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# Track to the south of Moel Goedog, near Harlech

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## Assessment Report

GAT Project No. 2082  
Report No. 804  
April 2009



**Track to the south of Moel Goedog, near Harlech**  
**An Archaeological Assessment**

**GAT Project no. G2082**

**GAT Report No. 804**

**Prepared for Egniol Consulting**  
**on behalf of Dŵr Cymru/Welsh Water**

**By J Kenney**

April 2009

Cover: View looking east down the track from near the western end

**Gwynedd Archaeological Trust**  
**Ymddiriedolaeth Archaeolegol Gwynedd**



# G2082 TRACK TO THE SOUTH OF MOEL GOEDOG, NEAR HARLECH

## ARCHAEOLOGICAL ASSESSMENT

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# **TRACK TO THE SOUTH OF MOEL GOEDOG, NEAR HARLECH (G2082)**

## **ARCHAEOLOGICAL ASSESSMENT**

### **SUMMARY**

*An archaeological assessment was carried out on the route of a track running to the south of Moel Goedog, near Harlech. The track is to be used for access by Welsh Water during their refurbishment of a raw water pipeline. The track runs through a landscape of particular importance, with evidence surviving of settlement patterns and field systems from prehistoric to medieval times. Thirteen Scheduled Ancient Monuments lie within half a kilometre of the track and one is bisected by the track. Other features lie close to the track and it is recommended that the route of the track is strictly kept to by vehicles.*

### **1. INTRODUCTION**

Gwynedd Archaeological Trust (GAT) was asked by Egniol Ltd on behalf of their clients Dŵr Cymru Welsh Water to carry out an archaeological assessment on a track to be used for access in connection with the replacement of a raw water main to Rhiwgoch Water Treatment Works, near Harlech. The track leaves the Llanfair to Talsarnau road at SH 6069 3203 and runs through the col between Moel Goedog and Moel y Gerddi. It then contours along the upper edge of the Nant Steicyn valley and meets the pipeline route at SH 6383 3338 (Figure 1). In order to support the greatly increased traffic it is intended to up-grade selected short sections of the track by laying hard core to consolidate and improve the surface. The hard core will be removed on completion of the raw water main replacement works.

### **2. DESIGN BRIEF AND SPECIFICATION**

A detailed project design has not been produced for this desk-based assessment but it follows a generic project design, which conforms to the guidelines specified in *Standard and Guidance for Archaeological Desk-based Assessment* (Institute of Field Archaeologists, 1994, rev. 2001 and 2008).

A desk-based assessment is defined as ‘a programme of assessment of the known or potential archaeological resource within a specified area or site on land, inter-tidal zone or underwater. It consists of a collation of existing written, graphic, photographic and electronic information in order to identify the likely character, extent, quality and worth of the known or potential archaeological resource in a local, regional, national or international context as appropriate’ (*Standard and Guidance for Archaeological Desk-based Assessment*, IFA 2008, 2).

The aims of the assessment are:

- to identify and record the cultural heritage within the defined study area;
- to evaluate the importance of what has been identified;
- to recommend ways in which impact upon the cultural heritage can be avoided or minimised.

To comply fully with the aims expressed above it can be necessary to undertake a programme of Field Evaluation following the Desktop study and Field Visit. This is because some sites cannot be assessed by desktop or field visit alone, and additional fieldwork is therefore required. This typically takes the form of geophysical survey or trial excavation, although measured survey is also a possible option. A full programme of assessment and evaluation may therefore consist of:

- Desktop study
- Field walkover
- Initial report
- Field evaluation

- Draft report
- Final report

This phase of the project concerns the first three phases only, and recommendations will be made for any field evaluation required.

### **3. METHODS AND TECHNIQUES**

#### **3.1 Desk top study**

The desktop study comprised the consultation of maps, documents, computer records, written records and reference works that form part of the Historic Environment Record (HER), located at Gwynedd Archaeological Trust (GAT), Bangor. The HER includes Cadw's information on listed buildings, and also holds copies of documents from the Mostyn Collection in the Bangor University Archives. The archives held by the Meirionnydd Record Office, Dolgellau were consulted, particularly for information from the relevant tithe maps. Aerial photographs from the collection at the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) were examined. Published and unpublished papers on the area and on relevant aspects of archaeology in North Wales in general were consulted to gain a broader understanding of the study area. In particular the assessment reports carried out for other Dŵr Cymru works in the area have been used for background information (Evans 2008a (GAT report 753); Evans 2008b (GAT report 754), and Kenney 2009 (GAT report 775)).

Appendix I contains a list of sites, buildings and find spots listed in the GAT HER, the National Monuments Record (NMR) and Cadw's register of listed buildings around the study area. These sites are located on figures 2 and 3. The numbers marked on figures 2 and 3 are PRNs (Primary Record Numbers) identifying the sites on the HER, NPRN (National Primary Record Numbers) identifying the sites on the National Monuments Record and listed building record numbers.

#### **3.2 Field Search**

The field search was undertaken along the route of the track on 31<sup>st</sup> March 2009. The route of the track was walked and features close to or easily accessible from the track were inspected. The track splits in places and where this occurred the clearest and most heavily used alternative was followed on the assumption that this will be the alternative used during the works. The weather was generally favourable, although mist descended over the eastern end of the route. The vegetation is largely short grass with some gorse at the western end of the track. The grass becomes longer and rougher further east, with heather and other moorland vegetation in places. Generally the vegetation was short enough to allow features to be easily identified.

Record photographs were taken of every gateway or gap through a field boundary but the walls have not been included in the list of features as it is assumed that the gateways will not have to be widened or altered.

#### **3.3 Report**

The available information was synthesised to give a summary of the archaeological and historic background and of the assessment and recommendations, as set out below. The separate features, their evaluation and recommendations are listed separately, and a summary of the overall assessment of the area is given at the end.

The criteria used for assessing the value of features was based upon those used by the Secretary of State for Wales when considering sites for protection as scheduled ancient monuments, as set out in the Welsh Office circular 60/96. The definitions of categories used for impact, field evaluation and mitigation are set out in Appendix II.

## **4. ARCHAEOLOGICAL RESULTS**

### **4.1 Topographic description**

The track runs through an upland landscape with low rounded hills intermediate between the high hills of the Rhinogau and the farmland below (figure 1). To the west the ground falls steeply to the flat coastal plain and Morfa Harlech and to the east the ground rises to the rocky, heather covered ridge with its high point at 623m OD on Moel Ysgyfarnogod. At its western end the track starts at 285m OD and ends at 330m OD at its eastern end, reaching 380m OD at its highest point.

This landscape is defined by the Cambrian rocks of the Harlech dome (Bowen and Gresham 1967, 1), which the British Geological Survey describes as Cambrian shales, sandstones and quartzites (British Geological Survey 1930). The soils have developed on boulder clay and exposed undifferentiated drift, and appear very thin over much of the uplands. In places there is peat, but this seems rarely to be deep in the vicinity of the track. In some places there are rocky outcrops with frost fractured rock and glacial erratic rocks scattered on the ground surface.

### **4.2 Archaeological and historical background**

The track under study runs through the col between Moel Goedog and Moel y Gerddi, both of which have important archaeological sites. Between these two hills the col, which has more recently been common land and rough grazing, was intensively occupied in the Iron Age and Romano-British period. Not only have the settlements been identified but also the fields surrounding them, preserved by the marginal nature of agriculture in this area in recent centuries.

#### ***4.2.1. Earlier Prehistoric***

No Mesolithic sites are known in the area but the presence of charcoal in a valley mire studied by Chambers and Price (1988) suggests Mesolithic clearance of woodlands possibly causing the local increase in alder carr observed in the pollen record. Neolithic activity is represented by chamber tombs, but all of these are to the south of the study area (Bowen and Gresham 1967). Very few other Neolithic sites are known, and the few stone axes that have been found are restricted to the coastal belt (Bowen and Gresham 1967). However, the lack of sites of this period is most probably due to limited excavation in the area. A Neolithic hearth, probably representing the remains of a small settlement, was identified under a later settlement excavated on Moel y Gerddi (Kelly 1988, 107). Chambers and Price (1988) detected episodes of Neolithic woodland clearance near Moel y Gerddi, probably relating to early farming activity.

Occasional objects dating from the Bronze Age have been found, again mainly on the lowlands (Bowen and Gresham 1967, 113, 124; RCAHMW 1912, 111). Other Bronze Age sites, particularly cairns, are more prevalent on the uplands. While there are many round cairns there are also more unusual types including ring cairns and cairns with upright orthostatic kerbs, like that at Bryn Cader Faner (Bowen and Gresham 1967, 87). Some ring cairns also make use of upright slabs. One such cairn (PRN 1008) was excavated on Moel Goedog and proved to enclose several cremation burials in urns (Lynch 1984). These more elaborate cairns and those with stone cists had a funerary function but other smaller cairns may be no more than heaps of stones cleared from the fields. Many of these are possibly also Bronze Age and are important because they indicate the location of fields and possibly arable agriculture.

At its western end the track runs for a short distance along a footpath leading around the north-western shoulder of Moel Goedog. This continues the line of the road, known as Y Fonllech Hir, where it is marked by seven standing stones. The route runs through the pair of cairns on Moel Goedog (PRN 1008 and 1009) and further along its line there are other standing stones and cairns including Bryn Cader Faner. It has been suggested that this is a Bronze Age routeway leading from the banks of the Afon Artro over the hills to the Trawsfynydd Basin (Bowen and Gresham 1967, 57-59; Lynch 1984, 34-35). Two of the standing stones (PRN 1040 and 1041) lie very close to the western end of the track under study.

#### ***4.2.2 Late Prehistoric / Romano-British***

The hill fort of Moel Goedog sits astride the junction of three parishes (Llandanwg, Llanfair and Talsarnau (previously Llanfihangel y Traethau)) (RCAHMW 1912, 58) on the summit of a hill with extensive views. It is roughly circular and defended by two rather slight banks with ditches. It is assumed to be Iron Age by



comparison to the similar excavated enclosure at Castell Odo, the earlier phase of which dated to the 3<sup>rd</sup> or 4<sup>th</sup> centuries BC (RCAHMW 1912, 58; Bowen and Gresham 1967, 148, fig 59).

The hill of Moel Goedog is surrounded by ancient field systems and their associated settlements. Kelly (1982, Fig 8) plotted the field boundaries from aerial photographs and his plan has been incorporated into figure 2. This shows a complex of fields around the settlement at Erw-wen. Some of the fields are denuded walls and others are terraces. Kelly (1982, 149) warns that some terraces are natural features, including one running through Erw-wen, but many are the product of ancient ploughing. The boundaries to the south of the settlement PRN 1002 are low stony banks visible in a grassy field. Several hut circles (PRN 1037, 1173, 5629) to the south of Moel Goedog are surrounded by further fields; some defined by very slight lines of stones. It is not known if all the settlements in this area are contemporary but they do appear quite evenly spaced and the field boundaries seem in places almost to create a single system. Two of the settlements have been excavated; both were circular enclosures with central stone-built roundhouses at Moel y Gerddi (PRN 1003) and Erw-wen (PRN 1036). The excavations suggested a date in the first millennium BC for the main phase of occupation at both sites and in both cases the stone roundhouse was preceded by a timber one (Kelly 1988).

