
**PROPOSED ABERFFRAW
WASTE WATER TREATMENT WORKS**

ARCHAEOLOGICAL ASSESSMENT

Report No. 454

**Prepared for
Symonds Group**

May 2002



**Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust**

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by
Andrew Davidson

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ARCHAEOLOGICAL ASSESSMENT

SUMMARY

An archaeological assessment was carried out prior to application for planning for a waste water treatment works at Aberffraw, Anglesey. This involved consultation of existing records and documents and a field search. Two archaeological features were identified: 1 was categorised as of regional importance, and one of local importance. The proposals will have no direct impact upon either site. A watching brief is recommended during the early stages of construction of the works.

1. INTRODUCTION

Gwynedd Archaeological Trust was asked by Symonds Group Limited to carry out an archaeological assessment in advance of a proposed waste water treatment works south of Aberffraw at SH 350689. The site is to be approached via an access track from the minor road which leads west out of Aberffraw village (as shown on fig 1). The basis for the site location and access is taken from Drawing Number 57750/LOC/02 provided by Symonds Group. A brief for this work has been prepared by Gwynedd Archaeological Planning Service (Reference D594). This design will conform with the requirements of the Brief.

2. SPECIFICATION AND PROJECT DESIGN

The basic requirement was for a desktop survey and field search of the proposed area, in order to assess the impact of the proposals on the archaeological features within the area concerned. The importance and condition of known archaeological remains were to be assessed, and areas of archaeological potential and new sites to be identified. Measures to mitigate the effects of the improvement work on the archaeological resource were to be suggested.

Gwynedd Archaeological Trust's proposals for fulfilling these requirements were, briefly, as follows:

- a) *to identify and record the cultural heritage of the area to be affected;*
- b) *to evaluate the importance of what was identified (both as a cultural landscape and as the individual items which make up that landscape); and*
- c) *to recommend ways in which damage to the cultural heritage can be avoided or minimised.*

A full archaeological assessment usually comprises 6 phases:

- 1) *Desk-top study*
- 2) *Field Search*
- 3) *Interim Draft Report*
- 4) *Detailed Field Evaluation*
- 5) *Final Draft Report*
- 6) *Final Report*

This assessment has covered the work required under 1, 2 and 3. It is sometimes necessary to undertake a programme of field evaluation following the desktop assessment. This is because some sites cannot be assessed by desktop or field visit alone, and additional fieldwork is required. This typically takes the form of geophysical survey or trial excavation, although a measured survey is also an option. The present report makes recommendations for any field evaluation required.

3 METHODS AND TECHNIQUES

3.1 Desk-top Study

This involved consultation of maps, computer records, written records and reference works, which make up the Sites and Monuments Record (SMR), located at Gwynedd Archaeological Trust, Bangor. The archives held by the Anglesey Record Office, Llangefni, were also consulted. Aerial photographs held within the SMR were examined. Information about Listed Buildings and Scheduled Ancient Monuments was obtained from Cadw: Welsh Historic Monuments. Secondary sources were consulted to provide background information.

The sites listed in the SMR within 0.5km around the study area were collected to give an indication of the type of sites recorded in the general locality and are given below and shown on figure 1.

| | | |
|------|---|-------------|
| 3000 | EXCAVATIONS SW OF ABERFFRAW 1957 | SH34976847C |
| 3003 | TUMULUS, TRWYN DU, ABERFFRAW | SH35236787 |
| 3006 | HUT CIRCLE, S OF ABERFFRAW | SH35196800 |
| 3009 | ST BEUNO'S CHURCH, ABERFFRAW | SH35366879 |
| 3010 | CROSS SHAFT - SITE OF, ABERFFRAW | SH35326876 |
| 3014 | ROMAN COPPER CAKE - FINDSPOT, ABERFFRAW | SH35006800A |
| 5055 | MESOLITHIC FLINTS - EXCAV., TRWYN DU, ABERFFRAW | SH35206790 |
| 5197 | WATCHING BRIEF, PENDREF, ABERFFRAW | SH35356883 |

3.2 Field Search

This was undertaken on 28 May, 2002, when the location of the proposed works were inspected by an archaeologist to note the present state of known sites, and to identify any archaeological features visible as earthworks.

