CEMAES BAY WASTEWATER TREATMENT SCHEME, ANGLESEY

ARCHAEOLOGICAL RECORDING & WATCHING BRIEF

Report No. 317

Prepared for DWR CYMRU March 1999

Ymddiriedolaeth Archaeolegol Gwj nedd Gwynedd Archaeological Trus.

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FOR DWR CYMRU, WELSH WATER

1. Introduction and summary

An intermittent watching brief was carried out by Gwynedd Archaeological Trust (GAT) during the construction, as recommended in the project design (Appendix 1). The principal objects were to observe the topsoil stripping of the easement and subsequent excavation of the pipe trench. It was also meant to observe the topsoil stripping of the treatment station site and the excavation of the foundation trenches and pump pits. There were no known or potential archaeological sites on the line of the pipeline (GAT 1996) so there were no particular areas that required special attention. The only feature of possible interest was the point where the route crossed the former parish boundary between Llanbadrig and Llanfechell at the west side of Porth y Wylfa (the parishes were combined in this century). The former boundary probably followed the same line as a medieval township boundary and so might preserve evidence of the medieval boundary bank.

The work was carried out between 21st September and 12th October 1998 and six visits were made. This involved mainly walking of the stripped easement to look for features in the exposed subsoil surface. It also involved observation of the sides of the pipe trench and in one case excavation and recording.

The pipeline route crossed areas of light coloured glacial till and of bedrock and stripping of the generally thin topsoil produced quite good visibility in terms of recognition of possible archaeological features. The results should therefore be reliable. The area exposed was largely sterile in terms of archaeological remains although three features of interest were noted: an old cobbled road, an area of both worked and naturally occurring chert and an 18th century boundary or drainage ditch (Fig.1)

2. Acknowledgements

GAT would like to thank Dwr Cymru for allowing observation of the construction work. Mike Ryding and Mike Hester of Galliford Northern provided the liaison for the construction programme and site visits. Thanks must also go to Emyr Hughes of Hughes Construction, subcontractors, and their construction team for co-operation during fieldwork.

3. General results of the Watching Brief

The topsoil stripping was carried out using large 360° excavators. This went according to plan and three visits allowed observation of most of the route. It was found essential to

visit soon after stripping because the easement was used for frequent construction traffic and the surface quickly became obscured. About one third of the route was of bedrock and these areas had to be excavated by rock-cutter and so progress was slowed. The final part of the route, approaching Cemaes, cut across a small stream and valley deposits and this was again slow because of the necessity to dam and under-trench the stream bed.

The results will be described according to the natural geographical divisions of the route.

3.1 Wylfa Treatment Station

The first stage of the work was stripping and excavation of the treatment station site. This included excavation through the bedrock of the deep pumping house pit. This was carried out some time before GAT was notified and the exposed surfaces had become trampled by machinery and partly obscured. However, most of this area was of bedrock and so the majority was still visible. No features were identified.

3.2 Wylfa to Porth yr Ogof

This stage of the topsoil stripping had also been carried out before GAT were notified and had already been badly obscured by the time of the first visit. One feature was noted, a road or track defined by heavy cobbling. This was not marked on the OS first edition, 2 inch map of or the first edition 25inch map of 1900. It lay on the line of an existing footpath and is almost certain to be a track providing access to the former lifeboat station in Porth yr Ogof. Subsequent cutting of the pipe trench involved much rock cutting and revealed some good geological sections showing the relationship between the rock surface and the glacial drift but did not reveal any archaeological features.

3.3 Porth yr Ogof to Porth y Wylfa

After the high ground above Porth yr Ogof the level dipped to a low point adjoining Porth y Wylfa and this dip contained quite deep deposits of red-brown, brick-earth-like glacial till. The topsoil stripping was cleanly done and visibility was good but no archaeological subsoil features were recorded. The line of the parish boundary was not of interest because the route at this point used a pre-existing gateway and the boundary bank itself was not cut through. However, in the surface of the exposed subsoil a number of fragments of distinctive black chert were seen. The chert is a similar material to flint, fine and hard and able to be flaked to produce stone tools. It was used fairly widely in North Wales in the early prehistoric period, from the Mesolithic to the Bronze Age, between about 6000 to 1500 BC. The pieces here were scattered over an area directly above Porth y Wylfa. They comprised a number of natural pebbles, some broken but included a few that were humanly struck. It cannot be certain that these were not the accidental byproducts of plough-damage to natural pebbles but their flake surfaces were more like those produced by deliberate percussion rather than the characteristic heavy, random marks of plough impact. The situation, close to the coast edge, is one typically chosen for what were probably temporary summer camp sites in the later Mesolithic and earlier

Neolithic periods and many sites of that period are known around Wales and similarly around the Atlantic coast of Cornwall and Scotland (Jacobi 1980, 178-91).

