
Holyhead Water Treatment Works and Associated Pipeline Improvements

Final Effluent Scheme



Archaeological Mitigation

GAT Project No. 1750

Report No. 576

March 2005

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Prepared for Galliford Try

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By

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FINAL EFFLUENT SCHEME

ARCHAEOLOGICAL MITIGATION (G1750)

SUMMARY

A watching brief was undertaken during construction of a new pipeline from Penrhos to Soldiers Point, Holyhead. Excavations at Ffynon Gorlas revealed a well and related tracks of post-medieval date. Though minor features were noted during the remainder of the watching brief, no other sites of significance were located.

INTRODUCTION

A new waste water treatment works has been constructed at Penrhos, Holyhead. In order to serve the new works, a series of existing pipelines were upgraded, and a new effluent discharge pipeline was constructed. The pipeline improvements were divided into three schemes: final effluent, urban and villages. This report contains the results of archaeological mitigation work, consisting of a watching brief, undertaken during the upgrading of the final effluent pipeline. The work was commissioned by Galliford Try, and undertaken by Gwynedd Archaeological Trust. The work was monitored for Welsh Water by Gwynedd Archaeological Planning Service.

ASSESSMENT AND EVALUATION

An archaeological assessment of the route was undertaken in October 2002 (GAT Report No. 462), and updated in February 2003 (GAT Report No. 462a), to take into account minor variations in the route and the results of a programme of field evaluation. Additional evaluation work was undertaken in February 2004 to ensure the pipeline did not impact upon a Romano-British settlement (Site 6 within the assessment report; GAT Report No. 524).

RESULTS OF THE WATCHING BRIEF

Introduction

The final effluent was a new pipeline, designed to take effluent from the Penrhos Waste Water Treatment Works at Penrhos, Holyhead (SH25938135) to the outflow at Soldiers Point (SH23618361), a distance of approximately 5.5 Km.

The watching brief was undertaken intermittently from April 2004 through to January 2005. Some areas were covered with a comprehensive watching brief (an archaeologist was present continuously), though most of the route was walked as soon after the topsoil strip (usually within 24 hours) as possible. At Ffynon Gorlas a comprehensive watching brief was undertaken, and a series of features excavated prior to pipeline construction.

Areas of potential interest were recorded, and cleaned by hand. Certain features could not be fully examined because of health and safety issues – these are noted below where relevant.

The feature numbers below refer to the features identified during the archaeological assessment, and described in GAT Report No. 462a.

Breakwater Park to Llaingoch

1. Breakwater tramway. (PRN 16076) SH23208346.

The topsoil stripping either side the tramway did not reveal any additional information concerning its construction. The bank separating the tramway from the footpath on the south side was constructed of earth. The footpath surface was of clay. The pipe trench excavated across the tramway was undertaken rapidly in order to minimise the time required for road closure, and the work was undertaken without archaeological supervision. However, a section across the tramway was recorded at Hibernia Row (see report on Urban pipeline route). The banks either side the tramway have been reinstated.

2. Footpath, Cae Fabli SH23208306 PRN: 74525

The topsoil strip across the footpath at Cae Fabli did not reveal any additional information to that already observed. The south side of the path was defined by a low stone wall with a hedge alongside. The north side was defined by a low earth bank.

3. Track and building at Tan y Bryn SH23178286 PRN: 74526

The topsoil strip did not impact upon the building at Tan y Bryn. The trench was excavated into the existing track, revealing a layer of hardcore on clay. No dating evidence was recovered.

Llaingoch to Parc Road

4. Ffynon Gorlas (PRN 1761) SH23388243

Introduction

Ffynon Gorlas was known to 19th century antiquaries as the site of a medieval well and chapel. Though a well of that name remains on site, the site of the chapel is lost. The present upstanding remains on the site consist of two farm buildings and the well (the farmhouse and additional farm buildings lie further east; see fig 3 for location). A trial excavation was undertaken between the two farm buildings in December 2003, when a mound of burnt stone associated with a stone lined trough was found. This was interpreted as a 'burnt mound' of Bronze Age date, though no definite dating evidence has yet been obtained (see GAT Report No. 462a). In order to avoid impact on the burnt mound, the pipeline was re-routed west of the farm buildings, and between the buildings and the well. Because the potential for the existence of relict archaeology was considered high within this area, the pipeline route was cleared of topsoil under archaeological supervision. This revealed a number of stone features, that were cleaned by hand, and recorded. The following is a description of these remains. The work was undertaken in September 2004. Archaeological deposits are numbered within rounded brackets and archaeological cuts within square brackets. An underlined number signifies archaeological structures. The dimensions of deposits and features are expressed in metres. The dimensions of structural stonework are expressed in millimetres.

