



## **WRITTEN SCHEME OF INVESTIGATION**

### **‘Pencwm Mawr Wind Turbines, Llanddeiniol, Llanrhystud, Ceredigion.’**

“Construction of two wind turbine bases, hard-standings, access tracks and service trenches”.

**Planning Ref:**

A140853

**Listed Building Consent:**

N/A

**Prepared for:**

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**On behalf of:**

**Date:** 28/01/2016

**HRS Wales**

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## NON TECHNICAL SUMMARY

*This Written Scheme of Investigation details the intended programme of archaeological works to be undertaken during the groundwork for the erection of two wind turbines on land at Pencwm Mawr, Llanddeiniol, Ceredigion, centered on OS grid references SN 56514 73292 & SN 56315 72957.*

### 1 Introduction

- 1.1 This Written Scheme of Investigation (henceforth WSI) details the intended programme of archaeological works to be undertaken during the groundwork for the erection of two wind turbines (each 40.4m to blade tip), with associated hard-standings, access tracks and service trenches on land at Pencwm Mawr, Llanddeiniol, Llanrhystud, Ceredigion, centered on OS grid references SN 56514 73292 & SN 56315 72957.
- 1.2 This WSI has been prepared by Richard Scott Jones of Heritage Recording Services Wales (henceforth HRS Wales).

### 2 Site Location & Description

- 2.1 The proposed wind turbines are to both be positioned in open fields of improved pasture at a height of approximately 130m AOD. The turbine locations are at OS grid references SN 56514 73292 & SN 56315 72957, approximately 3km northeast of the village of Llanrhystud and approximately 4.5km southwest of the village of Llanfarian in the county of Ceredigion.
- 2.2 The southern turbine is located in the field immediately adjacent to the track and the proposed access track will spring from the existing track and lead directly southwards to the proposed turbine, 140m from the track.
- 2.3 The proposed access track serving the northern turbine will run north-west from the point at which it leaves the existing track and to run along the eastern field boundary to enter the field to the north. It will then run north-west to the turbine. All field boundaries will be crossed at existing gateways.

### 3 Planning Background

- 3.1 Following submission of a planning application (Ref: A140853) detailing the development proposals to Ceredigion County Council (henceforth CCC) on 15<sup>th</sup> October 2014, full planning permission was granted by CCC on 20<sup>th</sup> January 2016, with condition 14 stipulating that:

“No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the Local Planning Authority.” **Reason:** In order to protect archaeological interests.

- 3.2 HRS Wales were commissioned by Norvento Wind Energy UK to undertake the archaeological works.

### 4 Historical & Archaeological Background

- 4.1 In May 2014 Cgms Consulting undertook a heritage assessment report (*Cgms Ref: RJC/17086/02*) for the proposed two wind turbines on land at Pencwm Mawr, Llanddeiniol, Llanrhystud, Ceredigion

- 4.2 The assessment identified no direct physical impact from the proposals on any known heritage assets aside from field boundaries. However, the report concluded that there is potential for previously unrecorded archaeological assets to be present in the general area, most probably of prehistoric date. However, the construction footprint of the turbines and access tracks and construction compound is relatively small and it is concluded that the potential for currently unrecorded archaeological features to lie within the construction footprint and hence be affected by the development is low. It is proposed to allow for the preservation by record of archaeological assets affected by construction through archaeological monitoring of groundworks.

## **5 Development Proposals**

- 5.1 The proposed location of the wind turbines will require a temporary access track across open improved fields accessed from the public highway, using existing agricultural access, over privately owned land. For the purpose of the access tracks, the top soil will be stripped and the stripped route will be laid with stone, with each track leading to the proposed turbine location.

The concrete turbine foundation trenches will measure approximately 9.1m x 9.1m x 2m and will be installed within a 2/3 day period using a tracked excavator. Following excavation, reinforced steel lattice work will be installed, which will be followed by the pouring of concrete into the foundation area. A concrete up-stand would be cast on top of the slab, to which the turbine tower would later be bolted. Approximately 150 cubic meters of concrete will be required.

A proposed service cable trench from the turbines will run parallel to the proposed access track and then connected to the National Grid.

## **6. Aims of the Archaeological Watching Brief**

- 6.1 The aims of the watching brief, as defined by the ClfA (2014) are:
- 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.
- 6.2 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.
- 6.3 The objective of a watching brief is to establish and make available information about the archaeological resource existing on a site.

## **7 Methodology**

### General

- 7.1 The archaeological watching brief will be undertaken by HRS Wales staff using current best practice in early February 2016.

- 7.2 All work will be carried out by a suitably qualified archaeologist with relevant level membership of the Chartered Institute for Archaeologists (CIfA) and will follow the CIfA Standard and Guidance for an archaeological watching brief (CIfA 2014).

#### Detailed

- 7.3 All proposed groundwork will be undertaken under close and constant archaeological supervision.
- 7.4 If archaeological features, finds or deposits are uncovered, work will be stopped in the area of the exposed material in order that the supervising archaeologist can clean and identify the extent and nature of the material and for a degree of excavation and recording to take place.
- 7.5 All archaeological deposits or features that are identified will be cleaned, recorded and fully excavated. The developer will provide a safe working area and sufficient time to record and excavate all features to the satisfaction of the regional archaeological trust, Dyfed Archaeological Trust – Heritage Management (henceforth DAT-HM). Full excavation and recording of identified features will not be compromised by the construction programme.

