

# HARLECH TO LLANBEDR AND LLANBEDR TO LLANDANWG RISING MAINS

## ARCHAEOLOGICAL ASSESSMENT

G1795



Report number : 490 (revision 1)

Prepared for

Symonds Group Ltd

AUGUST 2003

Ymddiriedolaeth Archaeolegol Gwynedd  
Gwynedd Archaeological Trust

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## **ARCHAEOLOGICAL ASSESSMENT**

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# **HARLECH TO LLANBEDR AND LLANBEDR TO LLANDANWG RISING MAINS (G1795)**

## **ARCHAEOLOGICAL ASSESSMENT**

### **SUMMARY**

*An archaeological assessment was carried out in advance of construction of a new underground rising main between Harlech and Llanbedr and between Llandanwg and Llanbedr, Gwynedd. The report covers the pipeline easement and associated pumping stations and treatment works. The pipeline runs through the outskirts of Harlech a planned borough established by Edward I around one of a series of castles built after the conquest of Gwynedd. The assessment involved consultation of existing records and documents and a field search. Existing records identified three archaeological or historic features recorded on the SMR that were of direct relevance to the assessment. The field search identified nineteen archaeological or historic features that actually lay within the easement area. Two were categorised as being of regional importance seven of district or local importance, four of minor importance or damaged/destroyed and six requiring further assessment.*

*The features of regional importance are standing buildings and can probably be avoided by the scheme. The features of local or minor importance are mainly tracks and walls that require reinstatement. Both the northern part of the pipeline and the Llandanwg rising main pass through areas where there has been significant coastal change since the medieval period. The sea reached Harlech castle when it was built and it now stands over 1Km from the coast. The pipeline passes close to the Water Gate in the outer defences and it is possible that environmental evidence can be recovered during the scheme, both here, along the edge of the dunes and in the marshes, allowing a clearer picture of coastal change in this area to be built up.*

### **1 INTRODUCTION**

Gwynedd Archaeological Trust was asked by Symonds Group to carry out an archaeological assessment in advance of the construction of a of a new underground rising main between Harlech and Llanbedr and between Llandanwg and Llanbedr, along with a sewage treatment works just to the north of Llanbedr at SH58152747 and, two pumping stations at Harlech (SH58293151) and Llandanwg (SH 5708 2859) (Fig. 1). The area affected is shown on Black Veatch and Bullen Drawing No. 2489\_0000\_0133\_PO (2003). The present report is based on this. The length of easement between Harlech and Llanbedr is about 4.4km with a 0.7 km spur to Llandanwg. The exact sizes and locations of the proposed treatment works and pumping stations are not known, nor is the size and depth of the proposed pipeline.

The area lies within the Snowdonia National Park and the Ardudwy Landscape of Outstanding Historic Interest (HLW (Gw) 2). The pipeline also passes within 50m of Harlech Castle which is a World Heritage Site.

Harlech stands on a promontory overlooking Tremadog bay. The present town originated as one of a series of castle-boroughs built by Edward 1<sup>st</sup> that was intended to encircle North Wales. The castle was largely complete by 1289 but the town remained relatively undeveloped and was the smallest of the Edwardian planned boroughs. The town was largely destroyed during the Glyndwr rebellion in 1404 and the castle was taken and held for nearly five years.

The later history of Harlech is dominated by the castle which featured in both the Wars of the Roses and the Civil War. The town remained undeveloped until a resurgence in the 19<sup>th</sup> century when much of the present town was built.

### **2 SPECIFICATION AND PROJECT DESIGN**

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

Gwynedd Archaeological Trust's proposals for filling these requirements were as follows:

- Desktop study
- Field walkover
- Report

### **3 METHODS AND TECHNIQUES**

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

This comprised the consultation of maps, documents, computer records, written records and reference works, which form part of the Sites and Monuments Record (SMR), located at GAT, Bangor. The archives held by the Meirionnydd Record Office, Dolgellau were also consulted. Information about listed buildings was consulted by means of the CARN (Core Archaeological Index), which is the online index of the Royal Commission on Ancient and Historic Monuments, Wales. Relevant aerial photographs from the collection at RCAHM, Wales were examined. A previous assessment report examining part of the route was consulted (Gwyn D. Rh. 1996. *Llanbedr to Harlech Link Main, Archaeological Assessment*. Unpublished, Gwynedd Archaeological Trust Report 208) as was Kelly R, The Ardudwy Survey: Fieldwork in Western Merioneth 1971-81 although the latter report concentrated mainly on the uplands to the east of the survey area.

Sites, buildings and find spots listed in the GAT SMR were identified (Fig. 2) within three zones. Those within about 1km of the route were identified in order to give background information relevant to understanding the area. Those within 100m, might have direct relevance for understanding the easement area, and finally those directly on the easement route, might be physically affected by construction.

#### **3.2 Field Search**

The field search was undertaken on the 27th of July 2003. The whole route was walked over, notes, and photographs taken. The first part of the route follows the existing roads and tracks where only features adjoining the route would be likely to be seen.

The second part of the main route passes through improved open grassland. Most of the fields contained short grass at the time of survey allowing a good assessment to be made of any visible archaeology. The Llandanwg spur runs through partially drained marshland. At the time of survey this containing very long uncut, grass and wild flowers thus masking any minor earthworks. The locations of all sites identified were marked on 1:10000 maps and written and photographic records were made. The records will be retained in the site archive (under project number G1795) at Gwynedd Archaeological Trust.

#### **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 below.

##### ***3.3.1 Categories of importance***

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

*Category A - Sites of National Importance.*

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.

### **3.3.2 Definition of Impact**

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

*None:*

There is no construction impact on this particular site.

*Slight:*

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

*Unlikely:*

This category indicates sites that fall 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 road.

### ***3.3.3 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. Two principal techniques can be used for carrying out the evaluation: geophysical survey and trial trenching.

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.

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.

### ***3.3.4 Definition of Mitigatory Recommendations***

*None:*

No impact and therefore no requirement for mitigation measures.

*Avoidance*

Where possible, features that may be affected should be avoided. Sometimes this could mean a change in layout, design or route. More usually it refers to the need for care during construction to avoid accidental damage to a feature. This may be achieved by marking features or areas, for example with warning tape, before work starts, or in sensitive cases carrying out a watching brief.