The conditions were good for a field search. Most of the fields were closely grazed, so earthworks could be easily seen.

3.3 Report

All available information was collated, and the features were then assessed and allocated to the categories listed below. These are intended to give an idea of the importance of the feature and the level of response likely to be required; descriptions of the features and specific recommendations for further assessment or mitigatory measures, as appropriate, are given in the relevant sections of this report.

The criteria used for allocating features to categories of importance are based on those used by the Secretary of State when considering ancient monuments for scheduling; these are set out in the Welsh Office Circular 60/96.

3.3.1 Categories of importance

The following categories were used to define the importance of the archaeological resource.

Category A - Sites of National Importance.

This category includes Scheduled Ancient Monuments and Listed Buildings of grade II* and above, as well as those sites that would meet the requirements for scheduling (ancient monuments) or listing (buildings) or both.

Sites that are scheduled or listed have legal protection, and it is recommended that all Category A sites remain preserved and protected *in situ*.

Category B - Sites of Regional Importance

This category includes grade II Listed Buildings and sites which would not fulfil the criteria for scheduling, but which are nevertheless of particular importance within the region. Preservation *in situ* is the preferred option for Category B sites, but if damage or destruction cannot be avoided, appropriate detailed recording might be an acceptable alternative.

Category C - Sites of District or Local Importance

These sites are not of sufficient importance to justify a recommendation for preservation if threatened, but nevertheless merit adequate recording in advance of damage or destruction.

Category D - Minor and Damaged Sites

These are sites, which are of minor importance, or are so badly damaged that too little remains to justify their inclusion in a higher category. For these sites rapid recording either in advance or during destruction, should be sufficient.

Category E - Sites needing further investigation

Sites, the importance of which is as yet undetermined and which will require further work before they can be allocated to categories A-D, are temporarily placed in this category, with specific recommendations for further evaluation. By the end of the assessment there should be no sites remaining in this category.

3.3.2 Definition of Impact

The direct impact of the proposed development on each site was estimated. The impact is defined as *none, slight, unlikely, likely, significant, considerable or unknown* as follows:

None:

There is no construction impact on this particular site.

Slight:

This has generally been used where the impact is marginal and would not by the nature of the site cause irreversible damage to the remainder of the feature, *e.g.* part of a trackway or field bank.

Unlikely:

This category indicates sites that fall on the margins of the study area, but are unlikely to be directly affected.

Likely:

Sites towards the edges of the study area, which may not be directly built on, but which are likely to be damaged in some way by the construction activity.

Significant:

The partial removal of a site affecting its overall integrity. Sites falling into this category may be linear features such as roads or field boundaries where the removal of part of the feature could make overall interpretation problematic.

Considerable:

The total removal of a feature or its partial removal which would effectively destroy the remainder of the site.

Unknown:

This is used when the location of the site is unknown, but thought to be in the vicinity of the proposed development.

3.3.3 Definition of field evaluation techniques

Field evaluation is necessary to allow the reclassification of the category E sites, and to allow the evaluation are areas of land where there are no visible features, but for which there is potential for sites to exist. Two principal techniques can be used for carrying out the evaluation: geophysical survey and trial trenching.

Geophysical survey

This technique involves the use of a magnetometer, which detects variation in the earth's magnetic field caused by the presence of iron in the soil. This is usually in the form of weakly magnetised iron oxides, which tend to be concentrated in the topsoil. Features cut into the subsoil and back-filled or silted with topsoil contain greater amounts of iron and can therefore be detected with the gradiometer. Strong readings can be produced by the presence of iron objects, and also hearths or kilns.

Other forms of geophysical survey are available, of which resistivity survey is the other most commonly used. However, for rapid coverage of large areas, the magnetometer is usually considered the most cost-effective method. It is also possible to scan a large area very rapidly by walking with the magnetometer, and marking the location of any high or low readings, but not actually logging the readings for processing.

Trial trenching

Buried archaeological deposits cannot always be detected from the surface, even with geophysics, and trial trenching allows a representative sample of the development area to be investigated. Trenches of an appropriate size can also be excavated to evaluate category E sites. These trenches typically measure between 20m and 30m long by 2m wide. The turf and topsoil is removed by mechanical excavator, and the resulting surface cleaned by hand and examined for features. Anything noted is further examined, so that the nature of any remains can be understood, and mitigation measures can be recommended.

