

Llithfaen 11kv Network Alterations: Llithfaen, Gwynedd

Archaeological Watching Brief



Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

Llithfaen 11kv Network Alterations: Llithfaen, Gwynedd

Archaeological Watching Brief

Project No. G2129

Report No. 1004

Prepared for : Scottish Power Energy Networks

December 2011

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Published by Gwynedd Archaeological Trust
Gwynedd Archaeological Trust
Craig Beuno, Garth Road,
Bangor, Gwynedd, LL57 2RT

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Mae Ymddiriedolaeth Archaeolegol Gwynedd yn Gwmni Cyfyngedig (Ref Cof. 1180515) ac yn Elusen (Rhif Cof. 508849)
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Summary

An archaeological watching brief has been carried out on the route of the Llithfaen 11kv overhead cable improvements, Llithfaen, Gwynedd. This scheme involves the removal of poles numbered 27 to 71 from an overhead cable line and placed in a trench in a nearby track way.

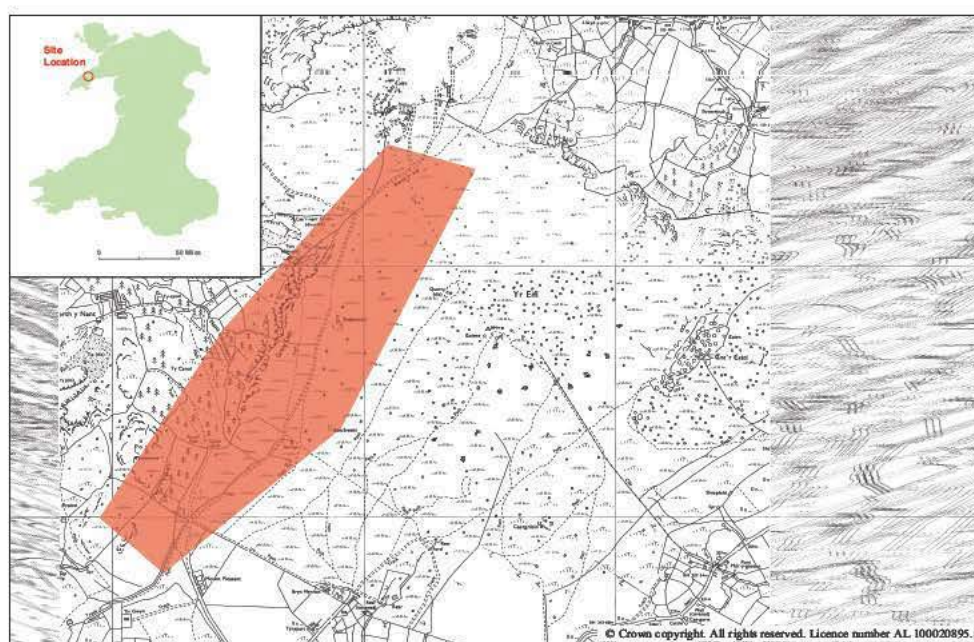
An archaeological assessment had been carried out, which noted that the area was one of high archaeological potential, with evidence for settlement sites and field systems dating from the late prehistoric to medieval periods. This upland archaeology is extensive, well preserved and largely not recorded. A strategy of avoidance of known archaeological sites with archaeological supervision and a Watching Brief during ground works associated with cable laying was recommended.

The open cut trenching along the route of the Llithfaen 11kv network improvements were examined as part of the archaeological watching brief. The excavations close to a long hut and possible hut circle (Site 6) at the north end of the scheme were intensively watched, but no new archaeological information was recovered. This was also the case on the open cut trenching along the southern part of the scheme and along the track where much of the new cable was buried. The known archaeological sites along the old overhead cable route were successfully avoided through being fenced off prior to the removal of the redundant poles.

1. Introduction

Gwynedd Archaeological Trust (GAT) was commissioned by Scottish Power Energy Networks to complete an archaeological watching brief during an overhead line replacement scheme, located near Nant Gwrtheyrn, Llithfaen, Gwynedd, centred on NGR SH 35834466. The works are shown on SP Energy Networks drawing number FGC_304703_1_SP (Figure 01).

The scheme measured c.1.92km in length and included the removal of poles numbered 26 to 71 from the former overhead line. The cable was placed in a trench excavated in the neighbouring extant track way to the north west. The route is shown on SP Energy Networks Drg. No FGC_304703_1_SP. This work involved the excavation of a 750mm deep and 500mm wide trench cut using a 26 ton trenching machine, to be backfilled after 100mm ducts have been laid. An additional spur section of trench excavation was required in the southern part of the scheme to link to the spur poles leading to Nant Gwrtheyrn, which involved the excavation of a 1 metre wide trench, with a 5m working zone around it. The vegetation was only to be removed over the 1m trench line, and laid back on the ground in the same position from which it was removed (Carillion method statement revision 3, dated 26th November 2009). An additional short spur of about 40m was required to connect the cable to a new 'H' pole between the current poles 25 and 26 (SP Energy Networks Drg. No. FGC_304703_1_SP).



