

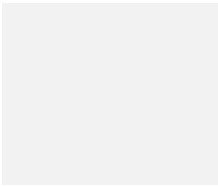
Carnedd Wen Wind Farm and Habitat Restoration Project

Response to BEIS request for further information to inform
HRA

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1 Introduction

The Secretary of State (SoS) is in the process of making a re-determination of the applications for consent under section 36 Electricity Act 1989 and for planning permission for Llanbrynmair wind farm and for Carnedd Wen Wind Farm and Habitat Management and Restoration Scheme. As part of this process the Department for Business, Energy and Industrial Strategy (BEIS), on behalf of the SoS, has written to the applicants for those wind farms, RES UK and Ireland Ltd and Innogy Renewables UK Limited (Innogy) respectively, requesting further information to enable the SoS to make a Habitats Regulations Assessment (HRA) of the likely effects of the proposals on two European Sites.

The re-determination follows a public inquiry, held in 2013, into a series of conjoined wind farm applications which included those for Llanbrynmair and Carnedd Wen. The Planning Inspector's report that followed that public inquiry concluded that, with certain planning conditions that had been agreed between Innogy and the Welsh Government's statutory environmental advisor, Natural Resources Wales (NRW), the Carnedd Wen proposal was not likely to have a significant effect on the nearby Berwyn Special Protection Area (SPA) or on any other European Site. The SoS subsequently made an HRA of the proposed development and agreed with the HRA recommendation of the Planning Inspector. However, the SoS refused consent and planning permission. That decision was quashed by the court, leading to the current redetermination.

The current re-determination requires that the HRA process is repeated. The present document seeks to assist this process on behalf of Innogy by providing a response to the request by BEIS (16 February 2018) with respect to the Carnedd Wen application.

The references for documents mentioned in this response are those assigned by the Inspector at the public inquiry except for a report by BGS (Llanbrynmair and Carnedd Wen – Confidential Bird Survey Report 2016/17). This report sets out the findings of further bird surveys, conducted between April 2016 and August 2017 and covering both the Carnedd Wen Wind Farm and Habitat Restoration Project, the Llanbrynmair Wind Farm, and buffer around the two sites extending to 2 km. A series of specialist surveys were undertaken, including extensive Vantage Point observations of flights across the area; targeted raptor surveys and a range of other species-specific surveys. The author of the present document agrees with the methodologies used and is of the view that they provide a detailed update on the status of key species in the area.

2 BEIS Information request

The BEIS request directed three questions to Innogy.

Berwyn SPA ornithological interest feature populations

*Innogy's supplementary environmental information uses regional bird populations to assess the effect of modelled collisions on the Berwyn SPA rather than the populations as described in the Berwyn SPA Core Management Plan. This approach infers that the SPA population could be supported by the wider population of birds in the event of mortality. Can **Innogy** explain further how the SPA population would be able to replenish/draw from the regional population and how this meets the conservation objectives of the SPA?*

In-combination assessment for Berwyn SPA

*Innogy has provided a list of plans and projects for consideration within the Secretary of State's in-combination assessment for the Berwyn SPA. Can **Innogy** provide further evidence to justify the exclusion of other developments within foraging range of the SPA from the in-combination assessment?*

Montgomery Canal SAC

*The Montgomery Canal SAC was considered during the mid-Wales public inquiry (Paragraph 527 of the Inspector's Report refers). However, in reviewing the information publically available, the Secretary of State considers that there is limited evidence. **RES** and **Innogy** are requested to provide any further information that they hold on the likely effects, or why it should be excluded from consideration, for the Carnedd Wen and Llanbrynmair projects, in combination with other plans or projects, on the Montgomery Canal SAC.*

2.1 Berwyn SPA ornithological interest feature populations

The Berwyn SPA is classified as a SPA for its nationally significant populations of three raptor species; hen harrier, merlin and peregrine. Red kite was formerly also a qualifying species.

Hen harrier

The 2008 Environmental Statement (ES)¹ was based on detailed ornithological surveys that were carried out in 2006 and 2007. Very little movement of hen harriers between the Berwyn SPA and the application site was recorded during those surveys and it was concluded that the then existing population of up to four pairs of hen harriers was separate from the Berwyn population and that interchange between the two was negligible. It was therefore concluded that the Carnedd Wen proposals were not likely to have a significant effect on the Berwyn hen harrier population.

