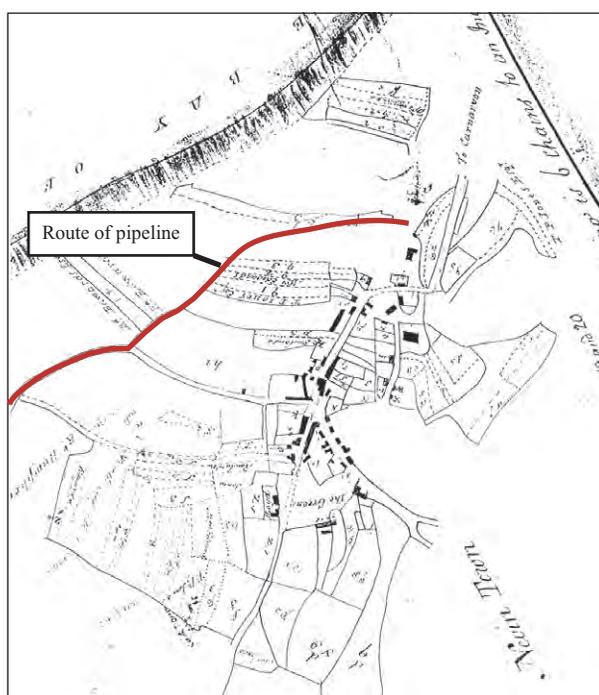


NEFYN WASTE WATER TREATMENT SCHEME

ARCHAEOLOGICAL ASSESSMENT

Report No. 471



Nefyn town, 1815, showing surviving medieval strip field holdings

Prepared for
Symonds Group Ltd

December 2002
By
G.H. Smith



Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

☎ 01248 352535 ✉ 01248 370925 email : gat@heneb.co.uk

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NEFYN WASTE WATER TREATMENT SCHEME

ARCHAEOLOGICAL ASSESSMENT

SUMMARY

An archaeological assessment was carried out in advance of construction of a water treatment works and associated pipelines at Nefyn and Edern, Gwynedd. The report covers the Water Treatment Works site and the pipeline easement, of which part runs through the outskirts of the town of Nefyn, which was a Royal Manor and flourishing trading centre in the medieval period. The assessment involved consultation of existing records and documents and a field search. Existing records identified fourteen relevant archaeological or historic features SMR that were relevant to the assessment. The field search identified eighteen archaeological or historic features that actually lay within the easement area. Seven were categorised as of district or local importance, ten as of minor importance or damaged/destroyed and one as requiring further assessment.

The features are all of relatively low value although watching briefs are recommended in four areas: first, a field with possible earthwork features, second, a possible early road section, third, an area close to a possible documented medieval site and fourth, in the vicinity of the site of a series of medieval strip fields. The remainder will either be re-instated, avoided or need no response.

1 INTRODUCTION

Gwynedd Archaeological Trust was asked by Symonds Group to carry out an archaeological assessment in advance of construction of a water treatment works and associated pipeline at Nefyn, Gwynedd (Fig. 1). The area affected is shown on Binnie, Black and Veatch Drawing No. 1065513/enviro4 (Mar 2002). The proposed pipeline extends from just south of Edern to just north of Nefyn with a treatment works at the Edern end (with a connection to Edern) and a pumping station at the Nefyn end. The total length of easement is about 3.25km. The exact sizes and locations of the proposed Edern treatment works and Nefyn pumping station are not known, nor is the size and depth of the proposed pipeline.

The area lies just outside the Lleyn Area of Outstanding Natural Beauty but within the Lleyn Peninsula Environmentally Sensitive Area (ADAS 1988). Nefyn had a priory in the 12th century and was a Royal manor or Illys of the Welsh kingdom of Gwynedd and a flourishing market town in the 13th and 14th centuries AD. Its importance was underlined by its choice by Edward I as the location for a royal tournament of international status to celebrate his victory over Llywelyn in 1282. The town was unfortunately largely destroyed during the Glyndwr rebellion and the exact sites of the Priory, Royal manor buildings and other contemporary housing still needs to be located. It is a valuable area for historical research in that it retained much of its medieval plough land pattern until the middle of the 19th century and this latter is of particular relevance to the present project.

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
- Initial 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 Gwynedd Record Office, Caernarfon 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.

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

3.2 Field Search

This was undertaken on the 25th of November 2002. The whole route was walked over and notes and photographs taken. A large part of the route follows the existing roads where only features adjoining the route would be likely to be seen. The remainder of the route and the site of the proposed treatment works and pumping station lie within open fields that are easily visible, either stubble or short grass pasture.

Field notes were written up on recording forms that summarised the Evaluation of importance, Impact and Recommendations for further assessment and Mitigation, in a manner suitable for database entry. These also provided a reference to the photographs, which were numbered and catalogued. The whole archive is stored with GAT under project no. G1760.

The route was been divided into convenient topographic units according to the varying blocks of land traversed, fields, roads etc. as set out below in order to assess the general environmental impact of the construction and to allow reference to particular areas of the route.

3.2.1 Pipeline and construction area topography, land use and sub-surface descriptions.

L1 Edern to Morfa Nefyn Road B4417. 0.50km.

