Moel Maelogen Wind Power Project



ARCHAEOLOGICAL WATCHING BRIEF

GAT Project No. 1962 Report No. 725 March 2008

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Moel Maelogen Wind Power Project

Archaeological Watching Brief

Report No. 725

Prepared for Jones Bros.

March 2008

By

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Moel Maelogen Wind Power Project

ARCHAEOLOGICAL WATCHING BRIEF

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MOEL MAELOGEN WIND POWER PROJECT, LLANRWST, CONWY

ARCHAEOLOGICAL WATCHING BRIEF (G1962)

Summary

An archaeological watching brief has been conducted during topsoil stripping associated with the extension to the windfarm at Moel Maelogen, Llanrwst, Conwy (NGR SH852605). The upgrading of the existing track through the windfarm was monitored as well as the construction of nine new tracks to turbines T4, T5, T6, T7, T9, T10, T11, T13 and T14. The associated crane pads/turbine locations were also monitored during the initial topsoil strip phase.

As suggested in the archaeological site assessment in 2003, this area consists mainly of improved moorland, currently used for pasture that has seen limited exploitation. The two archaeological sites identified in that assessment, comprising post-medieval stone-built revetments, were not affected by the scheme. A similar feature was identified along the track leading to turbine T5 during the watching brief.

No other activity was identified and most excavated areas were limited to glacial deposits below the topsoil.

1.0 INTRODUCTION

Gwynedd Archaeological Trust has been asked by Jones Bros. to undertake an archaeological watching brief during topsoil stripping associated with the extension to the windfarm at Moel Maelogen, Llanrwst, Conwy (NGR SH852605; Figure 01).

The existing windfarm comprised three turbines and a permanent site track. The expansion of the windfarm included the construction of a permanent track by upgrading an existing farm track and the construction of short tracks to the nine new turbine sites. Each of these sites required the construction of new platforms for the turbines and crane pads.

The nine new turbines were T4, T5, T6, T7, T9, T10, T11, T13 and T14 (see Figure 01 for their location).

The archaeological requirements were for an **intermittent watching brief** during the relevant stages of the works.

Gwynedd Archaeological Planning Service has prepared a Brief for this project (ref. D723). A project design was prepared conforming to the requirements specified within the Brief, and in the *Standard and Guidance for Archaeological Watching Brief* (Institute of Field Archaeologists, 1995, rev. 1999).

2.0 BACKGROUND

The archaeological and historical background of the site was examined in an archaeological assessment carried out in February 2003 by Engineering Archaeological Services Limited (EAS Client Report 2003/5). The report identified several archaeological features within the vicinity of the windfarm. The only two features possibly affected were PRN13999 and 14000: two stone revetments across a modern drainage ditch. Both features were located along the line of the permanent track. It was suggested that both examples were post-medieval in date and represented access points between two fields (*ibid*.: 04).

In response to the report, Gwynedd Archaeological Planning Service recommended avoidance of these features.

3.0 METHODS AND TECHNIQUES

The watching brief was undertaken between the 10th of December and the 15th of February 2008.

The permanent site track and associated turbine tracks were all excavated using 360° tracked excavators.

4.0 TOPOGRAPHY

Moel Maelogen is located on the eastern side of the Conwy Valley between Llanrwst and Gwytherin, within the unitary authority area of Conwy. The area consists of moorland that has largely been converted to agricultural grassland.

5.0 ARCHAEOLOGICAL RESULTS

5.1 Archaeological and Historical Background

The archaeological and historical background of the site has been examined in detail in the archaeological assessment carried out in February 2003 by Engineering Archaeological Services Ltd. (EAS Client Report 2003/5).

Maelogen Farm and its environs were originally owned by the Bodysgallen Estate until it became part of the Mostyn estate in the late 17th century. The area subsequently passed into private hands during the mid 19th century.

The windfarm site was still moorland until at least the First World War, after which it was finally improved through drainage to become pastureland (EAS Client Report 2003/5: 03).

The only examples of 20th century agricultural activity within the site are two stone revetments (PRN13999 and PRN14000) crossing a drainage ditch between the location of turbines T11 and T13 (see Figure 01).

5.2 Results of the Archaeological Watching Brief

The archive is held by GAT under the project number (G1962)

The watching brief focused on the upgrading of the existing farm track, from the location of turbine T3 to the location of the nine new turbine sites. The additional tracks to the individual turbines were also monitored and features PRN13999 and PRN14000 were inspected during the works to assess the level of impact.

Each turbine site and its associated track will be discussed separately and the level of impact on features PRN13999 and PRN14000 will also be discussed.

Permanent site track

An existing track had been built in tandem with the three original turbines (turbines T1 to T3). The watching brief monitored the extension of this track from T3 to the south, utilising an existing farm track (total length c.1.0km). The existing farm track was widened in the process and the watching brief monitored the topsoil strip associated with this (Plates 09 to 11).

Separately, a series of new site tracks were excavated from the main track to the individual turbines (see Figure 01).

