

# LLANBRYNMAIR WIND FARM

Supplementary Environmental Information February 2014

Volume I - Non-Technical Summary



## 1 INTRODUCTION

### 1.1 Background to the scheme

- 1.1.1 RES UK & Ireland Ltd ('RES') applied to the Department of Energy and Climate Change (DECC) for consent to construct and operate a wind farm development on land between the villages of Llanerfyl and Llanbrynmair, north west of Newtown, Powys in April 2009.
- 1.1.2 The Section 36 application is currently under consideration and is being appraised at the Mid-Wales (Powys) Conjoined Wind Farms Public Inquiry. An Environmental Statement (ES) accompanied the Section 36 consent application.
- 1.1.3 The Proposal has undergone considerable changes since the original submission in 2009, including the number of turbines being reduced from forty three (43) to thirty (30). In order to update and consolidate these changes within the ES, eight rounds of Supplementary Environmental Information (SEI) have been submitted between 2010 and 2013. For clarity, the SEI submitted in August 2013 superseded the original Environmental Statement and subsequent SEI packages submitted as supporting information between 2010 and 2012.

### 1.2 The Application

- 1.2.1 The application includes the erection of 30 three-bladed, horizontal axis wind turbines, each up to 126.5m maximum height to tip and associated infrastructure including, on-site tracks, underground cabling and crane hardstandings, a communications mast (25m high), a permanent (80m high) free standing lattice wind monitoring mast, borrow pits, water crossings, electrical transformers, electrical connection works, a substation and control building, for a period of 25 years.
- 1.2.2 Thirty wind turbines are planned, each up to a height of 126.5m to blade tip and with a capacity of between 2MW and 3MW providing an installed capacity of 60MW to 90MW. This would be sufficient to power more than 37,000 homes, or nearly two-thirds of the houses in Powys.
- 1.2.3 Consultation has been ongoing with consultees since 2005. Such discussions offered instrumental advice and input into the detailed site design and mitigation options and therefore enabled development of a wind farm with minimal effect on the environment.

### 1.3 Purpose of this Supplementary Environmental Information

- 1.3.1 This SEI has been prepared to present the findings of additional surveys, assessment, and design work that has been undertaken to inform the Environmental Impact Assessment since August 2013 and comprises further and revised information which is subject to the Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2000 (as amended). This SEI should be read in conjunction with the August 2013 SEI.
- 1.3.2 As part of the proposed Llanbrynmair Wind Farm, Abnormal Indivisible Loads (AILs) would use the Llanerfyl to Talerddig minor road in order to access the site, as detailed in the August 2013 SEI. Powys County Council (PCC) has requested that RES consider an alternative shared access arrangement with the adjacent Carnedd Wen scheme.
- 1.3.3 In the event that the proposed access for AILs using the Llanerfyl to Talerddig minor road is considered unacceptable by the Secretary of State, environmental information has been prepared as part of this SEI for the alternative AIL access route.
- 1.3.4 The SEI is presented in two parts; part one provides additional information and further clarification on the impact of the proposed local highway works between Llanerfyl and Talerddig, and the second part providing additional survey and assessment information on a set of access tracks linking the proposed Llanbrynmair Wind Farm and the adjacent proposed Carnedd Wen Wind Farm.

1.3.5 The SEI is contained within two separate volumes:

- Volume I - Non-Technical Summary (NTS)
- Volume II - Main Text, Supporting Figures and Supporting Appendices

1.3.6 This NTS has been prepared to summarise, in non-technical language, the findings of the SEI undertaken for Llanbrynmair Wind Farm.

## 2 PART 1 - ADDITIONAL INFORMATION OF THE TALERDDIG TO LLANERFYL ACCESS ROUTE

### 2.1 Access Route Ecological Surveys

2.1.1 This section assesses the potential ecological impact of proposed works along the county road from Llanerfyl to Talerddig. The assessment provides results from the ecological surveys, identifies the potential impacts of the proposed wind farm on ecological receptors, and assesses the significance of those impacts taking into account any mitigation or enhancement works along the access route.

#### Habitat Surveys

2.1.2 Habitat surveys were carried out along the access route in August 2010 and repeated in April 2013, with further visits in May 2013 following minor changes to the physical works proposed. In addition further visits have been made through October and November 2013. All areas of proposed widening along the access route were also checked for presence of peat.

2.1.3 The surveys indicated that hedges along the access route varied from species-rich sections to relatively newly planted hawthorn hedge. Aside from hedgerows, only two main areas of verge / open habitat were identified as being of conservation interest. The first is a section of the proposed Neinthirion bypass that crosses an area of peat. The second is an area of unimproved grassland within a longer section of improved and semi-improved verge. Please refer to **Appendix 2.1/2.2 (Volume II)** for further information.

2.1.4 The proposed access route requires 21,676sqm of highway widening which includes the removal of a total of 1532 metres of hedgerow (of varying sensitivity), the felling of 52 individual trees (of varying age and size), and disturbance to a small area of peat habitats.