Left:
Figure 01 -
Site location. Base
map taken from
Ordnance Survey
1:10 000 series
sheet SH 34 SE
& SH 34 NE

1.1 Acknowledgements

The assistance of Alan Jones of SP Power Systems and the project site team is acknowledged. The assistance of Jenny Emmett and Ashley Batten of Gwynedd Archaeological Planning Service (GAPS) with this project is gratefully acknowledged.

2. Specification & Project Design

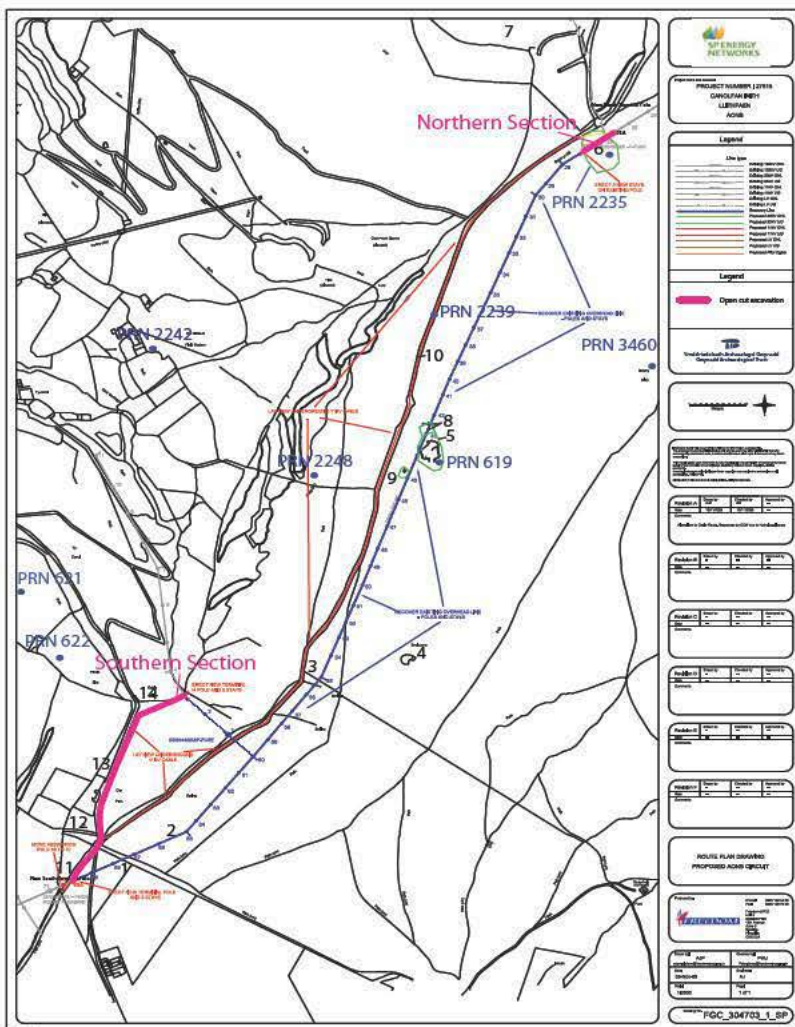
A project design was prepared for & agreed by GAPS (Appendix I). Gwynedd Archaeological Trust's proposals for fulfilling these requirements were:

- Watching Brief
- Report

The report conforms to the guidelines set down in the Institute for Archaeologists (IFA) Standard & Guidance for an archaeological Watching Brief (2001).

Below:

Figure 02 -
New cable route,
outlined in red.
Sites noted on the
Gwynedd HER are
noted in purple with
their PRN numbers.
Open cut sections
highlighted in pink.
Base map SP Energy
Networks Drg. No
FGC_304703_1_SP



3. Methods & Techniques

3.1 Watching Brief

The watching brief involved the examination of open cut trenches on the open moorland at the northern and southern ends of the scheme, and along the quarry track connecting the two, and during the setting up of new overhead poles at both ends of the scheme (Figure 01). The known archaeological sites along the former overhead cable route (sites 5, 8 and 9 (Figure 02); Evans 2010, 7-10) were fenced off during pole removal and were not disturbed, and an intensive watching brief was during the excavation works close to site 6 (ibid.). A written and photographic archive was maintained during the work.

3.2 Archive

A full archive including plans, photographs, written material and any other material resulting from the project has been prepared. This is currently held by GAT under project code G2129.

4. Topography

The 11kv route crosses a mid slope plateau on the southern side of Yr Eifl, above Nant Gwrthryn, centred on NGR SH35834466 (Figure 01). The plateau is itself located in a steep sided valley located to the north west of Llythfaen, Gwynedd. The upland grazing slopes, which include the route of the current 11kv power line, fall away with steep cliffs of a prominent igneous intrusion over Ordovician rocks on which the Port Nant quarries are located close to the sea (Bassett and Davies 1977, 18-20). Soils consist of a shallow humic horizon on weathered rock, with thicker organic horizons in areas where drainage is impeded. A significant quantity of gorse and heather cover was noted over the study area. To the south and west areas of post-war conifer plantation were noted.