Undulating poorly drained improved pasture. Possibly former open heathland.

L2 B4417 road, Morfa Nefyn to War Memorial, Nefyn. 2.25km.

Approximately level, following the existing main road.

L3 War Memorial, Nefyn to Penisardre Farm, Nefyn. 0.50km.

Firstly over an existing road and track then across gently sloping arable fields and part of the farmyard of Penisardre Farm.

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 be no sites remaining in this category.

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 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. Geophysical survey is not thought to be suitable for the feature and subsoil types expected at Fairbourne/Arthog.

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.

4 ARCHAEOLOGICAL RESULTS

4.1 Topographic description

The Llŷn peninsula projects some 35km into the Irish Sea on the south-west side of the mountain massif of Snowdonia. It constitutes a relatively low-lying area of undulating plateau with occasional isolated hills of intrusive, harder rock. Geologically, the largest part of the plateau consists of slates and shales, while the isolated hills are of igneous rock, mainly granite. The tip of the peninsula and most of the northern coast consists of low hills, of pre-Cambrian rocks, such as gneiss and schist (Smith and George 1961, 7-11). The whole surface has, however, been affected by the passage of the Irish Sea ice sheet that left, in retreat, thick deposits of fluvio-glacial clay, silt and gravel and these have had a strong influence on soil formation. The soil types are largely derived from glacial till and fall into four broad categories: the rock dominant and leached podsoils of the volcanic intrusions, the poorly drained gleys of the lowland areas and river valleys, the freely drained brown earths on the hill slopes and an area of organic soils in the marshland along the south-central part of the coast (Soil Survey of England and Wales, Sheet 118). Nefyn lies on an undulating coastal plateau between about 30 to 50m OD. The town itself lies in a slight hollow centred around the head of a narrow valley and the stream which runs into it was probably the key factor in the siting of the priory and later the town. However, it also benefited from its proximity to the sheltered bay of Porth Dinllaen. The underlying geology of the town and immediate surroundings are slate but the area to the west, at Morfa Nefyn and Edern, lies over igneous gneiss and schist. More importantly, the whole area is covered by deep deposits of glacial till on which have developed brown earths which are relatively productive agricultural soils, where drainage is good, as here. The land of the pipeline easement is all classed as of Grade 3, Good to Moderate quality, suitable for a range of arable crops with only moderate limitations so that yields are lower or more variable than better quality land (MAFF 1977). The medieval success of the town was based on the availability of a good area of land suitable for arable, in comparison to elsewhere in Llŷn. However, much of it is now permanent pasture. The Llŷn peninsula, like Anglesey, benefits from a mild maritime climate, generally warm and with a long period of frost-free days, more like south-western England than the rest of mainland Wales.

4.2 Archaeological and historical background

The area close to the town of Nefyn is historically the most significant for the current assessment. However, the village of Edern, at the western end of the proposed pipeline and location of the treatment works, was a minor medieval settlement. The present church of St. Edern was built in the mid-19th century but on the footings of a Medieval church and re-using some of the timber trusses of that church (RCAHM 1964, 33). There was a church there as early as 1254 and there are other indications of an early establishment. Burials were reported to have been found when a mill leat was dug in the mid-19th century across the field (Cae Newydd), to the east of the church (*ibid*). These were on the west side of the stream, while the proposed treatment works is on the east side. However, it is likely that a new connecting pipe will be laid to connect the treatment works to Edern and this will cross the stream at some point and so there may be some archaeological implications.

Llŷn or Lleyrn is the name for the peninsula, in Welsh Penllŷn, and is thought to take its name from the same root as the Irish tribal name Laigin (as in Leinster), probably reflecting early Irish settlement and influence in the area (Carr, 1972, 69). A large, presumably Iron Age, promontory fort near Nefyn on the north coast, Dinas Dinllaen, incorporates the same root name, which also gave its name to the medieval commote or administrative district. Nefyn is well recorded in the medieval period but may ultimately owe its origins to the presence of Dinas Dinllaen and may have succeeded it as a settlement and administrative centre. However, the first mention of Nefyn is in the Life of Gruffydd ap Cynan in the 11th century, where it is described as a harbour used by Gruffydd (Evans 1990, 72). Gerald of Wales also visited the area in 1188 and stated that there was a priory (*ibid*) and two burgesses of Nefyn witnessed a charter of Maredudd ap Cynan (died 1212). It was a clearly a well established, sizeable and wealthy town during the period of rule of the Welsh princes and its importance as a centre was clearly recognised by Edward I when he organised a grand tournament there in 1284 to celebrate his victory over Llywelyn in 1282. He ordered new ovens to be built to accommodate the number of guests for this occasion. The location of this tournament is not known but was identified by Lewis (1840) to be at a circular earthwork by the Edern road out of Nefyn, which has been suggested to be at a location that adjoins the present pipeline construction (Feature 9a, Figs. 1, 5 and 8).