2.1.5 Overall, it is considered that following the implementation of the Habitat Management Plan (HMP), which includes replanting of hedges and trees, management of hedges and verges, and the management of peat habitats, there will be no long-term adverse impacts on the conservation interest of the access route.

#### Otter Surveys

2.1.6 Otter surveys were undertaken in 2010 and 2013. In 2010, the surveys were undertaken in August over a number of days. In 2013, the otter surveys were undertaken on 10th and 11th May 2013. On both surveys the river was in a state of low flow and most banks and areas beneath bridges accessible.

2.1.7 No signs of otter were found during either of the surveys (in 2010 and 2013). However, it is acknowledged that there is potential for holts and lying up areas in the areas where physical works are proposed.

2.1.8 It is not considered that there will be any material adverse impacts on otters as a result of the proposed access route works and, on the basis of the current survey evidence a licence is not deemed necessary. However, pre-construction surveys would be carried out prior to any construction works.

#### Badger Surveys

2.1.9 Surveys for signs of badger were undertaken in August 2010 and signs of badger were found along the access route including unoccupied holes and latrines. Further survey work was carried out in March-May 2013; no signs of badgers were identified. Holes identified in the 2010 surveys appeared to be unused and there were no latrines present.

2.1.10 It was concluded that there will not be any material adverse impacts on badgers as a result of the proposed access route works.

### Dormice Surveys

- 2.1.11 Survey work was carried out in 2010 to identify sections of the access route engineering works that may be suitable for dormouse habitation. A desk study was undertaken, and then a search for gnawed nuts was undertaken.
- 2.1.12 The survey indicated that there were no signs of dormouse on the sections of potentially suitable habitat that may be impacted by the engineering works. No further Sections of high potential dormouse habitat were identified in surveys following changes to designs in spring 2013.
- 2.1.13 On the basis of this combined evidence the assessment was made that dormice are unlikely to be present and therefore there is no need to undertake a further detailed survey. However, precautionary methods of removing areas of suitable habitat have been suggested as part of the habitat management works.

### Conclusions

- 2.1.14 Extensive surveys have been undertaken over a number of years to assess the potential impact of works proposed along the access route. Potential impacts on areas of conservation interest are assessed as having no long-term adverse impact.

## 2.2 Bats

- 2.2.1 This section has been prepared in response to queries relating to the original October 2013 Bat SEI by Powys County Council (PCC) and Natural Resources Wales (NRW). Without prejudice to the contention that the Bat SEI was adequate, this SEI contains further information concerning potential effects of the proposed access route between Llanerfyl and Talerddig on bats and in relation to the following:
- Bridges and Culverts;
  - Additional trees and woodland;
  - Roost information within the Carnedd Wen Wind Farm ES; and
  - Clarification and corrections to information provided as part of the October 2013 Bat SEI.
- 2.2.2 The assessment concludes that it is considered too early to confidently state whether a European Protected Species licence will be required. The need for a licence would be determined in discussion with NRW closer to the time of the implementation of works. This would be informed by updated survey information and a finalised method of working (including timing of the works).
- 2.2.3 Where potential impacts on bats have been identified suitable mitigation measures have been considered in the event that bats are found from future update surveys and the overall impact on bats assessed.
- 2.2.4 In summary, whilst there are potentially additional roosting opportunities, potential impacts are considered to be low and readily addressed through various mitigation options. These approaches would have very limited impacts on transitory roosts and would not result in an adverse impact on the favourable conservation status of local bat populations. As such it is considered that the additional information presented in this SEI does not change the assessment of impacts presented in the original August 2013 SEI.

### **3 PART 2 - ADDITIONAL INFORMATION FOR POTENTIAL ALTERNATIVE ACCESS ACROSS ADJACENT WIND FARM**

#### **3.1 Project Description**

- 3.1.1 As part of the proposed Llanbrynmair Wind Farm, Abnormal Indivisible Loads (AILs) would use the Llanerfyl to Talerddig minor road in order to access the site, as detailed in the August 2013 SEI. Powys County Council (PCC) has requested that RES consider an alternative shared access arrangement with the adjacent Carnedd Wen scheme. PCC presented the concept of the shared access arrangement during Session 2 of the Mid Wales (Powys) Conjoined Public Inquiry.
- 3.1.2 PCC have developed an outline alternative access proposal connecting the proposed Llanbrynmair Wind Farm and proposed Carnedd Wen Wind Farm. The shared access consists of two relatively short sections of access track to allow for the movement of Abnormal Indivisible Loads (AILs) and construction traffic between the two sites. An overview of the alternative access arrangement is provided in **Figure 4.2**.
- 3.1.3 The alternative access proposal would involve AILs gaining access to the Llanbrynmair Wind Farm through the proposed Carnedd Wen Wind Farm. All AILs would access using the Carnedd Wen A458 site entrance and main spine road, the only additions being the two linking tracks assessed as part of this supplementary environmental information.