5. Archaeological Background

5.1 Introduction

The following background is taken from the archaeological assessment report (Evans 2010; GAT Report No. 863).

The upland archaeology in the region is extensive, well preserved and largely unrecorded (Browne and Hughes 2003, 7). Indeed there are many prehistoric and later sites in the region around Nant Gwrtheyrn, similar to those examined nearby at Moel Bronymiod by GAT in the 'Uplands Initiative' under the auspices of Cadw (Geary 2003, 75-80). Also prehistoric sites in the region have been studied by Smith (1999).

Nant Gwrtheyrn itself plays a very important role in the legends and folklore of post Roman Wales. The name gwrtheyrn is thought to derive from gor meaning 'super' and teyrn meaning 'king', suggesting associations with local elites who gained power after the collapse of Roman authority. Since the 8th century writings of Nennius it has been associated with the final place of refuge of the Kentish prince Vortigern (Gwrtheyrn) with whom legend associates the fatal error of inviting assistance from Saxon mercenaries and thus 'being hated by all the people of Britain', forcing his subsequent flight to the Nant, and his building of a fortress there (Morris 1980, 31). This story has a theme recurrent in Welsh literature, in which the tragic hero is forced to roam the mountains after disaster strikes.

It has been suggested that the name Gwynus, now given to a farmhouse close to Llithfaen and 2.5 km south of the study area, but once the name of a medieval township in the commote of Dinllaen, represents the name of an early medieval ruler in the area. This hints at the former importance of the region (Richards 1963, 22-24).

Nant Gwrtheyrn is referred to in the 13th century as forming part of a grant from Llywelyn to Heilyn ap Tudur before 1282, and in the 16th century it is referred to as 'Vortigers' Valley' by Leyland (ibid., 25).

Later folk tales such as the marriage of Rhys and Meinir are also set in the valley. Thomas Pennant, touring North Wales in the 1770s reports that a stone cist grave bedd Gwrtheyrn had been

opened by the people of the valley and that the bones of a tall man were discovered, possibly that of the royal fugitive (Pennant 1783, 213-214).

Whilst these stories may contain elements of a traditional folk memory of actual events, another significance of these tales from an archaeological point of view is that they give Nant Gwrtheyrn a sense of place and significance in the landscape which may have affected the way later people interacted with the area.

It is certainly the case that important prehistoric and early medieval sites are situated not far from Nant Gwrtheyrn and relatively easy access from the sea means that it would not have seemed as remote as it does today. In archaeological terms, the presence of a possible early medieval chapel and medieval township hint at the significance of the area in the post Roman period.

5.2 General History

5.2.1 Prehistoric and Roman

A flint flake, of unknown date but probably earlier prehistoric, has been found at (NGR SH 35904500, PRN 2239). A Bronze Age spearhead (PRN 2,248) has been found on the steep scarp of Yr Eifl at NGR SH 35114495. There is no further information on when this happened. No other prehistoric or Roman finds or sites have been identified within the immediate vicinity of the study area.

The wider landscape has preserved very good examples of prehistoric settlement and funerary sites, including the hillfort at Tre'r Ceiri (PRN 613, Hogg 1962) on the summit of the easternmost peak of Yr Eifl, and Bronze Age cairns on the summits of two peaks of Yr Eifl (PRNs 610, 623). Further evidence for Bronze Age funerary activity (PRN 2243, SH 35524310) comes from about 1.5km to the south of the current study area, where a cist burial, within a cist about 1m by 0.55m, containing a beaker with comb impressed decoration and bones, was uncovered in the village of Llithfaen during the laying of water pipes in 1937 (Hughes 1939, 95-97).

An excavation has been carried out to the south west of the study area at Carreg y Llam (Hogg 1957, 46-55) in advance of quarrying, where a late prehistoric fortified oval enclosure 30m long by 15m wide with single round hut built into the inner face of the rampart was found. Outside the study area to the south, Mount Pleasant settlement (PRN 620) at SH 35104428 may be late prehistoric in origin (Griffiths 1950, 39). It consisted of a 'D' shaped enclosure c.48m

east-west by 40m, containing and connecting four circular, ruined stone wall defined structures 10-18m in diameter. Additional structures within the enclosure include sheepfolds and shepherd's shelters (Silvester 2003, 127). The site is a Scheduled Ancient Monument (ref. CN 249). A hut circle and probable prehistoric field system has been noted at Ty Uchaf, Nant Gwrtheyrn (PRN 2242, NGR SH35414495) and within the study area between poles 43 and 44 (PRN 619), although this site may be more extensive than has been identified. It is likely that many further prehistoric sites remain to be discovered in the area.

The track that runs north-south may follow the route of the Nefyn to Segontium Roman Road (PRN 17815 and 17823), although there is no trace of this visible on the ground.

5.2.2 Medieval and Later

Possible evidence for medieval ecclesiastical activity within the area is suggested by the presence of a chapel site at Nant Gwrtheyrn (PRN 2231, NGR SH 35114495), although the date of this site remains very uncertain.

