

MENAI BRIDGE - TREBORTH  
SEWER RISING MAIN

ARCHAEOLOGICAL ASSESSMENT (G1310)

REPORT NO. 170

Ymddiriedolaeth Archaeolegol Gwynedd  
Gwynedd Archaeological Trust

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## ARCHAEOLOGICAL ASSESSMENT (G1310)

prepared for Dwr Cymru/Welsh Water

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**Gwynedd Archaeological Trust Report No. 170**

# **MENAI BRIDGE - TREBORTH SEWER RISING MAIN (G1310)**

## **ARCHAEOLOGICAL ASSESSMENT**

### **1. INTRODUCTION**

Welsh Water are proposing to construct a rising main between the Gasholder Station on the shore of the Menai Straits at Menai Bridge and the Treborth Sewage Treatment Works. The proposed pipeline will affect a corridor approximately 15m wide and will cover a distance of just under three kilometres.

This proposal replaces an earlier scheme and differs in one important respect: the middle section has been relocated to the south, where previously it lay further to the north, immediately below the Holyhead road (formerly part of the A5). An archaeological assessment was commissioned by Wallace Evans for the original route, and the results were presented in GAT Report No. 48. Both ends of the current proposal were covered by this work, but the middle section of the current proposal, however, was not covered as the assessment undertaken at the time was confined to the easement of the pipeline and did not extend to the southern side of the fields. This assessment therefore looks at that central part of the route between the east edge of the Coed Mor woods and the west side of the garden of Cartrefle.

Gwynedd Archaeological Trust (Contracts Section) was commissioned by Welsh Water to carry out this assessment in accordance with a brief prepared by Gwynedd Archaeological Planning Service acting as the Archaeological Curator.

### **2. ASSESSMENT BRIEF**

An initial report was requested from Gwynedd Archaeological Trust, assessing the likely archaeological impact of the proposed pipeline and suggesting mitigatory measures.

The basic requirement was for a desk-top survey and field search of the proposed area in order to assess the impact of the proposals on the archaeological and heritage 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 proposed pipeline 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 by the proposals;
- 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.

This report covers the work done under the first two stages of assessment, documentary research and walking the route, and includes recommendations for later stages.

### 3. METHODS AND TECHNIQUES

#### 3.1 Desk-top Study

Consultation of maps, computer records, written records and reference works, which make up the Sites and Monuments Record, was undertaken at Gwynedd Archaeological Trust. Records (including early Ordnance Survey maps, tithe maps and schedules, estate maps and papers and reference works - see bibliography) were consulted in the library and the archives of the University College of North Wales, Bangor, and the County archives at Llangefni. Aerial photographs were inspected at the offices of the Countryside Council for Wales.

#### 3.2 Field Search

This was undertaken on the 30th January 1995 by two members of Trust staff. The whole of the proposed area was walked. Conditions were good for fieldwork, and light and visibility were good for the time of year.

Sites identified were marked on copies of 1:2500 OS maps as accurately as possible without surveying. Forms were filled in assessing each site, and detailed notes made of the more important. Photographs were taken of all potential sites identified.

#### 3.3 Report

All available information was collated, and transferred onto a single set of maps at a scale of 1:2500 for convenience. The sites were then assessed and allocated to the categories listed below. These are intended to give an idea of the importance of the site and the level of response likely to be required; descriptions of the sites and specific recommendations for further evaluation or mitigatory measures, as appropriate, are given in the relevant sections of this report.

In some cases, further investigation may result in sites being moved into different categories. The criteria used for allocating sites to categories are based on those used by the Secretary of State when considering ancient monuments for scheduling; these are set out in Annex 3 to Planning Policy Guidance 16 (Wales): Archaeology and Planning.

#### 3.4 Categories

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

##### *Category A - Sites of national importance.*

Scheduled Ancient Monuments, Listed Buildings and sites of schedulable or listable quality, i.e. those which would meet the requirements for scheduling (ancient monuments) or listing (buildings) or both.

Sites which 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 or county importance.*

Sites which would not fulfil the criteria for scheduling or listing, 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.*

Sites which are not of sufficient importance to justify a recommendation for preservation if threatened.

Category C sites nevertheless merit adequate recording in advance of damage or destruction.

*Category D - Minor and damaged sites.*

Sites which are of minor importance or so badly damaged that too little remains to justify their inclusion in a higher category.

For Category D sites, rapid recording, either in advance or during destruction, should be sufficient.

*Category E - Sites needing further investigation.*

Sites whose importance 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.

### **3.5 Definition of Impact**

The impact has been defined as none, slight, likely or considerable 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.

*Likely:*

In some instances the site in question would not fall within the area to be directly affected by the proposed pipeline, but would fall within the construction area and therefore may, subject to its nature, be removed or damaged.