Some of the roundhouse settlements probably continued in use throughout the Roman period, although the two excavated examples showed no evidence of this (Kelly 1988). There is little evidence of a Roman military presence in the area. The Roman road between Tomen-y-Mur and Pennal (Margary 1996, 354-5) takes an inland route about 6km to the east of the study area. However, late Roman coin hoards found at Harlech Castle and Llanbedr (Bowen and Gresham 1967) do suggest some trade or other contact between the Ardudwy area and the Roman army.

#### **4.2.3. Medieval**

It is likely that some of the roundhouse settlements were occupied into the early medieval period but firm evidence for this has proved hard to find. The excavations at Erw-wen demonstrated the re-use of the site sometime between the thirteenth and sixteenth centuries, when the roundhouse was converted into an animal pen and a rectangular platform house was constructed (Kelly 1988, 128, 140).

The earthwork and rubble remains of long huts or rectangular hut platforms have been dated to the medieval period since Gresham's work in Caernarvonshire (Gresham 1954). On the uplands these are often isolated dwellings, probably hafodau (Gresham 1954), the summer dwellings used as part of the hafod and hendre system of annual transhumance up until the eighteenth century (Davies 1979, 26-29, 18). The remains of a series of these structures can be found nearly 300m south of the track (PRN 1182), with associated enclosures and another isolated long hut not far away (PRN 1181). A similar fairly substantial rectangular building of probable medieval date has been found as high as 360m OD, overlying an earlier settlement (PRN 1174).

The track under study runs mainly within the parish of Llanfair, but starts in Llandanwg and ends in the former parish of Llanfihangel y Traethau, all within the commote of Ardudwy (figures 4, 5 and 6). The commote was divided into the half commotes of Is Artro and Uwch Artro, Llanfair being in the former and Llandanwg and Llanfihangel y Traethau in the latter (Thomas 2001). The uplands and lowlands worked as part of an integrated agricultural system and it is notable that all the parishes in this area run from the coast inland to maximise land of all types within the parish boundary. While pollen evidence shows that woodland clearance continued throughout the Roman period in the area there was some regeneration in the early medieval period, perhaps suggesting less intensive use, especially the uplands, but clearance continued from the mid 12<sup>th</sup> century (Chambers and Price 1988). In the twelfth and thirteenth centuries there may have been arable cultivation up to 450m OD but the limit of cultivation then retreated until it was unlikely to be above 300m by 1600 (Thomas 2001, 178). This still allows the possibility of cultivation close to the trackway. Some of the ancient field boundaries may belong to medieval cultivation but the pattern of the fields does seem more closely related to the earlier settlements.

#### **4.2.4 Post-Medieval**

An enclosure award was drawn up for the parishes of Llanbedr and Llanfair in 1836 (Merioneth RO QR/En/5). This divided the commonland, marshes and waste land between landowners with rights to its use. The field boundaries in the uplands are mostly very regular showing that they are 19<sup>th</sup> century creations, post-dating the enclosure award. This is confirmed by most being listed as allotments on the early 1840s tithe maps.

At the western end of the track the field boundaries were quite different in the 1840s to those today (figure 4). The large, regular boundaries had been extended over this area by 1890 (figure 7), by which date some additional boundaries had been added further east. As all the walls are similar in character it is likely that the

boundaries shown on the tithe maps were fences set up shortly after enclosure and that these were replaced throughout the 19<sup>th</sup> century by walls. Many of the fields have well-built sheep folds in their corners or isolated in the middle of fields and these were presumably built at the same time as the walls. The large walled fields appear designed to maintain each farmer's sheep separate from his neighbours, unlike more communal systems that functioned on areas such as the Carneddau.

The western boundaries on the tithe map appear to preserve some of the earlier divisions, some of which may have re-used ancient boundaries. The northern most of the group of ancient boundaries recorded as PRN 2952 seems to have formed part of an early 19<sup>th</sup> century field but internal boundaries related to it probably went out of use much earlier, and all may be Iron Age in origin.

Although the uplands were divided up between individual landowners turbary rights were still maintained. Peat must have been an important fuel and the Llanfair tithe map labels the track under study as leading to turbaries in Llanfihangel parish (figure 4), to which, presumably Llanfair had some rights. Peat stacks and drying platforms (PRN 29224, 29226 and 29227) can be found around the bog at the eastern end of the track.

There was manganese mining up Nant Steicyn and near Llyn Eiddew-mawr but most of the route of the track is quite distant from most 19<sup>th</sup> century activity. Some small cottages on the ffridd, often close to sheep folds, such as PRN 29228 and 29233, demonstrate that the uplands were still occasionally occupied. Most people probably travelled to the upland pastures and brought down livestock or milk the same day, but the cottages suggest occasional overnight stays occurred.

The track itself is shown on the Llanfair 1840 tithe map (figure 4) and was established on almost the same line as today by 1890 (figure 7). It follows the topography and could have been used for a considerable period for access to the upland pastures and to the turbaries. There is no convincing evidence that it has an origin in an Iron Age track as it fails to respect most of the ancient field boundaries, but it seems likely that there was a route between the settlements and possibly beyond in the Iron Age and it is unlikely to have run very far from the present track.

### **4.3 Statutory and non-statutory designations**

The development area lies within the Snowdonia National Park and the Arddwy Landscape of Outstanding Historic Interest (HLW (Gw) 2), where it is described as 'a large, exceptionally rich and well-studied landscape, situated on the western flanks of the Rhiniog Mountains, containing extensive relict evidence of recurrent land use and settlement from prehistoric to recent times' (Cadw 1998, 76). There are 3 Scheduled Ancient Monument close to the track and another 10 within about 500m of it (these are listed in appendix I). The track has been terraced through the settlement site (SAM Me133, PRN 1002) causing obvious damage to some of the structures. The standing stones (SAM 57 d and e, PRNs 1040 and 1041) lie at the start of the western end of the track. There are no listed buildings within 500m of the track.

### **4.4 Aerial Photographs**

Vertical aerial photographs were examined at the NMR in Aberystwyth. These provide a good over view of the area and are particularly useful for identifying ancient field boundaries and other linear features. The Arddwy Survey has already made use of these photographs to transcribe some of the field boundaries over part of the study area (Kelly 1982, fig 8). The 1946 photographs were of poor quality and of limited use. Sites identified from the air photographs were checked on the ground during the field search.

### **4.5 The Archaeological Survey (Figures 2 and 3)**

Ten new features were identified directly on or close to the track (including the track itself) and 10 previously known features lie within about 50m of the track. These are shown on figures 2 and 3 and described below with recommendations for further assessment and mitigatory measures, where appropriate. Those features that did not previously have PRN numbers have been allocated them and they will be added to the HER.

**PRN 1040                      Standing stone   SAM Me57e      Plate 1**

SH 6067 3203

*Period: Bronze Age*

*Category: A                      Impact: None*

This small standing stone stands to the west of the tarmaced road and is easily identified. Boulders have been placed along this stretch of road to prevent parking so there should be no risk of accidental damage while turning vehicles.

***Recommendations for further assessment: None***

***Recommendations for mitigatory measures: Avoid***

**PRN 1041                      Standing stone   SAM Me57d      Plate 2**

SH 6071 3204

*Period: Bronze Age*

*Category: A                      Impact: None*

This small stone of slightly unusual shape is close to the edge of the track on its western side. It is less obvious than the previous stone because of other boulders in the area including a heap of boulders at the start of the track and a natural erratic to the east of the track. There should be no risk of damage but it is recommended that the stone be fenced off as it is a scheduled ancient monument.

***Recommendations for further assessment: None***

***Recommendations for mitigatory measures: Fence off and avoid***

**PRN 30425                      Short section of walling                      Plate 3**

SH 61042 32096

*Period: Post medieval?*

*Category: D                      Impact: Slight*

This is a short section of rough revetment wall no more than 10m long, about 0.5m wide and 0.2m high. Only 1 or 2 courses survive and it is very disturbed. It runs at a slight angle to the track and does not seem to revet the current track but may be related to a previous track joining from the south-west. It is probably of a late date but with the presence of early field boundaries in the area it is not impossible that it is related to these. This feature should be fenced off to avoid damage.

***Recommendations for further assessment: None***

***Recommendations for mitigatory measures: Fence off and avoid***

**PRN 30426                      Curving wall with ditch                      Plate 4**

SH 61043 32074 to SH 61157 32102

*Period: Post medieval/Medieval?*

*Category: B                      Impact: None*

The remains of a substantial wall curve around the edge of a boggy area. The wall only survives to one or two courses in height but is built of large stones and is up to 0.5m high. It is about 1m wide and has a shallow ditch on its northern side. This feature was recorded by Kelly (1982, fig 8) as part of the field systems associated with the roundhouse settlements in the area. However, it is very much more substantial than the other boundaries and although it may have originally been part of the ancient system it has been reused in the medieval period or later. Although comparing this part of the Llanfair tithe map to features on the ground is not straight forward this wall seems to form the north side of field 443 (figure 4).

This is far enough from the track that there should be no risk of accidental damage.

***Recommendations for further assessment: None***

***Recommendations for mitigatory measures: Avoid***

**PRN 30427                      Ancient field boundaries                      Plate 5**

SH 61129 32125

*Period: Prehistoric?*

*Category: B                      Impact: None*

Two very slight parallel lines of grass covered stones run across the track about north-south and continue up a gentle slope. A rather clearer boundary crosses these further up the slope. These are at present partly defined by the gorse bushes growing on them and in places use bedrock outcrops but their regularity makes them convincing as genuine field boundaries. There is about 15m between the parallel boundaries and this area is fairly level and relatively stone free. Kelly (1982, fig 8) recorded these boundaries and they seem to relate to an enclosure around the roundhouses (PRN 1173 and 5629). They run to the wall described above (PRN 30426) and may all have originally been contemporary, although PRN 30426 seems to have been reused at later

periods.

As long as vehicles stay on the track there is no reason why these features should be damaged, although they are very close to the track and very difficult to identify. The track should be fenced where it passes through this area to ensure no vehicles leave the track here.