There are two possibilities: either there was a naturally occurring deposit of chert nodules here in the glacial till that was exploited in situ or they were collected locally from cliff exposures of the till or from the beach and brought to be worked here. There has been no survey work in the area to identify the source of the chert but it seems more likely that they were collected from the beach. Although no actual tools were found that would allow dating the discovery is of interest because the raw material appears to be all chert and elsewhere in North-West Wales discoveries of stone tools have been mainly of the more widely known flint.

This type of chert is similar to that known to occur in situ near Gronant, in North-East Wales (Healey 1993, 24) and occurrences more widely have obviously suggested the possibility of trade or other movement of the raw material. It has not previously been shown that the raw material can occur locally, in a secondary deposit. That is, either in glacial till or beach deposits, and so may have been widely available. As a raw material for flaked tools it is of quite good quality, better than some other types of chert if not quite so good as most flint. It may have been important as a raw material if it was more readily available than flint and possibly, available in larger pieces. It is quite dull compared to the glassy fracture of flint and so not as easily seen which may account for its rarity of reporting compared to flint finds. This has been borne out by recent discoveries of similar chert use in a late third millennium BC context at Cleifiog Ucha, Valley, Anglesey (Smith forthcoming).

3.4 Porth y Wylfa to Tre'r-gof-isaf

This area cut only through glacial till and no features were located. There was a build up of soil uphill of a field boundary between two rock outcrops north of Tre'r-gof-isaf but this was all relatively recent as this boundary was part of a 19th century reorganisation of the field layout here. This can be said because the boundary was shown on the OS 1st edition 25 inch map of 1900 but did not exist at the time of the Tithe Apportionment map of 1845.

3.5 Tre'r-gof-isaf to Traeth Cemaes

The final field was relatively low lying but in the first part, surprisingly, the topsoil lay directly over bedrock. The subsoil of the lower part of the field, in the valley bottom, was of red-brown glacial till. One feature was identified here, a linear, ditch-like feature that was apparent because of its dark, humic fill. This was oriented approximately parallel to the nearby stream and 40m from it (Fig. 3b). This was exposed in the side of the pipe trench and the section cut back and recorded. It proved to be relatively broad and shallow scoop rather than a ditch, c. 1.5m wide and 0.30m deep with a shallow sloping side downhill grading out on the uphill side where its fill was cut buy a (later) narrow, stone-filled field drain ((Fig. 4). The fill was dark, humic soil, fairly clearly ploughsoil. The only find from its fill was a small fragment of post-medieval pottery but unfortunately so

small that it may not be in its correct context, that is, it could have moved down due to animal burrowing or cultivation disturbance etc. The feature is best interpreted as a field boundary ditch, that would have also acted as a drain and would have separated the sloping, better-drained part of the field, that may have been cultivated, from the more level valley bottom, that may have been hay meadow. A slight terrace is still visible on the present field surface on the line of the feature, following the contour, approximately parallel to the stream. However, no field boundary is shown in this position on the first edition OS 25 inch map of 1900 (Fig. 3b). Neither is any boundary shown on the Tithe Apportionment map of 1845 (Fig. 3a) and this shows the field pattern that existed prior to 19th century reorganisation. At that time the whole of this side of the stream, consisting of five fields at the present time was shown a s a single large field. However, the feature located is almost certainly agricultural and may have just been simply an open drain within a meadow and so would not have been recorded as a land boundary.

The pipe trench through the stream bed was observed because there could have been early post-glacial organic remains buried by later alluvium but nothing could be seen.

The final part of the line from the stream crossing to the beach was not observed because this section was re-using an existing pipe trench.

4. Discussion

The archaeological results were relatively sparse, confirming the previous lack of evidence from the area. The poverty and thinness of the soils and lack of available water supplies over most of the route shows why there has been little settlement activity here in the past and prior to 19th century agricultural improvement much was probably just poor pasture. The discovery of worked chert is of considerable interest and it might be that there are better preserved areas of prehistoric activity within the unploughed heathland on either side of Porth y Wylfa and on the headland of Mynydd y Wylfa itself. These areas would be worthy of further investigation and so the watching brief has contributed significantly to research and has provided information of local value.

5. References

Maps

Tithe Apportionment map of 1845 OS 1st edition 2 inch map c. 1880 Os 1st edition 25 inch map 1900

Publications

GAT 1996. Coastal Erosion Survey, Anglesey (G1386), Report No. 251, Gwynedd Archaeological Trust.

Healey, E. 1993. The Mesolithic stone artefacts, in F.M. Lynch, *Excavations in the Brenig Valley, Denbighshire*, Cambrian Archaeological Monograph No. 5, Cambrian Archaeol. Assoc..