3.3.4 Definition of Mitigatory Recommendations

None:

No impact so no requirement for mitigatory measures.

Detailed recording:

Requiring a photographic record, surveying and the production of a measure drawing prior to commencement of works.

Archaeological excavation may also be required depending on the particular feature and the extent and effect of the impact.

Basic recording:

Requiring a photographic record and full description prior to commencement of works.

Watching brief:

Requiring observation of particular identified features or areas during works in their vicinity. This may be supplemented by detailed or basic recording of exposed layers or structures.

Avoidance:

Features, which may be affected directly by the scheme, or during the construction, should be avoided. Occasionally a minor change to the proposed plan is recommended, but more usually it refers to the need for care to be taken during construction to avoid accidental damage to a feature. This is often best achieved by clearly marking features prior to the start of work.

Reinstatement:

The feature should be re-instated with archaeological advice and supervision.

4 ARCHAEOLOGICAL FINDINGS AND RECOMMENDATIONS

4.1 Topographic Description

The study area is located west of the Afon Ffraw, on an undulating coastal plateau which rises to some 30m OD. The plateau is called Penrhyn, and the west end where it juts into the sea is called Trwyn Du. The underlying rocks are Precambrian schists of the Mona complex, overlain by glacial drift and soils of the Brown Earth group. The development area is sited on a south facing slope at a height of 20m OD. The complex of relatively small fields (which contrast with the larger fields of Bodfeurig to the north, are all grass, used primarily for grazing sheep and cattle by several graziers. The plateau is bordered on the south by the sea and on the east by the Afon Ffraw. East of the river lie the sand dunes of Tywyn Aberffraw.

4.2 Archaeological and Historical Background

The study area must be seen in relation to Aberffraw, which lies a short distance north. The present village occupies the former commotal centre of Malltraeth. A commote represents a self-contained unit of regional administration with a royal estate-centre (*maerdref*) where dues and renders owed to the King were paid (Longley 1998). Within the *maerdref* stood the *llys* or court, a palace or mansion house with its appurtenances. This administrative system operated from the 12th century to the 14th century, though it is probable that Aberffraw had far earlier origins: it was raided by the Vikings in 968, implying the existence of wealth worthy of raiding, and by the 12th century the bardic tradition recognised Aberffraw as the pre-eminent royal court of Wales (White and Longley 1995). The existence of a Roman fortlet underlying the village has been postulated from excavations of ditches, and Roman coins have been found at the site of the ford across the Ffraw (White and Longley 1995).

The site of the former *Llys* has been identified underlying the housing estate constructed in the 1960's called Maes Llywelyn, lying on the west side of the village, north of the church (Johnstone 1995). The layout of the settlement and medieval townships is discussed in some detail by Longley (1998).

It was formerly thought that the medieval *Llys* may lie further south of the village, on lands called Bryn Llywelyn, adjacent to the site of the proposed works (Jones 1957). However, excavations undertaken in 1957 revealed no medieval remains, and it is now known that the identification of this site was incorrect (Hague 1957; Johnstone 1995).

A series of prehistoric sites lie 0.6Km south of the proposed development area and adjacent to the coast at Trwyn Du. Here, a burial cairn (PRN 3003) of Beaker date (c. 2000 BC) was found to overlie a Mesolithic (c. 8000-7000 BC) working floor (PRN 5055), from which some 300 implements and several thousand flint waste flakes were recovered (White 1978). North of the cairn lies a hut circle of probable late prehistoric date (PRN 3006).

In the 19th century the area of the proposed development was part of a smallholding called Bryn y Ci (UWB Llysdules MS 53, Map 5). To the west lay Tyddyn Owen Lawrence, also known as Bryn Llywelyn (the name which possibly led the OS to consider it the site of the medieval palace). Bryn y Ci lay on the boundary of the area of the former medieval bond lands known as *garddau*, an area subdivided into many strips and quillies, and probably an area of nucleated settlement, where fourteen tenants each held a garden one acre in extent. In later times *garddau* came to be called 'Fron', but the unenclosed strips remained visible into the 19th century, as shown on the tithe map and 1816 estate map. Although it is difficult to identify the medieval boundaries with certainty, it would appear that Bryn y Ci lay just outside *garddau*, in a township called Penrhyn. This latter was a possible free township lying outside the *maerdref* and bond lands of Aberffraw. It is clearly identified as such in the 18th century Land Tax records, but is not referenced in the medieval period. The name is preserved in the farms Penrhyn Du, Penrhyn Gwyn and Penrhyn Mawr. No buildings are shown on the 1816 estate map (fig 3) within the area identified as Bryn y Ci, nor on the 1845 tithe map.