The location of the site is shown on fig's 1 and 3, and site details on fig's 4-10 and plates 1-5.

Excavation results

Revetment kerbs 102 and 106

The excavation area was stripped in advance of the pipe trenching with the topsoil removed. This exposed an extensive spread of stonework below the modern field boundary wall. Further cleaning revealed this spread continued on either side of the wall, covering an area c.10m by 10m. The stonework was identified as three distinct linear features, two of which surrounded a sub-circular feature that was interpreted as a well or spring.

PRN 74532

Along the south edge of the site lay a line of stones forming a revetment kerb (context 102). A length 10m long was revealed, though it appeared to continue in both directions. It was aligned approximately east-west, and was made up of stones measuring up to 400mm by 300mm by 200mm (l x w x d). These were set into a deposit, context (103), which comprised a 0.08m thick deposit of clay-silt with frequent inclusions of small, sub-angular stones (<100mm). This was interpreted as an initial levelling layer on which the kerb stones were to be laid (see fig. 2, Plate 1). A section through contexts

102 and (103) revealed that context (103) sealed a thicker levelling deposit, context (104); a grey-brown silt-clay. This deposit measured 0.11m in depth and directly sealed the natural, context (105). Context (104) contained several sherds of white-glazed pottery and several fragments of ceramic tobacco pipe.

Context 102 is best interpreted as the south edge of a reveted trackway, probably leading from the farm that lies to the east to an extant spring (Ffynon Gorlles) several metres to the west (outside the area of excavation). The finds from the underlying levelling deposits show the construction of the track to be of post-medieval date, and almost certainly post-1750.

Running parallel to context 102, 0.60m to the north, was a similar line of stones, context 106 (Figure 2; Plate 1). Again, this context comprised a line of sub-angular stones (average size: 220mm by 300mm by 200mm), set into a levelling/metalling deposit, (context 107, similar to 103). This was interpreted as a secondary line of kerb stones, put in later to support the surface of the track (107). The kerbstones (106) and metalling (107) lay on top of the earlier metalling (103).

PRN 74533

Partially sealing context 106 and spreading to the north was a deposit of clay-silt, context (108). This context directly underlay the field boundary (context 108) that had been built in the 20th century, and was still standing when excavation started. The clay layer (106) appears to have been purposefully laid down as a levelling layer prior to the construction of the wall.

Trackway 118, spring 114 and overflow 116

Running approximately north-south, and to the north of the east-west track 102, was another reveted trackway, context 118. A pre-construction layer (124), probably for levelling, lay between the track and the natural clay (105) (Figure 1; Plate 3). The track was 1m wide, and a length of 4m was uncovered. It may once have continued north, though there was no evidence for continuation to the south.

PRN 74535 - 74536

A spring and overflow drain had been constructed on the west side of the track. The spring appeared to be an excavated hollow on the base of which had been laid flat slabs (114), covering an area approximately six square metres in size. The spring was lower than the track, and the two were linked by a steeply sloping stone surface (119) formed of stones laid on edge, and butting against the kerb of the track on the east, and the base of the spring on the west. The south end of the stone surface (119) was defined by a line of kerb stones (111). A low wall (120), stratigraphically later than the base slabs (114) and sloping surface (119), defined the north edge of the spring.

The stratigraphic sequence suggests the track was constructed first, and the remainder built against it. However within the track was a frogged brick, suggesting that the whole construction was little more than a hundred years old.

In order to try to link the construction phase of the spring and track to the north with the two phases of trackway to the south, the modern field wall, built in the early 20th century, (contexts 108) that crossed the site from east to west was removed.

Below the field wall (108), a stone-built culvert was exposed, leading from the well in a southerly direction. The start of the culvert was in line with the kerb (111) already exposed at the south end of the paving. A stone slab (113) lay across the mouth of the culvert, the height of the slab top edge of the slab being carefully calculated to allow it to act as an overflow from the spring.

The south edge of the culvert was formed by a row of revetment stones, context 109, and the north side by another row 116. These stones were set into a deposit of mixed stone and clay (117, that in turn overlay a layer of clay 112). A stone capping lay over the culvert (115) that allowed the stone wall (108) to be built over the top. The culvert appears to have been designed to empty down the slope into the marshland below, though its relationship to the track 102 remains unclear, as the discharge point would appear to have been immediately up-slope of the track. The kerb stones within 102 are missing opposite the discharge point of the drain, and perhaps these were washed away, or the discharge point was carried across, and the evidence has not survived.