Jacobi, R.M. 1980. The Early Holocene settlements of Wales, in J.A. Taylor, ed., *Culture and Environment in Prehistoric Wales*, British Archaeological Reports, Brit. Ser. 76, 131-206.

Smith, G.H. forthcoming. The worked flint and chert, in Davidson, A. A55 Llandegai to Holyhead Archaeological Evaluation (G1550), GAT.



Fig.1 Location of easement route, descriptive zones and identified features.



Fig. 2 Detail from OS 1st edition 25 inch map, 1900. Position of trackway, feature 2.



Fig. 3A Detail from 1845 Tithe map, Tre'r-gof-isaf.



Fig. 3B Detail from OS ist Edition 25 inch map. Tre-r-gof-isaf and location of feature 3





East

Appendix 1

PROJECT DESIGN FOR ARCHAEOLOGICAL WATCHING BRIEF OF THE CEMAES BAY WASTEWATER TREATMENT SCHEME (G1534)

Prepared for Dwr Cymru Welsh Water 10/02/1998

1. PROJECT BACKGROUND

Dwr Cymru Welsh Water are proposing to construct a new sewage pumping main between Wylfa Power Station and the town of Cemaes. This will involve the construction of a new pipeline approximately 2 Km long, and a working corridor approximately 15 m wide.

An archaeological watching brief during the construction of the pipeline has been recommended by Gwynedd Archaeological Planning Service, and Gwynedd Archaeological Trust (Contracts Section) have been asked to submit a project design and quotation for this archaeological work.

2. ARCHAEOLOGICAL AIMS

The aims of the work are to carry out a watching brief along the full length of the pipeline to ensure any archaeological deposits revealed during construction are fully recorded.

3. PROGRAMME OF WORK

3.1 Watching Brief

An archaeological watching brief will be conducted along the pipeline. The watching brief will be preceded by one day desk-top, which will involve familiarisation with the existing study and sites within the immediate vicinity. The watching brief will then be conducted in phases, to accompany the top soil stripping and the digging of the pipeline trench. The pipeline will be walked following the stripping of the topsoil, and all potential sites identified. These will then be cleaned by trowelling and the nature and significance of any features recorded. If the features revealed can be understood and recorded with no further work required, then they will be photographed, described and located on OS 1:2500 plans. However if any of the features are too complex to allow this, then recommendations will be made for further work. The pipeline will again be visited during the digging of the pipe trench, particularly in those areas where there is a build-up of top-soil, which would not have been fully removed during the initial stripping.

Time: 5 man-days (estimated) Staff: 2 Grade: Project officer, project assistant.

3.2 Report

Following the completion of the fieldwork, a final report will be produced for submission to the clients. The report will detail and synthesise the results of the recording and the watching brief. It will be to an acceptable publication standard and will comprise:

- a) a copy of, or details of, the agreed Project Design
- b) a scale plan showing the location of features recorded and described:
- c) plans and sections at an appropriate scale of each trench;
- d) other illustrations as appropriate;
- e) a description of the archaeology revealed including its extent and character, an interpretation and

date, and an assessment of the importance (regionally/nationally) and condition (quality and state of preservation) of known archaeological and historical remains identified;f) a full bibliography of all sources consulted; andg) all specialist reports.

The client will be supplied with one copy of the report with further copies at cost (a copy of the report can also be supplied on disc if required). A copy will also be lodged with the Archaeological Curator and with the Gwynedd Sites and Monuments Record on the understanding that this will become a public document after an appropriate period of time (generally not exceeding six months).

Time: 3 man-days Grade: Project Supervisor, Illustrator Staff: 1

4. PERSONNEL

The work will be supervised by the Trust's Projects Manager Mr Andrew Davidson. The work will be undertaken by one of the Trust's Archaeological Field Officers experienced in the relevant skills/periods required, aided by trained Project Assistants.

5. TIMING

Should the project design and costings be judged acceptable by the client. The Trust would be able to make personnel available to carry out the work programme identified above with two weeks notice.

A report will be available four weeks after the end of the fieldwork.

6. DEPOSITION OF 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 (ie they begin to disintegrate) when removed from the ground. All finds are the property of the land owner, however, it is Trust policy to recommend that all finds are donated to an appropriate museum where they can receive specialist treatment and study. At the very least the Trust would request access to the finds for a reasonable period to allow for study and publication.

7. 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 (1996)

8. INSURANCE

The Trust holds public liability insurance with an indemnity limit of £2,500,000 through Russell. Scanlon Limited Insurance Brokers, Wellington Circus, Nottingham NG1 5AJ (policy 01 1017386 COM).

9. OTHER

Any queries concerning the above should be directed to Mr Andrew Davidson at the Gwynedd Archaeological Trust Offices, Garth Road, Bangor. Telephone (01248) 352535.

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