Probable medieval long huts and enclosures have been identified at a number of locations (PRN 621 NGR SH 35194448, PRN622 SH 35264434 [ibid. 1964, 94-95- including plans], NPRN 15,181 SH 352444). The medieval township of Nant (PRN 6,525 SH 35104428) is located south of the study area. The long huts, which are probably

both medieval and post-medieval in date, may have housed people and beasts under the same roof, although many of the small ones may have served as hafodydd occupied only during the summer months (Silvester 2003, 129). A known site of this type has been identified along the proposed route at SH 36234535 (PRN 2235), and a probable further example has been identified in the study area (Feature 9).

5.2.3 Post medieval and modern

The route of the 11kv network crosses an area of common land, which was the property of the Bodvel estate from post reformation times until the early 19th century, when it came into the hands of the Assheton-Smith's of Vaynol Hall, Felinheli. In 1776 Thomas Pennant wrote that there were three families living in Nant Gwrtheyrn at Ty Hen, Ty Canol and Ty Uchaf, and that 'they find it very difficult to get their small amount of produce to the market' (Pennant 1783, 213). Access out for this produce would have required using the southern end of the access track (Feature 10), which would at this time probably have been a rough cart track. An estate map of 1802 refers to the study area as forming part of Nant Gwrtheyrn, and notes the areas crossed by the poles (numbered 4) as Cae garw covering 14a 1r 3p to be 'rough pasture' and the large area of upland plateau (numbered 20) as Cae Mawr covering 112 a 0r 19p which is described as 'covered with heath &c' (Vaynol 4212). These areas form part of the farm known as Ty Canol. The tithe map of 1839 (Gwynedd Archives) show the route crossing common land and upland allotments. An extract from the schedule covering those crossed by the electricity poles and adjacent areas is given below. By 1867 most of the area had been consolidated into the holdings of the Assheton-Smiths of Vaynol Hall. A survey carried out in that year shows the estate at that time (Gwynedd Archives, Vaynol 4179). Granite quarrying began at Yr Eifl , later also to become known as Trefor quarry in the 1840s, and at Porth y Nant in 1851, and by the 1860s this had developed into a significant industry and the major employer in the area. The industry was based around the production of granite setts, stone cubes or rectangular blocks, which were used to make road surfaces, particularly in the growing industrial towns and cities of the north of England. Between 1861 and 1871 the number of people employed in the sett-making industry in Caernarfonshire rose from under 500 to 2000 (Dodd 1971, 228). This demand diminished in the early 20th century, and production at the quarries shifted to the production of crushed stone for

Below:
Plate 01 -
Cable trench excavation looking toward pole 25A. View from the west





roads and railway ballast. Both quarries declined in the 20th century as a result of competition from quarries with greater rail access, such as at Penmaenmawr, as well as the continuing decline in demand for setts. The Porth y Nant quarry closed in 1939, and Yr Eifl quarry declined significantly. Significant remains of this activity are located north of the study area (Feature 7), although the track way (Feature 10) was significantly upgraded in the 19th century to provide access from Llithfaen to the quarry, and to the new quarry village of Trefor beyond.

The Llithfaen 11kv overhead cable network was constructed along Graig Ddu between 1961 and 1971.

6. Results of the Watching Brief

6.1 Introduction

The open trench excavation consisted of two sections at the northern and southern end of the scheme, and these both formed part of the Watching Brief, as well as the excavation along the trackway, which was examined less intensively (Site 10). The known archaeological sites (5, 8 and 9; **Figure 02**) were fenced off during the pole removal and were not disturbed.

6.2 Northern Section

The cable trench, excavated in June 2011, immediately opposite pole 27 on the track way to the new pole 25A (**Plates 01-04**), consisted of an excavation approximately 44m long and 0.5m wide (**Figure 02**). It was located across open ground and dug to a depth of up to 0.9m. It revealed a stratigraphy of 0.15m of peaty silt topsoil with heather and juncus (101) overlying 0.75m- 0.9m of silty clay with subangular shale stone inclusions (102) (**Plate 03**). This deposit gets more gravelly at depth, and overlies undulating bedrock of light grey shale (103), which protrudes in other parts of the area.

Above:
Plate 02 -
Cable trench
excavation between
the trackway and
new pole 25A. View
from the south-west

Far left:
Plate 03 -
South facing section
of cable trench close
to site 06, showing
glacial clay and gravel
(102). Scale 1m





Above:
Plate 04 -
Re-instated section
of trackway with bur-
ied cable below. View
from the north. Scale
1m

Far right:
Plate 05 -
Cable trench excava-
tion at the junction of
the open cut trench
and the trackway west
of the former pole 27

Close to the track deeper topsoil was noted (**Plate 04**), up to 0.3m in depth, which is probably explained as material thrown up along the edge of the track during levelling for the quarry road. No activity associated with site 6, which survives as an earthwork visible on the ground to the east of the new pole 25A (**Plate 05 & 06**), and which lay relatively close to the cable trench at this point, was encountered.