The only entry on the Sites and Monuments Record which lies close to the development area is the location of the 1957 excavations, which were undertaken in the field immediately to the south, and two fields away to the north-west. The only feature found of note was a culvert, or drain, of unknown date, thought by Hague to be pre-modern (Hague 1957).

The 1st edition 1" to the mile OS map of 1838 (reproduced by David and Charles) marks a 'cavern' just to the west of the development area, but there is no indication of what this may be. Another is marked a short distance to the north.

4.3 The Existing Archaeological Record

Site 1 Enclosure *Class D*

Impact: None

Alongside the gate into the study area from the minor road is a small walled enclosure some 1m square. It is now too overgrown to see anything inside, however, it is typical of structures built to house small road-side hand-pumps. That it lies on a spring line is evident from the presence of a well in the field to the west. It is therefore probably of late 19th century or early 20th century date, possibly of the same age as the adjoining rectory.

Recommendations for further assessment: *None*

Recommendations for mitigatory measures: Watching brief and basic recording if it is to be disturbed.

Site 2 Field boundaries *Class B* (figure 2)

Impact: None

The narrow field through which runs the access road may be a remnant of the medieval open fields (that is, a former open strip which is now enclosed). Clearer remnants of such strips are marked on the 1845 tithe map. The boundaries vary in character, but are mostly stone-faced earth banks (2b, 2c, 2e, and 2g), though the stone facing has been eroded from several lengths. The exceptions are the mortared stone wall to the north east (2a), which forms the west side of the walled garden of the adjacent rectory, and the dry stone wall (2d) north of the proposed works. The boundary at 2f has been removed, whilst that at 2h is a wire fence. There are ditches on the west and south sides of the study area which are very overgrown. The ditch in the south-west corner of the study area contains an upright slab of unknown function (Plate 1d).

Recommendations for further assessment: *None*

Recommendations for mitigatory measures: *Watching brief if the ditches are to be cleaned. Basic record and watching brief if any boundaries are to be disturbed.*

5. RECOMMENDATIONS FOR MITIGATORY MEASURES

There will be no impact upon the known archaeological record from the proposed works. However, if the ditches are to be cleaned and excavated then a watching brief should be maintained during the works. If site 1 is to be disturbed then a watching brief and basic recording should be undertaken.

It is also recommended that a watching brief be undertaken during the construction works to ensure that any underground archaeological remains which may be disturbed are found and recorded.

6. SOURCES

Sources held by Gwynedd Archaeological Trust

First edition OS 1" to the mile Sheet 24, c. 1839 (reprinted by David and Charles 1970)

OS 1:63360 Soil survey of England and Wales 1948: Anglesey

OS 1:10560 Sheet XXI NE, 1926

OS 1:10,000 SH36NW 1975, SH36NE 1977

Aerial photographs 106 G/UK 655, 3165, 3167 (1945)

Gwynedd Sites and Monuments Record

Johnstone, N., 1995 *Llys and Maerdref*, GAT Report 167.

Longley, D., 1998 *Medieval Settlement on Anglesey* (2 parts), GAT Report 308.

Sources in UWB Archives, Bangor

Llysdulas Ms 53, Estate survey of 1816.

Sources in County Archives, Llangefni

OS 25" County Series, Anglesey Sheet 24.3 and 24.7, Second Edition 1900.

Tithe map and schedule for Aberffraw parish, 1845.

Published sources

Cadw, 1998 *Register of Buildings of Special Architectural or Historic Interest for the community of Aberffraw*

Hague, D. B., 1957 'Some light on the site of the palace of Aberffraw', *Transactions of the Anglesey Antiquarian Society*, 1-4.