A survey made by Edward I showed that the majority of the households were free, not bound tenants. Interestingly the town was never fortified and its layout continued as it was established and was not re-laid out

by Edward in the regular manner of the burgages in the fortified towns of Caernarfon and Conwy. A new charter was given to the town by Edward II in 1355. Edward I's survey showed the town to have 200 acres of arable, a sizeable area for the time, suggesting a considerable and profitable surplus (Jones Pierce 1931, 256, 253). The Royal manor was also of some size and complexity as shown by records of repairs in 1284 and 1306-7, including a 'great barn', presumably for storing grain from taxes (Jones Pierce 1957, 150). The fields lay to the south and south-west of the town, between the cliffs and 'an outer boundary extending roughly from Cae Rhyg to Penymaes, and skirting the lands of Bodtacho Ddu, which at that time was a separate rural district outside the limits of Nefyn' (Jones Pierce 1957, 39). The fields were characteristically long and curving because they were divided into long narrow strips in the medieval open field system. In most places in Britain these strips were gradually amalgamated into larger, more efficient holdings, and the field patterns eventually changed dramatically. Here, however, the ownership of many of these strips continued up to the mid-19th century when an estate map (Fig. 4) (Glynllifon 1815) and the Parish Tithe map were drawn up. These records provide a rare example of the medieval field system and are relevant to the present construction project because the east end of the easement crosses two of these former strip fields. It may be that a cross section of the field may reveal traces of the former strip fields and at the lower end of the field there may be preserved soil horizons, where a plough lynchet or terrace of plough soil has built up, possibly even traces of the former medieval field boundary and a buried soil that could provide environmental evidence of the Medieval period.

Nefyn was sacked by Owain Glyndwr in 1400, despite being a basically Welsh town, not a new English settlement. The destruction seems to have been fairly total and the town was abandoned for a while and this may account for the fact that no traces of medieval buildings survive today, apart from a motte (castle mound) of unknown attribution, but assumed to be Norman. The town very gradually recovered but never gained its former wealth and status and was still not much more than a village in the 18th century, as recorded by Lewis Morris (1748) (Fig. 2) and John Evans (1797) (Fig. 3). However, it had a flourishing herring fishing and boat building industry in the 19th century, at Porth Dinllaen, although it was not a good harbour and was one of the smaller ship building centres, the last ship being built in 1880 (Eames 1977, 170) and the settlement eventually expanded to the south and west, covering most of the medieval strip fields, although fortunately a few survived to the north, on the line of the present construction route. In the early 19th century it became the focus for a proposed scheme to provide a rail and ferry route to connect London with Ireland, via Porth Dinllaen, through mid-Wales. Such a mail route had already been in use via the road and there had been improvements to turnpikes and the harbour from the 1770's (Davies 1977, 173). To this end a new road was built from Porthmadog to Porth Dinllaen, a road that will be crossed by the present pipeline construction at Morfa Nefyn (Figs 1 and 5). Figures were produced which attempted to show that the route through Porth Dinllaen would be faster, taking the combined time of rail and sea journeys into account (Dodd 1933, 115). However, the north coast route eventually won and the rail connection to Holyhead was completed in 1850 following the opening of the Britannia Bridge at Bangor.

4.3 The Archaeological Survey (Fig 1)

Eighteen features were identified directly within or contiguous with the survey area, defined as the easement shown on the map supplied (Binnie, Black and Veatch Drawing No. 1065513/enviro4 (Mar 2002)). These are 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). No information was available on the exact location and depths of construction of the proposed buildings of the Edern treatment works and the Nefyn pumping station or of the depths and width of the proposed pipeline trench.

Feature 1 Field Bank (Fig. 6)

SH27903981 (C)

Period: Medieval-Post-medieval

Category: D. Impact: Likely

A field boundary around the south side of a large irregular field (Feature 3). It is a wide bank on which some fairly mature trees grow, all that is left of a probable former hedge. The bank was built some way down slope from the natural scarp edge of the field to create a terraced track way (Feature 2), probably at a time when the field was unimproved poor pasture.

It will only be affected if a new connection is made to the Edern pumping station.

As a relict part of the historic landscape and a functioning part of the existing field it should be re-instated.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Re-instatement

Feature 2 Track (Fig. 6)

SH22903983 (C)

Period: Medieval-Post-medieval

Category: D. Impact: Likely

A hollow-way leads around the contour from the former mill at Edern, alongside the stream and the boundary bank (Feature 1), eventually leading out into the field (Feature 3). Its purpose therefore seems to be just a local drove way for the field, since it was not separated from the rest of the field by another bank.

As a long, linear agricultural feature any impact will be only minor.

As a relict part of the historic landscape its profile should be restored.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Re-instatement

Feature 3 Field (Fig. 7)

SH28003990 (C)

Period: Medieval-Post-medieval

Category: D. Impact: Slight

A large irregular-shaped field rather poorly drained but generally improved. There are occasional humps and bumps, possibly remnants of a more irregular original surface or perhaps created by machinery during installation of the existing water main across the field. There is also a marked terrace in the field (Feature 4).

The field outline is not that of a Medieval or Post-medieval arable enclosure and is likely to retain that of an original land enclosure of an area of poor pasture or heath. There is a band of such large enclosures on the east

side of Edern parish, between the more complex patterns of smaller arable enclosures close to the centre of Edern on the west, and Nefyn parish on the east. However, the field had been taken into cultivation by 1839 as in the Tithe apportionment for Edern it is named as Cae Gwyn, described as Arable and Meadow. No specifically identifiable archaeological features will be affected and the wetness of the land suggests that there would not be any prehistoric settlement although activity of some kind, such as a 'burnt mound' cooking site is a possibility.