*Considerable:*

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

### **3.6 Definition of Mitigatory Recommendations**

The alignment of the proposed pipeline avoids as far as possible sites of archaeological interest. Where a site is affected, mitigation measures will be included in accordance with current policies as recommended in PPG16 for rescue archaeology.

For the purposes of this report the mitigation and rescue archaeology proposals as suggested by Gwynedd Archaeological Trust have been summarised as:

*None:*

No impact so no requirement for mitigation measures.

*Detailed recording:*

Detailed recording requires a photographic record, surveying and the production of a measured drawing prior to the commencement of the works on site.

Archaeological excavation works may also be required depending upon the particular feature and the extent and effect of the impact. Some of the sites would require dismantling by hand, to provide a detailed record of the method of construction and in the case of a listed structure, the salvage of materials for re-use and re-building.

*Recording by photograph and description:*

Recording by photograph and description requires a photographic record and survey work prior to the commencement of works on site. A measured drawing may be required in certain cases.

*Watching brief:*

At the commencement of the improvement works on site, all sites affected by the works would need to be observed up to the end of the contract period.

## **4. ARCHAEOLOGICAL FINDINGS AND RECOMMENDATIONS**

### **4.1 Introduction**

Archive material consulted during the desk-top study provided dating evidence for known sites (e.g. Ty Mawr - 1752, Britannia tubular bridge - 1845), and maps of successive dates allowed an appreciation of the development of the landscape. The Estate map coverage of the area was generally poor and late, but Ordnance Survey and tithe map coverage was good.

Lists supplied by Cadw: Welsh Historic Monuments gave information about listed buildings and scheduled Ancient Monuments. There is one listed building on the proposed Menai Bridge - Treborth pipeline, this is the Britannia bridge. Listed building consent will be needed for any work on the bridge. There are no Scheduled Ancient Monuments within the immediate vicinity of the proposed pipeline. The nearest monuments are the north weir and smoke tower on the island of Ynys Gorad Goch to the south (Scheduled Monument No. A96) and the Neolithic burial chamber at Ty Mawr (Scheduled Monument No. A36) approximately 0.5km to the north.

Aerial photographs both confirmed the positions of known sites and showed up some possible new sites.

Many of the fields walked in the course of the fieldwork had been repeatedly ploughed. This meant that results were sometimes disappointing, little being visible on the ground even in fields where features show up on aerial photographs. It is clear that under these circumstances field walking may not be the most efficient way of identifying new features.

Sites noted from documentary sources were identified in the field where possible, and in addition a number of previously unrecorded sites were identified. These are included, with the rest of the sites, in the gazetteer.

### **4.2 The Archaeological Background**

This section provides a summary of the archaeology and history of the surrounding area so that the findings of the assessment can be put into a wider context.

#### *4.2.1 Prehistoric (up to 48AD)*

The Prehistoric period is well represented by finds and sites: to the north is the Ty Mawr burial chamber, now collapsed, which dates to the Neolithic period, around 3,500 - 4,000 BC. Immediately east of Cartrefle and partially within the corridor of interest are field systems of the late Prehistoric/Roman period. A number of largely ploughed out cultivation terraces and



traces of hut circles and scoops are located in the fields to either side of the Holyhead road about 0.5km NW of Llandysilio church and roughly centred on SH546719. At least two settlements with associated field terraces situated north of the road were recorded by the RCAHM(W) in the 1930's, however these have largely been destroyed by ploughing.

A carved stone head discovered at Hendy to the north of the area (now on display at Oriel Môn), is thought to represent a local Celtic deity. The head is carved from a sandstone block and has a small hole drilled in one side of the mouth and a flattened head. Based on stylistic comparisons it is thought to have been carved in the pre-Roman Iron Age, between 50 and 500 BC.

#### *4.2.2 Roman (48AD - 400AD)*

There are no Roman finds from the immediate area, although the settlements and field systems mentioned in 4.2.1 above may well have continued in use throughout the Roman period. Recent excavations by the Gwynedd Archaeological Trust at sites adjacent to Castellior (1.5 Km N of Menai Bridge) indicated occupation within the Roman period, and isolated finds from the area around also suggest occupation at this date.

#### *4.2.3 Medieval and Later (400AD - present day)*

Settlement of the area during the Medieval period is fairly well documented but not well represented on the ground. The area lies within the Commote of Dindaethwy in the Cantref of Rhosyr and straddled the border between the townships of Pwllgwngyll and Porthaethwy, and is mentioned in an Extent of 1306 as forming part of the lands of the Bishop of Bangor.