*Detailed recording:*

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

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

*Basic Recording:*

A photographic record and full description, and limited measured survey where applicable.

*Watching brief:*

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

It can be further defined as comprehensive (present during all ground disturbance), intensive (present during sensitive ground disturbance, intermittent (viewing the trenches after machining) or partial (as when seems appropriate).

## 4 ARCHAEOLOGICAL RESULTS

### 4.1 Topographic description

Harlech stands on the edge of the Precambrian rocky massif of the Harlech Dome. The upper part of the town and the castle stand on a rocky shelf and eminence that falls steeply to a former shoreline which is masked by the alluvial and sandy plain of Morfa Harlech. There are no definite records of the sea reaching the foot of the rocks beneath the castle. H. H. Lamb states in *Climate – History and The Modern World* (1995, 193) that the medieval port of Harlech was obliterated by sand dunes around 1400. Milward and Robinson (1978, *Landscapes of North Wales* 80-81) consider a harbour unlikely and suggest that sand flats formerly extended to the base of the rock. The archaeological evidence clearly demonstrates that the castle had a link to the sea. The outer defences include a ‘way to the sea’ and a ‘Water Gate’ and A J Taylor (1985, *Harlech Castle* 32) notes that the ‘wall encircling the castle rock makes an indent here and this may relate to the former presence of a dock outside the gateway’. The way from the sea appears to have been put to good use during Madoc ap Llywelyn’s uprising when both Harlech and Criccieth castles were cut off by land and supplied from the sea from Ireland (ibid. 7). This defensive position suggests that there must have been something more than shallows and mudflats in front of the castle, at least at high tide. Further evidence is provided by 14<sup>th</sup> century documents referring to the “port of Hadelowe” and a 1564 manuscript referring to the castle as being by the sea (Steers 1964, *The Coastline of England and Wales* 135). Gwyn’s suggestion of a canal from the castle to Traeth Bach near Llechollwyn 5 Km to the north (Gwyn 1996, *Llanbedr to Harlech Link Main* 4) seems highly unlikely given that the ‘way to the sea’ was apparently designed to supply the castle when under siege.

Wind blown sand has been a long-term problem in this area. The early churchyard at Llandanwg is lost under the sand and the church itself is often inaccessible for the same reason. There has certainly been a degree of coastal change with a considerable accumulation of sand since the Medieval period but it cannot be determined whether the way from the sea was via a wide channel through sand flats at high tide or if the waves actually lapped the outer defences of the castle. Speed’s map of 1610 (Fig. 3) suggests that the castle was not beside the sea at this time and Lewis (1989 *Sails on the Dwyryd* 61) notes that vessels could no longer reach Harlech by 1650. The excavation for the pipeline may uncover evidence of coastal change along the Harlech and Llandanwg lowlands and offer a chance for environmental sampling.

The route of the pipeline runs from below Harlech Castle, along the plain to the small village of Llanfair before turning inland and running across the lowlands to a point on the banks of the Afon Artro to the north of Llanbedr. A further pipeline spur runs out to the coastal village of Llandanwg. The coastal plain provides a convenient transport corridor and contains both the Cambrian Coast Railway Line and the A496 road.

### 4.2 Archaeological and historical background

The pipeline runs through an area rich in history and containing a fairly high density of archaeological sites. A total of 63 sites are recorded in the Gwynedd Sites and Monuments Record as standing within 1km of the pipeline. This includes one world heritage site, seven scheduled areas and six listed buildings. The study area lies within the parishes of Llandanwg and Llanbedr in the commote of Ardudwy and the cantref of Uwch-Atro in the county of Meirionnydd.

#### 4.2.1. Prehistoric

The earliest sites in the area are Neolithic chambered tombs. (PRN 1434 + 1060) The best preserved is Gwern Einion portal dolmen (PRN 1057) which is built into a wall close to the Afon Artro. The ‘Llanaber Spiral Stone’ (PRN 4782) currently rests in St. Peters church, Llanbedr. This is probably a Neolithic incised stone and has a spiral carved into one face. It was reputedly found in Cwm Nantcol at SH 6260 2570 (Bowen and Gresham, 1967 *History of Merioneth Vol. I.* 23-24)

Two Bronze-Age standing stones (PRN 1059) stand on the banks of the Afon Artro just to the North of Llanbedr – other Bronze Age activity is reflected by a scatter of finds, some of high status, within the study area. (Bowen & Gresham 1967, 121-129). Most do not have exact findspots so their context is lost. The most spectacular is a gold torque (PRN 2896) dug up in a garden somewhere near Harlech Castle. It is now in the National Museum of Wales. Two palstaves (PRN 2908) from a group found in 1851 ‘near Harlech’ are in the



British Museum. One in an untrimmed casting and could therefore have been locally manufactured. A Bronze Age rapier in the Ashmolean Museum, Oxford was also found in the Harlech area. Of more relevance to the present project is a record of fragments of a Bronze Age cinerary urn (PRN 4783) found at Pensarn (OS NAR card SH52 NE17) about 1/3 mile East of the railway station. Again an exact findspot is not known but the pipeline passes either through or alongside Pen-sarn farm holdings.

#### **4.2.2 Iron Age / Romano-British**

The high level of survival of Iron Age settlement patterns on the Ardudwy Uplands is one of the defining characteristics of the landscape of Outstanding Historic Interest. An extensive system of huts, enclosures and fields stands at Muriau Gwyddelod (PRN 1054-56). The system includes many Iron Age features along with signs of medieval settlement. Further settlement to the west of this (PRN 1051) at Groes Las is less well preserved but also appears to be Iron Age. Two circular enclosures, one to the south of Harlech (PRN 2903) and one at Llanfair (PRN 1164) are probably the remains of Romano-British homesteads. A very denuded hut group and faint remnants of terracing (PRN 1063) are all that survive of a Romano-British homestead about 100m to the west of the pipeline just to the south of Llanfair (Bowen and Gresham, 195). The field containing the hut group is visible on RAF aerial photographs from 1951 (540/464/4031 and 4032) as unimproved pasture containing poorly defined features. Nothing was however visible in the surrounding fields. The OS recorded that much of the system of terraces is overlaid by modern field walls and only fragments are clearly visible (NAR card SH52 NE 11 1972).