As there are vague features in the field surface and there is a possibility of evidence of prehistoric activity then a watching brief during pipeline and building construction would be desirable.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Watching brief

Feature 4 Lynchet/Terrace

SH28054005 (A)

Period: Medieval/Post-medieval

Category: D. Impact: Slight

A large contour terrace, not very easily visible in the grassed field. It grades out into the slope at both ends. Possibly a natural terrace as there are no indications that the rest of the field has any early cultivation. However, it could have been created during a temporary period of arable expansion.

It lies a little way from the pipeline easement but close to the field entrance and so could be damaged during movement of plant and machinery onto site so needs to be avoided.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Avoidance

Feature 5 Field bank

SH28254024 (C)

Period: Medieval/ Post-medieval

Category: D. Impact: Likely

The north boundary bank of the field (Feature 3). It supports a tall hedge. It possibly retains the core of an original post-medieval enclosure bank but much of this roadside bank has been rebuilt.

Of little archaeological potential. Already cut by the existing water/waste pipe.

As a functioning modern field boundary it will have to be re-instated.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Re-instatement

Feature 6 Road

SH28204044 (C)

Period: Medieval-Post-medieval-Modern

Category: C. Impact: Significant

The Nefyn to Abersoch road, known as Lon Goch in Edern, possibly because it cut through red or brown soils there.

The original medieval trackway will have been completely eradicated by the modern road construction, so no mitigation is needed.

Recommendations for further assessment: None
Recommendations for mitigatory measures: None

Feature 7 Road

SH28754024
Period: 18th-19th century
Category: C. Impact: Significant

At the cross-roads in Morfa Nefyn the pipeline route along the B4417 road crosses the B4412 road which began as the new turnpike constructed in the early 19th century to serve the proposed London-Ireland route, via the harbour of Porth Dinllaen (Fig. 5). If it had been successful, the road and harbour would have had a major impact on the economy of the area, as it eventually did for Holyhead, which became the accepted route to Ireland.

The trench may reveal a section of the 19th century road and this is of local historical interest.

If the early road is revealed during trenching it should be recorded.

Recommendations for further assessment: None
Recommendations for mitigatory measures: Basic recording and watching brief

Feature 8 Milestone

SH20904023
Period: Early 19th century
Category: C. Impact: Unlikely

A listed building, Grade II, No. 19981 (Cadw 1998). It is set into the dry stone wall at the south side of the road. One of a series of milestones along this road with crudely carved lettering indicating miles to Caernarfon, Nefyn and Aberdaron:

C 21 N 1 A 12

It should not be affected if care is taken in its vicinity.

Recommendations for further assessment: None
Recommendations for mitigatory measures: Avoidance

Feature 9 Enclosure, site of (Figs 1, 5 and 8)

SH29574023 (A)
Period: Prehistoric? Medieval?
Category: E. Impact: Unlikely

Feature 9a: This is the suggested location of a circular earthwork (PRN 6628) identified as the possible site of the Royal tournament arranged by Edward I in 1284 to celebrate his victory in 1282. This was said to be a 'round table' in the Arthurian tradition and Pennant (1783, 213) suggested that it would have been held in a circular earthwork. In 1833 Lewis (1840, Vol. II, 'Nevin') observed '...traces of the circular earthwork within which the military feats took place may still be seen on the road to Ederm'. The location of Feature 9a was recorded in the SMR because of a suggestion that a house on the north side of the road here, named Ty'n Llys, might indicate the site of the Royal court or Llys of Nefyn (RCAHM 1964, cxliii, note 9 and 84). Recent study has suggested that a more likely location was within Nefyn town itself (Johnstone 1995). However, the ground just to the south of Ty'n Llys is distinctively level, compared to nearly all the gently sloping land around and is on the brow of a hill with good prospects to the east, over Nefyn. This would have made it a good location for a tournament. The Tithe map of 1839 does show a circular feature of about 50m diameter overall as an area of rough land a little further to the south-west at Cae'r Pwll (Fig. 5). However, the name Cae'r Pwll ('Pool field')

in the Tithe apportionment (Fields 282 and 292), shows that the feature (which survives as a reed-filled depression) was just a pond.

Feature 9b: Another feature nearby has also been suggested to be the earthwork described by Lewis. This is a very large curvilinear feature, recognisable in the field pattern (Fig. 1). It is an oval feature of c. 750m east to west and 450m north to south. This area was apparently respected by early fields, probably from Medieval times. The feature has not yet been fully studied, or incorporated in the SMR, and there are no previous finds from Morfa Nefyn that hint at any early activity here. It seems to have been an enclosure of some kind, not simply a boundary, because part of its perimeter on the north side exists as an earthwork (D. Thompson, *pers. comm.*). It seems rather large to have been the site of Edward 1's tournament but a Medieval date seems likely because of the pattern of fields. However, it could have been a prehistoric settlement enclosure with substantial banks that were simply utilised as part of later field boundaries. An Early Christian monastic enclosure would be another possible interpretation but there is no evidence of any Early Medieval activity here.

