MOELFRE TO BENLLECH

SEWAGE PUMPING MAIN

REPORT NO. 281

Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

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Prepared for Dwr Cymru Welsh Water

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Gwynedd Archaeological Trust Report No. 281

MOELFRE - BENLLECH SEWAGE PUMPING MAIN (G1474)

Archaeological watching brief for Dwr Cymru

1. INTRODUCTION

An intermittent watching brief was carried out during the construction works as recommended in the assessment report. In order to provide most economical use of time the work was limited to visits to view each section of the easement after topsoil stripping with occasional visits to observe trenching. Longer visits were also made to observe trenching in the vicinity of two features of potential value which were noted during the assessments, these were Assessment Feature (AF) 7, a hollow or platform, possibly an early building platform and AF9, an enclosure or farmyard associated with a ruined building, possibly a house of medieval or sub-medieval date.

In addition, a buried feature, a burnt mound of probable early Bronze Age date was discovered at Figin Farm (see below) which required extra time on site to allow detailed recording.

In all 22 visits were made between 3rd February and 4th April with one further visit on 2nd May to survey in the burnt mound at Figin Farm, which was not possible until after reinstatement of the topsoil dumps. Five further visits were made in November, 1997 during the construction of the pipeline between Efail Newydd and Benllech.

Most areas of operation involved stripping of topsoil down to a relatively 'clean' glacial till subsoil. The expectation of visibility of archaeological features was therefore high. In some areas removal of topsoil revealed only a deeper colluvium where ploughsoil had built up and where archaeological features could be expected to be hidden from view. It was in one of these areas that an early feature was located during trenching at Figin Farm. This was a 'burnt mound' buried by c. 0.5m of ploughsoil colluvium in a shallow, former valley. This feature was fortunately easily visible because of its dark colour, and was seen by the machine driver and reported to GAT by the Clerk of Works, Terry Williams.

A full site archive, with context sheets, field notes and site photographs will be deposited in the Regional Sites and Monuments Record.

2. GENERAL RESULTS OF THE WATCHING BRIEF

The construction work took place using a single work gang from north to south except the portion from Moelfre harbour along the public road. The work took place in short stages defined by the topography or the land ownership. Each stage was topsoil stripped overall followed by continuous trenching and immediate backfilling. The archaeological observation followed the same stages and will be described in the same manner with the stages numbered 1 to 10 from north to south (Fig. 1).

2.1 Moelfre harbour to Parish Church Hall

Nothing of archaeological interest was noted at the harbour works for the pumping station or where the route ran along the existing public road.

2.2 Parish Church Hall

Garden type soil with 20th century rubbish. No features.

2.3 Parish Church Hall to Porth yr Aber

The stripped subsoil was light coloured, clean glacial till which suggested that visibility of sub-surface features would be good.

The lines of the former (18th - 19th century) field boundaries noted in the assessment report (AF 1 and 3) were cut by the pipe trench, and the sections were photographed, but no new features were recorded.

2.4 Porth yr Aber to Gell-bach

The first part of the construction here was accompanied by very wet weather and the stripped easement was already churned by machinery when visited but the clayey subsoil was light coloured giving reasonable visibility and no subsoil features were noted.

Two of the existing field boundaries crossed by the easement in this part of the route were identified in the assessment report as being of possibly early origin and therefore of local importance, deserving a watching brief and possibly detailed recording (AF 5 and 6). Only one (AF 6) was cut through in clear enough manner to allow observation of its structure. It consisted of a bank and ditch, the bank constructed entirely of clay subsoil cast up from the ditch (Plate 1). Its make-up appeared to be simple, i.e. with no evidence of multiple phases of construction or of buried soils. The bank appeared to lie on a raised ridge of subsoil defined on one side by its ditch and on the other by a drop in ground level. This suggests that the bank was isolated by plough erosion of the surrounding subsoil surface as it lies on a slope. The apparent lack of complexity of the bank itself suggests that it is not of great antiquity.

The second part of this length of the route was stripped in ideal dry conditions and the subsoil surface was clean and well defined with good visibility (Plate 2). Two shallow patches of charcoal were revealed, one close to the stream, the other higher up the slope, but they were not associated with any other features.