**Recommendations for further assessment:** *None*

**Recommendations for mitigatory measures:** *Fence and avoid*

**PRN 30428                      Terraced field boundary                      Plate 6**

*SH 61220 32079*

*Period: Medieval?*

*Category: B                      Impact: None*

A substantial, west-facing terrace runs north to south from the track. It is about 1m high, well-defined and seems to have been revetted by large glacial boulders. Many of the boulders seem to be casually dumped but there is a small group that remain stacked on top of each other to form rough walling. Kelly (1982, 149) warns that some terraces in the area are natural and may be of glacial origin. It is probable that this was a natural feature but it has been enhanced and made sharper by ploughing and revetting. This is presumably related to the field system further east (PRN 2952) and may be the western boundary of field 442 shown on the tithe map (figure 4), but almost certainly has earlier origins. In 1840 this field was arable, so there is no reason for it not to have been ploughed for centuries, creating the large lynchet.

As long as vehicles stay on the track there is no reason why this feature should be damaged.

**Recommendations for further assessment:** *None*

**Recommendations for mitigatory measures:** *Avoid*

**PRN 30429                      Cairn/site of cottage?                      Plate 7**

*SH 61287 32125*

*Period: Post medieval?*

*Category: D                      Impact: None*

This is a heap of stones about 6m in diameter and 1m high. The stones are generally loose and unconsolidated and it is likely that this is a 19<sup>th</sup> century field clearance cairn built up on an outcrop of rock. However there is the possibility that an earlier cairn or a structure might be preserved beneath it. This must be close to the location of a cottage on the Llanfair tithe map, although its precise position is difficult to determine. The cottage seems to have been known as Tyddyn y Cefn and belonged to the farm of Rhydyreirin (figure 4).

This feature is quite obvious and should be easily avoided, but the possible presence of remains of a cottage and possible related features in this area emphasises the need for vehicles to stay on the track even if there are no obvious earthworks present.

**Recommendations for further assessment:** *None*

**Recommendations for mitigatory measures:** *Avoid*

**PRN 2952                      Ancient field boundaries**

*Centred on SH 6140 3200*

*Period: Prehistoric/medieval?*

*Category: B                      Impact: None*

Grass covered stone banks define small roughly rectangular fields. Some are quite clear on the ground and others are difficult to identify. They were traced from aerial photographs by Kelly (1982, fig 8) and seem to relate to the roundhouse settlement PRN 1002. They form small sub-rectangular fields appropriate to early agriculture and one boundary seems to run directly to the settlement. Their origin in the Iron Age/Romano-British period seems likely but the northern boundary at least seems to have been used into the post medieval period as it probably formed the northern boundary of field 449 shown on the tithe map (figure 4).

As long as vehicles stay on the track there is no reason why these features should be damaged, but the field is quite open here and drivers should be prevented from leaving the track to turn or park.

**Recommendations for further assessment:** *None*

**Recommendations for mitigatory measures:** *Avoid*

**PRN 1002                      Hut circle settlement                      SAM Me 133                      Plates 8 and 9**

*SH 6155 3216*

*Period: Iron Age/Romano-British*

*Category: A Impact: None*

Gresham (Bowen and Gresham 1967, 196) describes this settlement as consisting of four circular huts set around a courtyard and linked by an enclosing wall, with a rectangular hut terraced into the hill slope on the north side of the settlement. A small D-shaped paddock adjoins the settlement on the south side. The rectangular structure may indicate reuse in the medieval period. Gresham's plan (Bowen and Gresham 1967, fig 82) shows no more than a slight disturbance where the track passed through the settlement, and the plan was clearly drawn before the track was terraced into the hill slope causing considerable disturbance to the smaller huts. This has made the site harder to understand, but most features recorded by Gresham are still there.

It is important that vehicles stick strictly to the track through this feature. Some additional reinforcement of the track would be useful to prevent any further erosion and fencing to prevent any straying from the track.

***Recommendations for further assessment:*** *None*

***Recommendations for mitigatory measures:*** *Fence and avoid. Reinforce the track.*

**PRN 1175 Funerary cairn**

*SH 63241 33204*

*Period: Bronze Age*

*Category: A Impact: None*

The current HER entry describes this features as a 'Small mound of stones with a large central disturbance, near Llyn y Fedw. Cairn 5m in diameter, with the remains of a large cist. Covered with turf and has a deep hole probably indicative of antiquarian disturbance.' This is an adequate description and its condition has not changed. The remains of the cists show that this was definitely a funerary monument.

The cairn lies about 15m south of the track and should not be at any risk from the use of the track. The grid reference given above was taken with a hand-held GPS and is slightly different to the previous reference.

***Recommendations for further assessment:*** *None*

***Recommendations for mitigatory measures:*** *Avoid.*

**PRN 12898 Cairn**

*SH 63189 33316*

*Period: Bronze Age*

*Category: B Impact: None*

The current HER entry describes this feature as a 'small low stony mound, mostly grass covered. A few exposed stones in the centre seem to be a result of robbing and there is a small central cavity. The stones include one long slab which could derive from a cist or could be a fallen orthostat for a way marker for the adjoining trackway'. This is an adequate description and its condition has not changed, but it is now adjacent to the footpath rather than 3m away as previously recorded, presumably because the path moves over time. This cairn has no obvious traces of a cist or kerb and could be a field clearance cairn.

The current HER record shows this cairn to be only 17m north of the track under study. However, a cairn was found during the field search that perfectly matched the description above but was about 90m north of the track and immediately adjacent to the footpath leading north. No other cairns were seen in the area and there is little doubt that this is the feature described as PRN 12898. The grid reference given above was taken with a hand-held GPS and should replace the previous reference. As long as the footpath is not used by vehicles there should be no risk to this feature.

***Recommendations for further assessment:*** *None*

***Recommendations for mitigatory measures:*** *Avoid.*

**PRN 28,907 Sheepfold Plate 10**

*SH 6335 3324*

*Period: Post medieval*

*Category: D Impact: None*

This is a small building set into the side of a small hill. The rear wall stands about 2m high and the front wall is only 1m high, but may never have been much higher if this was a type of lean-to structure. There is a small enclosed yard in front and a further much collapsed walled enclosure hidden in the reeds. This structure is marked on the 1890 OS map as a sheepfold but it seems also to include a shepherd's shelter. The style of construction indicates a 19<sup>th</sup> century date.

The building is some distance from the track, easily recognized and unlikely to be damaged.

***Recommendations for further assessment:*** *None*

**Recommendations for mitigatory measures:** *Avoid.*

**PRN 30430                      Clearance cairn                      Plate 11**

*SH 63431 33173*

*Period: Prehistoric?*

*Category: B                      Impact: Slight*

This is a grass and moss covered cairn about 3m in diameter and no more than 0.3m high. It contains some larger stones up to 0.6m on length but no obvious traces of a cist or kerb. It is probably a clearance cairn rather than a funerary cairn but no other clearance cairns or field boundaries were recognised in the area.

This cairn is on the very edge of the track. If vehicles repeatedly tracked over it the stones could be disturbed and the appearance of the cairn confused. It is difficult to recognise and would need to be clearly fenced off to avoid damage.

**Recommendations for further assessment:** *None*

**Recommendations for mitigatory measures:** *Fence and avoid*

**PRN 30431                      Track                      Plate 12**

*SH 60754 32076 to SH 63832 33375*

*Period: Post medieval*

*Category: D                      Impact: Slight*

This is a fairly rough track. In places it is terraced into the slope and very occasionally revetted with stone but in many places it is just a pair of vehicle ruts. However it is shown on the 1890 map (figure 7) running along almost the same route as today, though with slight variations. In parts at that period it is marked as a footpath only. The part within Llanfair parish is shown on the 1840 tithe map, and it is marked at its eastern end "To Turbaries" (figure 4). The track therefore probably dates from at least the early 19<sup>th</sup> century when most of the fields in this area were laid out after the enclosure award of 1836. As the track follows the natural topography it may have approximately followed an older route used for collecting peat from the uplands. However, there is likely to be very few physical remains of the early track as this was probably little more than a footpath. The track has not been surfaced and the terracing was probably done late in the track's history, so its use will not damage any physical remains.

The track will have to be up-graded by the deposition of hardcore to create a more robust surface, but as long as it is not widened or re-terraced there will be no loss of the existing route or features of the track. No other specific mitigatory measures are therefore recommended.

**Recommendations for further assessment:** *None*

**Recommendations for mitigatory measures:** *Upgrade to prevent erosion*

**PRN 29226                      Peat stack**

*SH 63849 33370*

*Period: Post medieval*

*Category: C                      Impact: None*

This appears as an approximately circular raised area of peat on edge of a bog. It is c.10m in diameter, and 0.3m high. This feature is quite close to the end of the track but is in a boggy area that is best avoided. It has already been recommended that it be fenced off during the pipe bursting work.

**Recommendations for further assessment:** *None*

**Recommendations for mitigatory measures:** *Fence and avoid*

**PRN 29227                      Peat stack**

*SH 63823 33345*

*Period: Post medieval*

*Category: C                      Impact: None*

This is a small oval stone revetted platform, measuring c.6m by 3.5m, and 0.5m high. It is on a hill slope amongst boulders and rock outcrops and so should be easily avoidable.

**Recommendations for further assessment:** *None*

**Recommendations for mitigatory measures:** *Avoid*

**PRN 1176                      Hut circles**

*SH 63731 33295, SH 63785 33285 and SH 63750 33290*

*Period: Prehistoric*

*Category: A                      Impact: None*

There is a line of three circular features varying in diameter between c.5.5m and 10m. They are stone built, although now partially overgrown, and are probably hut circles or a hut circle and two enclosures. A search of the area failed to identify any other related features so there seem to be no related field boundaries or other structures. A branch of the track runs south very close to one of these features but this track is overgrown with gorse where it leaves the main track and is unlikely to be used. Close to the end of the track the land is fairly flat and dry and would make a suitable compound if one was needed. Presumably a turning circle for traffic at least would be needed here. Any use of this area would require its fencing to prevent vehicles tracking over the area with the hut circles on.

**Recommendations for further assessment:** *None*

**Recommendations for mitigatory measures:** *Fence and avoid*

**PRN 30432                      Sheep fold**

SH 61480 32184

*Period: Post medieval*

*Category: D                      Impact: None*

Rectangular sheepfold measuring about 16m by 8m with two compartments. It has well-preserved with walls standing to c.1.5m high. The sheepfold is shown on the 1890 OS map and is probably mid 19<sup>th</sup> century in date. This structure is about 40m north of the track and is easily avoided.

**Recommendations for further assessment:** *None*

**Recommendations for mitigatory measures:** *Avoid*

**PRN 30433                      Sheep fold**

SH 61961 32117

*Period: Post medieval*

*Category: D                      Impact: None*

Rectangular sheepfold measuring about 9m by 5m with two compartments in corner of field walls. It has well-preserved with walls standing to c.1.2m high. The sheepfold is shown on the 1890 OS map and is probably mid 19<sup>th</sup> century in date. This structure is about 30m south of the track and is easily avoided.