There is no evidence of Roman occupation along the Ardudwy coastal plain. The Roman road between Tomen-y-Mur and Pennal (Margary 1967, *Roman Roads in Britain*, 354-5) takes an inland route about 8 miles to the east.

#### **4.2.3. Early Medieval**

There are two early Christian inscribed stones built into the fabric of Llandanwg old church, one reading IN(G?)ENUI/IARRI ( /HI)C IA(CIT) and the other EQUESTRI(S) NOMIE (Nash Williams 1950, *Early Christian Monuments of Wales* 278-9). The origin of the stones is open to debate. The RCAHM *Inventory of the county of Merioneth* (1921, 61-63) speculates that the 'Hic Iacit' stone originated in Beddau gwyr Ardudwy and was reported as missing from Ffestiniog church in 1695 by Edward Lhuyd. No firm conclusions were drawn however.

#### **4.2.3 Medieval**

Three churches in the study area have medieval origins. A church was certainly present in Llanfair in 1188, when visited by Gerald of Wales and Archbishop Baldwin. In the 15<sup>th</sup> century, a new chancel was built onto an existing church and parts of those structures have survived the restoration of the church in the 19<sup>th</sup> century (Davidson 2001 *Parish Churches* 353). Llanbedr parish church is thought to have been founded in the 13<sup>th</sup> century and retains a few features of 15<sup>th</sup> or 16<sup>th</sup> century date although most of the building dates from the restoration in 1883 (ibid. 342). An early foundation for Llandanwg church is suggested by its original circular cemetery that is now buried by sand. The present church appears to be of 13<sup>th</sup> century date with 14<sup>th</sup> and 15<sup>th</sup> century extensions. A cross slab in the west wall probably dates from the 9<sup>th</sup> to 11<sup>th</sup> century (ibid. 343-4).

The most spectacular archaeological/historical site within the study area is the 13<sup>th</sup> century Harlech Castle, built by Edward I as part of a series of fortifications designed to consolidate the conquest of Wales. Tradition maintains that there was an earlier Welsh stronghold on this site. The second branch of the Mabinogi records that 'Bendigaidfran son of Llyr ... was at Harddlech in Ardudwy, at his court. And they were seated on the rock of Harddlech overlooking the sea'. There are, however no physical remains to confirm the tradition (Soulsby 1983, *The Towns of Medieval Wales*, 138/9). It is, known that Llywelyn ap Gruffydd's wooden hall from nearby Ystumgwern was set up in the castle presumably as a symbol of conquest.

Works on the castle commenced in 1283 and it was virtually completed by 1290. Edward created boroughs alongside his castles, in some cases these were impressively walled towns such as Caernarfon and Conwy. Harlech however remained undefended and did not thrive. It appears that the population of the community did not exceed 150 persons (ibid. 138). The lack of adequate defences was highlighted when 46 houses, making up virtually the whole town, were destroyed by Owain Glyndŵr in 1404.

The castle was also taken and was Glyndŵr's headquarter until 1408-9. The castle saw further use in the wars of the Roses, it being the last fortress surrendered to the Yorkists in 1468.

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

The Merioneth gentry were staunchly royalist in the civil war and the castle was again garrisoned. It was attacked unsuccessfully in 1646 but fell after a brief siege on 10 March 1647 and orders were given for its demolition. The walls may have been breached but the orders were not carried out to any large extent. The castle was allowed to decay until the 18<sup>th</sup> century when it became a tourist attraction. The town, however, remained poor. Fenton visited it in 1808 during his *Tours in Wales* and described it as the 'most forlorn, beggarly place imaginable'.

The borough failed to recover from Glyndŵr's occupation and Speed's map of 1610 shows only a small settlement. He records a medieval chapel that was 'decayed and without use' just to the east of the castle and a mill at the north of the borough (Speed 1610, *Atlas of Wales* 117-8).

Two farmhouses Argoed (PRN 4786) and Llanfair Isaf (PRN 4787) retain 16<sup>th</sup> and 17<sup>th</sup> century elements. Smith (1988, *Houses of the Welsh Countryside* 166-168) classifies these as sub-medieval houses built to a pattern using 'the unit system' where ranges of rooms are duplicated but not directly linked as in cross-winged houses. At Argoed the two units of the house are linked by a vestibule but at Llanfair Isaf the units are built corner to corner with no direct link. This pattern of construction suggests that the units may have held independent households or perhaps provided separate guest accommodation. RCAHM also notes that buildings at both houses were thought to have housed tanneries (RCAHM CARN ref 41221 and NPRN 12398).

#### **4.2.5 Early-Modern/Modern**

The town finally began to flourish in the mid 19<sup>th</sup> century with better communication via the creation of local turnpike trusts and latterly the creation of a rail link. The Llandanwg and Llanfair tithe maps of 1839/40 show a pattern of small fields, that remain largely unchanged to the present day apart from a certain amount of urban expansion around Harlech. The tithe schedules record a mixture of pasture and arable land along with marsh allotments to the north of Llanbedr. The main landowner was the Hon E. M. L. Mostyn (later to be the second Lord Mostyn). During the latter part of the 19<sup>th</sup> century, new houses were built to accommodate several well-to-do English families (Lloyd 1986, *The Book of Harlech* 81) and Harlech became a popular summer destination. The newcomers patronised local music festivals and some sponsored the creation of the Harlech Golf Links.

The economy, away from Harlech itself, remained primarily agricultural throughout the 19<sup>th</sup> and 20<sup>th</sup> centuries although small-scale industrial activity is demonstrated by the presence of trial quarry workings along Harlech Cliff shown on the OS 1:2500 map of 1901 and a slate quarry to the east of Llanfair.

The twentieth century saw a degree of depopulation in the post-war depression although tourism continued to be an important source of income. The growth in the ownership of motor cars led to further expansion of the tourist trade and the spectacular castle remains the chief attraction (Lloyd 91-93).

