RECORD OF THE HABITATS REGULATIONS ASSESSMENT UNDERTAKEN UNDER REGULATION 61 OF THE CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2010 (AS AMENDED) FOR AN APPLICATION UNDER THE PLANNING ACT 2008 (AS AMENDED)

Project Title: Mynydd y Gwynt:

Date: 20 November, 2015

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# Introduction

## Background

- 1.0 This is a record of the Habitats Regulation Assessment ("HRA") that the Secretary of State ("SoS") for Energy and Climate Change has undertaken under the Conservation of Habitats and Species Regulations 2010 (as amended) (the Habitats Regulations) in respect of the Development Consent Order ("DCO") for the Mynydd y Gwynt Wind Farm and its associated infrastructure (the 'Project'). For the purposes of these Regulations the SoS is the competent authority.
- 1.1 The Project comprises of an onshore wind farm in Powys, east of Aberystwyth, consisting of up to 27 turbines with a generating capacity of up to 89.1 megawatts (MW). The Project application is described in more detail in Section 2.
- 1.2 In England and Wales, onshore energy generating stations with a capacity greater than 50 MW constitute nationally significant infrastructure projects ("NSIPs") and applications for consent are subject to the requirements of the Planning Act 2008 (as amended). This Project constitutes an NSIP as it has a generation capacity of up to 89.1 MW.
- 1.3 The Project was accepted for examination by the Planning Inspectorate ("PINS") on 20 August 2014 and a single Inspector ("the Inspector") was appointed as the Examining Authority ("ExA") for the application. The examination of the Project application began on 20<sup>th</sup> November 2014 and completed on 20<sup>th</sup> May 2015. The Inspector submitted his report of the examination, including his recommendation ("the ExA's Report"), to the SoS on 20 August 2015.
- 1.4 The SoS conclusions on habitats and wild birds issues contained in this HRA report have been informed by the ExA's Report, and further information and analysis, including a Report on the Implications for European Sites ("RIES") and written responses to it.

## Habitats Regulation Assessment (HRA)

- 1.5 Council Directive 92/43/EC on the conservation of natural habitats and of wild fauna and flora ("the Habitats Directive") and Council Directive 2009/147/EC on the conservation of wild birds ("the Birds Directive") aim to ensure the long-term survival of certain species and habitats by protecting them from adverse effects of plans and projects.
- 1.6 The Habitats Directive provides for the designation of sites for the protection of habitats and species of European importance. These sites are called Special Areas of Conservation ("SACs"). The Birds Directive provides for the classification of sites for the protection of rare and vulnerable birds and for regularly occurring migratory species. These sites are called Special Protection Areas ("SPAs"). SACs and SPAs are collectively termed European sites and form part of a network of protected sites across Europe. This network is called Natura 2000. A Site of Community Importance ("SCI") is a site in the process of receiving approval; it has received

approval by the European Commission ("EC") and will be a SCI until the site has been formally designated as a SAC by UK Government.

- 1.7 The Convention on Wetlands of International Importance 1972 ("the Ramsar Convention") provides for the listing of wetlands of international importance. These sites are called Ramsar sites. UK Government policy is to afford Ramsar sites in the United Kingdom the same protection as European sites.
- *1.8* In the UK, the Habitats Regulations transpose the Habitats and Birds Directives into national law as far as the 12 nm limit of territorial waters.
- *1.9* Regulation 61 of the Habitats Regulations provides that:

.....before deciding to give consent, permission or other authorisation for, a plan or project which is likely to have a significant effect on a European site (either alone or in combination) and which is not directly connected with or necessary to the management of the site, the competent authority must make an appropriate assessment of the implications for the site in view of the site's conservation objectives.

- 1.10 This Project is not directly connected with, or necessary to, the management of a European site. The Habitats Regulations require that, where the project is likely to have a significant effect ("LSE") on any such site, an appropriate assessment ("AA") is carried out to determine whether or not the project will have an adverse effect on the integrity of the site ("AEoI") in view of its Conservation Objectives. In this document, the assessments as to whether there are LSEs, and, where required, the AAs, are collectively referred to as the HRA.
- *1.11* The HRA takes account of mitigation measures which will be secured by requirements and conditions in the DCO, if made.
- *1.12* This report should be read in conjunction with the following documents that provide extensive background information, a fuller list of documents is provided in the References section of this report:
  - The Planning Act 2008 (as amended) Mynydd y Gwynt Wind Farm. Examining Authority's Report of Findings and Conclusions and Recommendation to the Secretary of State for Energy and Climate Change.20<sup>th</sup> August 2015 (The ExA's Report)
  - Report on the Implications for European Sites. Proposed Mynydd y Gwynt Wind Farm. April 2015. (The RIES) (PrD-018)
  - Natural Resources Wales' Response to RIES. 14 May 2015 (D10-002)
  - Natural Resources Wales Written summary of an oral case put at the Issue Specific Hearings held 17-19 March (D6-010)
  - Natural Resources Wales Comments on responses to the ExA's Second Written Questions (D6-023)
  - Mynydd y Gwynt Ltd Updated Habitat Regulations Assessment Screening Report (Version 6) (HRASR)