**Recommendations for further assessment:** *None*

**Recommendations for mitigatory measures:** *Avoid*

**PRN 30434                      Sheep fold**

SH 62548 32640

*Period: Post medieval*

*Category: D                      Impact: None*

Triangular sheepfold measuring about 20m by 15m formed within a corner of the field. It has well-preserved with walls standing to c.1.5m high. The sheepfold is shown on the 1890 OS map and is probably mid 19<sup>th</sup> century in date. This structure is about 35m north of the track and is easily avoided.

**Recommendations for further assessment:** *None*

**Recommendations for mitigatory measures:** *Avoid*

## **5.                      SUMMARY OF ARCHAEOLOGICAL POTENTIAL**

Ten previously known features and 10 new ones are listed above as being located close to the track. The features listed above cover a wide time period from the Bronze Age through to the nineteenth century. They include some late and minor features but also include a scheduled ancient monument and parts of the Iron Age/Romano-British field systems, which make this area one of particular archaeological importance.

The peats of the uplands have a high potential for preserving a good pollen record, especially those in small bogs near farmsteads. However, the use of the track will not damage any peat bogs or effect the drainage regime of the area, so it will have no impact on this preserved record.

## **6.                      RECOMMENDATIONS**

The use of the track as such should not cause damage to any of the sites but for this to be ensured all drivers must be aware that they must keep to the track and not leave it to allow passing or to park. The track needs to be clearly marked so that no drivers take alternative routes by accident. Some passing places will presumably be needed and these should be chosen in consultation with the archaeologists and should be clearly marked. A

turning circle will presumably be needed at the eastern end and this must be fenced. Several features close to the track are recommended for individual fencing. These are:-

<b>PRN</b>	<b>Site</b>
1041	standing stone (SAM Me57d)
30425	revetment
30427	ancient field boundaries
1002	settlement (SAM Me133)
30430	cairn
29226	peat stack
1176	hut circles

Fencing should be monitored by an archaeologist to ensure that the correct areas are fenced.

As the volume of traffic using the track will be considerable the track will have to be locally up-graded temporarily to withstand this use. The landscape and aesthetic implications of this need to be discussed with the Snowdonia National Park Authority, but a clear track that is not prone to erosion will help to ensure that the archaeology is protected. Additional protection for the track should be provided where it passes through the scheduled area (Me 133) to ensure that no erosion occurs here.

## **7. CONCLUSIONS**

As long as the fencing recommended above is carried out and use of the track is well regulated there should be no damage to the archaeology near the track caused by its use for access during the pipe refurbishment works.

## **8. ARCHIVE**

The archive consists of copies of historic maps, plans with annotations made in the field and transcribed from aerial photographs, along with notes and 67 digital images taken on the field visit. The sites are recorded in a database to aid their input to the HER and any relevant National Park database.

Three copies of the bound report will be sent to the SNPA archaeologist, and a further copy sent to the HER Archaeologist at the curatorial division of Gwynedd Archaeological Trust, Bangor, for deposition in the Regional HER. A copy of the report will be provided to the National Monument Record, Royal Commission on the Ancient and Historic Monuments of Wales, Aberystwyth.

## **9. REFERENCES AND OTHER SOURCES CONSULTED**

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#### **GAT Historic Environment Record**

Ordnance Survey 1:10,560 map, First Edition, Merionethshire sheets IXX SW and SE (1890)

#### **Merioneth Record Office, Dolgellau**

Tithe map for the parish of Llanfair in Merionethshire 1840.

Tithe Apportionment Schedule for the parish of Llanfair in Merionethshire 1839.

Tithe map for the parish of Llandanwg in Merionethshire 1841.

Tithe Apportionment Schedule for the parish of Llandanwg in Merionethshire 1841.

Tithe map for the parishes of Llanfihangel y Traethau and Llandecwyn in the County of Merioneth 1842.

Tithe Apportionment Schedule for the parishes of Llanfihangel y Traethau and Llandecwyn in the County of Merioneth 1842.

QR/En/5: Enclosure award for the parishes of Llanbedr and Llanfair 1836 (no map surviving)

#### **RCAHMW, Aberystwyth**

##### ***Aerial Photographs***

##### *Verticals*

106G/UK/1455, date 2<sup>nd</sup> May 1946, frames 4308-4309

540/464, date 20<sup>th</sup> April 1951, frames 3011-3015

58/RAF/2649, date 5<sup>th</sup> December 1958, frames 118-120

OS 71-286, date 4<sup>th</sup> June 1971, frames 080, 090

OS 91-206, date 30<sup>th</sup> July 1991, frames 78-80

OS 96-514, date 4<sup>th</sup> April 1996, frames 120-130

##### *Obliques*

003505, frames 12, 18, 19, 20 (PRNs 1008, 1009, 1042, 1040)

935113, frame 53 (PRN 1034)

##### *Colour slides*

89-CS-376 (PRNs 1008 and 1009), dated 07/06/1989

## APPENDIX I: Previously known sites along and around the route of the raw water pipe

**Table 1: HER sites close to the track**

PRN	NPRN	Site name	NGR	SAM No.	Period	Form	Notes
1002	56800	Hut Group + Field System, SE Of Moel Goedog	SH61553216	M133	Iron Age/Romano-British	Stone Built Feature	The settlement includes the remains of 4 circular huts and a larger rectangular structure set into the hillside below Moel Goedog fort. Two of the huts have been disturbed by a track which crosses the monument, but the other features and a small associated D-shaped paddock are well-preserved. The scheduled area forms a rectangle 60m WSW-ENE x 75 NNW-SSE. Quite possibly all the structures are contemporary the round hut and rectangular enclosure are less well defined than the rest of the monument. Wandering walls were noticed to the NE of the site.
1040	57324	Fonllech Hir Standing Stone (3)	SH60673203	M057e	Prehistoric	Standing Monument	Standing stone 1m high 0.5m x 0.18m. The standing stone has packing stones clearly visible at its base.
1041	57355	Fonllech Hir Standing Stone (4)	SH60713204	M057d	Prehistoric	Standing Monument	Squat stone measuring 2'6" high x 2'9" x ?'6". One of a series. Standing stone 0.9m high x 0.5m x 0.6m at base. Located at the junction of two tracks.
1175	57425	Cairn, SE Of Moel y Glo	SH63223320		Prehistoric	Stone Built Feature	Small mound of stones with a large central disturbance, near Llyn y Fedw. Cairn 5m in diameter, with the remains of a large cist. Covered with turf and has a deep hole probably indicative of antiquarian disturbance.
1176	57426	Hut Circle\Hut Group, SE Of Moel y Glo	SH63703325 (SH 63731 33295, SH 63785 33285, SH 63750 33290)		Prehistoric	Stone-built/earthworks	Three hut circles in a rough line W - E on sloping ground SW of Llyn Eiddew Mawr. Site selected for detailed outline plan to be published in the Ardudwy survey. Three circles defined by low walls identified in the pipe line assessment, some seem rather large for hut circles and it is odd that they are in such a straight line. There is a possible fourth in the line visible on APs and other features may exist in this area.
2952	57154	Field System, Dyffryn Ardudwy	SH61403200C		Iron Age/Romano-British?	Earthwork	
12898	0	Cairn, E of Llyn y Fedw	SH63203324		Prehistoric	Stone Built Feature	On a gentle east facing slope about 3m W of the trackway and about 100m n of PRN 1175. A small low stony mound, mostly grass covered. A few exposed stones in the centre seem to be a result of robbing and there is a small central cavity. The stones include one long slab which could derive from a cist or could be a fallen orthostat for a way marker for the adjoining trackway.
28907		Sheepfold 11 SW of Llyn Eiddew-mawr	SH63353324		Unknown		Sheepfold
29226		Peat stack	SH 63849 33370		Post medieval	Earthwork	Approximately circular raised area of peat on edge of bog
29227		Peat stack	SH 63823 33345		Post medieval	Stone built feature	Small oval stone revetted platform

**Table 2. HER sites within about 250m of the track**

PRN	NPRN	Site name	NGR	SAM	Period	Form	Notes
-----	------	-----------	-----	-----	--------	------	-------

				No.			
1000	56798	Moel Goedog Camp	SH61373250	M059	Iron Age/Roman o-British	Earthwork	<p>Moel Goedog hillfort commands an excellent position in the landscape on the almost circular summit of the hill, although the defences are relatively slight. The defences consist of two close-set concentric banks, no more than 1m high, with shallow external ditches. It has been suggested that they were once topped by wooden palisades in order for the site to be defensible. The entrance to this small hillfort is to the south west where a simple gap in the ramparts follows the natural line of approach up the hill. No excavation has taken place at the site, and therefore little is known about the date or occupation of the hillfort. However, it is considered to resemble Castell Odo in Aberdaron, which was one of the earliest hillforts in North Wales and was established in the late Bronze Age.</p> <p>The hillfort of Moel Goedog, SH61363250 is roughly circular in plan, nowhere more than 340ft in overall diameter. The defences consist of two more lines of banks and ditches about 30ft apart, and the small size of the banks, at most 3-4ft high x 10-12ft wide, suggests that they possibly represent the bases of timber palisades, comparable with one phase of Castell Odo where excavations have revealed the remains of palisade defences dated by pottery to the 3rd century -4th century BC slight breaks though the inner and outer banks on the s side are the only remains of an entrance, and the absence of any form of built entrance passage perhaps supports the suggestion of a timber structure.</p>
1001	56799	Hut Group - Enclosed, SE Of Moel Goedog	SH61703214C	M134	Iron Age/Roman o-British	Stone Built Feature	<p>Enclosed homestead, RB and poss RB close to a second homestead (see PRN 1002). Lying between two ridges of outcrop consisting of two massively built hut circles 20 and 22ft diameter set at each end of the oval courtyard, all extensively robbed to build the nearby field walls. Outside and above the enclosure are the remains of a third circle of about 20ft in diameter, now little more than a leveled shelf in the slope, and above this again is a rectangular enclosure with traces of a poorly constructed hut, possibly from a second occupation.</p> <p>This enclosed homestead and associated complex are much as described by Bowen and Gresham except that the two huts are on the S and W side of the oval enclosure and not at either end.</p> <p>A track through the site continues to pose a threat. Wondering walls can be associated with the site. Includes the remains of 4 circular huts and associated enclosures. Two of the huts are well-preserved and the archaeological potential of the site is enhanced by its association with other monuments of similar date in the area. The scheduled area forms a rectangle 40m x 60m oriented NE-SW.</p>
1005	56802	Wandering Walls, nr Moel y Gerddi	SH61903207		Iron Age/Roman o-British	Recorded	<p>Set in a small marshy shelf to the SE of Moel Goedog summit is a low grass covered mound, 4m x 3m overall. Traces of a kerb on the S side. There are 2 possibly 3 fallen stones on the periphery.</p> <p>A search for this site during the Ardudwy survey failed to reveal the feature above. A couple of stretches of wandering wall were noted just to the E.</p>
1006	56803	Cairn\Clearance Cairn?, Nr Moel y Gerddi	SH61743207		Prehistoric	Stone Built Feature	<p>An inconspicuous cairn measuring 30 yrs in circumference x 2ft high. It has been opened.</p> <p>A small turf covered cairn at 61743199 on a slight rise on otherwise level ground is almost certainly that described above. It is 10m in diameter, 0.6m high and has traces of peripheral kerbing at ground level.</p> <p>A search for this site following its publication as a 'cairn' by the OS revealed a small turf grown, oval mound 4m x 5m with a central disturbance. The site is probably a clearance cairn.</p>
1008	56805	Moel Goedog I - Ring Cairn	SH60993244	M058a	Prehistoric	Stone Built Feature	<p>28 yards in circumference, this circle is one of a pair of cairn circles. The former has only about 8 stones around it, the biggest of which is a thin slab projecting 2ft above the ground.</p> <p>It was excavated in the winter of 1978. The circle 6.5-7m in diameter originally consisted of 12 upright stones in deep holes, none more than 1m high, banked by an infill of cairn material circa 3m wide and 2 or 3 stones high. Only 3 of the upright stones remained, 4 had been pulled out in January 1978 and 5 lost many years ago, but these stoneholes and packing survived. Within the central area were 9 pits, the varying levels of which suggest a long sequence of activity. Most of them contained dark earth and charcoal, one deposit contained a charred urn and another included an urn containing a quantity of cremated bones. The earliest feature was a deep pit containing a very large urn filled with charcoal and cremated bones. The upright stones were replaced and new stones found for the other post holes. The</p>