The final part of this length comprised the summit of a low ridge close to a pond (AF 8) and crossing a hollow or platform (AF 7). The latter was recorded as a site of potential value, a possible house or building platform of medieval or post-medieval date. The topsoil stripping across this area was therefore observed closely. Excavation showed it to be a hollow with gently slopeing sides filled with ploughsoil, c. 0.80m deep (Plate 3). A stone-lined drain ran into the hollow taking overflow from the nearby pond (AF 8). If the hollow had been a building platform it would have shown a regular shape, particularly where cut into the slope, and might have preserved some trace of building stone footings or trenches. The lack of any such shape, or features and its shallow scoop profile, with no buried soil horizon suggests it is the remnant of a natural hollow or possibly part of a drainage system subsequently graded over and obscured by many ploughing episodes.

2.5 Gell-bach building and enclosures (AF 9)

This site consists of a stone walled enclosure containing the foundations of a rectangular building , and various terraces with slight traces of walls, suggesting it was once a a farmyard complex, now largely obscured by trampling and dumping of rubble (see Report No. 241). The building was assigned to the category of regional importance and it was hoped that observation of trenching through the enclosure might provide some artefactual evidence which would help to assign a date to the building. However, conditions were poor when trenching cut through the yard area as a spring rises there. The revealed soil was dark and humic and there was no evidence for any former yard surface e.g. cobbling, suggesting that this part of the enclosure may have been a garden plot rather than a yard. The excavated soil was carefully searched but no artefacts of earlier than 19th - 20th century date were found.

2.6 Gell-bach to Traeth Bychan road

Conditions dry. Visibility good. No features identified.

2.7 Figin Fawr and Dinas Farm

A long stretch of undulating pasture, well cultivated in the past, mostly gently sloping. Conditions good. Visibility of subsoil mostly good but some areas were dark in colour and seemed likely to consist of buried colluvium, not true subsoil, and these areas were therefore of poor or at best uncertain visibility. In one such area due east of Figin Fawr farmhouse a line of large boulders was noted after removal of the topsoil (Plate 5). These lay below the topsoil and seemed likely to be the line of a former field boundary predating the present large, rectilinear fields of 18th/19th century date. Subsequent pipe trenching revealed that there had been a small stream in a shallow valley here. The stream had later been canalised in a small leat running around the contour to discharge into a ditch alongside the 18th/19th century field boundary. The build-up of colluvium in the former valley was over 1m deep and proved to have completely buried an early archaeological feature, a 'burnt mound' of dark, charcoal-rich soil and burnt stones. This feature was of sufficient value to deserve detailed recording and is therefore described separately after the general survey description (see section 4.0 below).

2.8 Penrhyn Point Caravan and Chalet Park

A short stretch across a medium sloping pasture field. Conditions good but this and the immediately preceding stretch through Dinas Farm were not fully topsoil stripped because the owners wished the area to be kept open for the holiday season, therefore the easement was not fenced and the topsoil was not stripped. Instead just the turf was lifted along the line of the pipe, the trench was cut and the pipe laid and immediately laid and re-turfed. It was therefore not possible to view the ground except briefly, as revealed in the trench cutting. Three visits were made to observe parts of the trenching but no features were observed.

2.9 Pen-llain to Efail Newydd

A long stretch through the pasture fields of Pen-llain and Borthwen (formerly Ty Croes). Mostly gently sloping, undulating grass pasture, well cultivated in the past. Stripping of this part was carried out along the fenced easement, as normal, and in good conditions providing good visibility of the exposed subsoil surface.

On Pen-llain land an old field boundary (shown on the 1920 OS 1:2500 map) was noted along with two stone-lined drains.

On Borthwen land visibility was very good but only one feature was noted. This was a scoop filled with dark material. On investigation this proved to be filled, not with charcoal-rich soil, but of dark organic soil. It is likely to be a remnant of a natural, periglacial peat-filled hollow.

Nothing was found along the remainder of the route.

2.10 Efail Newydd to Benllech

No sites of archaeological interest were noted along this section of the route, much of which lay within the confines of a caravan park.

3. THE BURNT MOUND, FIGIN FAWR FARM (SITE 16).

3.1 Introduction

This portion of the easement cut across a shallow valley, the stream from which is presently diverted into a leat as described above. The leat relates to the 18th/19th field pattern of relatively large rectangular fields. Previously a more irregular pattern following the natural topography might be expected and the line of boulders noted during topsoil stripping probably formed part of such a pattern, following the valley bottom, perhaps demarcating the stream or wetland edge.