The excavation depth varied across the length of the track, but included the removal of the topsoil and the partial removal of underlying glacial deposits to create a level surface. The watching brief monitored the removal of the topsoil and subsequently inspected the exposed section walls (Plate 11).

No archaeological activity was identified along the length of the permanent site track: below the topsoil was a mixture of glacial clays and Morainic drift glacial deposits.

<u>T4</u>

Turbine T4 was located at the southwestern end of the scheme (NGR SH84845982), *c*. 100m to the west of turbine T14. A *c*.100m long track was excavated, linking this turbine to the main track (plate 12). Secondly, a 60.0m long and 20.0m wide plot of land was excavated to accommodate the turbine platform and crane pad. The excavation depth varied across the length of the track, but included the

removal of the topsoil and the partial removal of underlying glacial deposits to create a level surface. The watching brief monitored the removal of the topsoil and subsequently inspected the exposed section walls. The turbine platform/crane pad area was monitored in a similar fashion.

No archaeological activity was identified along the length of the access track, nor within the turbine platform/crane pad area: below the topsoil was a mixture of glacial clays and Morainic drift glacial deposits.

<u>T5</u>

Turbine T5 was located at the western end of the scheme (NGR SH84596090). A *c*.500m long track was excavated, linking this turbine to the main track (Plate 13). Secondly, a 60.0m long and 20.0m wide plot of land was excavated to accommodate the turbine platform and crane pad. The excavation depth varied across the length of the track, but included the removal of the topsoil and the partial removal of underlying glacial deposits to create a level surface. The watching brief monitored the removal of the topsoil and subsequently inspected the exposed section walls. The turbine platform/crane pad area was monitored in a similar fashion.

A small stone revetment was identified along the length of the access track (see Figure 01 for location). The revetment was constructed from sub-angular and sub-rounded stones and formed a bridging point across a drainage ditch. The feature measured 2.30m in length and 1.50m in height (Plate 06) and was of similar "design" to PRN 13999 and 14000. It was most likely an example of post-medieval agricultural activity and functioned as an access point between two fields. This feature was preserved *in situ* beneath the site track.

<u>T6</u>

Turbine T6 was located *c*.400m to the south of turbine T5 at NGR SH84666048. A *c*.200m long track was excavated, linking this turbine to the main track. Secondly, a 60.0m long and 20.0m wide plot of land was excavated to accommodate the turbine platform and crane pad. The excavation depth varied across the length of the track, but included the removal of the topsoil and the partial removal of underlying glacial deposits to create a level surface. The watching brief monitored the removal of the topsoil and subsequently inspected the exposed section walls. The turbine platform/crane pad area was monitored in a similar fashion.

No archaeological activity was identified along the length of the access track, nor within the turbine platform/crane pad area: below the topsoil was a mixture of glacial clays and Morainic drift glacial deposits. The 3.2m deep section for the turbine area/crane pad consisted of 0.2m of topsoil followed by a 0.26m thick deposit of light orange-brown silt-clay subsoil overlying grey-brown clay-silt with small to large rounded and angular stone inclusions, which merges into natural grey boulder clay which was observed for a depth of 3.2m.

<u>T7</u>

Turbine T7 was located *c*.400m to the south of turbine T3. A *c*.30m long track was excavated, linking this turbine to the main track. Secondly, a 60.0m long and 20.0m wide plot of land was excavated to accommodate the turbine platform and crane pad (Plate 13). The excavation depth varied across the length of the track, but included the removal of the topsoil and the partial removal of underlying glacial deposits to create a level surface. The watching brief monitored the removal of the topsoil and subsequently inspected the exposed section walls. The turbine platform/crane pad area was monitored in a similar fashion.

No archaeological activity was identified along the length of the access track, nor within the turbine platform/crane pad area: below the topsoil was a mixture of glacial clays and Morainic drift glacial deposits.

<u>T9</u>

Turbine T9 was located c.40m to the south of turbine T6 at NGR SH84706051 (see Figure 01). A c.200m long track was excavated, linking this turbine to the main track (Plate 14). Secondly, a 60.0m

long and 20.0m wide plot of land was excavated to accommodate the turbine platform and crane pad. The excavation depth varied across the length of the track, but included the removal of the topsoil and the partial removal of underlying glacial deposits to create a level surface. The watching brief monitored the removal of the topsoil and subsequently inspected the exposed section walls. The turbine platform/crane pad area was monitored in a similar fashion.

As turbine T6: identical deposits were observed and no archaeology was identified.

<u>T10</u>

Turbine T10 was located *c*.100m to the south of turbine T7 at NGR SH85076051 (see Figure 01). A *c*.20m long track was excavated, linking this turbine to the main track. Secondly, a 60.0m long and 20.0m wide plot of land was excavated to accommodate the turbine platform and crane pad. The excavation depth varied across the length of the track, but included the removal of the topsoil and the partial removal of underlying glacial deposits to create a level surface. The watching brief monitored the removal of the topsoil and subsequently inspected the exposed section walls. The turbine platform/crane pad area was monitored in a similar fashion.