							eastern circle (PRN 1009) was not investigated.
1009	56806	Moel Goedog II - Ring Cairn	SH61053244	M058a	Prehistoric	Stone Built Feature	The circle to the east consists of a ring of at least thirty stones, doubled for a short stretch on the N side, with no trace of a mound. To W of Moel Goedog. 50m E of 58 a (i) separated by ancient trackway. Low grassed over stone bank 1m wide enclosing. Space 5.3m in diameter. Ten boulders within bank. Tallest 0.4m high. Large boulder on S side may be natural.
1035	57353	Hut Circle, E. Of Erw Wen	SH60483237		Iron Age/Roman o-British	Stone Built Feature	A hut circle 32ft diameter internally in fair condition, with massive walls. There are traces of terraces on nearby slopes. The round hut, type ii (e) of uncertain date lies near the centre of an area of well defined field (see PRN 2951). Remnants of a field system can be seen to the south and west. Possibly related to PRN 1036 up slope to the east.
1036	56825	Homestead, Erw Wen	SH60643233	M188	Iron Age/Roman o-British and medieval	Stone Built Feature	Erw Wen is an enclosed settlement cut into the hillside at Moel Goedog which was occupied in the Iron Age. It is unusual because it was reused in the medieval period. The prehistoric site consisted of a circular enclosure with different phases of a circular house in the centre. The earliest huts were built from timber, while the later hut had stone walls but probably still had a conical timber roof like its predecessors. The enclosure wall was probably about 1m tall. The medieval settlement saw what remained of the central hut being altered and re-used, probably as a pen or fold for livestock. Two large gaps were made in the stone walls to allow passage across it. Immediately outside the hut there was a rectangular structure which archaeologists have interpreted as a small byre or sty. There are two other rectangular stone structures and possibly some other features outside the enclosure. Their location shows that the enclosure was no longer in use, but these have not yet been excavated so little can be said of their purposes. Following the medieval period, a dry stone wall was built across the site. This was part of a field system which became disused by 1841. The enclosure is not a true circle and is about 100ft across. The central hut circle remains as a grass grown bank 30ft diameter. Three rectangular structures belong to a secondary occupation in the medieval period, and a later rough stone wall wanders indiscriminately across the terrace and rectangular building. Trial excavations were field in 1980/81. This revealed that the original settlement was represented by two trench or slot timber houses and these were immediately followed by a stone built hut circle. Post holes and post settings had been dug in the huts well defined floor. These may represent posts for roof supports or substantial internal partitions. Strewn about the floor were a number of stone pounders, grinders and quern stones, but there were no other finds. Overlying the hut was roughly laid medieval stone floor probably contemporary with the rectangular building to the west. This suggests that the hut area was probably used as a pen or field. Erw-wen is a complex multi period site demonstrating two long phases of occupation firstly in the iron age period as a single hut circle set within an enclosure after which it was abandoned and then later re-occupied during the medieval period as a small settlement comprising three or more buildings.
1037	56826	Hut Circle + Enclosure, E Of Erw Wen	SH61253230		Iron Age/Roman o-British	Stone Built Feature	This site refers to site marked on plan 3 on the Ardudwy survey. GAT 1173 NGR was corrected to SH 61123227.
1039	57354	Fonllech Hir Standing Stone (2)	SH60433168	M057e	Prehistoric	Standing Monument	Small pointed stone, one of a series. Site visit during the Ardudwy survey. No change. Seventh stone of group 1m high, triangular profile. Fonllech Hir, ancient trackway leading to Moel Goedog and Bryn Cader Faner (SAM Me 61). Low standing stone 0.8m high, 0.34 x 0.3m at base- wedge shaped. Raised stony area around base spreading 2m W-E and 1m N-S. 5m to NNW-low pile of grassed over stone 0.15m high and 0.4m across.
1042	57356	Moel Goedog Standing Stone (2)	SH60823217	M058c	Prehistoric	Standing Monument	A rounded boulder 4ft high 2ft x 3ft. One of a series making an ancient trackway of prehistoric origin. Period of erection is uncertain.
1043	56828	Moel Goedog	SH60933228	M058b	Prehistoric	Standing	Standing stone 0.9m high, 0.6 x 0.55m at base. Stands along ancient trackway some 160m NE of Me 58

		Standing Stone (1)				Monument	c.
1173	57423	Hut Circle SW Of Moel Goedog	SH61123227		Iron Age/Roman o-British	Stone Built Feature	A single hut circle (type undated possibly recent) on a rocky mountain side at SH61223224 measures 27ft in internal diameter and is constructed of small laid stones. It is in poor condition and there are no associated paddocks. There is no hut circle at the position given but 90m to the NW at SH61166227 on a level area above a rock face is a much ruined hut circle 9m in internal diameter. The turf covering enclosing bank is only evident on the north and east side where it is up to 0.2m high. There is no trace of an entrance. Some confusion between this site and PRN 1037. However the GAT PRN 1173 state "1173 will now be taken to be Gresham's No 310 at the grid reference shown". No 1037 is at SH61253230
1174	57424	Hafoty Settlement & Other Remains, Se Moel Y Glo	SH63173347	M189	Iron Age/Roman o-British and medieval	Stone Built Feature	Rectangular structure, possibly the remains of a 'hafoty' with a length of associated walling running to the SW of it for some distance. Earlier wandering walls can be seen surrounding the hafoty although no definite hut circle remains could be seen. This is a complex site comprising the well preserved remains of two or more settlements including both prehistoric and medieval occupation. The earliest remains are two iron age hut circles which are interconnected by stone walling which defines a central terraced yard. Later occupation is represented by a substantially built rectangular building, probably dating from the medieval period. This had two rooms, one attached as a side porch or annexe from the main building.
1181	57428	Settlement Site, Moel y Gerddi	SH61853174		Medieval?	Stone Built Feature	Settlement site on Moel y Gerddi comprising a rectangular structure 11m x 5m, built on a platform but with no traces of a hood. On the western flanks of Moel y Gerddi is a small hollow 12m x 5m. The whole slope is overgrown and accurate measurements could not be obtained.
1182	57429	Hafoty Settlement, Moel y Gerddi	SH62273190		Medieval?	Stone Built Feature	Series of rectangular structures with associated enclosures or paddocks were noticed centered on, or almost, on the NGR stated.
2951	57846	Field System, Dyffryn Ardudwy	SH60483237C		Iron Age/Roman o-British?	Earthwork	
2956	56915	U-Enclosure, Hut + Cairn, Cwm Mawr	SH63853352		Iron Age/Roman o-British?	Stone Built Feature	
5212	60223	Ffridd Fron kerb cairn	SH631612395	M208	Prehistoric	Stone Built Feature	The Ffridd Fron kerb cairn is a well-preserved and largely intact example of a burial monument of the Early Bronze Age (c. 2000-1500 BC). It is 4.5m in diameter and stands 0.5m high. Along its north western edge, the heap of stones making up the body of the cairn is held in place by a kerb of 6 upright slabs of stone about 0.6m in height. This feature gives rise to the term 'kerb cairn'. In the centre of the cairn are the remains of a stone box or 'cist' which once held the body or ashes of those interred in the monument.
5629	61799	Hut Circle, SW Moel Goedog	SH61173222A		Iron Age/Roman o-British?	Stone Built Feature	Massive hut circle c.12m overall diameter, walls c.1.5m cut into slope on a small shelf facing south. Some inner & outer facing stones/slabs showing. It has a gap of c.4m on its north side opening up into a rectangular structure c.4 x 6m with 2 distinct changes in build.
5900	63940	Cairn	SH62003177		Prehistoric	AP Site	Cairn
5903	63941	Circular Enclosure, Moel y Gerddi	SH61763174		Unknown	AP Site	Enclosure
5904	63942	Circular Enclosure, Moel y Gerddi	SH61553176		Unknown	AP Site	Enclosure
6158	60978	Peat Stacks, Nant y Steicyn	SH63303300		Post medieval?	Other Structure	Peat stacks
6159	60977	Burnt Mound, Nant y Steicyn	SH63333295		Prehistoric	Other Structure	Burnt mound

6160	60975	Settlement, Cwm Mawr	SH63603295		Iron Age/Roman o-British?	Stone Built Feature	Hut circle settlement?
6161	60979	Peat Stack, Nant y Steicyn	SH63803300		Post medieval?	Other Structure	Peat stack
6162	60976	Hut Circle Under Peat Stack, Cwm Mawr	SH63903335		Iron Age/Roman o-British?	Other Structure	Hut circle
6163	60980	Peat Stacks, Llyn y Fedw	SH62803290		Post medieval	Other Structure	
15645	0	Erw Wen - Medieval Homestead?	SH60623230		Medieval	Stone Built Feature	
15646	0	Erw Wen - Medieval Homestead?	SH60643234		Medieval	Stone Built Feature	
15647	0	Erw Wen - Medieval Homestead?	SH60633232		Medieval	Stone Built Feature	
21792	0	Ffridd Tyddyn Du Mine	SH63703280		Post medieval	Earthwork	Manganese mine worked from 1896 to 1903. Workings: underground, accessed by adits. Transport: roads connect the addit levels and loading banks.
28712		Enclosure N of Gerddi Bluog Farm	SH62113190		Unknown		Enclosure
28897		Sheepfolds 1 SW of Llyn Eiddew-mawr	SH63843327		Post medieval		Sheepfolds
28898		Sheepfold 2 SW of Llyn Eiddew-mawr	SH63673320		Post medieval		Sheepfold
28899		Sheepfold 3 SW of Llyn Eiddew-mawr	SH63793305		Post medieval		Sheepfold
28900		Sheepfold 4 SW of Llyn Eiddew-mawr	SH63683287		Post medieval		Sheepfold
28901		Sheepfolds 5 SW of Llyn Eiddew-mawr	SH63643286		Post medieval		Sheepfolds
28902		Sheepfolds 6 SW of Llyn Eiddew-mawr	SH63463280		Post medieval		Sheepfolds
28903		Sheepfold 7 SW of Llyn Eiddew-mawr	SH63473265		Post medieval		Sheepfold
28904		Sheepfold 8 SW of Llyn Eiddew-mawr	SH63433265		Post medieval		Sheepfold
28905		Sheepfold 9 SW of Llyn Eiddew-mawr	SH63593256		Post medieval		Sheepfold
28906		Sheepfold 10 SW of Llyn Eiddew-mawr	SH63513242		Post medieval		Sheepfold
28908		Manganese Level SW of Llyn Eiddew-mawr	SH63563245		Post medieval		Manganese level
28909		Tramway SW of Llyn Eiddew-mawr	SH63563245		Post medieval		Tramway
29221		Wall	SH 64260 33580		Post medieval	Stone built feature	Dry stone field wall with stream passing beneath. Irregular coursing, coping stones survive in places. Open work construction where stream passes through.