### **4.3 The Archaeological Survey (Fig 1)**

Twenty-nine features were identified directly within or contiguous with the survey area, defined as the easement shown on the map supplied (Drawing No. 57748/RM/01). These are initially described listed below with recommendations for further assessment and mitigatory measures, where appropriate. Other features in the vicinity, not directly affected, but which may be relevant to the work are listed separately (Appendix 1).

#### **Feature 1      Former shoreline close to outer defences of Harlech Castle**

*SH58053136C*

*Period: Medieval*

*Category: E Impact: Unknown*

The pipeline passes within a few metres of the Water Gate in the outer defences of Harlech Castle. The castle originally had direct access to the sea but now stands over 1 Km away. Little is known of the line of the

medieval coast. There were presumably inundations of sand in the medieval period because Speed's map of 1610 indicates no access to the sea. Further details are, however, lacking. It is possible, depending on the exact line and depth of the pipe and the depth of the road sub-base that environmental evidence relating to changes in the coastline could be recovered along the line of the minor road from the Harlech pumping station to the junction with the A496.

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

***Recommendations for mitigatory measures: Intensive watching brief, environmental sampling.***

## **Feature 2      Sand dunes and possible former coastline.**

*SH57843095 to SH57503000*

*Period: Medieval*

*Category: E Impact: Slight*

The pipeline runs along tracks and paths through former dunes alongside the railway. There is potential for the recovery of information relating to coastline changes and the formation of the present landscape along this line.

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

***Recommendations for mitigatory measures: Intensive watching brief in sample locations. Environmental sampling.***

## **Feature 3      Trackway**

*SH57553004C*

*Period: Post-medieval*

*Category: C Impact: Slight*

A winding path is visible running along a wide probably natural hollow down a shelf towards the sea. The date of the path is unknown although it is not presently used. The line of the hollow and path is blocked by the railway so it presumably pre-dates this. The track could be linked to small-scale slate quarrying to the north marked on the 1901 OS map.

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

***Recommendations for mitigatory measures: Intensive watching brief***

## **Feature 4      Trackway**

*SH57552999C*

*Period: ?Post Medieval*

*Category: C Impact: Slight*

A narrow path or track can be traced, in places, along the base of Harlech Cliff. Patches of rough metalling are visible along with what appears to be fairly recent terracing. The track could be linked to small-scale slate quarrying to the north marked on the 1901 OS map.

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

***Recommendations for mitigatory measures: Intensive watching brief***

## **Feature 5      Wall**

*SH57462977C*

*Period: Post medieval*

*Category: D Impact: Slight*

Dry-stone field wall, probably 19<sup>th</sup> century.

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

***Recommendations for mitigatory measures: Reinstatement***

**Feature 6      Path**

*SH57433964*

*Period: Post-medieval*

*Category: C Impact: Slight*

The path from the beach zig-zags up the very steep gradient of Harlech Cliff. The path is probably Victorian and may be contemporary with the railway.

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

***Recommendations for mitigatory measures: Reinstatement***

**Feature 7      Wall**

*SH57402960C*

*Period: Post-medieval*

*Category: D Impact: Slight*

Mortared stone boundary wall, probably 19<sup>th</sup> century.

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

***Recommendations for mitigatory measures: Reinstatement.***

**Feature 8      Track**

*SH57402957*

*Period: ?Post-medieval*

*Category: ?C Impact: Slight*

A largely turfed over, roughly cobbled track runs through the field along the top of the cliff. This could pre-date the current road that is shown on the 1839 tithe map. A footpath is marked here on the 1901 OS map. See also Plate 1.

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

***Recommendations for mitigatory measures: Intensive watching brief***

**Feature 9      Wall**

*SH57362953C*

*Period: Post-medieval*

*Category: D Impact: Slight*

Dry-stone field wall, probably 19<sup>th</sup> century.

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

***Recommendations for mitigatory measures: Reinstatement***

**Feature 10      Wall**

*SH57362944*

*Period: Post-medieval*

*Category: D Impact: Slight*

Dry-stone field wall, probably 19<sup>th</sup> century.

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

***Recommendations for mitigatory measures: Reinstatement***

### **Feature 11      Farm buildings**

*SH57402938*

*Period: Post-medieval*

*Category: B Impact: None*

Two post-medieval farm buildings, one of which is shown on the 1840 Llandanwg tithe map (part of Llanfair Ucha holdings)

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

***Recommendations for mitigatory measures: Avoidance***

### **Feature 12      Field system**

*SH57602890C*

*Period: Medieval/Post-medieval*

*Category: C Impact: Slight*

The field system around Llanfair Isaf and Pen-sarn remains largely unchanged since the 1839 Llanfair tithe map. Most of the fields, particularly around the Artro estuary, probably date from 19<sup>th</sup> century enclosures of common land, although some elements of earlier boundaries could survive around Llanfair. The pipeline runs through this area on a similar alignment to an existing water pipe and it is therefore expected that new breaches to the dry-stone walls will be kept to a minimum.

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

***Recommendations for mitigatory measures: Reinstatement of walls***

### **Feature 13      Possible trackway/boundary and associated features**

*SH57592915*

*Period: Unknown*

*Category: E Impact: Slight*

A slight ridge runs in a SW-NE direction across this field. The field is also quite uneven suggesting buried remains. This could be tentatively interpreted as a trackway or relict boundary along with associated features. The unevenness could also be a result of modern disturbance.

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

***Recommendations for mitigatory measures: Intensive watching brief during topsoil strip of easement.***

### **Feature 14      Trackway**

*SH57602915*

*Period: Post-medieval*

*Category: C Impact: Slight*

The 2.5m wide trackway from Capel Bethel will be cut by the pipeline. The track pre-dates the chapel and is shown on the 1839 Llanfair tithe map. The track is bounded on either side by dry-stone walls and does not appear to have been widened or greatly upgraded and is as such an interesting relict landscape feature.