The surface revealed by topsoil stripping in the area of the valley was slightly darker but not otherwise different from the rest of the exposed subsoil except for being wet with natural seepage. However, cutting of the pipe trench showed that a considerable depth of colluvium had accumulated as a result of ploughing on the slope.

Hidden beneath this colluvium and close to the lowest point of the former valley was an extensive layer of dark soil and burnt stones. This layer can be identified as part of a burnt mound: such mounds of charcoal-rich soil and burnt stones occur widely in western Britain and Ireland, usually adjacent to water courses. Most are thought to be 'cooking places' where food, probably large joints of meat, was cooked in pits of water heated by the addition of hot stones (O'Kelly 1954; Williams 1990). In a few cases the mounds may be the residues from metal smelting from ores, (Lynch 1991, 362-4) but that was clearly not the case at Figin Fawr since there are no ores or smelting residues present in the mound. The majority of burnt mounds that have been excavated have been shown to have been in use during the second millennium BC, and a radiocarbon date from charcoal confirms the use of this site at the start of the second millennium BC. Although a considerable number of burnt mounds have been located, their exact function and date cannot be assumed. The identification of such a feature at Figin Fawr is of great interest and potential value since it shows that not only was there activity here during the second millennium BC but that somewhere close at hand are likely to be the remains of associated settlement. This is of particular value given that no other evidence of activity or settlement of that period has yet been identified in the vicinity.

3.2 Dating

A sample of charcoal was submitted for dating to Beta Analytic Radiocarbon Dating Laboratory, and the following results were obtained. The results are shown in tabular form, with dates from similar sites within N Wales included for comparative purposes.

Site Details	Lab No. and Details	Radiocarbon Age BP	Age in Cal. BC (1 sigma) (2 Sigma)
G1474 Figin Fawr	Beta-106684	3770 +/- 60	(2050-2280) (1985-2350)
G1339 Gwalchmai	Swan-125	3650 +/- 70	(1940-2140) (1870-2280)
G1352 Nant Porth	Swan-140	3290 +/- 60	(1510-1670) (1440-1740)
G1317 Llanbedrgoch	Swan-124	2840 +/-70	(910-1130) (840-1260)

This site was therefore in use at the very start of the second millennium BC, comparable in date with the site at Gwalchmai, but the other two sites indicate the continuing usage of similar sites through to the start of the first millennium.

3.3 Location

The site lies at the mouth of a small valley which cuts through a limestone escarpment, issuing onto a gently sloping coastal plateau which then drops steeply at cliffs on the sea edge at a distance of approximately 200m. The coastal plateau is covered with a clayey glacial drift and the springs which issue from the limestone exit over this less pervious drift.

The mound lies on the south-east side of this valley and although the stream in the valley has now been diverted into an artificial leat it is clear from the topography that the burnt mound lay within a few metres of the stream when it was in its original course.

3.4 Description (note the numbers in brackets refer to the context layers as identified on the section drawing Fig. 2)

The burnt mound was not visible before the cutting of the pipe trench either in ground contours or in soil colour. It was completely buried by a deep layer of homogenous ploughsoil colluvium (2) to a minimum depth of 0.35m even after removal of c. 0.3m of turf and topsoil (1). The pipe trench was cut to a depth of c. 1.0m below the ground surface revealing the burnt mound in the sides of the trench (Plate 6). Thanks to the co-operation of the contractors it was possible to leave the trench open temporarily so that the archaeological features could be recorded and sampled.

The mound, as revealed in the trench section (Fig. 3) consisted of an extensive lens of dark material (4) extending over a maximum distance of c. 9.0m and with a maximum depth of 0.30m. The lens was approximately symmetrical and appeared equal in both sides of the trench. There is no indication of the overall shape or extent of the mound. The dark material (4) consisted of c. 50% burnt and fractured stone mixed with black, charcoal-rich silty loam. The overlying colluvium was a single, homogenous layer although becoming slightly paler in colour in its lower half (3). The burnt mound material appeared to lie directly on the brown silty clay subsoil (6) with no indication of any buried land surface at the interface between the two (5).