6.3 Southern Section

The open trench excavation in May 2011 between Poles 3 and 69A (**Figure 02**) was located on the east side of the south-north road heading from Llithfaen to Nant Gwytheryn. It was dug to a depth of 0.75m- 0.8m (**Plates 08 & 09**). At its northern end the stratigraphy consisted of 0.2m of a peaty dark greyish brown silt with small rounded and subangular stone inclusions (101) overlying a light yellowish brown sandy silt with clay, with small rounded and angular stone inclusions (102) (**Plate 07**). Approximately 18m south-west of Pole 3 the area became waterlogged, and the stratigraphy less clear, but at 25m evidence of exposed bedrock (103) was noted below (102) at a depth of

0.3m. Approximately 26m south-west from pole 69A deposits of fractured shale were noted above (102). These deposits appear to be as a result of

alluvial “carry along” associated with temporary surface watercourses common in wet conditions.

6.4 The Trackway

No archaeological deposits were encountered during either section of open trench excavation, or along the track way, which consisted of make-up and sub-surface layers above the natural bedrock (**Plate 02**).



7. Conclusion

The open cut trenching along the route of the Llithfaen 11kv network improvements were examined as part of an archaeological watching brief. The excavations close to a possible medieval long hut/hut circle (Site 6) at the north end of the scheme were intensively watched, but no new archaeological information was recovered.

The watching brief also covered the open cut trenching along the southern part of the scheme, and during the erection of new poles at either end of the scheme. That no archaeological evidence was encountered along the southern open cut section is likely due to the fact that much of the narrow cable trench was located

close to the verge of the current road to Nant Gwytheryn and its topsoil layer is likely to have been somewhat disturbed. The area is also significantly waterlogged in wet weather, which may have discouraged activity.

The trackway was noted to consist of make-up layers over shale bedrock, therefore no archaeological deposits were expected.

The known archaeological sites along the old overhead cable route, in a highly archaeologically sensitive area, were successfully avoided through being fenced off prior to the removal of the redundant poles.



Above:

Plate 06 -
Excavation of footings for new pole 25A, about 30m from site 06. View from the north



Left:

Plate 07 -
Section of cable trench close to pole 03, showing peaty silt (101), over sandy silt and clay (102). Scale 1m



Far left:

Plate 08 -
Cable trench excavation in progress, close to former pole 67 and public car park. View from the south south west

Left:

Plate 09 -
Excavation of cable trench close to pole 03



8. Sources Consulted

8.1 Unpublished Sources

Gwynedd Archives, Caernarfon

Gwynedd Archives Service, Caernarfon (GAS),
Tithe Map of Pistyll 1839

GAS Vaynol 4103 Survey of the Parish of Pistyll
1867

GAS Vaynol 4179 Vaynol Estate. Farms in Pistyll
and Carngiwch 1867

GAS Vaynol 4212 Survey, Plans and Reference of
the Bodfel Estates belonging to William Hervey in
the Counties of Caernarfon and Anglesey; survey
by W. Jones and R. Williams in the year 1802

Gwynedd Archaeological Trust Historic
Environment Record

Evans, R. and Davidson, A. 2007 Porth y Nant
Quarry, Nant Gwrtheyrn, Llithfaen, Gwynedd
(unpublished GAT report no. 703)

Evans, R. 2010 Llithfaen 11kv Network Alterations:
Llithfaen, Gwynedd (unpublished GAT report no.
863)

Jones, S. 1999 Deserted Rural Settlements in
Western Caernarfonshire (unpublished GAT report
no. 247)

8.2 Published Sources

Bassett, T.M. and Davies, B.L. 1977 Atlas of
Caernarfonshire (Caernarfon)

Browne, D. and Hughes, S. 2003 (eds.) The
Archaeology of the Welsh Uplands (Aberystwyth)

Dodd, A. H. 1968 A History of Caernarfonshire

Dodd, A.H. 1971 The Industrial Revolution in
North Wales (3rd edition)

Fasham, P.J., Kelly, R.S., Mason, M.A. and White,
R.B. 1998 The Graeanog Ridge: The Evolution
of a Farming Landscape and its Settlements in
North West Wales (Cambrian Archaeological
Association Monograph 6)

Geary, K. 2003 'Moel Bronymiod' in Browne and
Hughes The Archaeology of the Welsh Uplands
(Aberystwyth), 75-80.

Giles, J.A. 1841 The Works of Gildas and Nennius.
Part 1 Historia Brittonum. Translated from the
Latin (London)

Griffiths, W.E. 1950 'Early Settlements in
Caernarvonshire', *Archaeologia Cambrensis* 101,
38-71.

