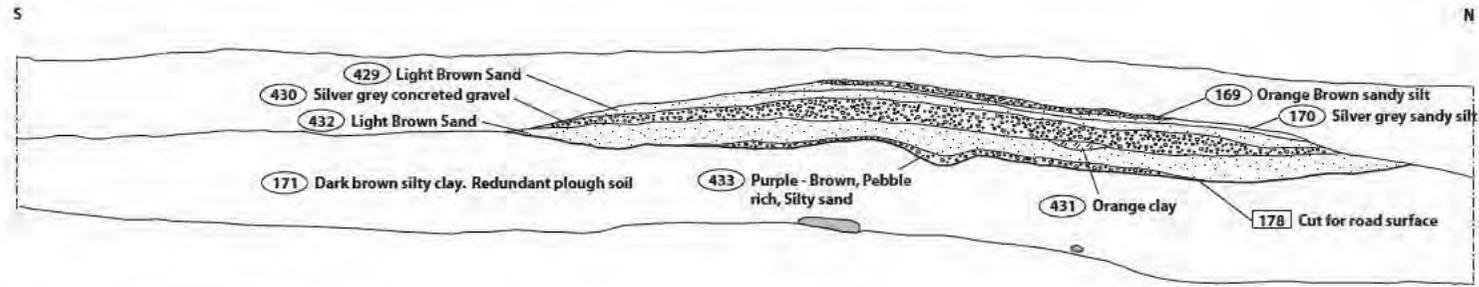


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**Figure 26: Feature 22.
Location of holloway and
associated trenches**

SCALE: 1:1500 at A4



-  Gravel
-  Sand
-  Clay
-  Charcoal spread
-  Stone

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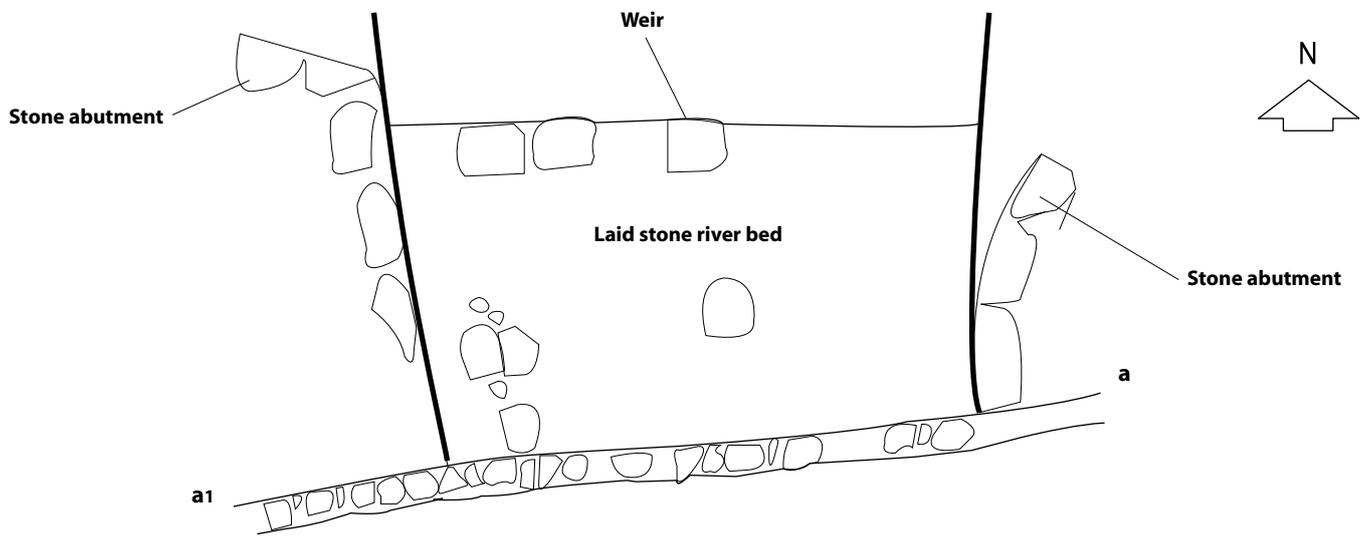


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ARCHAEOLOGICAL
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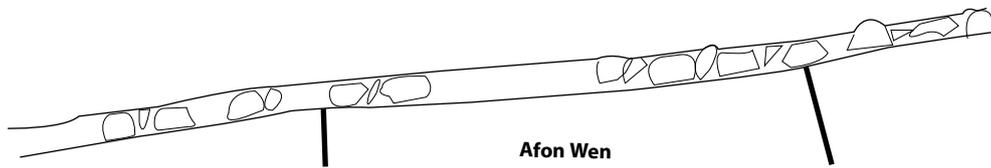
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Ffôn: 01248 332533, Ffacs: 01248 378025, email: gae@hwyrddo.co.uk

**Figure 27: Feature 15.
Trench 35**

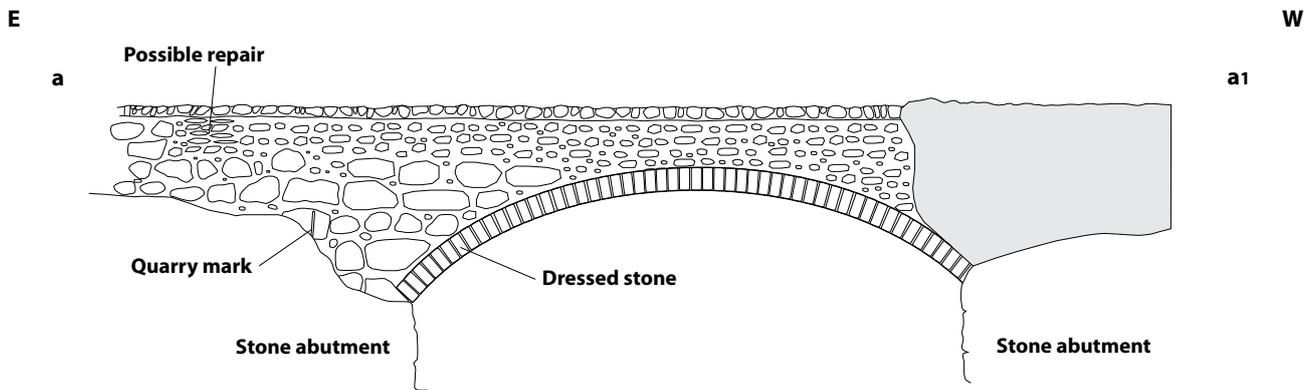
SCALE: 1:40 at A4



A497



Plan of Feature 31 (Scale 1: 100)



North-Facing Elevation of Feature 31 (1:100)

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Figure 28: Feature 31. Pont Friddlwyd

SCALE: 1:100 at A4



— Road Improvement Scheme
 — Watching Brief Areas



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Figure 30: Watching Brief Areas

SCALE: 1:40,000 at A4