Jones, G. R. J., 1957 'The site of Llys Aberffraw', *Transactions of the Anglesey Antiquarian Society*, 5-7.

White, R. B., 1997 'Excavations at Trwyn Du, Anglesey 1974', *Archaeologia Cambrensis*, 127, 16-39.

White, R. B., and Longley, D., 1995 'Excavations at Aberffraw', *Transactions of the Anglesey Antiquarian Society*, 13-22.

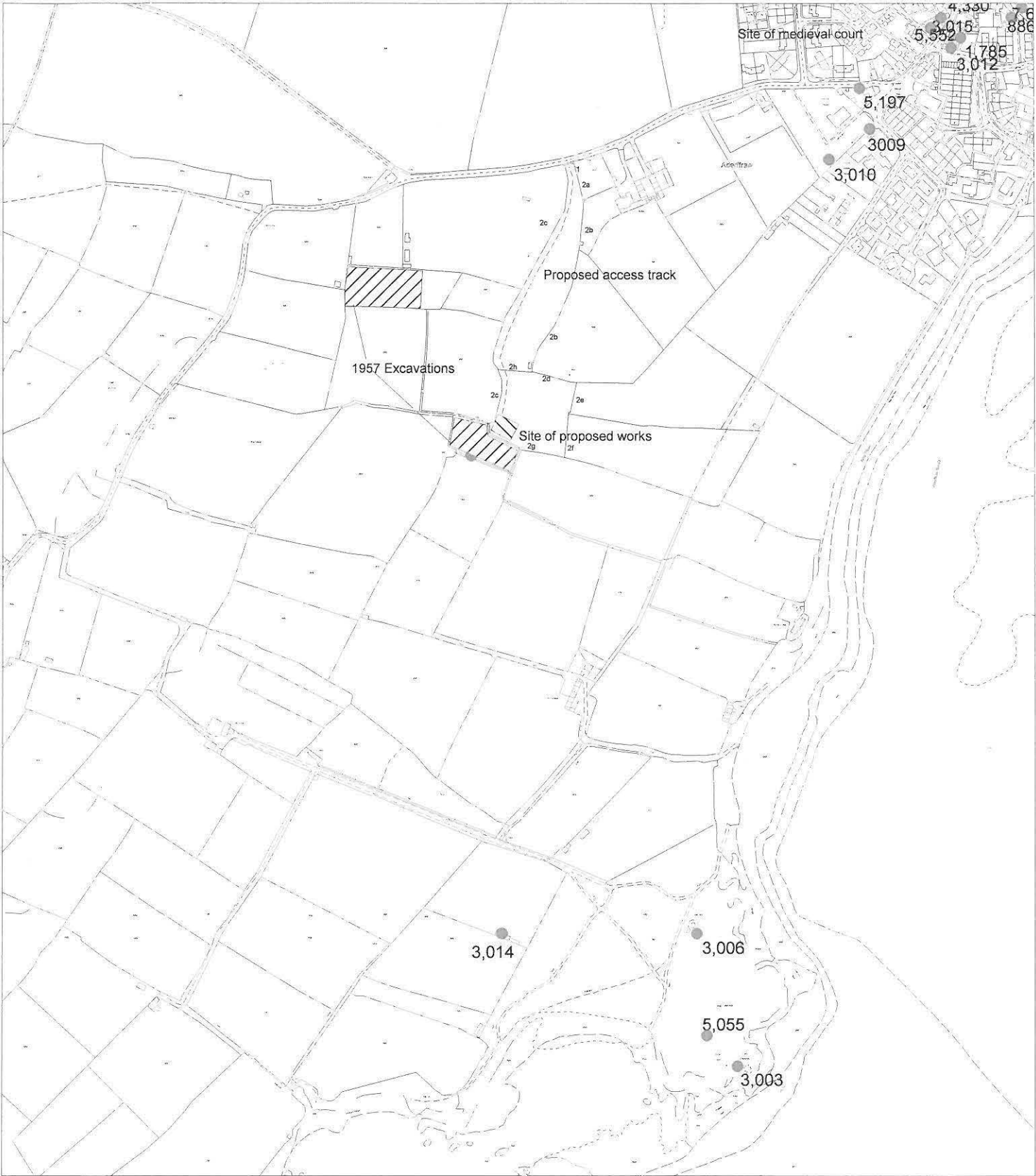


Figure 1: Location of site



Figure 2: Location of archaeological features

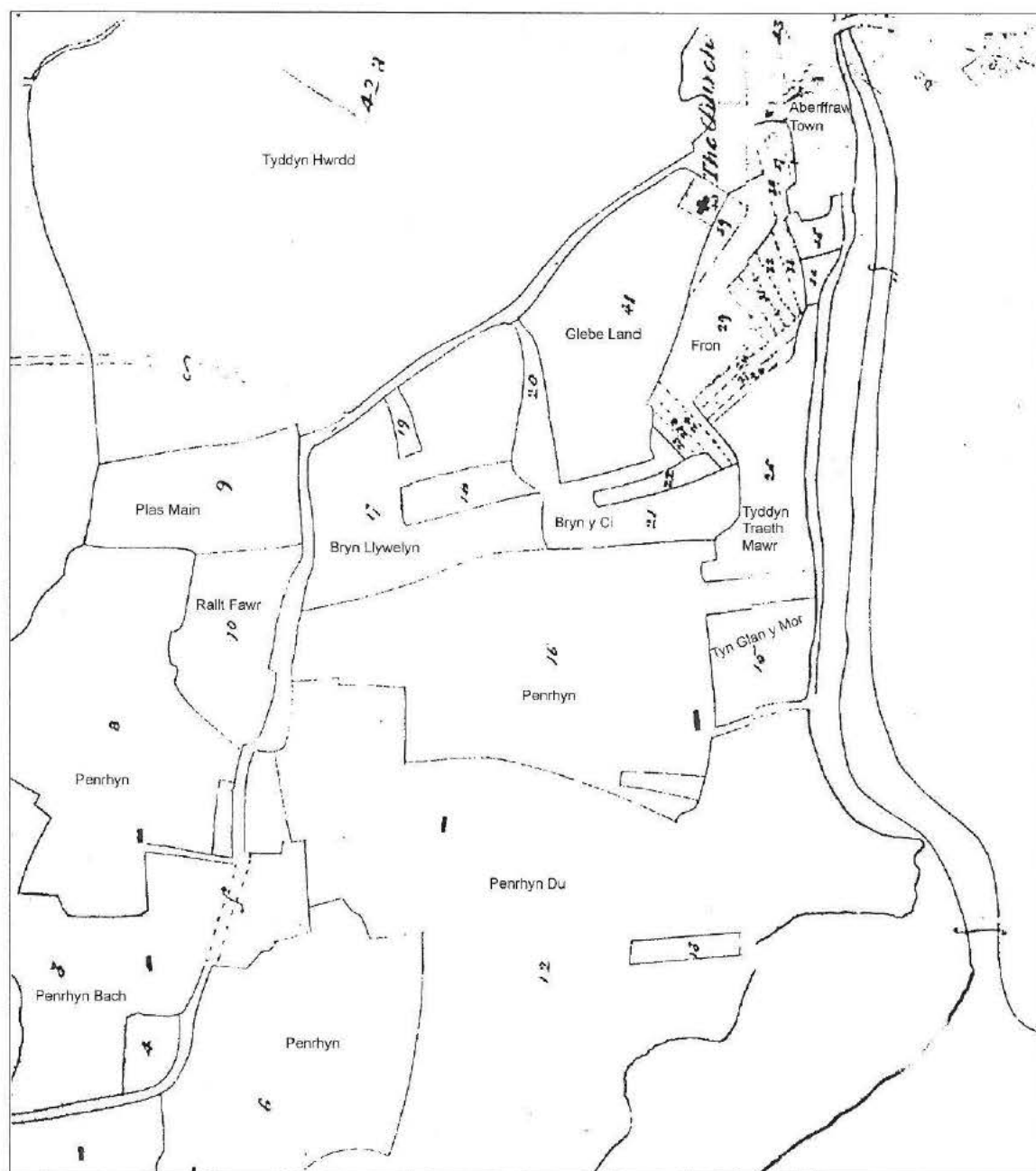


Figure 4: Aberffraw pa Tithe Map c.1845

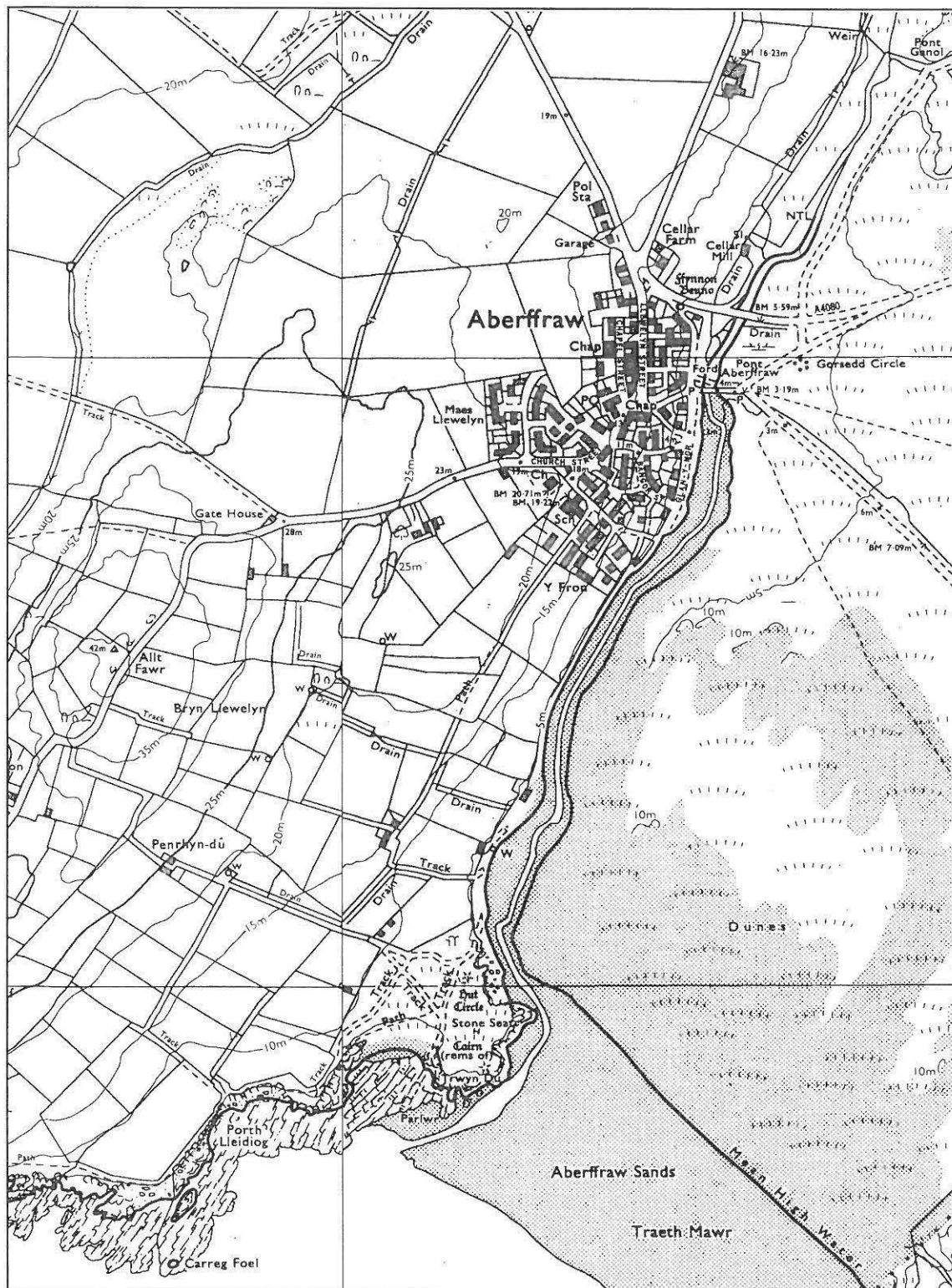


Figure 5: OS Sheet 36NW (1975) and 36NE (1977) joined



1A Site 1 Structure by entrance



1B The north end of the access route

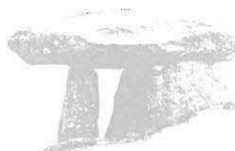


1C Site of proposed works and access route



1D Upright stone in ditch at south-west corner

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