Gwyn, D. 2006 Gwynedd. Inheriting a Revolution
(Chichester)

Hogg, A.H. 1957 'A Fortified Round Hut at Carreg
Y Llam near Nevin', in *Archaeologia Cambrensis*
106, 46-55

Hogg, A.H. 1962 'Garn Boduan and Tre'r Ceiri,
excavations at two Caernarvonshire hill forts',
Archaeological Journal 117 (1960), 1-39

Hughes, H.H. 1939 'A Beaker Burial at Llithfaen,
Caernarvonshire', *Archaeologia Cambrensis* 94;
Part 1, 91-110

IFA, 2001 Standard and Guidance for an
archaeological Watching Brief (revised edition)

Kelly, R. S. 1988 'Two Late Prehistoric Circular
Enclosures near Harlech, Gwynedd', *Proc.
Prehistoric Soc.* 54, 151

Kelly, R.S. 1990 'Recent Research on the hut group
settlements of north-west Wales' in B. C. Burnham
and J. L. Davies (eds.) *Conquest, Co-Existence and
Change*, 102-111 (Lampeter)

Leighton, D.K. and Silvester, R.J. 2003 'Upland
Archaeology in the Medieval and Post-Medieval
Periods' in Browne, D. and Hughes, S. (eds.)
The Archaeology of the Welsh Uplands, 31-40
(Aberystwyth)

Lynch, F.M. 1984 'Moel Goedog Circle: a Complex
Ring Cairn near Harlech, Arch. Camb. CXXXIII, 8-50

Manley, J. 1990 'A late Bronze Age Landscape on
the Denbigh Moors, north east Wales', *Antiquity*
64, 514-526.

Morris, J. 1980 Nennius, *British History and the
Welsh Annals* (Chichester)

Penmaenmawr and Welsh Granite Co. n.d. *Moving
Mountains* (Liverpool)

Pennant, T. 1783 *A Tour of North Wales* (Wrexham, 1991 edition)

RCAHMW, 1964 *An Inventory of the Ancient Monuments in Caernarvonshire. Volume III: West, the Cantref of Lleyn* (London)

Richards, M. 1963. 'Nennius's Regio Guunnessi', *Trans. Caernarvonshire Hist. Soc.* 24, 21-27.

Silvester, R. 2003. 'An Illustrated Guide to Common Field Monuments' in Browne and Hughes *The Archaeology of the Welsh Uplands* (Aberystwyth), 125-133

Smith, G.H. 1999 'Survey of Prehistoric and Romano-British Settlement in North-West Wales', *Archaeologia Cambrensis* 148, 22-53

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Appendix I

1.0 INTRODUCTION

Gwynedd Archaeological Trust has been asked by Scottish Power Energy Networks (SP) to provide a cost and project design for carrying out an archaeological assessment in advance of a proposed overhead line replacement scheme, located near Nant Gwtheyrn, Llithfaen, Gwynedd (centred on NGR SH35834466).

The scheme measures c.1.92km in length and includes the removal of an existing overhead line between SP poles 27 to 71 and the excavation of an underground power line along a neighbouring extant trackway; additional works will include the excavation of pole stays at the start and end of the scheme and the excavation of a 40.0m trench from the northern point of the underground line to SP pole 25a (see Figure 01 and para. 3.4 for specific information on the scheme).

A mitigation brief has not been prepared for this work by Gwynedd Archaeological Planning Services (GAPS; project reference no. D1353), but instruction has been given for an archaeological watching brief during groundworks. Proposed methodology is listed in para. 3.

GAPS will also be responsible for advising the Local Authority on the suitability of the work undertaken.

This design will conform to the guidelines specified in Standard and Guidance for an Archaeological Watching Brief (Institute of Field Archaeologists, 1994, rev. 2001 & rev. 2008).

2.0 BACKGROUND

Information supplied by GAPS (1009ab01/D1353) states that:

“The proposals will affect an area of high archaeological potential...The locality is one of significant prehistoric and later settlement activity and a number of sites are situated close to the line of the current overhead line. 3 well preserved later prehistoric hut circle settlements are located along the route of the overhead line (Primary Record Number, PRNs 619, 2235 and 2347). The extent of these features will need to be identified in order that the features can be avoided during the removal of the line...The HER also records that the track that runs north-south at this point may potentially follow the route of the Nefyn

– Segontium Roman Road (PRN17815 & 17823). No identified Roman remains are recorded but below ground evidence may help shed light on the origins of the path...Although no Scheduled Ancient Monuments (SAM) or listed buildings are likely to be affected by the proposed scheme...several undesignated archaeological sites are likely to be affected by the work. There is good potential for the discovery of as yet unrecorded archaeological sites during both the removal of the old line and the installation of the below ground line. In addition, other sites may be affected by the movement of plant, machinery or personnel, to and from the site”.

2.1 GAT Report 863

An archaeological assessment of the proposed scheme was completed by GAT in 2010 (GAT Report 863).

The report identified the area as one of high archaeological potential, with evidence for settlement sites and field systems dating from the late prehistoric to medieval periods. This upland archaeology is extensive, well preserved and largely not recorded.

Fourteen sites were noted close to the power cable route, including four of possible prehistoric or medieval date (reproduced in Figure 01 and Appendix I). A number of post-medieval features relating to upland pastoral farming were noted, including two probable sheepfolds, along with drystone walling. Evidence for industrial activity in the form of stone quarrying was also noted.