Interpretation

The excavations have revealed a series of stone features, all of post-medieval date, that relate to two tracks and a stone-lined spring. Prior to excavation, the upstanding features consisted of two farm buildings that, from map evidence, were erected between 1900 and 1924 (see fig's 4 and 5). The field wall that ran between them was moved from the south-east edge to the north-west edge of the buildings, allowing access through the end gables of each from the approach track that led down from the farm. The 2003 excavations located a prehistoric burnt mound in between the two buildings (see fig 3). South-west of the farm buildings is a stone-lined well. This is called Ffynnon Gorlas on the early OS maps, though it is not known for certain if it is the site of the medieval well. A field wall runs south-west from the farm buildings. The 2004 excavations were located immediately south-west of the farm buildings, and underneath the field wall (see fig 3).

The east-west revetment (102) is best interpreted as a track that ran from the farm of Ffynnon Gorlas towards the extant stone-lined well lying south-west of the farm, passing the two farm buildings in the process. The relationship between this track and the features north of the field wall could not be ascertained because the archaeological layers were truncated, partly by the construction of the field wall. North of the field wall lay a spring with a stone lined base (114), a track aligned north-south lay alongside and slightly above (118), and linking the track and the spring was a sloping stone revetment (119). The spring discharged into a carefully constructed culvert that underlay the field wall.

All the works, with the possible exception of the extant stone-built well to the south-west, are post-medieval, but as they are not marked on any of the OS maps, their exact date is not known. There is a local tradition of two brothers arguing, and dividing the farm, sometime within the early 20th century, in which case the construction of a new spring north of the wall may have been required when access was no longer available to the existing one. These works may be contemporary with the erection of the two farm buildings, that is, in the early years of the 20th century.

The excavations have not located any evidence for the medieval chapel. The Ordnance Survey map shows it on the location of the excavated spring. It cannot be ruled out that some of the masonry making up the excavated structures belonged to earlier features, however more extensive excavation on the west side would be required to confirm the presence or absence of adjacent archaeological features.

Plas Road to Porthdafarch Road

12. Boulder dump, north-west of Ysgubor Leinw SH23878158 *PRN 74537*

During topsoil stripping it became apparent that an abnormally large number of boulders were present. There was no associated archaeology, and they are best interpreted as partially buried field clearance stones, or a glacial dump.

13. Drain west of Ysgubor Leinw SH23948138 *PRN 74538*

During the erection of new fencing a stone drain was broached, this proved to be a stone lined and capped culvert, part of the drainage system still serving the farm of Ysgubor Leinw and channelling excess water into a marshy area to the north east.

14. Manganese deposit north-west of Porthdafarch road SH24068119 *PRN 74539*

An area of dark deposits suggested archaeological activity, but upon closer examination was found to be a thick layer, up to 5cm, of manganese, naturally deposited in a wet low-lying hollow.

Porthdafarch Road to Trearddur Bay Road

15. Burning north of football field SH24708093 *PRN 74540*

No clearly identifiable archaeological features were located along this stretch. However, parallel with the football field was an area of orange burnt clay, flecked with charcoal. No other features were present, and it was probably the result of a surface fire.

Trearddur Road to A55 crossing

6. Romano-British settlement (PRN 14602) SH25548097

This area was investigated prior to topsoil stripping by a series of trial excavations (see GAT Report 524). No significant archaeological remains were noted during the trial excavations, and the watching brief also did not reveal any new archaeological features. The route of the pipeline passed slightly to the east and north of the archaeological remains.

7. Chester to Holyhead Railway line SH25708102

PRN 16077.

The pipeline was excavated under the line, with no direct impact upon the archaeology.