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

***Recommendations for mitigatory measures: Reinstatement of walls using original materials***

**Feature 15      Possible ploughed out enclosure/boundary**

SH57642895

*Period: ?Romano/British or Medieval*

*Category: Impact: Slight*

An arc of a possible curvilinear boundary or ploughed down lynchet is visible as break of slope in improved pasture to the south of Llanfair. This could be an element of an early field system around Llanfair, perhaps an outlying part of the fields around the hut group to the north-west (PRN 1063)

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

***Recommendations for mitigatory measures: Intensive watching brief, reinstatement of profile***

**Feature 16      Marsh near Afon Artro**

SH57602835C

*Period: Unknown*

*Category: Impact: Slight*

Semi-improved coastal marshland to the south-west of Llandanwg and to the north of the Afon Artro probably originated as coastal mudflats and could contain environmental evidence for coastal change in this area.

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

***Recommendations for mitigatory measures: Intensive watching brief in selected areas, environmental sampling.***

**Feature 17      Raised trackway**

SH57522840C

*Period: Medieval/Post-medieval*

*Category: Impact: Slight*

A raised trackway, shown on the 1840 Llandanwg tithe map, runs through the marsh to Ymlwch. This could be part of an earlier route to the medieval church of Llandanwg from the east.

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

***Recommendations for mitigatory measures: Intensive watching brief, reinstatement.***

**Feature 18      Bronze Age cinerary urn findspot (PRN 4783), Pen-sarn.**

SH58002800A

*Period: Bronze Age*

*Category: E Impact: Unknown*

Fragments of a Bronze Age cinerary urn were found at Pen-sarn. An exact findspot is not known. The description of the findspot as being one third of a mile east of the railway station could simply refer to the location of Pen-sarn farm. The pipeline passes through Pen-sarn farm holdings and there may be potential for the recovery of further Bronze age material from the area although it should be noted that the new pipeline is following the line of the existing water main and there will already have disturbance to this area.

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

***Recommendations for mitigatory measures: Intensive watching brief during topsoil strip of easement.***

## **Feature 19      Barns, Pen-sarn Farm**

SH57832805

*Period: Post-medieval*

*Category: Impact: None*

Two barns to the west of Pen-sarn farm are shown on the tithe map. Both are still in use.

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

***Recommendations for mitigatory measures: Avoidance***

## **5            SUMMARY AND RECOMMENDATIONS**

### ***5.1 Pipeline route summary with recommendations.***

The proposed pipeline runs from a pumping station north of Harlech at SH58293151 along a tarmac side road until it reaches the A496 at SH58003127.

- This stretch of pipeline passes within a few metres of the Water Gate in the outer defences of Harlech Castle. It is possible, depending on the exact line and depth of the pipe and the depth of the road sub-base that environmental evidence relating to changes in the coastline could be recovered here. An intensive watching brief with provision for environmental sampling is therefore recommended along this stretch of pipeline.

The pipeline then runs along the A496 until SH57843095.

- A watching brief with provision for environmental sampling is recommended here if any material with environmental potential has survived.

The pipeline route then continues along a narrow road alongside the railway to Harlech College buildings. The track beyond the college is roughly metalled until it turns inland at SH57643038. The pipeline then follows a narrow footpath, still alongside the railway line, until SH57503000 where it turns towards Harlech cliff.

- There is potential for recovering environmental evidence relating to changes in the sand dunes and hence the coastline along the whole of the route alongside the railway and an intensive watching brief with provision for environmental sampling in selected sample areas is recommended. The extent of the watching brief is somewhat dependant on the level of preservation of material useful for environmental analysis but it is anticipated that an intensive watching brief along 20% of this stretch of pipeline would be adequate.

The pipeline then runs up a rough path up Harlech Cliff and incorporates a pumping station at SH57552999.

The lower part of the uphill route cuts two possible trackways. Feature 3 (SH57553004C) follows a wide hollow down a natural shelf from the North. Feature 4 can be traced as a damp hollow which occasional metalling in several places along the bottom of the cliff.

- An intensive watching brief is recommended where the pipeline cuts the trackways.

The route runs alongside steps up to the bottom of the garden of Hafan Wen guest house at SH57592999, and then through gardens and a small field to the top of another path (feature 6) from the beach at SH57432965.

- One dry-stone wall (feature 5) is cut at SH57462977, reinstatement is the preferred option here.

The path from the beach (6) zig-zags up a very steep gradient and is probably Victorian and perhaps built at the same time as the railway below. The upper part of the path will be disturbed by the pipeline as will boundary wall (7) which runs alongside the path and then along the cliff top.

- Reinstatement of both features using original materials and building techniques is recommended.

The pipeline route emerges into open fields at SH57422963, initially running along a poorly defined roughly cobbled track (8) before turning inland and cutting dry-stone walls 9 and 10 at SH5362953 and SH57369244 respectively.

- An intensive watching brief is recommended for the track in order to determine the status of this cliff top route and reinstatement is recommended for the walls.

The pipeline passes between two semi derelict 19<sup>th</sup> century farm buildings (feature 11 SH 574 02938). Before crossing the adjacent minor road to Llandanwg and picking up the line of an existing water main at SH 5741 3937 and following it until the end of the pipeline route at SH58172750. This 2km stretch of pipeline runs through improved pasture bounded by substantial dry-stone walls (12).

- The reinstated breaches or additional gateways constructed during the laying of the water main are still visible and it recommended that a similar line and method of reinstatement will be followed during the present works.

The archaeological potential along previously disturbed ground is lower although some features may be visible during topsoil stripping along the easement. Features identified along this stretch of pipeline are as follows:

- A possible trackway or boundary (feature 13 SH57602915) and unidentified 'humps and bumps' in a field to the North west of Capel Bethel. An intermittent watching brief is recommended here.
- The pipeline crosses the pathway (feature 14) shown on the 1839 tithe map running west from Capel Bethel, it is recommended that this be reinstated.
- The pipeline cuts a possible relict field bank (possibly Roman-British) at SH57642895. An intensive watching brief along with reinstatement is recommended.
- The ordnance survey records the recovery of fragments of a Bronze Age cinerary urn at Pen-sarn (feature 18). An intensive watching brief is therefore recommended in the fields to the west of Pen-sarn farm

The barns below Pan-sarn farm at SH 5783 2806 (feature 19) are also on the tithe map. It is expected that the current pipeline will follow the line of the water pipe quite closely here and that there will be no archaeological implications because of previous disturbance.