Whether either of these areas are the feature described by Lewis or not, both are worthy of attention. Feature 9a is just a possible site but Feature 9b certainly exists and is of great potential, whatever its date and function. It can be assumed that the road, as a route, formed an integral part of it, crossing where there would have been entrances to the enclosure. The pipeline cutting will cross the enclosure perimeter in two places, at the east and west and it is possible that finds may be made at any point within the bounds of the enclosure, which might help to understand it although along the modern road itself, following an old route, there is only a small chance of survival of evidence. However, a watching brief should be carried out during excavation in the vicinity of Feature 9 and along the length of road that crosses Feature 9b.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Watching brief

Feature 10 Strip field

SH30654071 (C)

Period: Medieval

Category: C. Impact: Slight

One of several long, curving fields in the area around Nefyn, which still retained partial ownership as remnants of medieval strip fields in the early 19th century (Glynllifon 1815) (Fig. 4). Now amalgamated as one field, part of Penisardre farm.

The field is important because it was an unchanged medieval field of 5 strips in 1815. The pipeline runs alongside it and the field should not be affected.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Avoidance

Feature 11 Strip field (Fig. 9)

SH30704078 (C)

Period: Medieval

Category: C. Impact: Significant

Slight remnants of the Medieval field strips survived in 1815 (Fig. 4). Now all are amalgamated into one large field, but in along, narrow, S-shape, running up and down the slope, typical of a Medieval field ploughed by an ox team.

The pipe trench will cut across the whole width of the field and may reveal a cross-section of the strip fields as ridge and furrow. This therefore needs a watching and recording brief, to produce a plan and photograph of any features found.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Basic recording and watching brief

Feature 12 Field bank

SH30754081 (C)

Period: Medieval-Post-medieval

Category: D. Impact: None

A rather regular field bank without a hedge, which is probably a post-medieval construction, when the fields were enclosed and amalgamated. However, it could be built on top of a medieval boundary, which may have been no more than a plough-headland in the open fields.

The trench will probably go through the existing gateway and not affect the field bank.

Recommendations for further assessment: None

Recommendations for mitigatory measures: None

Feature 13 Strip field

SH30754085 (C)

Period: Medieval

Category: C. Impact: Likely

No strip ownership was marked on the 1815 Estate Map here (Fig. 4) so the field had probably already been amalgamated into one enclosure. However, it is of a typical medieval field shape and was almost certainly previously divided into strips.

The pipe trench will cut some way across the field but is less likely to produce information than in Field 10 except where it cuts into the positive lynchet (Feature 14).

Recommendations for further assessment: None

Recommendations for mitigatory measures: Watching brief

Feature 14 Lynchet

SH30804085 (C)

Period: Medieval-Post-medieval

Category: D. Impact: Significant

This is the east end of the former medieval strip field, Feature 13. A depth of soil has built up behind the Post-medieval field bank here (Feature 15). This could be mainly Post-medieval plough headland but might help preserve traces of the former Medieval strip field ridge and furrow, possibly even some Medieval land surface.

The pipe trench will cut a cross-section across the lynchet but at the longitudinal edge of the field where the section will be less informative, and alongside a Post-medieval farm track into the farmyard, which may have obliterated any early features. A record of the lynchet profile, by levelling is needed. If a buried soil is present it should be sampled for possible environmental analysis.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Basic recording and watching brief

Feature 15 Field bank

SH30834085 (C)

Period: Post-medieval

Category: D. Impact: Unlikely

A bank faced with neat stonework, forming a revetment for a build-up of plough soil (Feature 14) on the west, uphill side. Contemporary with Penisardre Farm but may overlie remains of a previous medieval boundary.

The planned pipeline route cuts through the gateway and so should not affect the bank. If it did it might provide an interesting cross-section, perhaps with a buried soil and so need basic recording.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Basic recording and watching brief

Feature 16 Farm yard

SH30834082 (C)

Period: 18th-19th century

Category: D. Impact: Slight

A small extension to the main farmyard of Penisardre Farm, enclosed by a wall (Feature 17). Now disused and overgrown.

The trench will cut the yard surface along the line of the trackway in which there are unlikely to be any features.

Recommendations for further assessment: None

Recommendations for mitigatory measures: None

Feature 17 Farm yard wall

SH30844082 (C)

Period: Post-medieval

Category: D. Impact: Significant

A stone-faced bank topped by a hedge, enclosing a yard (Feature 16).

The trench will cut through the wall, which may preserve a medieval soil beneath it. As part of the existing boundary it will be re-instated. If there is a buried soil it needs basic recording and sampling.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Basic recording, watching brief and reinstatement

Feature 18 Strip field

SH30864086 (C)

Period: Medieval

Category: C. Impact: Considerable

This field lies at right angles to the other identified Medieval strip fields and to judge by the 1815 estate map was probably subdivided from previously longer strip fields, Features 10 and 11.