A strategy of avoidance of the archaeological remains during the removal of the current poles was recommended (ibid.: 14) by fencing off and prohibiting access to known sites, and also archaeological supervision of the use of the low pressure ATV during the pole removal to minimise its impact, is recommended as a Watching Brief.

A programme of archaeological strip, map and sample was recommended during the excavation of the new cable beyond the track way where it joins up with the current cable route between poles 25 and 26, and a watching brief along the length of the cable trench excavations on the track way and along the extension to pole 3 at the southern end of the scheme. A watching brief will also be required during the excavation of new footings for the new terminal poles at both ends of the scheme.

NB. On discussion with GAPS, it has been agreed that an intensive watching brief will be applied to the area incorporating the new cable beyond the trackway, instead of a strip, map and sample.

3.0 METHOD STATEMENT

3.1 Definition of an archaeological watching brief

(Reproduced from IFA. 2001. Institute for Archaeologists 2001 Standard and Guidance for an archaeological watching brief)

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

This definition and Standard do not cover chance observations, which should lead to an appropriate archaeological project being designed and implemented, nor do they apply to monitoring for preservation of remains in situ.

An archaeological watching brief is divided in to four categories according the IFA. 2001. Institute for Archaeologists 2001 Standard and Guidance for an archaeological watching brief:

- comprehensive (present during all ground disturbance)
- intensive (present during sensitive ground disturbance)
- intermittent (viewing the trenches after machining)
- partial (as and when seems appropriate).

An intensive watching brief has been recommended by GAT during the excavation of the new cable route from the northern end of the new underground line to an existing SP overhead pole 25a (see Figure 01); this will be in close proximity to GAT Report 863 Feature 06 (long hut/possible hut circle; cf. Appendix I).

An intermittent watching brief has been recommended by GAT during all remaining groundworks (cf. para. 3.4 for a description of the proposed groundworks).

3.2 Purpose of a watching brief

The purpose of a watching brief is:

- to allow, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of development or other potentially disruptive works
- to provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard
- A watching brief is not intended to reduce the requirement for excavation or preservation of known or inferred deposits, and it is intended to guide, not replace, any requirement for contingent excavation or preservation of possible deposits.

The objective of a watching brief is:

- to establish and make available information about the archaeological resource existing on a site.

The archaeologist shall establish the scope of the watching brief, whether comprehensive (present during all ground disturbance), intensive (present during sensitive ground disturbance), intermittent (viewing the trenches after machining), or partial (as and when seems appropriate).

3.3 Occurrence

A watching brief may arise:

- in response to a development which threatens the archaeological resource
- as part of the planning process (within the framework of appropriate national planning policy guidance notes) and/or development plan policy
- as part of an Environmental Impact Assessment (EIA)
- outside the planning process (e.g. ecclesiastical development, coastal erosion, agriculture, forestry and countryside management, works by public utilities and statutory undertakers) A watching brief may therefore be instigated or commis

sioned by a number of different individuals or organisations, including local planning authorities, national advisory bodies, government agencies, private landowners, developers or their agents.

3.4 Methodology

The watching brief will monitor four main tasks completed by the Client appointed contractor:

1. new footings for the new terminal poles at both ends of the scheme.

2. the length of the cable trench excavations on the existing trackway

3. the removal of poles 27 to 71 from the existing overhead line. According to a proposed method statement supplied by the client, the existing poles will be removed by linesmen climbing the poles and detaching the overhead line; these will then be retrieved by a winch at a suitable location; the poles will be removed by cutting the wooden pole off at the base using a chainsaw. The wood pole will then be taken away in sections by means of an ATV (Morooka). In tandem with this, the neighbouring trackway will be excavated via surface cutter (9 tonne) and trenching machine (26 tonne); the proposed trench dimensions will be 750mm deep and 500mm wide, after which the cable duct will be laid and the trench backfilled and compacted. An additional spur line will be excavated between the trackway and pole 03. For this a 5 metre wide working zone will be fenced along the route and a 1.0m wide area topsoil stripped, into which a 1.0m deep and 500mm wide trench will be excavated for placing two parallel ducts. This area will then be reinstated. All excavated material along the track will also be reinstated or removed from site.

4. the excavation of the new cable route beyond the existing trackway where it joins up with the current cable route at SP pole 25a; close proximity to the location of GAT Report 863 Feature 06 (Long hut and possible hut circle).

An intermittent watching brief will be completed during Tasks 1 to 3 and will monitor all intrusive groundworks.

An intensive watching brief will be completed during Task 4: this will require a permanent GAT presence during the excavation of the 40.0m long cable trench between the topsoil horizon and the glacial horizon. An excavator fitted with a TOOTHLES bucket should be used to excavate between the topsoil horizon and the glacial horizon.

- A photographic record will be maintained throughout, using a digital SLR camera set to maximum resolution.

- Any subsurface remains will be recorded photographically, with detailed notations and a measured survey.

- The archive will then be held by GAT under an appropriate project number (G2129).