The Llandanwg branch of the pipeline runs in a roughly westerly direction from a small track at SH57752883 through overgrown marshland. This marshland could contain environmental evidence relating to coastal change (feature 16). It should be noted that drainage trenches in this area were cut through silt deposits presumably indicating former coastal or estuarine mud flats. No peat deposits were visible in the trenches.

- An intensive watching brief with environmental sampling where appropriate is recommended in sample areas through the marshland (i.e. between SH 5760 2833 + SH 5731 2847). The extent of the watching brief is somewhat dependant on the level of preservation of material useful for environmental analysis but it is anticipated that an intensive watching brief along 20% of this stretch of pipeline would be adequate.

The pipeline cuts a raised track (17) running through the marsh at SH 5753 2840.

- An intensive watching brief is recommended in order to examine the trackway which is probably a continuation of a track shown on the tithe map, running to the nucleus of buildings and fields around Ymwlch.

The last part of the pipeline passes through semi-improved, although very stony, marshland to the sewage works at Llandanwg at SH 5708 2859.

## **5.2 Summary of recommendations**

### *Further assessment*

- None

### *Mitigatory recommendations*

- Avoidance Features 11 and 19.
- Intensive watching brief Features 1, 2, 3, 4, 8, 13, 15, 16, 17 and 18.
- Environmental sampling Features 1, 2, 3 and 16.



- Re-instatement      Features 5, 6, 7, 9, 10, 12, 14, 15 and 17.

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### **Documentary sources**

#### ***GAT Sites and Monuments Record***

- John Speed Map of Merioneth 1610.  
OS 1:2500 Merionethshire sheets XVIII16, XXV4 and XXV8 1901  
OS 1:10000 SH53SE and SH57NE 1976  
OS NAR card SH52 NE17 1972  
OS NAR card SH52 NE11 1972

#### ***Gwynedd Archives, Dolgellau***

- Tithe Apportionment Schedules for Llandanwg 1840 and Llanfair yn Harlech 1839 parishes.  
Tithe maps for Llandanwg and Llanfair yn Harlech parishes.

#### ***RCAHM Wales Aberystwyth***

##### *Aerial Photographs*

- RAF 540/464/4031 20 April 1951**  
**RAF 540/464/4032 20 April 1951**  
**RAF 540/464/4004 20 April 1951**  
**RAF 540/464/4005 20 April 1951**

**APPENDIX 1 List of sites around the Harlech to Llanbedr and Lanbedr to Llandanwg rising mains scheme recorded in the Gwynedd Sites and Monuments Record, with their public record numbers (PRNs) national grid references and site status.**

See Fig. 2 for locations

***a. Within the easement area***

None

***b. Within 100m of the easement***

| PRN   | SITENAME  | NGR         | PERIOD         | SITE STATUS |
|-------|---|-------------|----------------|-------------|
| 1063  | HUT GROUP + FIELD SYSTEM - SITE OF, S OF LLANFAIR | SH57412930  | Romano-British |             |
| 1434  | BURIAL CHAMBER POSS.- SITE OF, W OF GWERN EINION  | SH58002800A | Prehistoric    |             |
| 2896  | B.A.GOLD TORC - FINDSPOT, NEAR HARLECH CASTLE     | SH58003100A | Prehistoric    |             |
| 2906  | HOARD OF BRONZE AGE PALSTAVES, HARLECH            | SH58003100A | Prehistoric    |             |
| 2908  | HARLECH CASTLE                                    | SH58103125  | Medieval       | SAM, WHS    |
| 2909  | CENTURIAL STONES, HARLECH CASTLE                  | SH58103125  | Romano-British |             |
| 2910  | URN WITH ROMAN COINS FOUND AT HARLECH CASTLE      | SH58103125  | Romano-British |             |
| 4783  | BRONZE AGE CINERARY URN- FRAGMENTS                | SH58002800A | Prehistoric    |             |
| 9831  | LLANFAIR (LANUEYR) MEDIEVAL TOWNSHIP              | SH57502950  | Medieval       |             |
| 12291 | ARGOED FARMHOUSE                                  | SH58002835  | Post-Medieval  | LB          |

***c. Within 100m to 1km of the easement***

| PRN  | SITENAME                                      | NGR        | PERIOD       | SITE STATUS |
|------|---|------------|--------------|-------------|
| 960  | BRACKEN KILN, PENRALLT                        | SH58292878 | Undetermined |             |
| 961  | TRACKWAY, UWCH GLAN                           | SH58002950 | Undetermined |             |
| 962  | HUT CIRCLE, UWCH GLAN                         | SH58232895 | Prehistoric  |             |
| 1051 | GROES LAS SETTLEMENT + FIELD SYSTEM           | SH57933008 | Undetermined | SAM         |
| 1054 | MURIAU'R GWYDDELOD SETTLEMENT & FIELD SYSTEMS | SH58203038 | Prehistoric  | SAM         |