The proposed pumping station lies at the south end of this field, an area that probably was once Medieval ridge and furrow, with little likelihood of buildings or other features anywhere in the vicinity. The construction will involve stripping of an area of topsoil as well as deeper trenching. This could reveal elements of the former ridge and furrow. There should therefore be watching and recording brief during the topsoil stripping stage.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Basic recording and watching brief

5 SUMMARY AND RECOMMENDATIONS

The largest part of the pipeline route follows an existing road, where there is unlikely to be any archaeological survival, although the road itself is of interest in one place (Feature 7).

There are four areas where there are possible features and where a watching brief is recommended:

- At the west end of the pipeline route near features 3 and 4, including the site of the Edern Treatment Works, where there could be prehistoric features.
- Where the trench cuts the line of the early 19th century Morfa Dinllaen turnpike road, Feature 7, with the possibility of identification of some of the original road structure.
- Near the possible site of Feature 9, a prehistoric or medieval enclosure, recorded in the early 19th century but since destroyed. There is slight chance of artefactual evidence that could point to the location and date of the enclosure.
- At the east end of the pipeline route, the area of greatest interest, where the pipeline cuts through two fields that were once Medieval strip fields and where various features might be found. Such features are rarely recovered, because either there is no map evidence of their existence or, in most cases, they have been destroyed by later cultivation. Environmental evidence from a buried headland or boundary bank would be particularly interesting. The affected area comprises Features 10-18, including the area of the proposed Nefyn pumping station. A watching and recording brief is therefore recommended for this part of the construction works.

Most of the other extant archaeological and historic features are of only local or minor value, such as track ways and field banks. Their interest lies in their position in the landscape, rather than their detailed structure and they require no response although it is assumed that they will be reinstated.

Summary of recommendations

- Watching brief Features 3, 7, 9a, 9b, 11, 13, 14, 15, 17, and 18.
- Re-instatement Features 1, 2, 5
- Avoidance Features 4, 8, 10
- None Features 6, 12, 16

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- Glynllifon Estate map Nevin Town and Parish 1815, Scale 6 chains to one inch
- OS 1 inch first series, 1838, reprint.
- Tithe map for the parish of Nefyn, c. 1839.
- OS 1:2500 First Series
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- OS 1:10000 SH24SE
- OS 1:10000 SH23SE
- OS 1:10000 SH23NE
- OS 1:10000 SH34SW

Gwynedd Archives, Caernarfon

- Tithe Apportionment Schedules for Edern and Nefyn Parishes
- Tithe maps for Edern and Nefyn
- Glynllifon Estate maps for Nefyn

APPENDIX 1 List of sites around the water treatment scheme recorded in the Gwynedd Sites and Monuments Record, with their record numbers (See also Fig. 1a)

1. Archaeology and buildings (A – approximate location only, C – centre of extensive site)

a. Within the easement area

6522 Morfa Nefyn Medieval township

b. Within 100m of the easement

382 Burials, north of Edern church

5554 Find spot of a Medieval jetton (trade token), German or Low Countries, early 14th C

6628 Possible site of circular earthwork

c. Within 100m to 1km of the easement

367 St Edern's Church, Edern

422 Standing stone, site of

1535 Motte, Nefyn

1536 Cross incised stone, Early Medieval

4316 St. Mary's church, Nefyn

4317 Priory, site of

5137 Small circular sub-soil feature, unknown date

6529 Nefyn Medieval township

6622 Possible site of Royal manor house or llys

2. Industry and minerals

a. Within the easement area

Nil

b. Within 100m of the easement

Nil

c. Within 100m to 1km of the easement

Nil

APPENDIX 2 List of buildings around the water treatment scheme of special architectural or historic interest sites recorded by Cadw (1998)