#### **3.2 Landscape and Visual Effects**

- 3.2.1 This section provides a brief appraisal of the potential landscape and visual effects associated with alternative access arrangement presented by PCC.
- 3.2.2 The direct and indirect effects are predicted to be small in scale, in the context of the overall proposed Llanbrynmair development, therefore only the landscape elements which have the potential to be directly affected are discussed as part of the assessment. Similarly only visual receptors in close proximity to the potential connection tracks are assessed.
- 3.2.1 Landscape effects will extend to the physical footprint of the proposed connection tracks and the areas disturbed during construction of the wind farm. These landscape effects would be relatively small scale when considered in the context of the whole wind farm development.
- 3.2.2 Visual effects associated with the two proposed connection tracks would always be in the context of the other proposed Llanbrynmair wind turbines, access tracks and ancillary infrastructure which will form the key feature(s) in these views.
- 3.2.3 Due to the small scale and visually contained nature of the proposed alternative connection tracks and their location within the interior of the wider Llanbrynmair Wind Farm development, it is judged that the landscape and visual effects resulting from these components will not be greater than those identified within the LVIA presented in the August 2013 SEI.

#### **3.3 Ecological Assessment**

- 3.3.1 This section assesses the potential ecological impact of the alternative access arrangement presented by PCC. The assessment provides results from the ecological surveys, identifies the potential impacts of alternative access and infrastructure changes on ecological receptors, and assesses the significance of those impacts taking into account any mitigation or enhancement works along the access route.
- 3.3.2 Surveys of the proposed route were carried out in January 2014 and included a review of habitats and protected species (including water vole, otter, and badger).

- 3.3.3 The assessment concluded that the proposed infrastructure changes as a result of the alternative access arrangements are small sections when viewed within the context of the two proposed windfarms, and must be seen in the context of the two proposed HMPs. Little vegetation of conservation interest will be lost and no protected species will be affected.
- 3.3.4 Therefore it is concluded that the link tracks will have no additional significant impact when viewed as part of the two schemes.

### 3.4 Cultural Heritage

- 3.4.1 This section provides an assessment of the predicted effects of changes to the infrastructure layout on the cultural heritage resource of this area resulting from the alternative access arrangement.
- 3.4.2 The section concludes that no recorded historic assets would be affected, directly or indirectly, by the proposed changes to the access and infrastructure. Potential effects are limited to damage to currently unrecorded historic assets within the construction footprint of the linking tracks where they do not follow existing tracks.
- 3.4.3 Mitigation of adverse effects on currently unrecorded archaeological features (if any exist) would be achieved through an appropriate programme of archaeological works which would fully offset the adverse effect. This would form part of the wider specification for a programme of archaeological works required for the development as a whole. This would be prepared and submitted to Clwyd Powys Archaeological Trust (as archaeological advisors to Powys County Council) for approval prior to the commencement of construction works.

### 3.5 Geology, Hydrology and Hydrogeology

- 3.5.1 This chapter provides additional detail to compliment Chapter 8 of the August 2013 SEI which assessed the potential geological, hydrogeological and hydrological effects of the proposed Llanbrynmair Wind Farm. This additional assessment considers design alterations required for the potential alternative access through the adjacent Carnedd Wen Wind Farm.
- 3.5.2 The assessment included peat probing in and around the new infrastructure works and a review of watercourse crossings associated with both the current and alternative access arrangements.
- 3.5.3 From the assessment of potential effects, the minor alterations to the infrastructure layout and the additional small sections of track do not demonstrate a significant impact and therefore no additional mitigation or management is required.

### 3.6 Transport

- 3.6.1 This section provides an assessment of the alternative access route for Llanbrynmair Wind Farm abnormal indivisible loads (AILs) along the proposed Carnedd Wen A458 trunk road access.
- 3.6.2 Transport evidence provided on behalf of Carnedd Wen during Session 2 of the Inquiry confirmed that the highway authority responsible for the A458 trunk road has approved the proposed access arrangements. There is, therefore, an evidence base that has already been presented which supports the use of the A458 Carnedd Wen access junction for AIL access to Llanbrynmair.
- 3.6.3 It was concluded that there are no transport-related reasons for AIL deliveries for Llanbrynmair not to access the site via Carnedd Wen and the Carnedd Wen A458 trunk road access.

### 3.7 Carbon Calculator

- 3.7.1 This section includes a revised assessment of the Scottish Government Carbon Assessment Tool (v 2.7.0) for Llanbrynmair Wind Farm in light of the proposed alternative infrastructure amendments to the site layout.
- 3.7.2 The overall net effect of the layout changes is to decrease the estimated losses by 1430 tCO<sub>2</sub>e; the majority of which come from a reduction in losses of soil organic matter from excavated peat. However, the impact of these revisions on the overall payback is negligible - the expected payback for the grid-mix of electricity generation remains as 1.1 years. The minimum payback remains the same at -0.1 years but the estimated maximum payback has reduced by 2 months to 3.6 years as better refinements of peat depth upper and lower end estimates have been possible.