|      |   |             |                |     |
|------|---|-------------|----------------|-----|
| 1055 | MURIAU GWYDDELOD : HUT CIRCLE & ENCLOSURE         | SH58603017  | Prehistoric    | SAM |
| 1056 | MURIAU GWYDDELOD : HUT AND FIELD SYSTEM           | SH58233028  | Prehistoric    | SAM |
| 1057 | GWERN EINION BURIAL CHAMBER                       | SH58732861  | Prehistoric    | SAM |
| 1059 | LLANBEDR STANDING STONES                          | SH58332700  | Prehistoric    | SAM |
| 1060 | STANDING STONE/POSS. BURIAL CHAMBER SW OF HENGAEU | SH58442902  | Prehistoric    | SAM |
| 1164 | CIRCULAR ENCLOSURE, LLANFAIR                      | SH58332838  | Romano-British |     |
| 1582 | BRIDGE, PONT LLANBEDR                             | SH58542683  | Post-Medieval  | SAM |
| 2895 | ?ROMAN BURIAL;BRONZE MIRROR\PLATTER, LASYNYS      | SH59003200  | Romano-British |     |
| 2899 | MURIA GWYDDELOD, ENCLOSED HOMESTEAD, HARLECH      | SH58553016  | Early-Medieval | SAM |
| 2900 | MURIAU GWYDDELOD FIELD SYSTEM, HARLECH            | SH58603017  | Undetermined   | SAM |
| 2903 | CIRCULAR ENCLOSURE, S OF HARLECH                  | SH58242988  | Romano-British | SAM |
| 2907 | MURIAU'R GWYDDELOD - TWO LONG HUTS, HARLECH       | SH58513027  | Undetermined   | SAM |
| 2911 | CROSS-INCISED STONE, W WALL OF LLANDANWG CHURCH   | SH56872824  | Unknown        |     |
| 3193 | HARLECH MEDIEVAL TOWN                             | SH58203110  | Medieval       |     |
| 3896 | MILL - SITE OF, HARLECH                           | SH58183128  | Post-Medieval  |     |
| 3897 | CHAPEL -SITE OF, HARLECH                          | SH58153120  | Medieval       |     |
| 3904 | BRONZE TOOL (PALSTAVE) - FINDSPOT, NR. LLANFAIR   | SH57002900A | Prehistoric    |     |
| 3911 | BRONZE SWORD - FINDSPOT, NR. HARLECH              | SH58003100A | Prehistoric    |     |
| 4068 | LLANDANWG CHURCH                                  | SH56872824  | Medieval       |     |
| 4077 | EQUESTRI NOMINE STONE, LLANDANWG CHURCH           | SH56872824  | Early-Medieval |     |
| 4780 | IARRUS INSCRIBED STONE - LLANDANWG CHURCH         | SH56872824  | Early-Medieval |     |
| 4782 | INCISED STONE - LLANBEDR                          | SH58492698  | Prehistoric    |     |
| 4784 | HOLY WELL - FFYNNON DELAU                         | SH58602760A | Medieval       |     |
| 4786 | HOUSE - ARGOED                                    | SH57992835  | Post-Medieval  |     |
| 4787 | HOUSE - LLANFAIR ISAF                             | SH57532885  | Post-Medieval  |     |
| 4790 | HOUSE = LLWYN HWLCYN                              | SH58572838  | Post-Medieval  |     |

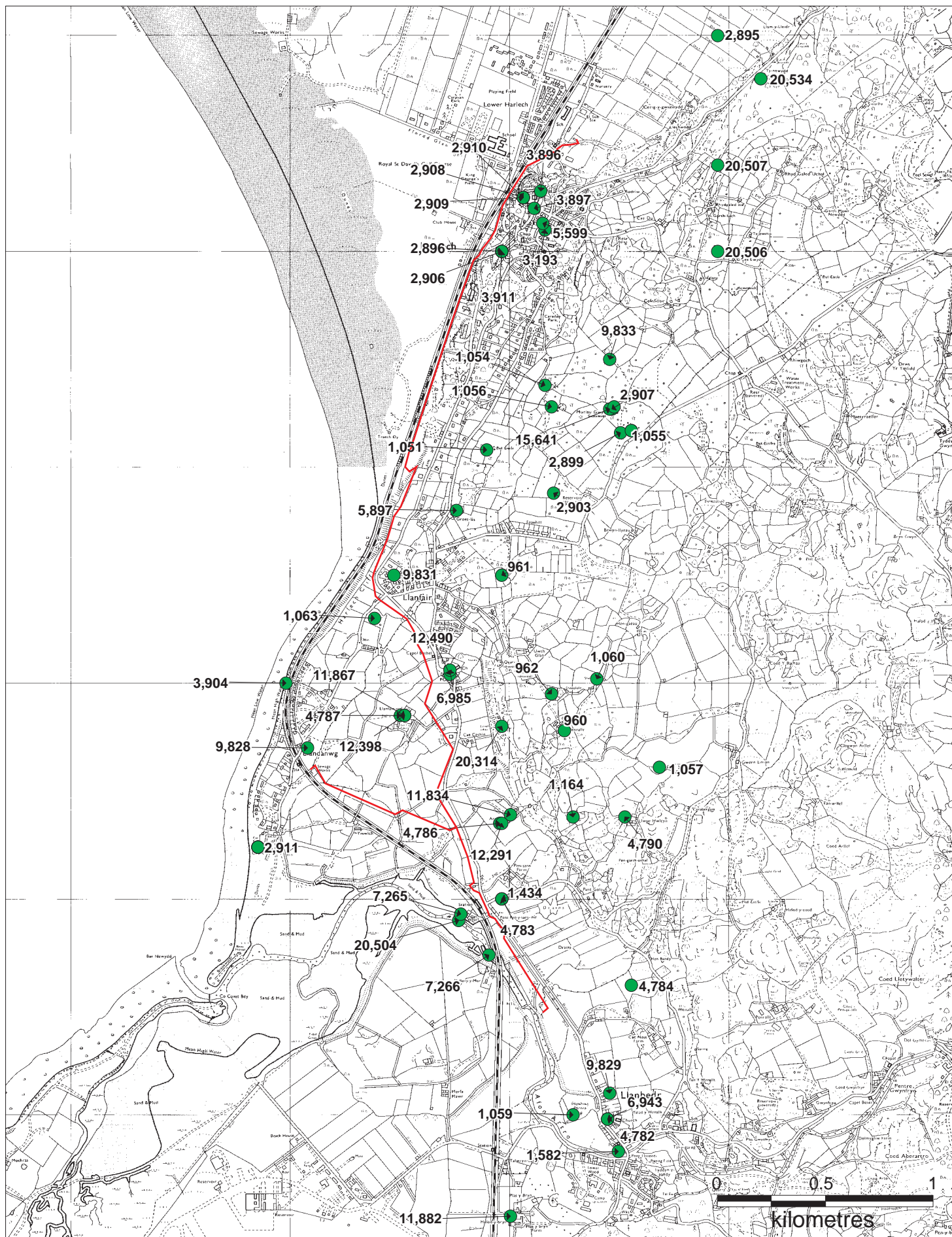
|       |  |            |               |    |
|-------|--|------------|---------------|----|
| 5599  | OVEN - GARDEN OF GLYNDWR, HIGH STREET, HARLECH | SH58193113 | Post-Medieval |    |
| 5897  | CIRCULAR ENCLOSURE, N OF LLANFAIR              | SH57792980 | Undetermined  |    |
| 6943  | LLANBEDR PARISH CHURCH                         | SH58492698 | Medieval      |    |
| 6949  | LLANDANWG PARISH CHURCH                        | SH56872824 | Modern        |    |
| 6985  | LLANFAIR PARISH CHURCH (MER)                   | SH57762906 | Medieval      |    |
| 7265  | WHARF AT PEN Y SARN                            | SH57812793 | Modern        |    |
| 7266  | RAILWAY BRIDGE AT PENSARN                      | SH57942774 | Modern        |    |
| 9829  | LLANBEDR MEDIEVAL TOWNSHIP                     | SH58502710 | Medieval      |    |
| 9833  | HARLECH MEDIEVAL TOWNSHIP                      | SH58503050 | Medieval      |    |
| 11834 | ARGOED FARMHOUSE - OUTBUILDNGS                 | SH58042839 | Post-Medieval | LB |
| 11867 | LLANFAIR ISAF - BARNES TO S. OF                | SH57552885 | Post-Medieval | LB |
| 11882 | PLAS Y BRYN FARM - OLD DAIRY; HAFOD Y BRYN     | SH58042653 | Post-Medieval | LB |
| 12398 | LLANFAIR-ISAF FARMHOUSE                        | SH57552885 | Post-Medieval | LB |
| 12490 | TY'N LLAN;FORMERLY CROW INN                    | SH57762904 | Post-Medieval | LB |
| 15641 | DRS, MURIAU GWYDDELOD                          | SH58503027 | Medieval      |    |
| 15642 | DRS, MURIAU GWYDDELOD                          | SH58523028 | Medieval      |    |
| 20314 | LLANFAIR SLATE QUARRY                          | SH58002880 | Post-Medieval |    |
| 20504 | WHARF, CEI PEN SARN                            | SH57802790 | Post-Medieval |    |
| 20506 | MANGANESE MINE, CAPEL ENGEDI                   | SH59003100 | Post-Medieval |    |
| 20507 | MANGANESE LEVEL, RHYD GALED NR HARLECH         | SH59003140 | Post-Medieval |    |
| 20534 | MANGANESE LEVELS, TY NEWYDD NR HARLECH         | SH59203180 | Post-Medieval |    |