Excavated examples of burnt mounds are often found in association with pits which form part of their use. Just beyond the north-west end of the Figin Fawr mound was a shallow pit or gulley (7) c. 0.25m deep filled with reddish-brown silty clay containing c. 50% sub-rounded pebbles, mostly c. 0.05 - 0.10m in length. Only part of this feature was available for study since the rest of the pipe trench had already been backfilled when the find was notified. It cannot be certain from the limited exposure whether the feature is man-made or a natural water-worn gulley. Its fill had no obviously water-laid lenses but on the other hand the stone content consists of water-worn pebbles quite different to the angular, fractured limestone in the burnt mound.

A bulk sample from the mound fill was sieved through 25mm, 1mm and 500 microns. The burnt stone was of fairly even size c. 80mm in length and almost entirely of local limestone with very occasional fractured glacial pebbles of other rock. The matrix soil contained a considerable amount of charcoal, some finely comminuted but a considerable proportion in chunks up to c. 15mm in diameter. This charcoal provides the possibility of further

analysis and radiocarbon dating. Study of the finer fraction of the sample might reveal carbonised botanical material such as seeds which would provide information about the environment and possibly the diet or processes of the mound's users.

The setting and location of the mound suggests that was probably used for cooking, as there are no metal ores in the vicinity. The shape of such mounds is often distinctive, typically of a crescentic shape around the pit where cooking took place. It may be possible to identify the shape and extent of the mound by geophysical survey which might also locate any associated pit and possibly give some indication of the location of associated settlement activity.

4.0 ACKNOWLEDGEMENTS

Terry Williams of Hyder Consulting was of considerable help in liaising with GAT to monitor progress of construction work and allow visits to take place when most suitable. All the landowners involved were supportive of the work and particular thanks go to Huw Rowlands of Gell Bach and Huw Rowlands (Snr) of Figin Fawr for allowing access. Thanks must also go to Emyr Hughes of Hughes Construction and the construction team for co-operation and occasionally adjusting the work to allow recording to take place. Thus it was possible to investigate and record the burnt mound at Figin Fawr without hindering construction in any way.

5.0 REFERENCES

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Lynch, F. 1991. *Prehistoric Anglesey.*

O'Kelly, M.J. 1954. Excavations and experiments in ancient Irish cooking-places. *Journal of Royal Soc, of Antiqs*, Ireland, 84, 105-55.

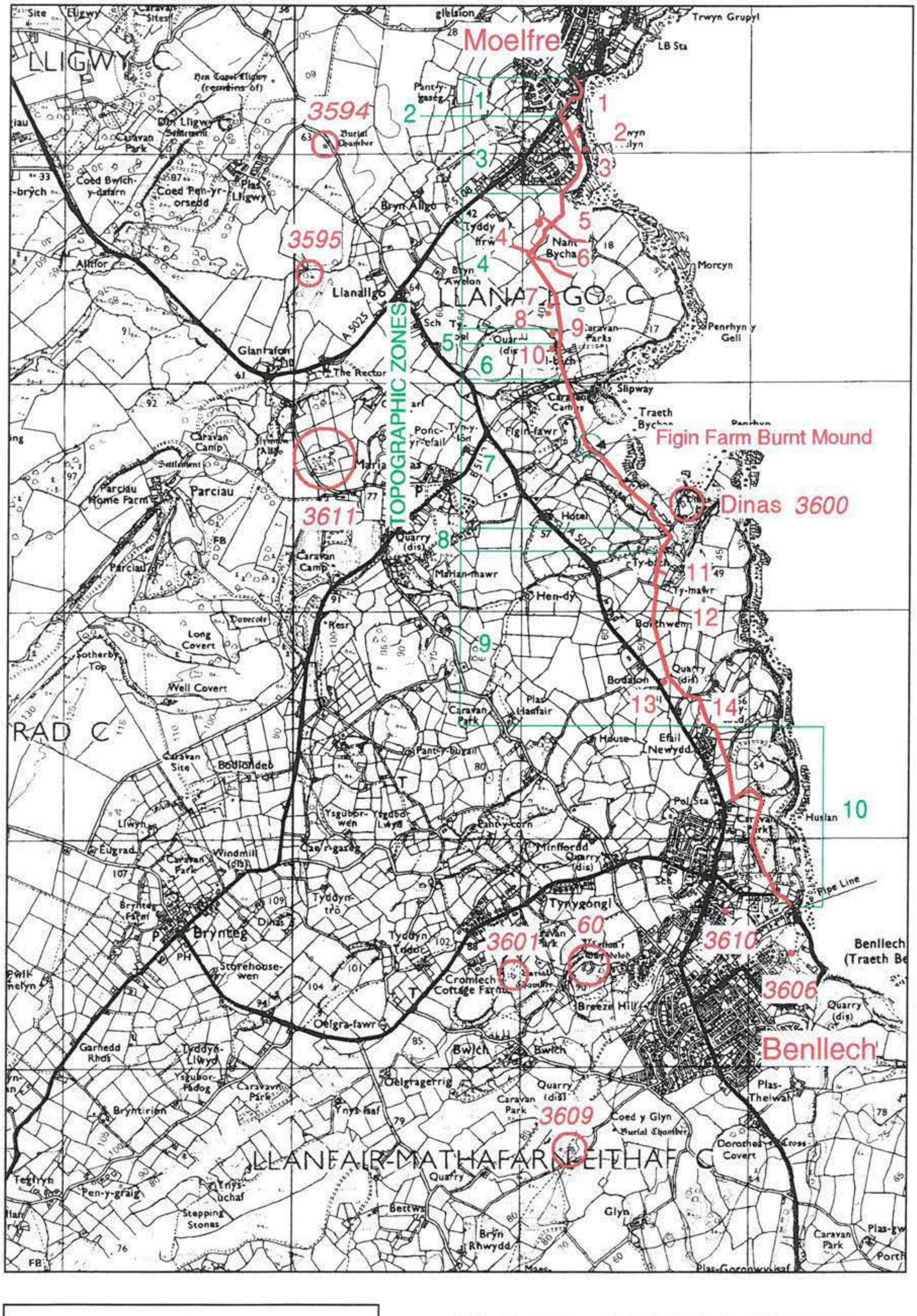
Williams, G. 1990. Burnt Mounds in South-West Wales, In Buckley, 1990, 129-40.