a. Nefyn

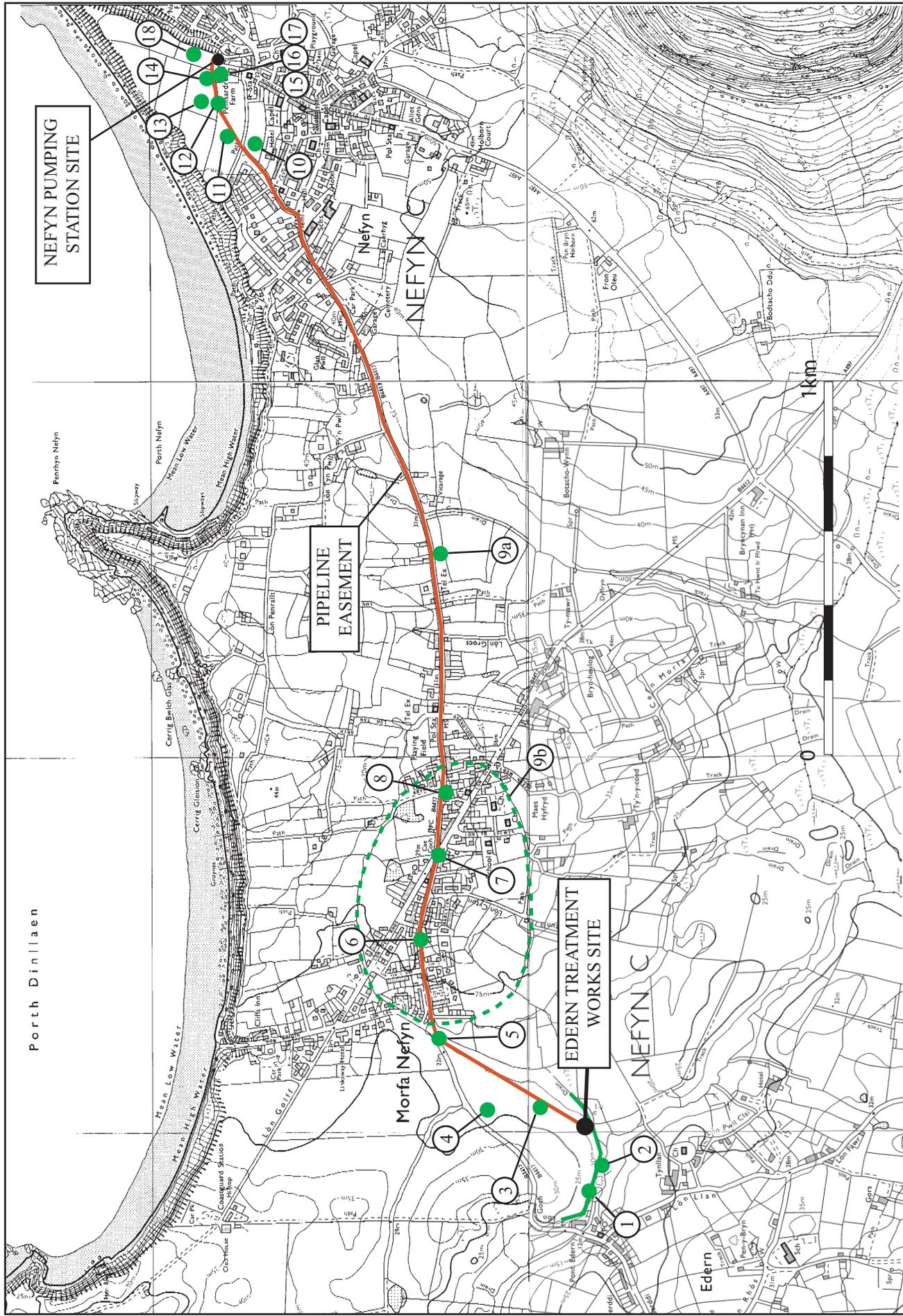
Church of St. Mary
St. Mary's Well
Nefyn Watch Tower

b. Edern

Church of St. Edern
Edern Presbyterian Chapel
Factory Cottage
Glan Afon (House)
Pont Edern

c. Morfa Nefyn

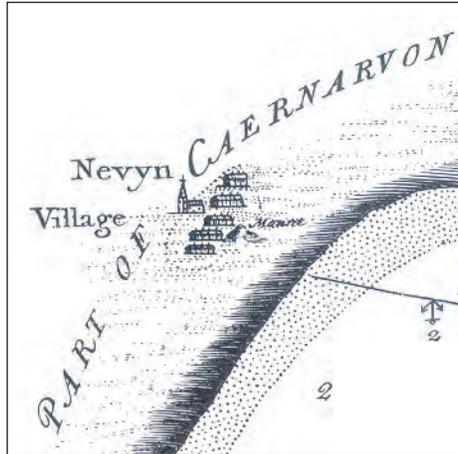
Capel Moreia
Cae'r Pwll (House)
Glandwr (House)
Milestone



Nefyn Waste Water Treatment Scheme

Fig. 1 Location of archaeological and historical features identified during the assessment.

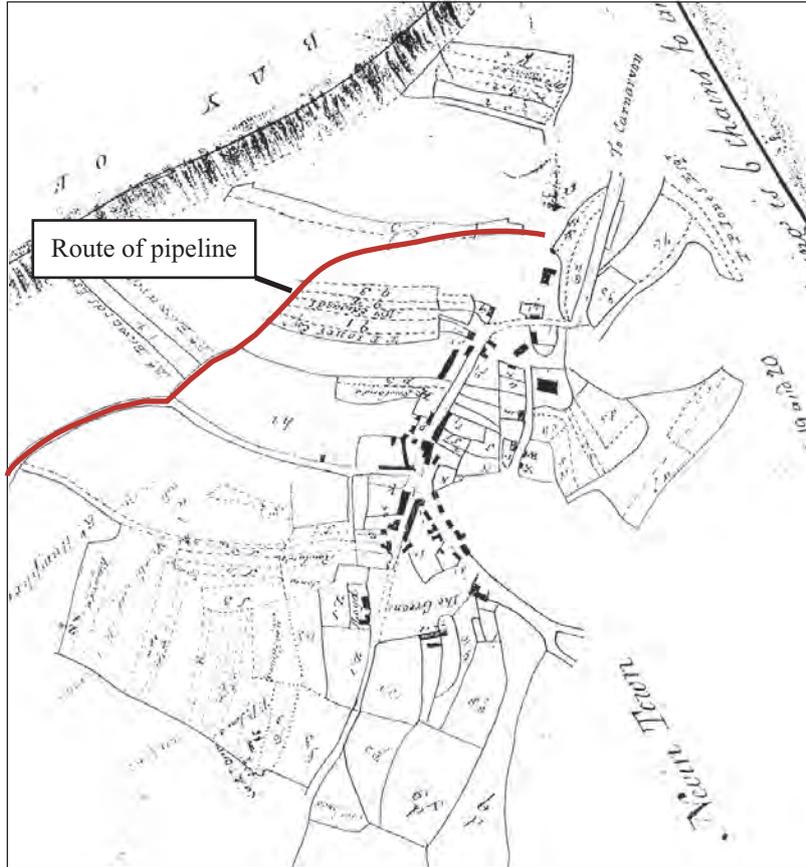
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Nefyn Waste Water Treatment Scheme
 Fig. 2 Nefyn town in the mid-18th century (Morris 1748)
 (North to bottom of map)