Fig. 1 The pipeline route showing location of archaeological sites identified during the assessment  
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Fig. 2 The location of all archaeological and historic features and finds on the Gwynedd SMR within 1 km of proposed route of pipeline

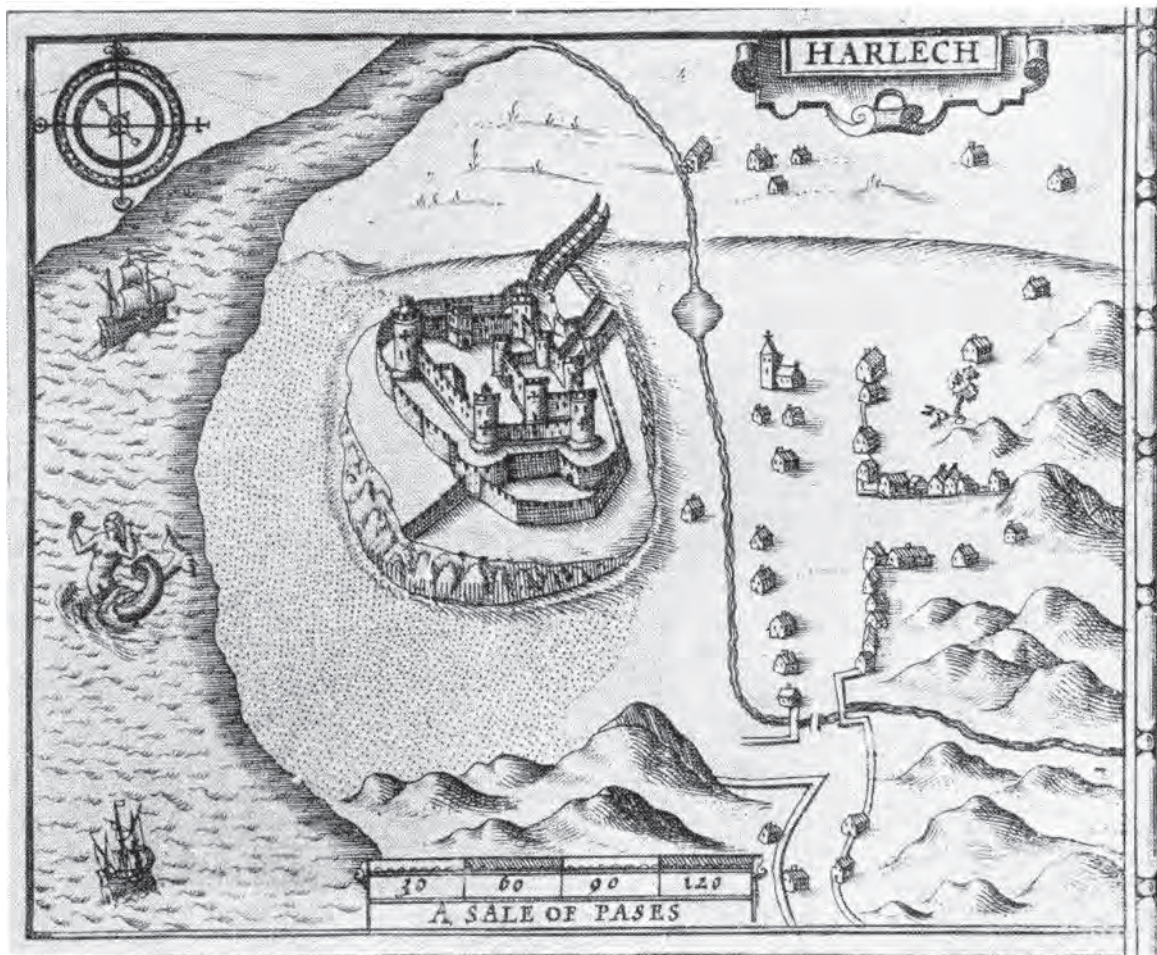


Fig.3 The Harlech inset to John Speed's map of Merioneth 1610





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