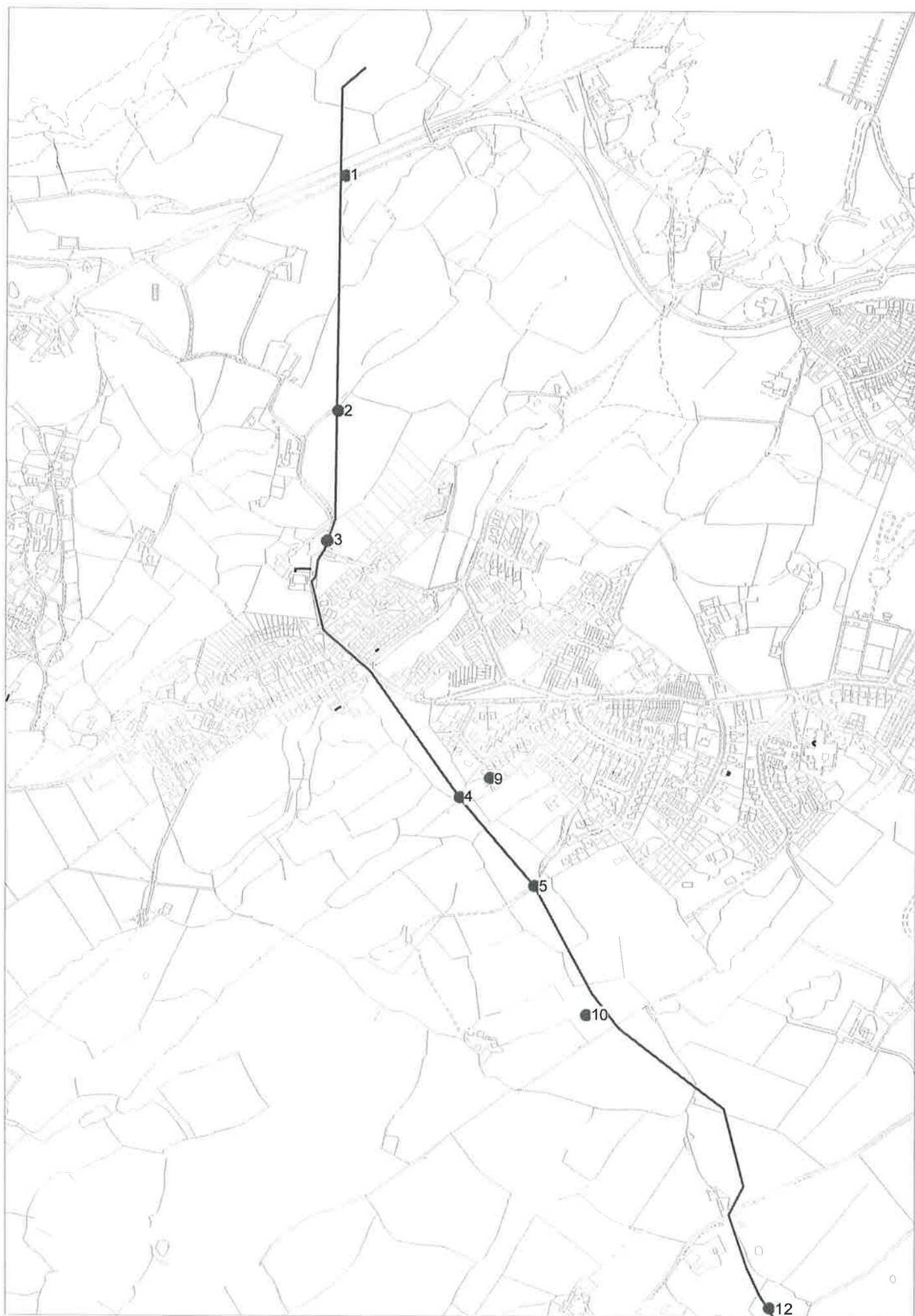


Figure 1: Location of sites on northern part of route. Scale: 1:8,000

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Figure 2: Location of sites on southern part of route. Scale: 1:8,000

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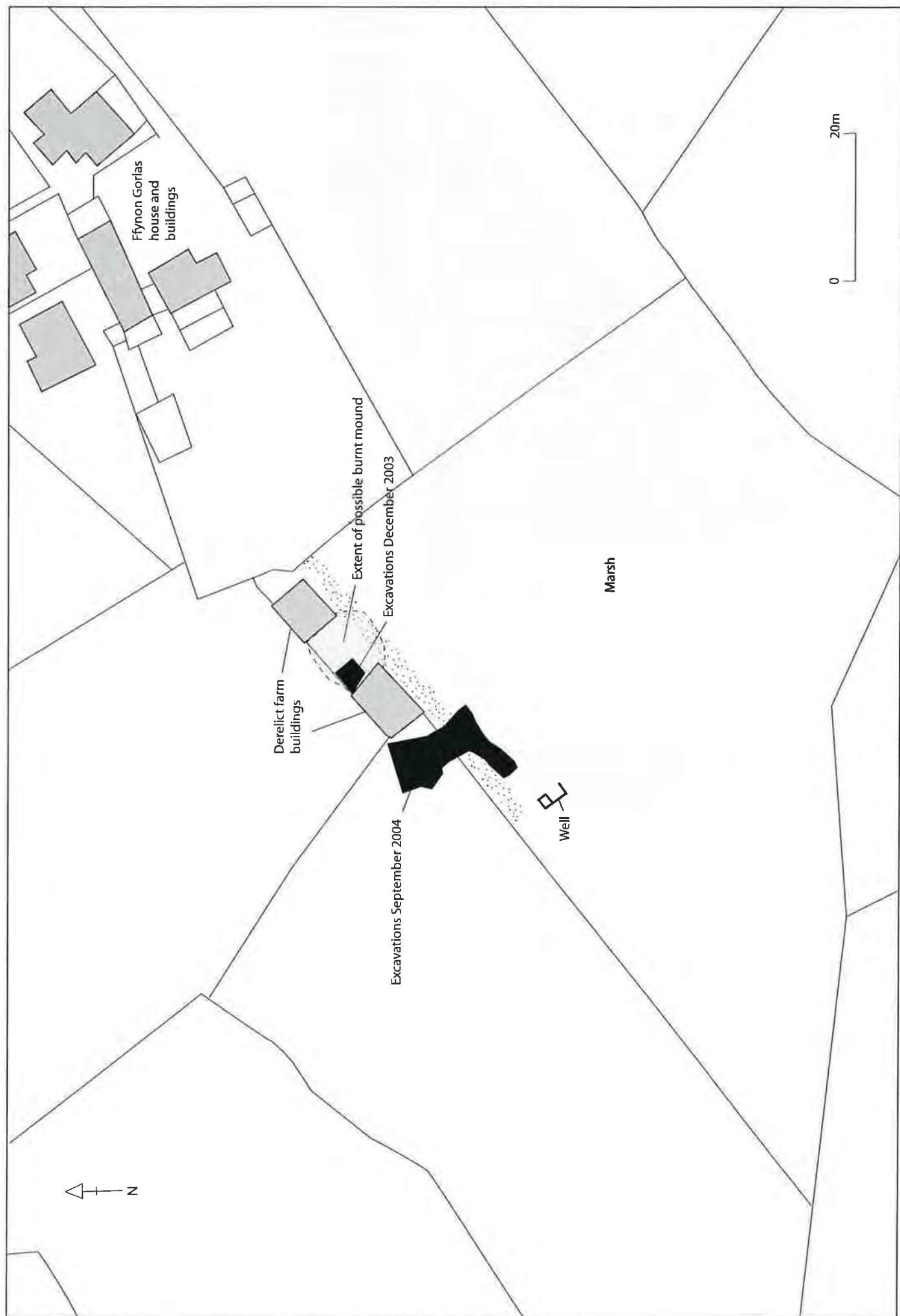