#### Contingency Arrangements

- 7.6 In the event of significant archaeological features being discovered all activities in this area of the site will be temporarily suspended. This will allow a period of consultation with the client, the regional archaeological trust, the council and any potential specialists.
- 7.7 Following such consultation, recommendations will be presented to the Developer and the Local Planning Authority.
- 7.8 The methodology and timescale of additional archaeological work to investigate such features will be presented and included in the Developers Programme, the feature will be made secure thus allowing the site programme to continue.

#### Recording

- 7.9 Recording will be carried out using HRS Wales recording systems (pro-forma context sheets etc), using a continuous number sequence for all contexts.
- 7.10 Plans and sections will be drawn to a scale of 1:50, 1:20 and 1:10 as required and related to Ordnance Survey datum and published boundaries where appropriate.
- 7.11 All features identified will be tied in to the both the OS National Grid and all local site and ground plans.
- 7.12 Photographs will be taken in digital format, using a 14 mega-pixel DSLR camera, with photographs stored in both RAW and JPEG formats. Should significant remains be identified that require comprehensive excavation, photographs may also be appropriated in black and white and colour slide (35mm film).

#### Artefacts

- 7.13 Archaeological artefacts recovered during the course of the work will be cleaned and labelled using an accession number, which will be obtained from the local museum. A single number sequence will be allocated to all finds. The artefacts will be stored appropriately until they are deposited with a suitable local museum.
- 7.14 All finds of gold and silver will be removed to a safe place and the Environment Agency, DAT-HM and the local coroner informed, within the guidelines of the Treasure Act 1996.

- 7.15 Any finds which are considered to be in need of immediate conservation will be referred to a UKIC qualified conservator.

Human remains

- 7.16 In the event of burials or cremations being found all work will be halted in the area of the burials and their extent and nature established. The client, DAT-HM and the Ministry of Justice will be informed and a methodology of excavation agreed which will adhere to Ministry of Justice Guidelines.

Environmental and technological samples

- 7.17 Samples will be taken where necessary if significant deposits are located and these samples will be assessed and analysed by a suitable specialist, if deemed necessary.

Specialists

- 7.18 In the event of certain finds/features etc. being discovered, the site archaeologist may have to seek specialist opinion for assistance. Such specialists will be accessed either internally within HRS Wales itself or from an external source.

## **8 Post-Fieldwork Programme**

Conservation

- 8.1 After agreement with the client, arrangements will be made for the long term conservation and storage of all artefacts in an appropriate local or county museum.

Archive

- 8.2 The site archive will be prepared in accordance with MAP 2, Appendix 3 (English Heritage 1991). It will comprise all the data recovered during the fieldwork and shall be quantified, ordered and indexed and will be internally consistent. The archive will be deposited with the finds in a suitable local museum.

Reporting

- 8.3 The results will be submitted in an illustrated and bound report, which will include the following material:
- Non-technical summary.
  - Location plan showing the area/s covered by the watching brief, all artefacts, structures and features found.
  - Plan and section drawings with ground level, ordnance datum and vertical and horizontal scales.
  - Written description and interpretation of all deposits identified, including their character, function, potential dating and relationship to adjacent features. Specialist descriptions and illustrations of all artefacts and soil samples will be included as appropriate.
  - An indication of the potential of archaeological deposits which have not been disturbed by the development.
  - Statement of local, regional and national context of the remains.

- A detailed archive list at the rear listing all contexts recorded, all samples finds and find types, drawings and photographs taken. This will include a statement of the intent to deposit, and location of deposition, of the archive.

#### Monitoring

- 8.4 Any changes to this WSI that the contractor may wish to make after approval will be communicated to DAT-HM for approval on behalf of the Local Planning Authority.
- 8.5 Representatives of DAT-HM will be given access to the site so that they may monitor the progress of the watching brief. DAT-HM will be kept regularly informed about developments, both during the site works and subsequently during any potential post-excavation.

#### Archive Format & Deposition

- 8.6 The full site archive will be deposited within one month of the completion of the client report.
- 8.7 The paper/drawing/digital archive will be deposited at the offices of DAT-HM, with the finds being deposited with the appropriate local museum. HRS Wales will agree the location and timing of the deposition of the archive before the contract commences.
- 8.8 The archive will include all site notes, finds, documents, drawings, photographs, digital data and a copy of the final report and any prior draft versions. All of these items will be clearly quantified in tabular form in an 'archive deposition statement' located at the rear of the clients report, and their ultimate location and proposed date of deposition stated.

### **9 Resources and timetable**

#### Standards

- 9.1 The watching brief will be undertaken by HRS Wales staff using current best practice.
- 9.2 All work will be undertaken to the standards and guidelines of the CIfA.

#### Staff

- 9.3 The project will be undertaken by suitably qualified HRS Wales staff. In this instance Richard Scott Jones will be managing the project.

#### Equipment

- 9.4 The project will use existing HRS Wales equipment.

#### Timetable of archaeological works

- 9.5 It is anticipated that the ground work for the development will start in early February 2016.

#### Health and safety

- 9.6 All members of staff will adhere to the requirements of the *Health & Safety at Work Act, 1974*, and the Health and Safety Policy Statement of HRS Wales.

### Insurance

- 9.7 HRS Wales presently holds Public Liability Insurance up to £5,000,000 and Professional Indemnity Insurance up to £250,000.

A handwritten signature in black ink, appearing to read 'R Jones', with a stylized flourish at the end.

Richard Scott Jones (*BA, MA, MCIfA*)

Date: 28<sup>th</sup> January 2016