29222		Hut/shelter	SH 64045 33399		Post medieval?	Earthwork	Small sub-circular, drystone stone structure. Roughly built but with lowest stones well embedded and placed. Almost a complete circle with no obvious entrance.
29223		Wall	SH 64020 33360		Post medieval	Stone built feature	Dry stone field wall. Irregular coursing, very few coping stones survive. Stream passes under low opening.
29224		Peat stack	SH 63921 33360		Post medieval	Earthwork	Raised mound on edge of bog with occasional stones around edge, most of mound is of stone-free peat. This does not seem to be the same as PRN 6162, which was not located.
29225		Shelters and enclosures, peat stack?	SH 63862 33272		Post medieval	Stone built feature	Group of small shelters with associated small enclosures, one of which could be a raised platform for turf stacks
29228		Small building	SH 63675 33210		Post medieval	Building - ruined	Unroofed rectangular drystone building, entrance in N side, terraced into slope. The building measures 7m by 4.5m and the walls stand up to 1.4m high. Appears to be a cottage, probably a summer dwelling (hafod).
29229		Denuded wall	SH 63691 33203		Prehistoric?	Stone built feature	Straight section of boulder wall, mainly just single stone high. Associated with area of small clearance
29230		Trackway	SH 63592 33058		Post medieval	Earthwork	Trackway aligned NE-SW with revetted E side. Links the hafod (feature 11) with the sheepfold (feature 14)
29231		Multicellular Sheepfold	SH 63557 32996		Post medieval	Stone built feature	A group of conjoined sub-rectangular stone-walled compartments, most still standing to full height.
29232		Cairn field	SH 63563 32953, SH 63590 32958, SH 63599 32922, SH 63582 32916		Prehistoric	Stone built feature	Cairn field containing at least 4 fairly substantial cairns. These could be clearance cairns but are large enough and well enough defined to be burial cairns. The hut circle (PRN 6160) was not located but suggests prehistoric occupation in the area.
29233		Small building	SH 63310 32699		Post medieval	Building - ruined	One roomed ruined and roofless cottage, measuring 5.5m by 4m with walls 1m high. Simple stone-built dwelling, with entrance to E, probably a summer dwelling (hafod).
29234		Wall	SH 63340 32580		Post medieval	Stone built feature	Dry stone field wall. Irregular coursing, most coping stones survive.
29235		Burial cairn	SH 63321 32527		Prehistoric	Stone built feature	Small oval cairn with elongated hollow in centre and possible traces of kerbing on N side.

**Table 3. NMR sites within about 250m of the track**

NPRN	Name	NGR	Type	Period	Description
15495	Llyn-y-Fedw	SH631334	Settlement	Medieval?	Rectangular structure remains possible hafoty. Associated field walling.
15499	Moel-y-Gerddi	SH61853174	Settlement	Medieval?	Remains of rectangular structure c. 5 m. x 12 m.
15500	Moel-y-Gerddi	SH62273190	Settlement	Medieval?	Remains of series of rectangular structures with associated enclosures.
302759	Fonlief Hir, Standing Stone (Stone 'E')	SH60433167	Standing stone	Bronze Age?	Standing stone (SAM ME057e) about 0.8m high. It measures 0.34 by 0.3m at the base, but is wedge-shaped in profile. There is a raised stony area around the base of the stone, spreading out for some 2m on the W and E and 1m on the N and S. One of 5 stones scheduled along the supposed route of the Fonlief Hir ancient Trackway (SAM ME058).

302760	Erw Wen, Homestead	SH60653233	Settlement	Iron Age; Medieval	NAR SH63SW17 A sub-circular enclosure, c.26-30m in diameter, with a centrally placed circular structure, 9.0m internal diameter, terraced into NW facing slopes, upon a NE-SW terrace that can be associated with the field system (Nprn308947) to the NW. Excavation, 1980-81 (Kelly 1981; 1988, 119ff), demonstrated that both the central structure had replaced a sequence of timber predecessors. At least 3 rectangular, possibly med. structures are found on & around the site (Bowen & Gresham 1967, fig).
302762	Fonlief Hir; Moel Goedog, Prehistoric Trackway	SH60933228	Standing stone	Bronze Age	Standing stones marking out a prehistoric trackway leading along the lower slopes of Moel Goedog.
302796	Moel-y-Gerddi, Cairn	SH61743199	Cairn	Bronze Age	
302797	Moel Goedog, Cairn Circles	SH61053244	Cairn	Bronze Age	A circle of originally 12 upright stones, up to 1.0m high, 6.5-7.0m in diameter: excavation, 1978, showed that the stones were set in a low stone bank & enclosed a complex of pits, three of which contained BA urns, two, including the primary feature, containing a cremation deposit assemblages: a second, superficially similar feature lies some 44m to the west.
302799	Moel Goedog, Enclosed Homestead	SH61553216	Homestead	Roman	
302800	Enclosed Homestead, Moel Goedog	SH61703214	Homestead	Roman	
302801	Moel Goedog Hillfort	SH61363250	Hillfort	Iron Age	NAR SH63SW4 A hill-top sub-circular enclosure, about 80m north-south by 64m, defined by two circuits of low banks, or scarps, with an additional line about the north-east, having a south-east facing entrance: indications of an inner enclosure not subsequently confirmed.
302803	Hut Circle, Moel Goedog	SH61133227	Hut circle	Iron Age	
308943	Erw Wen, Circular Structure	SH60483237	Enclosure	Unknown	A massively walled circular structure, c.9.6m internal diameter, associated with field system (Nprn308947).
308947	Erw Wen, Field System	SH60483237	Field system	Unknown	An area of terraced fields, c.400m NE-SW by 100m, set on NW facing slopes.
404178	Fonlief Hir Standing Stone (Stone 'C')	SH60673203	Standing stone	Prehistoric	Standing stone 1m high by 0.5m by 0.18m, leaning slightly to the W. One of the five stones (SAM ME057c) scheduled along the supposed route of the Fonlief Hir ancient Trackway (SAM ME058).
404179	Fonlief Hir Standing Stone (Stone 'D')	SH60713204	Standing stone	Prehistoric	Standing stone 0.9m high by 0.6m by 0.5m at the base. It is situated between two tracks, near the junction. The five stones (SAM ME057d) scheduled along the supposed route of the Fonlief Hir ancient Trackway (SAM ME058).



## **APPENDIX II: Definitions of categories used for impact, field evaluation and mitigation**

### **1 Categories of importance**

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

*Category A - Sites of National Importance.*

Scheduled Ancient Monuments, Listed Buildings of grade II\* and above, as well as those 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 or county importance.*

Grade II listed buildings and 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 that are of minor importance or are so badly damaged that too little remains to justify their inclusion in a higher category.

For Category D sites, rapid recording, either in advance of 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 usually be no sites remaining in this category. In this case several areas of unknown potential have been allocated to this category. These require environmental sampling which should be carried out during the pipeline works.

### **2 Definition of Impact**

The impact of the works 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 within the band of interest but are unlikely to be directly affected. This includes sites such as standing and occupied buildings at the margins of the band of interest.

*Likely:*

Sites towards the edges of the study area, which may not be directly affected, but 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 tramways 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 works.

### **3 Definition of field evaluation techniques**

Field evaluation is necessary to fully understand and assess most class E sites and to allow the evaluation of areas of land where there are no visible features but for which there is potential for sites to exist. Various techniques are available depending on the nature of the site to be assessed. The investigation of deposits, such as peat, may require augering to test depth, extent and potential for preserving environmental data. Identifying the date and extent of an artefact scatter on ploughed farmland may involve fieldwalking to recover artefacts in a methodical manner. To achieve a similar result in upland and pasture areas the excavation of a grid of small test pits might be required. Such an approach could also be used to test the depth and nature of deposits.

Three principal techniques are more generally applicable to many situations, and these are topographic survey, geophysical survey and trial trenching.

Topographic survey involves the recording of earthworks and upstanding remains visible on the ground surface. It can be carried out with global positioning technology, an electronic theodolite, hand drawing with tapes, or a combination of any of these. It allows the creation of a plan, rendering the visible remains more understandable and aiding their interpretation and evaluation. It is of particular use over large areas where the relationships of features such as field boundaries and settlements can be identified.

Geophysical survey most often involves the use of a magnetometer, which allows detection of some underground features, depending on their composition and the nature of the subsoil. Other forms of geophysical survey, including resistivity survey and ground penetrating radar might also be of use.

Trial trenching allows a representative sample of the development area to be investigated at depth. Trenches of appropriate size can also be excavated to evaluate category E sites. Trenching is typically carried out with trenches of between 20 to 30m length and 2m width. The topsoil is removed by machine and the resulting surface is cleaned by hand, recording features. Depending on the stratigraphy encountered the machine may be used to remove stratigraphy to deeper levels.

### **4 Definition of Mitigatory Recommendations**

Below are the measures that may be recommended to mitigate the impact of the development on the archaeology.

*None:*

No impact so no requirement for mitigatory measures.

*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.

*Basic recording:*

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

*Detailed recording:*

This requires a full photographic record and measured survey prior to commencement of works.

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

*Watching brief:*

This is a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive.

*Reinstatement:*

The feature should be re-instated with archaeological advice and supervision. This particularly applies to nineteenth century field walls parts of which may have to be dismantled. It is important for the landscape character of the area that these are rebuilt in the original style. In general, the presumption should be in favour of returning walls to their pre-impact state, i.e. tumbled walls are to be left tumbled and not rebuilt.