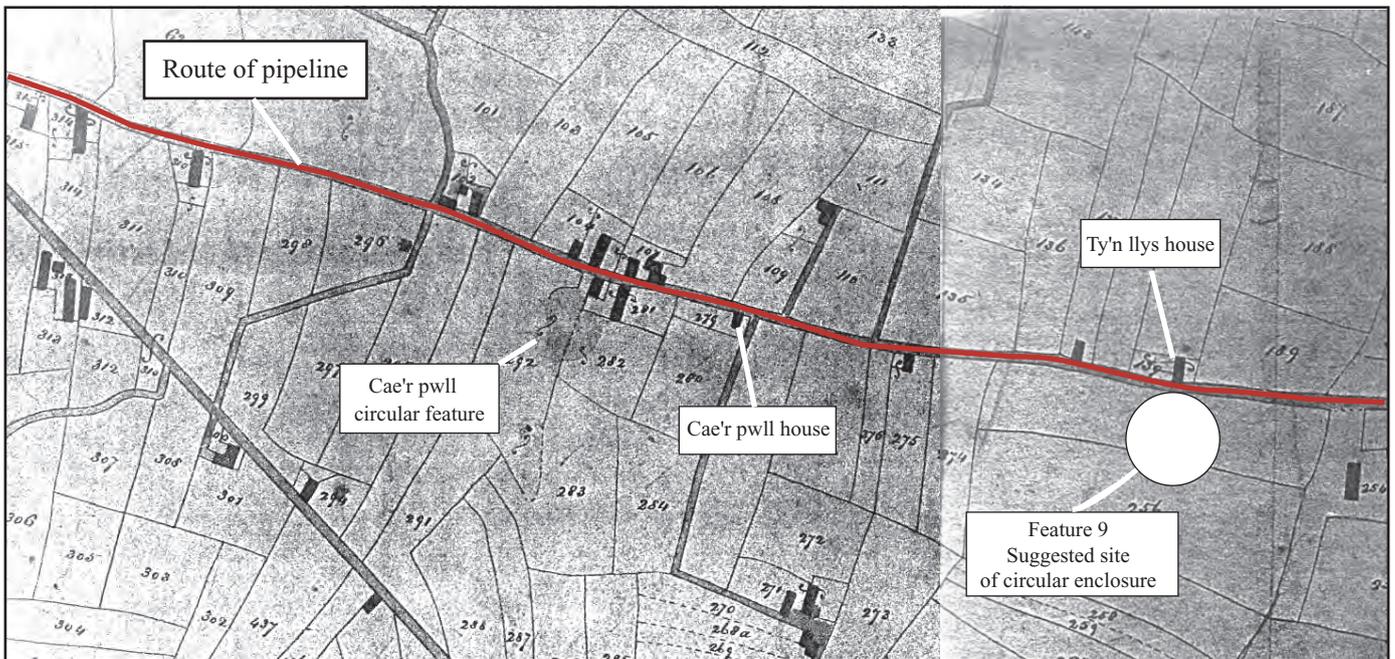


Nefyn Waste Water Treatment Scheme
 Fig. 3 Nefyn town and area in the late 18th century (Evans 1797)
 (North to top of map)



Nefyn Waste Water Treatment Scheme

Fig. 4 Nefyn town, 1815, showing surviving Medieval strip field holdings (Glynllifon 1815). (North to top of map)



Nefyn Waste Water Treatment Scheme

Fig. 5 East of Morfa Nefyn, part of Nefyn parish tithe map, 1839, showing area of possible location of Feature 9, circular enclosure near Ty'n llys and Cae'r pwll. (North to top of map).



Nefyn Waste Water Treatment Scheme
Fig. 6 Field bank (Feature 1) and hollow-way (Feature 2), Edern, from the east



Nefyn Waste Water Treatment Scheme
Fig. 7 Field (Feature 3), site of proposed Treatment Works, Edern, from the north-west



Nefyn Waste Water Treatment Scheme

Fig. 8 Suggested site of circular earthwork (Feature 9a), Morfa Nefyn, from the north-west



Nefyn Waste Water Treatment Scheme

Fig. 9 Former Medieval strip field (Feature 11), Nefyn, from the east



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Craig Beuno, Ffordd y Garth, Bangor, Gwynedd LL57 2RT Ffon/Tel 01248 352535 Ffacs/Fax 01248 370925
e-mail: gat@heneb.co.uk web site: www.heneb.co.uk