The area, highly suitable for agriculture, also presented the opportunity to exploit and control the fisheries along the Menai Straits; many of these date to the Medieval period and remained in use well into the Post Medieval Period. Documentation points to the existence of a tide mill and fish weir/fish yard at Traeth Tysilio (north of St Tysilio's church) in Porthaethwy prior to the late 16th century.

In Post-Medieval times the land appears to have belonged to two neighbouring estates: Plas Newydd and Plas Llanfair. The first detailed documentation appears following the purchase of the Plas Llanfair land by Thomas Williams, well known for his activities in the copper industry and a prolific buyer of land in the late eighteenth century. The land was still owned by the same family in the mid nineteenth century, when the recorded owner is Thomas Prees Williams of Craig y Don, grandson of Thomas Williams.

More recent developments in the area were the construction of the A5 road during the first half of the 19th century, engineered by Thomas Telford, and the opening of the Britannia tubular bridge in 1850, built by R. Stephenson to carry the railway across the Menai Straits. A small quarry, probably associated with the construction of the A5, lies at SH54347166 on a lightly wooded slope to the north of the eastern part of the corridor (see map).

#### *4.2.5 Conclusions*

The region holds a number of sites of archaeological and historical interest belonging to the Prehistoric and Roman periods. The Medieval period is reasonably well chronicled, but there are few remains. Later developments are primarily concerned with improvements to lines of communication.

### 4.3 Archaeology of the Proposed Development Area.

#### 4.3.1 Introduction (N.B. the numbers refer to the site numbers in the gazetteer)

The area proposed for the pipeline is largely improved pasture on Gaerwen soils of the brown earth group, overlying pre-cambrian schists, of which there are outcrops, and which is always fairly close to the surface.

There are several sites of interest within the area of study: the principal site is the hut scoop (4), which is considered to be of regional importance, and therefore falls into Category B.

Sites deemed to be of local importance (Category C) are the largely ploughed out remains of field systems and associated settlement sites (2) and (3).

The majority of the remaining sites identified within the corridor are minor sites only, such as the trackway, site (5), which nonetheless form an intrinsic part of the cultural landscape.

Two potential sites, (1) and (2a), will need further evaluation before their archaeological status can be confirmed, and are therefore placed in Category E. Following further evaluation, these sites will be re-categorised.

#### 4.3.2 Gazetteer of Archaeological Sites

##### 1. Possible platform SH54867188 Category E

A low 'D' shaped grassed over raised area, with possible traces of wall foundations embedded along its curved north east side, which faces a drainage channel. It is uncertain if the walling is revetting for the drainage channel.

*Potential Impact: Slight. Possible damage during fencing.*

*Recommendations for further assessment: None.*

*Recommendations for mitigatory measures: The pipeline appears to pass close to the north edge of this site, and damage could be caused by contractors vehicles. It is recommended that the site is identified by an archaeologist when the pipeline route is being fenced, to avoid including the site within the working corridor.*

##### 2. Area of cultivation terraces and associated settlement SH546720C Category C

An extensive area of field terraces visible on aerial photographs, lying to either side of the Holyhead road extending across the boundary of Llanfairpwllgwyngyll and Llandysilio parishes. At least six parallel low banks delineating narrow strip fields on ground sloping to the shore. Low banks or terraces also divide the fields across the slope in several places. There are at least three hut scoops/platforms, the most visible being situated just below a steep break of slope, which roughly parallels the modern road. The ploughed out remains of a rectangular structure cut by a recent drain, possibly a long hut, are vaguely discernible further down slope. A further series of terraces is located to the west in and around a small copse of mature trees.

*Potential Impact: Slight. Damage from the proposed pipeline and contractor's vehicles and fencing.*

*Recommendations: (i) that the area affected by the proposals, i.e the area in and near to the corridor of interest, is surveyed in advance of any work; (ii) that a watching brief is undertaken within the area, with time allowed for recording features observed; (iii) that an archaeologist be present during the fencing of the corridor.*



**2a. Circular feature** approximately SH547719 *Category E*

Situated within the area of site (2) is a possible feature, comprising a circular bank visible on aerial photographs. The surface of the feature has been severely disturbed by cattle.

*Potential Impact: Direct disturbance by the construction of the pipeline.*

*Recommendations: (i) that the site is included within the survey recommended for site 2 above; (ii) that a watching brief is maintained during topsoil stripping and pipeline construction.*

**3. Field system and traces of associated features** SH54487172C *Category C*

An area of rectangular fields initially identified from aerial photographs. The fields are delineated by the low ploughed out remains of banks, traversing and running down the slope to the shore. Low ridges, appearing to form the remains of ridge and furrow cultivation, can be seen running down slope, parallel to the banks. There are a number of low mounds and slight breaks of slope which may represent further features of archaeological interest.