*Strip, Map and Sample:*

The technique of Strip, Map and Sample (SMS) requires the machine stripping of topsoil and ploughsoil within a defined area to layers capable of preserving archaeological features. The work is undertaken under archaeological supervision. Stripping and removal of the overburden is undertaken in such a manner as to ensure damage does not take place to surfaces that have already been stripped, nor to archaeological surfaces that have not yet been revealed.

A small team of archaeologists will be responsible for subsequently further cleaning defined areas where necessary and evaluating any potential archaeological features. The evaluation will identify significant archaeological features requiring excavation and recording. Isolated features can be recorded at this stage but complex sites which cannot be avoided will need to be excavated in detail and this will form a new phase of works.

It is not always easy to identify the nature of features without excavation, therefore although strip, map and sample includes the initial assessment of features, it does not include detailed excavation should the features prove to be archaeologically significant. If a site of archaeological significance is found during the strip, map and sample process then a new design and cost estimate will be required for that site.

The advantage the strip, map and sample technique is that all archaeological features will be found, so it removes all risk. It is best undertaken where the reinstatement of the topsoil is not immediately required, so that the easement does not have to be reinstated and stripped again for construction. This method typically results in the identification of a large number of features such as drains, ditches, former field boundaries, the holes caused by the removal of trees, and casual pits etc.

*Detailed excavation:*

Where the requirement for detailed recording or the results of the strip, map and sample evaluation suggest that full excavation of a feature or features is necessary this would be carried out to a project design based on best practice. This normally involves the full excavation of significant small features and the partial excavation of ditches and other large features. Detailed plans and sections will be drawn, a full photographic record will be made and detailed notes will be written describing each context. The main aims are to establish the date and function of features and to establish the stratigraphic relationships between features. On a complex site this can be a long and labour intensive process.





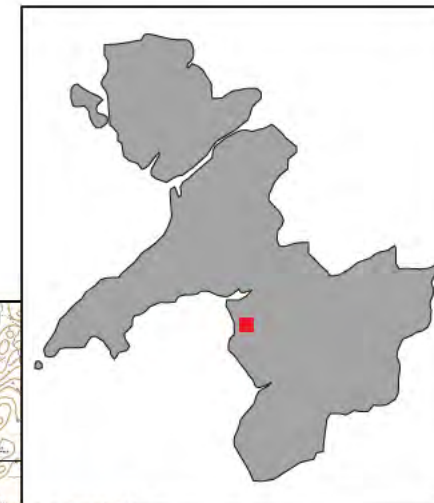
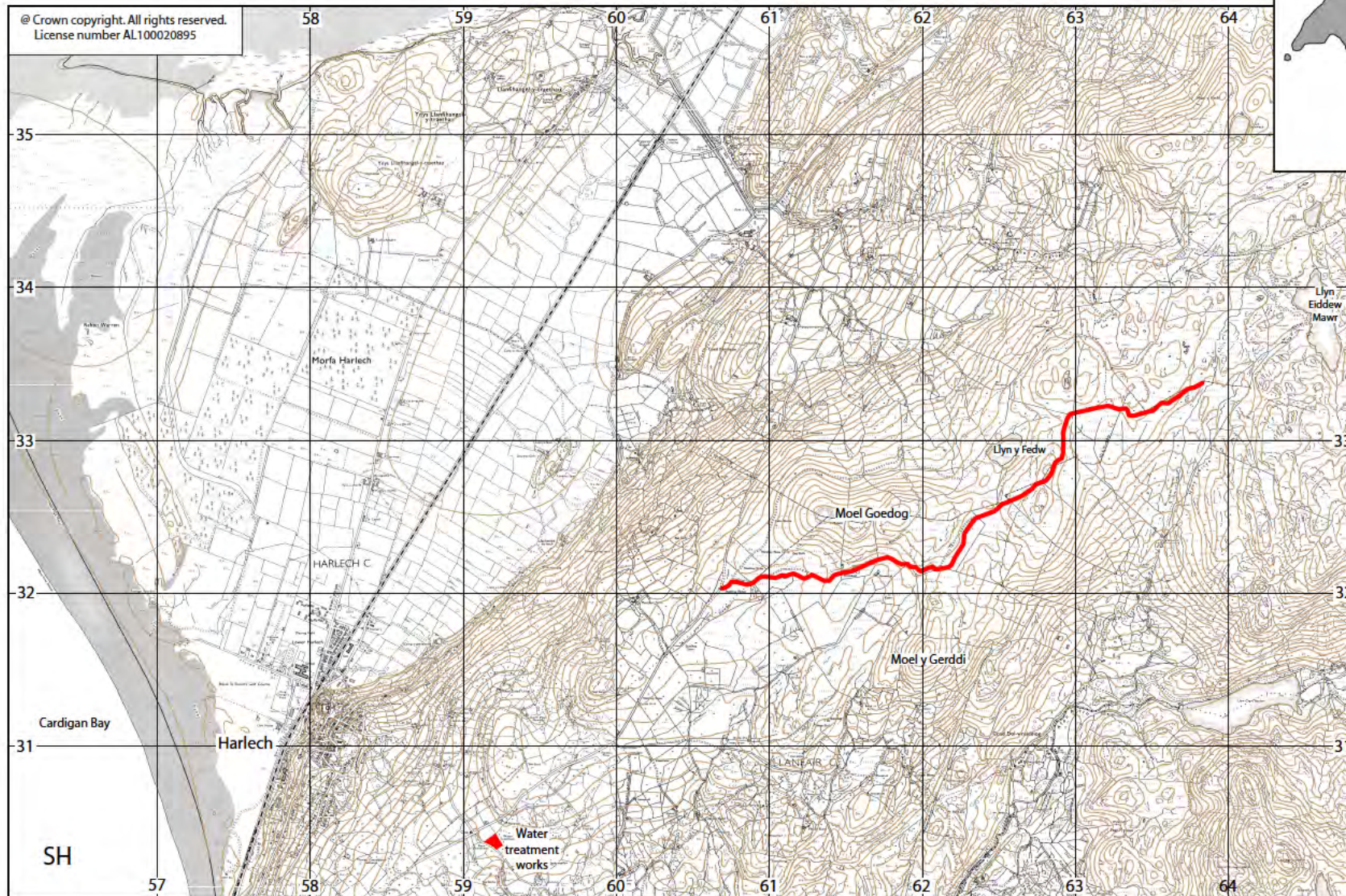
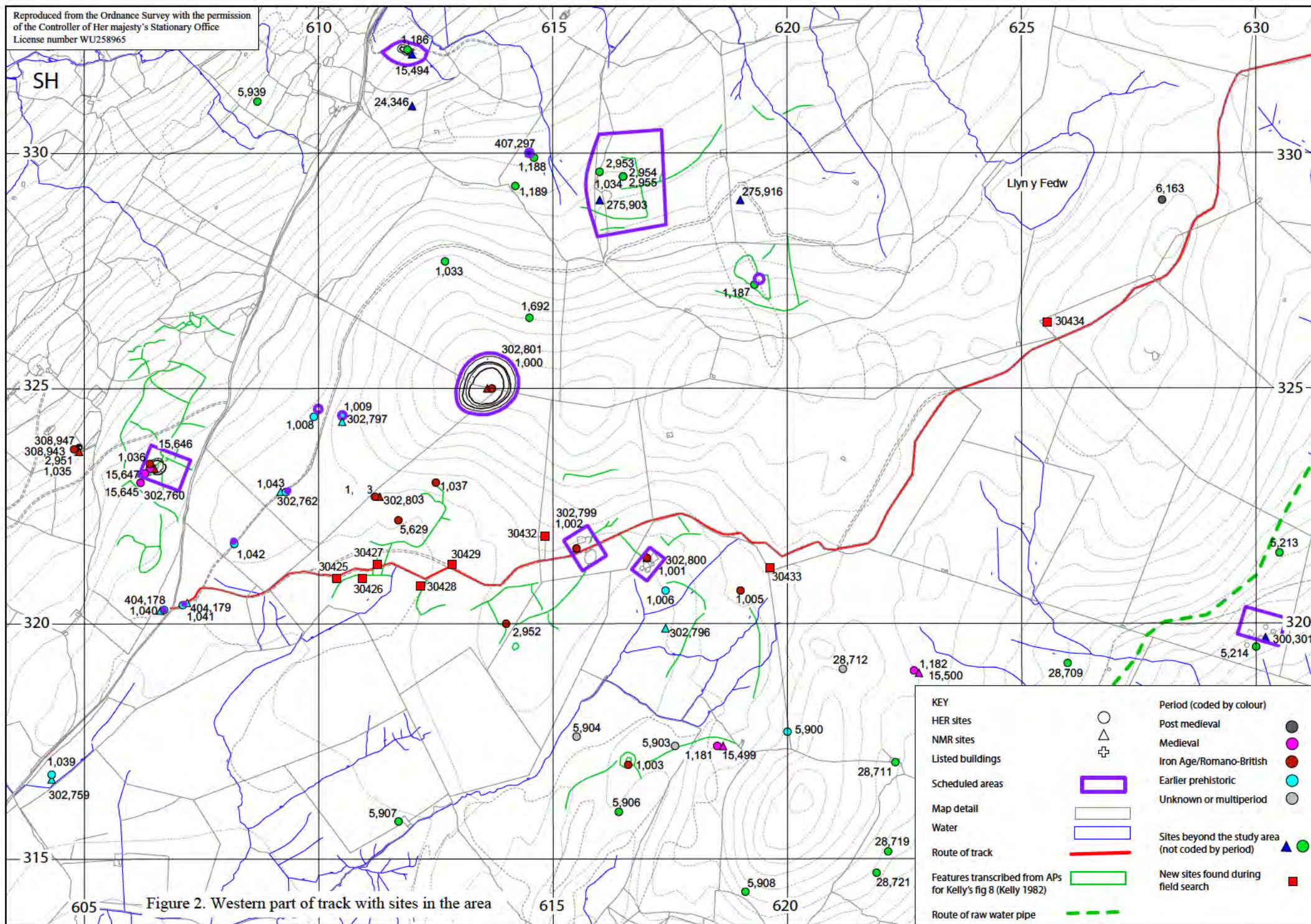


Figure 1. Location of track (red line), with contours (brown lines)