Figure 3. Ffynon Gorlas site location.

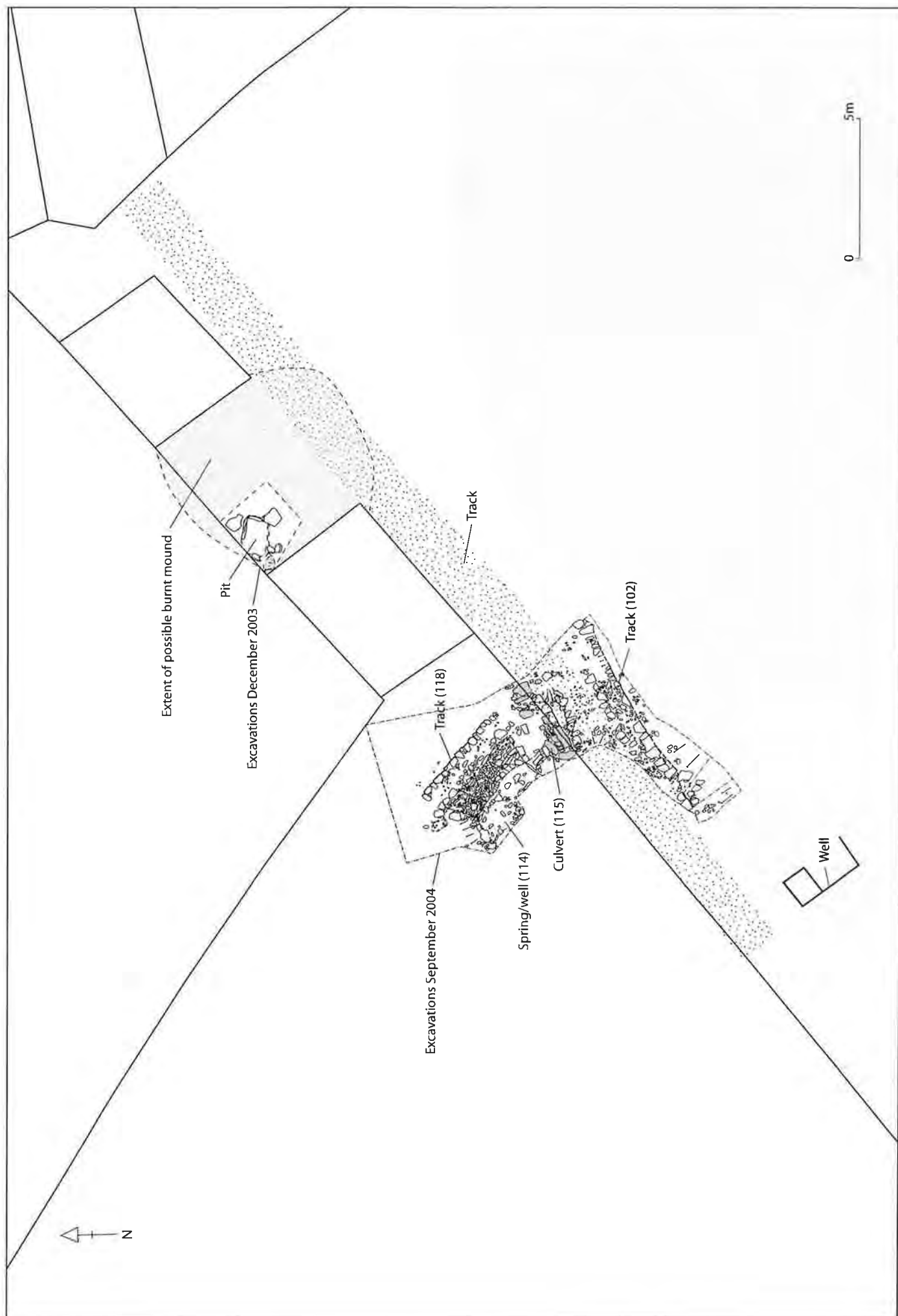


Figure 4. Ffynon Gorlas. Location of excavations.