A possible sub-rectangular structure, cut by a modern drain, lies at approximately SH54567172.

*Potential Impact: Slight. Damage from the proposed pipeline and contractor's vehicles and fencing.*

*Recommendations: (i) that the area affected by the proposals, i.e the area in and near to the corridor of interest is surveyed in advance of any work; (ii) that an archaeologist is present during the fencing of the corridor; (iii) that a watching brief is undertaken during topsoil stripping.*

**4. Hut scoop** SH54377168 *Category B*

A small hut scoop with level platform on down slope side, scarped into the slope at a point where the gradient of the hillside changes. Stone settings are visible on the platform. A large tree currently stands within the centre of the feature.

*Potential Impact: Slight. Damage from contractor's vehicles.*

*Recommendations: this site should be preserved in situ. It is recommended that the site is marked if access to this field is from the Holyhead road.*

**5. Trackway** approximately SH543717 - SH546717 *Category D*

A grassed over, slightly terraced track heading diagonally across the slope down to the shore, from the west. Map evidence (John Evans 1797) suggests that this track pre-dates the construction of the A5, and is possibly part of an earlier route between Llanfairpwllgwyngyll and the ferry at Porthaethwy.

*Potential Impact: Slight. Damage from contractor's vehicles.*

*Recommendations: the track is not directly affected by the proposed route of the pipeline, but may be affected by contractors vehicles if access is to be gained into this field direct from the Holyhead road. If this is to be the case, the track is to be surveyed, and recorded by photograph and written description before work starts.*

**6. Upstanding field boundaries**

The pattern and nature of field boundaries are an important part of the historic landscape. Their construction, linear plan and ecological diversity can provide valuable information about

the landscape and its evolution. The most common type of field boundary in this area is the stone faced bank, usually topped with modern sheep-fencing, though there are examples of drystone walls.

*Potential Impact: Slight. Damage from the construction of the pipeline.*

*Recommendations: where a significant part of any field boundary is to be destroyed, then it should be recorded in advance by photograph and description.*

#### 4.4 Recommendations For Areas Of Unknown Archaeological Potential

Previous results from similar projects have shown that many sites can only be detected by excavation, particularly in areas such as this where surface indications are slight due to ploughing. It is recommended that a continuous watching brief is undertaken during or immediately following soil stripping. This is an important part of the mitigatory strategy, with potential for discovering sites which would otherwise go unrecorded.

## 6. SUMMARY OF RECOMMENDATIONS FOR FURTHER WORK AND MITIGATORY MEASURES

### 6.1 Mitigatory Measures

This section lists the sites according to category. The categorisation attempts to quantify the importance of the archaeological resource, as suggested in PPG 16 (Archaeology and Planning (Wales)).

#### *Category A - National importance*

None.

#### *Category B - Regional importance*

4. Hut scoop	Preservation <i>in situ</i> and marking off
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#### *Category C - Local importance*

2. Cultivation terraces and settlement	Survey and watching brief
3. Field system and associated features	Survey and watching brief

#### *Category D - Minor and damaged sites*

5. Trackway	Photographic and written description
6. Field boundaries	Photographic and written description

#### *Watching Brief*

A continuous watching brief should be maintained along the whole route during relevant stages of the work, as some sites will not be suspected until topsoil stripping reveals them, and sites identified in advance of the works may require further recording during construction.

## 7. BIBLIOGRAPHY

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## 8. NON-TECHNICAL SUMMARY

An initial assessment comprising a desktop study and fieldwalk has been carried out along that part of the proposed pipeline, lying between Coed Mor woods and the west side of Cartrefle gardens.

Six sites have been identified, of which two are extensive field systems and four discrete sites.

One site, the hut scoop (4), is considered to be of regional importance (Category B), and should be preserved *in situ*. According to information currently available this site will not be directly affected by the present proposals. Similarly site (1), of unknown importance, is likely to be missed by the route of the pipeline.

The main sites affected are two areas of relict field systems with traces of associated settlements, sites (2) and (3). These areas have been damaged by ploughing and are considered to be of local interest (Category C). It is recommended that the areas to be directly affected by the proposed pipeline are surveyed prior to disturbance and subjected to a watching brief when work on the pipeline starts.

The remaining sites identified within the area, mainly agricultural features of a relatively recent date should be recorded by written description and photograph if they are to be disturbed.

It is recommended that an archaeologist is present when the route for the fences of the working corridor are being decided.

As with all schemes of this nature, the potential for further discoveries once soil removal commences is a possibility. Taking into account the wealth of archaeological remains in the locality (outlined in 4.2 above) it is recommended that a continuous watching brief is undertaken either during or immediately after the topsoil has been stripped.