No archaeological activity was identified along the length of the access track, nor within the turbine platform/crane pad area: below the topsoil was a mixture of glacial clays and Morainic drift glacial deposits.

<u>T11</u>

Turbine T11 was located *c*.100m to the south of turbine T10 at NGR SH85096032 (see Figure 01). The turbine was located alongside the main track. A 60.0m long and 20.0m wide plot of land was excavated to accommodate the turbine platform and crane pad. The excavation depth varied across the length of the track, but included the removal of the topsoil and the partial removal of underlying glacial deposits to create a level surface. The watching brief monitored the removal of the topsoil and subsequently inspected the exposed section walls. The turbine platform/crane pad area was monitored in a similar fashion.

No archaeological activity was identified along the length of the access track, nor within the turbine platform/crane pad area: below the topsoil was a mixture of glacial clays and Morainic drift glacial deposits.

T13

Turbine T13 was located *c*.90m to the south of turbine T11 at NGR SH85066007 (see Figure 01). The turbine was located alongside the main track and accessed via a short track. A 60.0m long and 20.0m wide plot of land was excavated to accommodate the turbine platform and crane pad. The excavation depth varied across the length of the track, but included the removal of the topsoil and the partial removal of underlying glacial deposits to create a level surface (Plate 16). The watching brief monitored the removal of the topsoil and subsequently inspected the exposed section walls. The turbine platform/crane pad area was monitored in a similar fashion.

No archaeological activity was identified along the length of the access track, nor within the turbine platform/crane pad area: below the topsoil was a mixture of glacial clays and Morainic drift glacial deposits.

<u>T14</u>

Turbine T14 was located at the southeastern end of the scheme, *c*.100m to the east of turbine T4 at NGR SH85035983 (see Figure 01). A *c*.40m long track was excavated, linking this turbine to the main track. Secondly, a 60.0m long and 20.0m wide plot of land was excavated to accommodate the turbine platform and crane pad. The excavation depth varied across the length of the track, but included the removal of the topsoil and the partial removal of underlying glacial deposits to create a level surface. The watching brief monitored the removal of the topsoil and subsequently inspected the exposed section walls. The turbine platform/crane pad area was monitored in a similar fashion.

No archaeological activity was identified along the length of the access track, nor within the turbine platform/crane pad area: below the topsoil was a mixture of glacial clays and Morainic drift glacial deposits.

PRN13999

Mortared stone revetment located at NGR SH85096027 across the line of a modern ditch (Plates 1 and 2). The revetment measured 3.50m in length and 0.7m in height and was constructed form from subangular and sub-rounded stones of varying size bonded by a pink mortar. A modern plastic drainage pipe has been incorporated into the structure, suggesting it has recently been repaired or re-modelled.

This feature was not affected by the construction of the permanent site track and was fenced off to avoid any damage (Plate 03).

PRN14000

Mortared stone revetment located at NGR SH85086019 across the line of a modern ditch (Plate 04). The revetment measured 2.30m in length and 0.5m in height and was constructed form from subangular and sub-rounded stones of varying size bonded by a pink mortar.

This feature was not affected by the construction of the permanent site track: the drainage channel to the immediate south was re-cut but the feature itself was fenced off and avoided (Plate 05).

6 CONCLUSION

Archaeological activity was limited to the identification of a small stone revetment during the construction of the site track to turbine T5. This revetment was similar in appearance to the two examples identified by Engineering Archaeological Services Ltd. during the initial assessment of the area (EAS Client Report 2003/5: PRN 13999 & 14000), which were recorded as post-medieval farming tracks. No other examples were present within this area or elsewhere on site and the remaining excavated areas were limited to glacial activity below the topsoil.

7 SOURCES CONSULTED

Brooks, I. & Laws, K. 2003. Moel Maelogen Wind Farm: Desktop Study and Field Visit. Engineering Archaeological Services Ltd. (EAS), Client Report 2003/5. Unpublished report held by the regional Historic Environment Record, northwest Wales, Gwynedd Archaeological Trust.







Plate 01: View south of PRN13999. Existing site track is to the left



Plate 02: View west fo PRN13999 detailing extent of waterborne erosion



Plate 03: PRN13999 cordoned off. The permanent site track has been completed





Plate 05: PRN14000 cordoned off. The permanent site track has been completed



Plate 06: Stone revetment located alongside T5 track. Similar in appearance to PRN13999 and 14000



Plate 07: View north of turbines T2 and T3 and the location of the permanent site track



Plate 08: Detailed view of permanent site track during excavation. Turbine T3 is to the right in the picture



Plate 09: View south of existing farm track prior to its expansion into the permanent site track





Plate 11: Close-up of existing farm track during expansion into permanent site track. At the base of the exposed section is glacial clay, above which is the humic topsoil, followed by the original track level and the new track level





Plate 13: Track to turbine T5 during excavation. The dark patch within the excavation area is humic material



Plate 14: Track to turbine T9 during excavation.



Plate 15: Location of turbine T7 site during excavation



Plate 16: Location of turbine T13 site during excavation



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