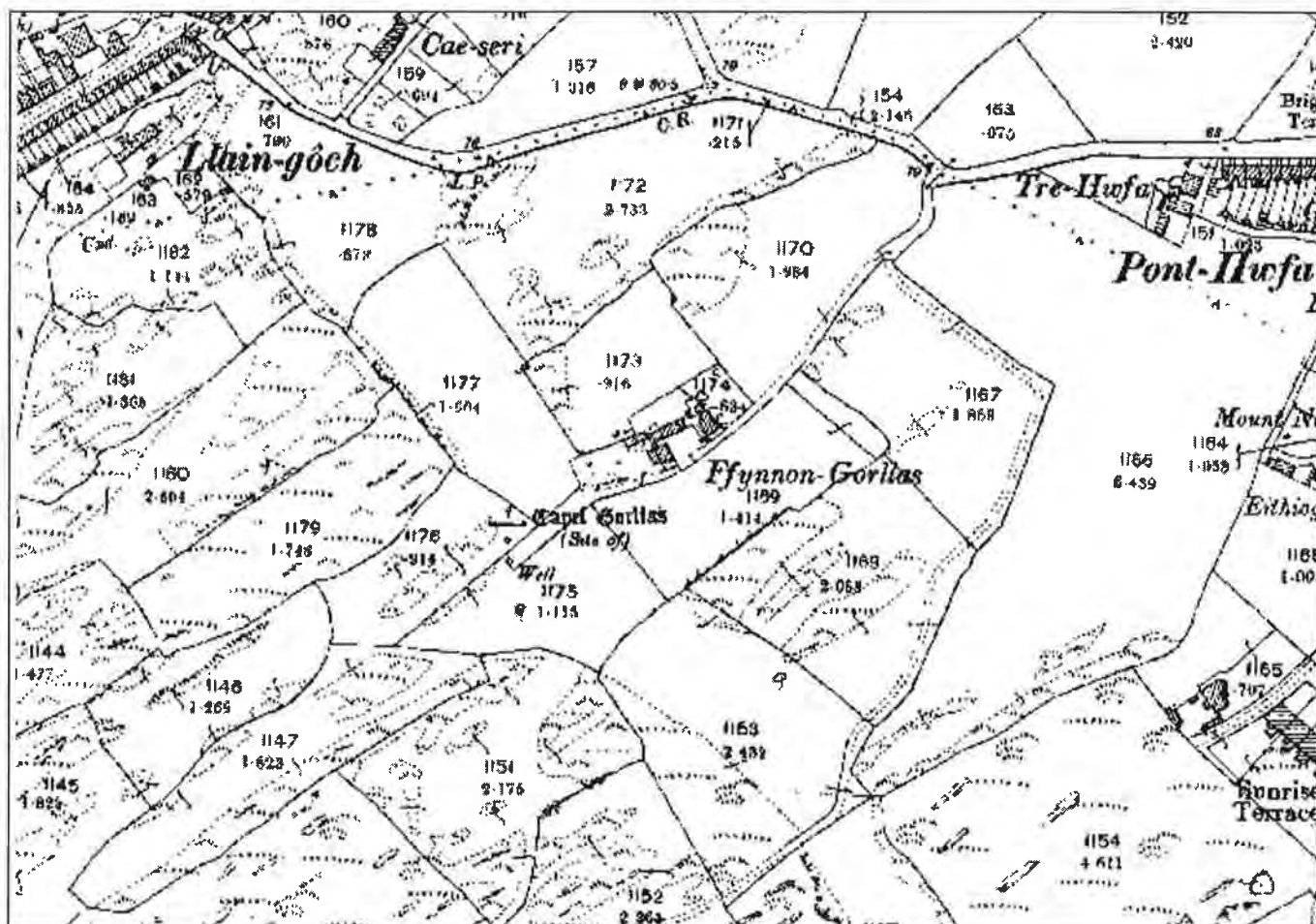


Figure 5. Ffynnon Gorlas in 1900. OS map Anglesey Sheet XI.02. Scale 1:2500

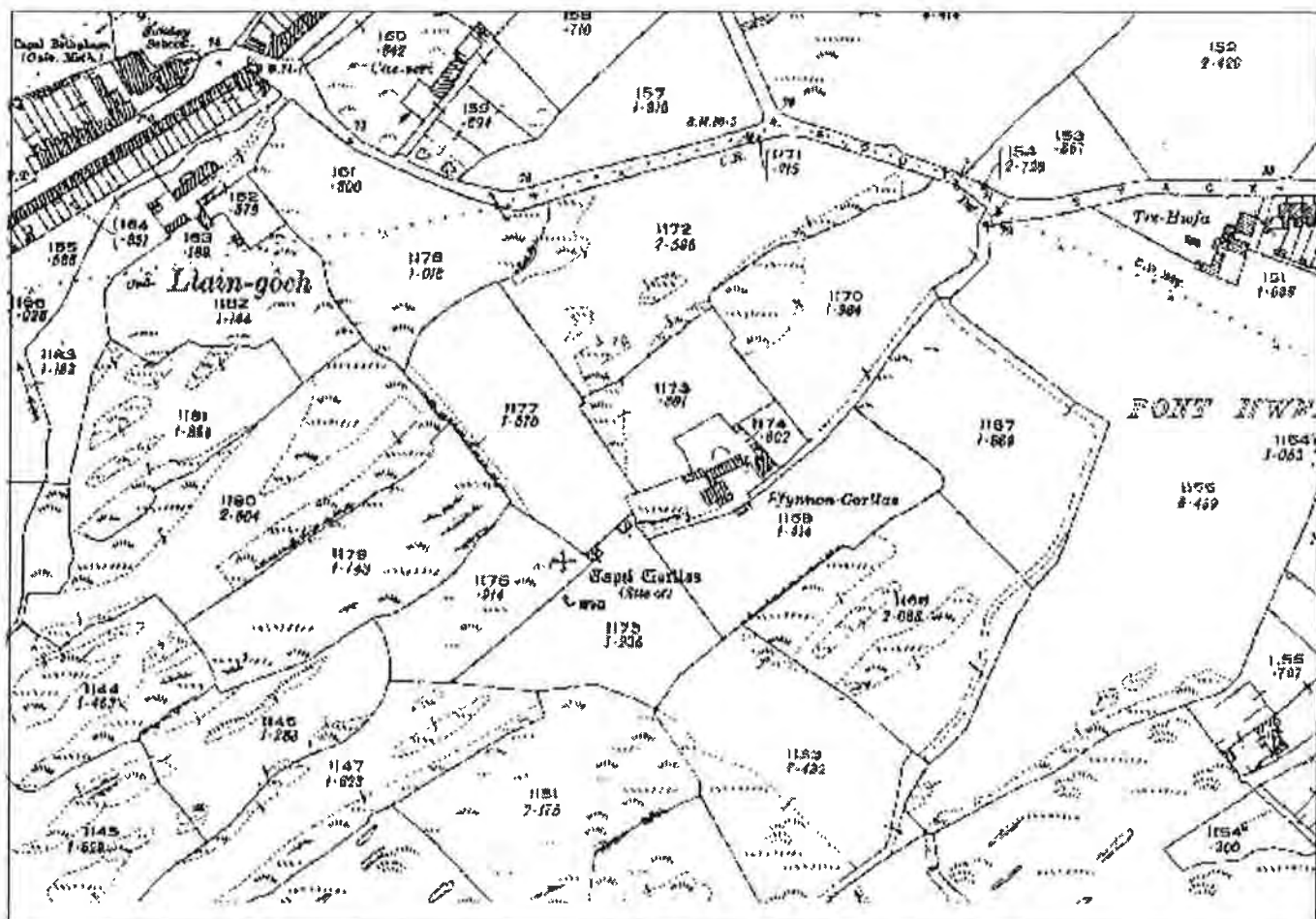


Figure 6. Ffynnon Gorlas in 1924. OS map Anglesey Sheet XI.02. Scale 1:2500



Figure 7. Site 4. Ffynon Gorllas. Site prior to excavation of the culvert.



Figure 8 . Site 4. Ffynon Gorllas. Site following the excavation of the culvert.