In response to the ES, the Countryside Council for Wales (CCW, now succeeded by NRW) advised that a more precautionary approach ought to be taken in the HRA (2011 Supplementary Environmental Information (SEI), Volume 1, Chapter 8, Section 8.5.1². Subsequently, CCW advised that there was material interchange between the Berwyn SPA and the Mingeint SPA to the north, suggesting that both the Berwyn SPA and the Carnedd Wen populations were part of a single, larger Welsh metapopulation, within which there was interchange, such that any increased mortality at a given site (including the Berwyn SPA) would be replenished from elsewhere (by for example, juvenile males newly entering breeding age and seeking territories within the range of the wider metapopulation). Further consideration of this matter led the current author to agree with CCW. Understanding that the predicted rate of collision of one strike every 10.6 to 54.3 years, depending on which avoidance rate was applied, would have no measurable effect on the Welsh population of hen harriers allowed the conclusion to be drawn that there would be no effect on the Berwyn SPA population, since such interchange would be unaffected (for population viability analysis, see volume 8.7 of the 2008 ES³).

Since the production of the 2011 SEI⁴, further surveys, conducted in 2012 and between April 2016 and July 2017 (BSG Ecology) have found that hen harriers no longer breed within the Carnedd Wen application area, or within a 2km buffer zone around the site. This is likely to be due to the maturation of the forestry plantation, since hen harriers favour breeding sites within stands of up to five years. 576 hours of vantage point observations were carried out during surveys undertaken across both the Carnedd Wen and Llanbrynmair sites during the 2016 breeding season, Hen harrier were observed on nine occasions. All observations were of single male birds. During the winter season (September 2016 to March 2017, 512 hours of observations were made and hen harrier were recorded on 38 occasions. The majority of observations were of males but females were also recorded occasionally.

These levels of activity were significantly lower than those reported in the 2008 ES⁵ and 2011 SEI⁶, indicating that the risk of collision is correspondingly lower. This is further lowered by the deletion from the Carnedd Wen scheme of five of the turbines during the public inquiry.

The variation in activity levels in the breeding and wintering season supports the premise that hen harriers occupy relatively restricted foraging ranges during the breeding season, but wander more widely during the winter. While collision risk is significantly lower than predicted in the ES, in the unlikely event that an individual from the Berwyn population were to suffer mortality, the wider ranging wintering behaviour of the species would ensure that an individual from the wider metapopulation, which covers the Berwyn and Migneint SPAs as well as the undesignated habitats that surround them, would replace it.

1 Environmental Statement 2008 (core document ref AD/RWE/003-009)

2 Supplementary Environmental Information September 2011 Vol 1-Vol 4 (core document ref AD/RWE/015 - 18)

3 *ibid.* 1

4 *ibid.* 2

5 *ibid.* 1

6 *ibid.* 2

From this it can be concluded that the conservation objectives of the Berwyn SPA would not be affected by the Carnedd Wen Wind Farm and Habitat Restoration Project and there would be no adverse effect on the site's integrity.

Red kite

A review of the UK SPA suite, undertaken by JNCC in 2010, concluded that the Welsh population of red kite had increased to such an extent that there was no longer a case for the species to be included as a qualifying feature of the Berwyn SPA. It was agreed at a meeting between DECC and CCW on 22 January 2010 that appropriate assessment was not required for this species.

Nevertheless, Appendix 8.7 of the 2008 ES⁷ comprises a population viability analysis of the Welsh red kite population and predicts a continued rise until around 2024 (i.e. the then expected end of the first ten years of wind farm operation). The model predicted an increase in the area surrounding the application site (including the Berwyn SPA) by a factor of 3.69, and that any mortality arising from the wind farm would have no significant effect on this rate of increase. It is therefore possible to conclude any mortality of red kite nesting within the Berwyn SPA would quickly be replenished from the surrounding area.