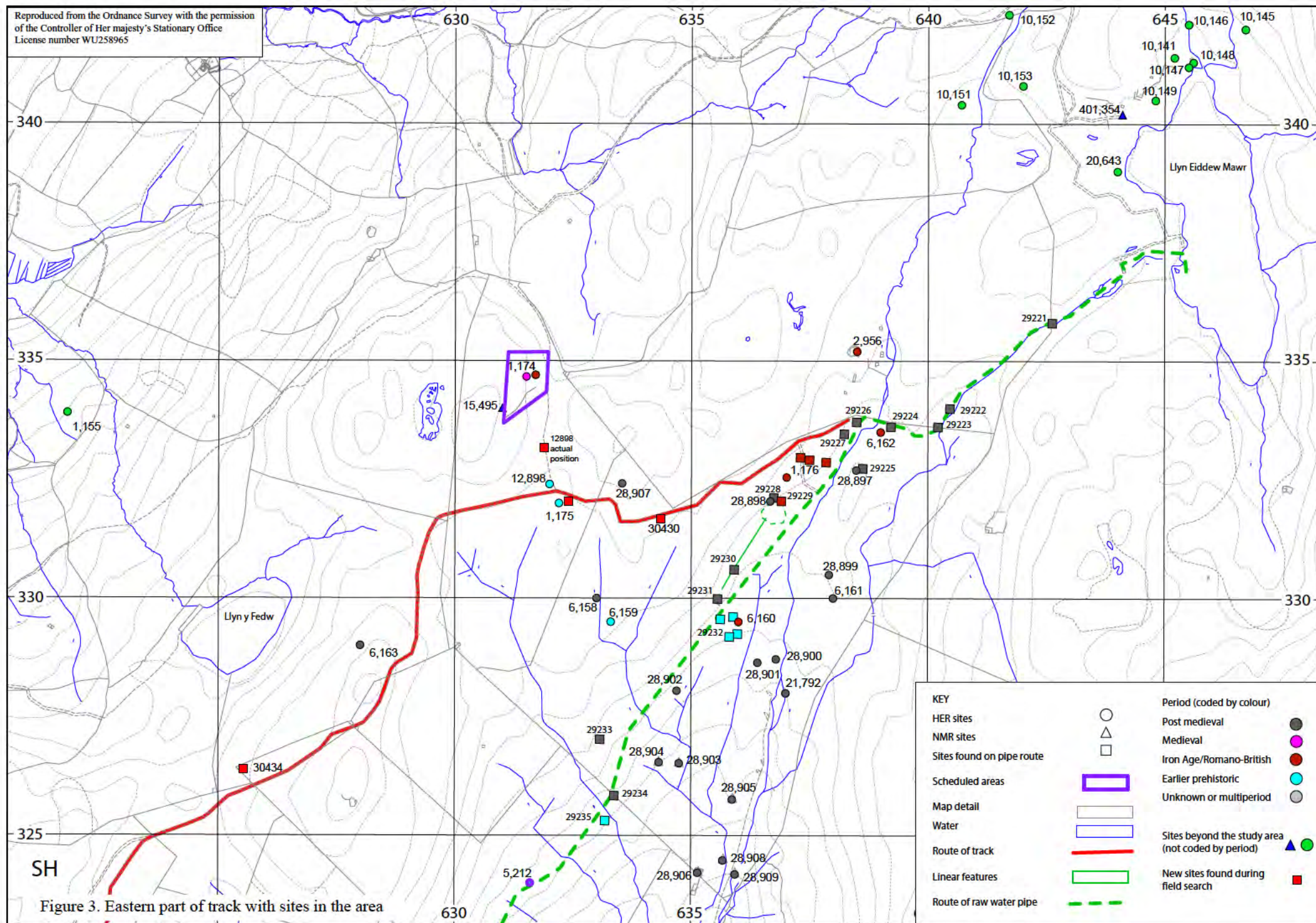
















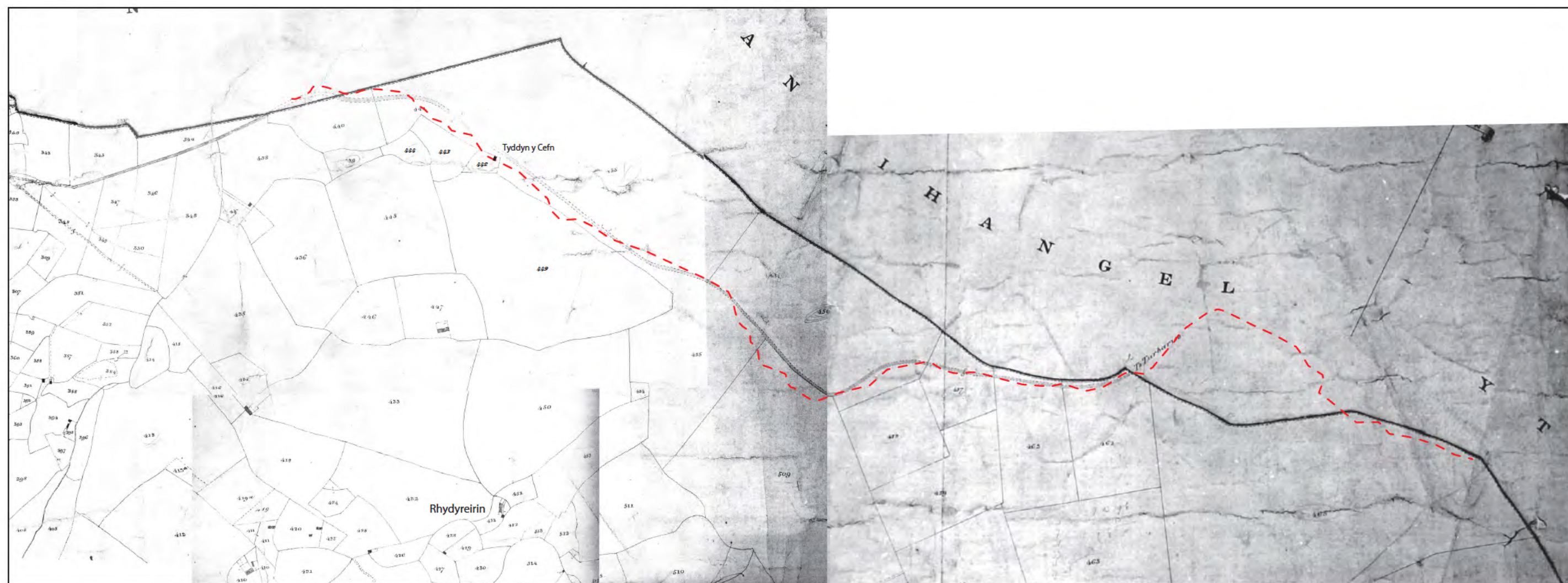


Figure 4. Part of tithe map for Llanfair parish showing approximate route of track in red









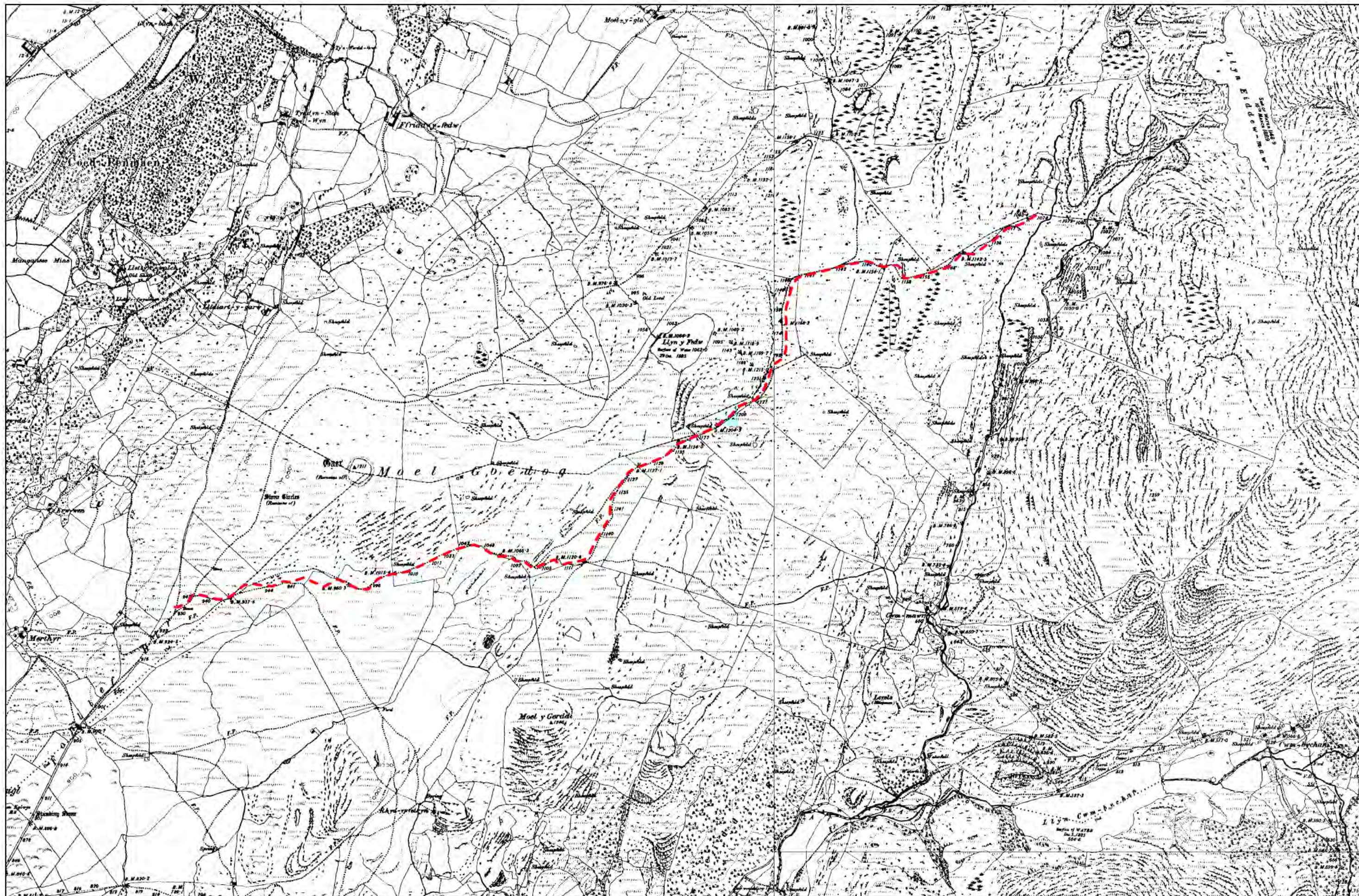


Figure 7. Ordnance Survey 1:10,560 scale map, First Edition, Merionethshire sheets IXX SW and SE (1890), route of track shown in red









Plate 1. Standing stone (PRN 1040), from east



Plate 2. Standing stone (PRN 1041), from south-west



Plate 3. Revetment wall (PRN 30425), from south



Plate 4. Field boundary (PRN 30426), from west



Plate 5. Ancient fields (PRN 30427), from south-west



Plate 6. Terraced boundary (PRN 30428), from south







Plate 7. Cairn (PRN 30429), from south-east



Plate 8. Settlement (PRN 1002), from north-west



Plate 9. Track running through settlement (PRN 1002), from east



Plate 10. Sheepfold/shelter (PRN 28907), from south



Plate 11. Cairn (PRN 30430), from south



Plate 12. Section of track (PRN 30431) terraced into hill slope, from west





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TRUST

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