Figure 9. South facing section of context (102)

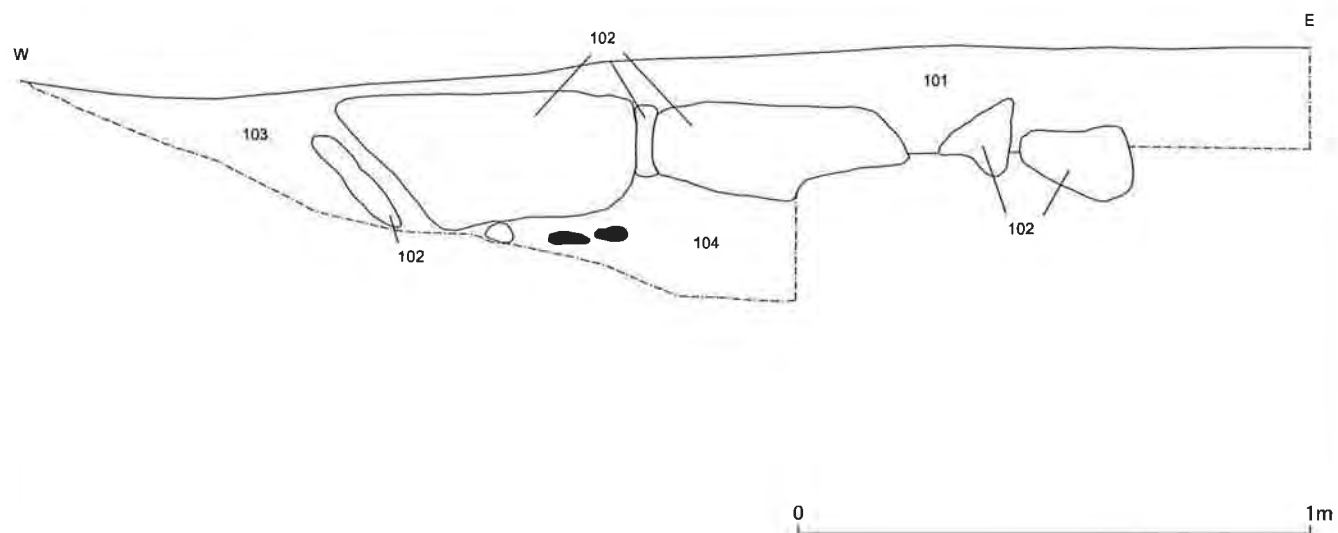


Figure 10. West facing section of context (102) to (104)

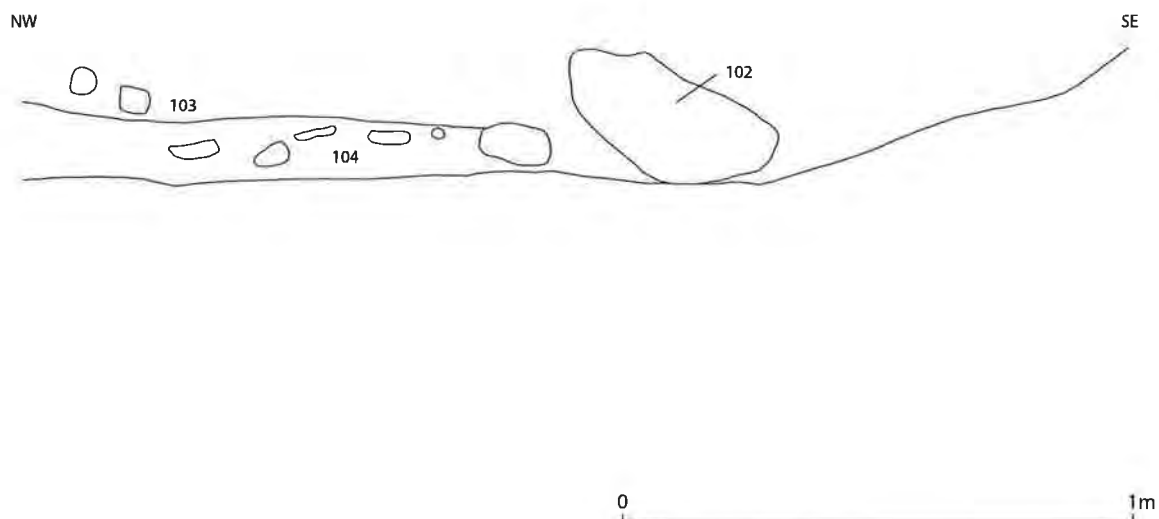




Plate 1. South west view of track (102)



Plate 2. North facing view of the (102) south facing section.



Plate 3. North west view of the spring/well (114).



Plate 4. South view of track (118)



Plate 5. West view of the culvert (115)