Appendix 1 List of Illustrations and Plates

Illustrations

Plates

Moelfre to Benllech Sewage Pumping Main
Archaeological Assessment (G1453) & Watching Brief (G1474)



YMDDIRIEDOLAETH ARCHAEOLEGOL *GWYNEDD* ARCHAEOLOGICAL TRUST

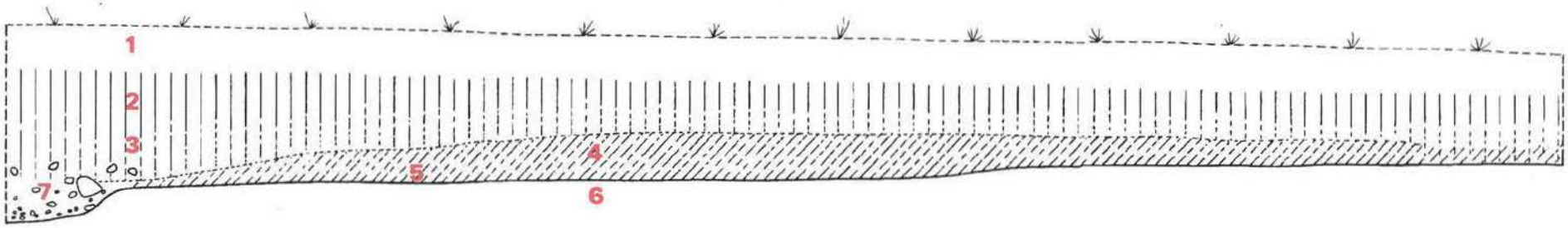
Title: Location of Archaeological Features

Dwg. no: 1474 /01

Scale: 1:25,000

Client: DWR CYMRU / WELSH WATER

Moelfre to Benllech Sewage Pumping Main
Archaeological Assessment (G1453) & Watching Brief (G1474)



YMDDIRIEDOLAETH ARCHAEOLEGOL *GWYNEDD* ARCHAEOLOGICAL TRUST

Title: Site 16 - Figin Farm Burnt Mound : Section through mound

Dwg. no: 1474 /02 Drawn by: GHS

Scale: 1:40 Date: 14:03:97

Client: DWR CYMRU / WELSH WATER

0 metres 2

Plat 1: Section through field boundary AF6, Nant Bychan

Plat 2: General view of stripped easement, Nant Bychan

Plate 3: Section through hollow/platform AF 7, Gell Fawr

Plate 4: Ruined building AF 9, Gell Bach

Plate 5: Footings of former field boundary and area of burnt mound before discovery, Figin Fawr

Plate 6: Section through burnt mound, Figin Fawr