NB. GAT Report 863 Features 05, 08 and 09 are to be fenced off in advance of the removal of SP poles 27 to 71 to avoid disturbance during groundworks and the areas subsequently monitored as part of the intermittent watching brief.

The watching brief is to be undertaken in a manner that allows for the immediate cessation of the works for the recording of archaeological evidence. This will involve close liaison between the archaeologist and the site agent.

4.0 FURTHER ARCHAEOLOGICAL WORKS

- The identification of significant archaeological features may necessitate the production of a new project design and the submission of new cost estimates to the contractor.

- This design does not include a methodology or cost for examination of, conservation of, or archiving of finds discovered during the watching brief, nor of any radiocarbon dates required, nor of examination of palaeoenvironmental samples. The need for these will be identified in the post-field-work programme (if required), and a new design will be issued for approval by the GAPS Archaeologist.

5.0 ENVIRONMENTAL SAMPLES

If necessary, relevant archaeological deposits will be sampled by taking bulk samples (a minimum of 10.0 litres and maximum of 30.0 litres) for flotation of charred plant remains. Bulk samples will be taken from waterlogged deposits for macroscopic plant remains. Other bulk samples, for example from middens, may be taken for small animal bones and small artefacts.

6.0 HUMAN REMAINS

Any finds of human remains will be left in-situ, covered and protected, and both the coroner and the GAPS Archaeologist informed. If removal is necessary it will take place under appropriate regulations and with due regard for health and safety issues.

7.0 SMALL FINDS

The vast majority of finds recovered from archaeological excavations comprise pottery fragments, bone, environmental and charcoal samples, and non-valuable metal items such as nails. Often many of these finds become unstable (i.e. they begin to disintegrate) when removed from the ground. All finds are the property of the landowner, however, it is Trust policy to recommend that all finds are donated to an appropriate museum where they can receive specialist treatment and study. Access to finds must be granted to the Trust for a reasonable period to allow for analysis and for study and publication as necessary. All finds would be treated according to advice provided within First Aid for Finds (Rescue 1999). Trust staff will undertake initial identification, but any additional advice would be sought from a wide range of consultants used by the Trust, including National Museums and Galleries of Wales at Cardiff, ARCUS at Sheffield and BAE at Birmingham.

8.0 PROCESSING DATA, ILLUSTRATION, REPORT AND ARCHIVING

Following completion of the watching brief as outlined above, a report will be produced incorporating the following:

- Non-technical summary
- Introduction
- Project Design (as an Appendix)
- Methods and techniques
- Archaeological Background
- Description of the results of the watching brief
- Summary and conclusions
- Bibliography of sources consulted.

Illustrations, including plans and photographs, will be incorporated within the report.

A full archive including plans, photographs, written material and any other material resulting from the project will be prepared. All plans, photographs and descriptions will be labelled and cross-referenced, and lodged in an appropriate place (to be decided in consultation with the regional Historic Environment Record) within six months of the completion of the project. All digital data will be written to CD-ROM and stored with the paper archive.

- one or more copies (as required) will be sent to the client
- one or more copies (as required) will be sent to GAPS

- one or two copies (as required) sent to the Historic Environment Record Archaeologist for the area (HER, Gwynedd Archaeological Trust, Craig Beuno, Bangor, Gwynedd LL57 2RT);

- copies of all key digital files on optical media should be provided to GAPS and the Regional HER, including report, photographs, scans of maps etc.

- a copy of the report and/or digital files on optical media should be provided to the National Monument Record (Royal Commission on the Ancient and Historic Monuments of Wales, Aberystwyth, SY23 1NJ) dependant upon their requirements.

9.0 STAFF

The project will be supervised by Andrew Davidson, Principal Archaeologist at the Trust, who has worked in various aspects of British archaeology for over 20 years, and who has been responsible for managing all contract work at GAT for the past nine years, including archaeological programmes for major road contracts, pipeline construction and new development sites. The work will be carried out by fully trained Project Archaeologists who are experienced in conducting watching briefs and working with contractors and earth moving machinery. (Full CV's are available upon request).

10.0 HEALTH & SAFETY

The Trust subscribes to the SCAUM (Standing Conference of Archaeological Unit Managers) Health and Safety Policy as defined in Health and Safety in Field Archaeology (1999).

11.0. INSURANCE

Contract Works Insurance – Aviva Policy 24719850 CTC

- Sum insured £500,000 any one occurrence

The current period expires 04/09/11

Liability Insurance - Aviva Policy 24299068 CCI

- Employers' Liability: Limit of Indemnity £10m in any one occurrence
- Public Liability: Limit of Indemnity £5m in any one occurrence

The current period expires 01/04/11

Professional Indemnity Insurance – Markell
A30664/0710

- Limit of Indemnity £2,000,000 in the aggregate

The current period expires 22/07/11

12.0 SOURCES CONSULTED

Gwynedd Archaeological Planning Services letter
1009ab01/D1353

Standard and Guidance for Archaeological Desk-based Assessment (Institute of Field Archaeologists, 1994, rev. 2001)



Gwynedd Archaeological Trust
Ymddiriedolaeth Archaeolegol Gwynedd

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