Peregrine

No movements of peregrine were recorded between Carnedd Wen and Berwyn SPA during the field surveys carried out in 2006 and 2008, or during the update surveys carried out between 2016 and 2017. Four peregrine nests were identified during targeted surveys in 2016. One was within the Carnedd Wen site and one was within the Berwyn SPA, although there was no evidence of occupancy at either. There was evidence of occupancy at the remaining two sites, one of which was within a 2 km buffer around Carnedd Wen and the other just beyond that buffer

Only low levels of flight activity were recorded during the 2016 survey. Twelve flights were recorded across the breeding and wintering seasons. Given the absence of peregrine occupancy at the historic locations within the Carnedd Wen site and the Berwyn SPA, it seems highly likely that any activity over the Carnedd Wen Wind Farm and Habitat Restoration Project area originated from a nest outside the Berwyn SPA. As such it can be concluded that the Project would not have an effect on the conservation objectives of the Berwyn SPA and that there would be no adverse effect on site integrity.

Merlin

An insufficient number of merlin flights were recorded during the surveys that were undertaken in 2006 and 2007 to enable collision modelling to take place. Update surveys in 2017 recorded no merlin flights during the breeding season, and three flights during the winter. Given the low level of activity, and the tendency of merlin to fly below the impact risk zone of wind turbines, the potential for significant levels of collision is negligible. Therefore there is no need to consider whether any mortality caused to the Berwyn SPA population would be replenished from the wider region.

⁷ *ibid.* 1

2.2 In-combination assessment for Berwyn SPA

The 2008 ES⁸ did not include an assessment of the scheme in combination with others. Following consultee response to the ES Innogy, then operating as Npower Renewables Limited, undertook informal scoping and agreed a list of six proposed schemes with Powys County Council. This list was accepted by DECC. An SEI dealing with cumulative effects was submitted in August 2009⁹. No consultee or any party at the public inquiry suggested any specific non-wind development, project or proposal for consideration as part of the in-combination assessment.

Between 2009 and the issue of further SEI in 2011, an additional three schemes were proposed, and were therefore included in the cumulative impacts section of SEI 2011 (Volume 1, Chapter 8, Section 8.8)¹⁰.

Wind farm development in north and central Wales is almost entirely in uplands which support the breeding and hunting habitats of three of the four qualifying species of the SPA (red kite being less restricted in its foraging habitats), and where other forms of major development do not generally occur. Moreover, the effects of wind farms on birds differ from those of most other forms of development. Those of wind farms in theory include the 'barrier effect', where the presence of operating wind turbines may disrupt movement of birds between foraging and nesting sites; displacement due to the rotation of the blades; and collision risk. At the same time, wind farm development gives rise to only a very small amount of direct habitat loss. Thus the potential impacts of wind farms, both in their location and their nature, differ from those of other forms of development, including infrastructure.

It is noted that NRW was satisfied with the scope of the cumulative/in-combination assessment at the time of the 2013 conjoined public inquiry. While a number of the projects considered at the inquiry were refused by the SoS and not subsequently revived and, hence are no longer relevant to any further in-combination assessment, there are not understood to be any new major applications within the breeding foraging ranges of the species for which the Berwyn SPA is designated

2.3 Montgomery Canal SAC

The Montgomery Canal SAC is designated because it supports the largest population of floating water plantain in Britain. The species is dependent upon slow moving mesotrophic conditions and as such, is sensitive to changes in water quality and to pollution. Pollution is considered to be a threat to the conservation objective of maintaining the extent and distribution of the species.

However, the Montgomery Canal SAC is not within the hydrological catchment of the Carnedd Wen wind farm proposals (see July 2013 SEI, Volume 3, Figure 13.1¹¹). Given the absence of hydrological connectivity, and hence absence of any potential for effects on water quality, the Montgomery Canal SAC was screened out of further assessment, with the agreement of CCW/NRW. The Secretary of State, in undertaking the HRA for the conjoined inquiry, and after seeking advice from NRW, also excluded the Montgomery Canal SAC.

Protection of other watercourses would be ensured through a variety of means, including the implementation of a CEMP, use of a Site Specific Drainage Plan and the employment of an Ecological Clerk of Works. Further details are provided in the Proof of Evidence of Dr Alan Edwards.

⁸ ibid.1

⁹ Supplementary Environmental Information Cumulative Assessment August 2009 (core document ref AD/RWE 11-12)

¹⁰ Supplementary Environmental Information September 2011 (core document ref AD/RWE/15-18)

¹¹ Supplementary Environmental Information 2013 (core document ref AD/RWE/026-029)

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