- Mynydd y Gwynt Ltd -AD-10 Grid Connection Statement (AD-351)
- Natural Resources Wales Response to the ExA's Second Written Questions, Appendix 5 (NRW submission on response to question 4.18 of ExA's Second Written Questions) (D5-018)
- Mynydd y Gwynt Limited Part 5 of comments on: Written Representations, Local Impact Reports and responses to the ExA's first written questions (D3-006)
- Mynydd y Gwynt Ltd Part 3 Appendices (Screening Report Version 2 and Version 3 (part) [D5-005])
- Mynydd y Gwynt Ltd Part 4 Appendices (Screening Report Version 3 cont.; Screening Report Appendix 6: Upper Wye Catchment; ES Figure 11.12a: European sites) (D5-006)
- Natural Resources Wales Response to ExA's request for further information and comments on submissions for Deadline VI (D7-012)
- Natural Resources Wales Written Representation and response to ExA's First Written Questions (D2-011)
- Mynydd y Gwynt Limited Response to NRW's response to ExA's request for further information letter dated 24 April 2015 and Comments on responses provided at Deadline VI (D10-007)
- Mynydd y Gwynt Ltd Written summary of an oral case put at the Issue Specific Hearings on Policy, Landscape, Environment and Ecology (D6-015)
- Natural Resources Wales Response to the ExA's Second Written Questions (D5-013)
- Mynydd y Gwynt Wind Farm Environmental Statement, July 2014, Chapters, Appendices and Figures:Chapter 11: Ecology (AD-064)
- Mynydd y Gwynt Ltd -ES-App 11.5 Collision Risk Assessment Notes and Calculations (AD-092)
- Natural Resources Wales Comments on Written Representations. 19 January 2015. (D3-013).
- Natural Resources Wales. Relevant Representation (RR-66)
- Natural Resources Wales Comments on the Applicant's submission for Deadline X accepted as an Additional Submission by the Examining Authority on 20 May 2015. (AS-15).
- Mynydd y Gwynt Limited Comments on submissions for Deadline VI relating to River Wye SAC and bats matters (D7-006).
- Natural Resources Wales Draft Statements of Common Ground (D3-018)
- Mynydd y Gwynt Limited Species Protection Plan (D10-028)
- Mynydd y Gwynt Ltd Updated draft Construction Environmental Management Plan (D7-023)
- Mynydd y Gwynt Limited Version 3 of the Surface Water Management Plan (clean) (D10-012).
- Mynydd y Gwynt Limited Version 2 of the Water Quality Management Strategy (clean) (D10-021)

- Mynydd y Gwynt Limited Responses to submissions for Deadline V (D6-027)
- Mynydd y Gwynt Limited Signed Unilateral Undertaking (Part 1 of 2) (D10-019)
- Mynydd y Gwynt Limited Signed Unilateral Undertaking (Part 2 of 2) (D10-020)
- Mynydd y Gwynt Limited -ES-17 Grid Connection (AD-070)
- Mynydd y Gwynt Limited Written summary of an oral case put at the Issue Specific Hearings on Policy held 17 March 2015 and Landscape, Environment and Ecology (D6-015).
- Plus other documents submitted during the Examination, available at: <u>http://infrastructure.planninginspectorate.gov.uk/projects/wales/mynydd-y-gwynt-wind-farm/?ipcsection=docs</u>
- *1.13* The key information in these documents and written representations is summarised and referenced in this report.

# The RIES and Statutory Consultation

- 1.14 Under the Habitats Regulations the competent authority must, for the purposes of an AA, consult the appropriate nature conservation body and have regard to any representation made by that body within such reasonable time as the authority specifies.
- 1.15 Natural Resources Wales ("NRW") is the Statutory Nature Conservation Body ("SNCB") for Wales.
- 1.16 The ExA prepared a RIES, with support from the Planning Inspectorate Environmental Services Team, based on working matrices prepared by the Applicant. The RIES documented the information received during the examination and presented the ExA's understanding of the main facts regarding the HRA to be carried out by the SoS.
- 1.17 The RIES was published on PINS planning portal website<sup>1</sup> and circulated to interested parties on 24 April 2015 and comments were sought by 14 May 2015 for the purposes of statutory consultation. The RIES, and the written responses to it, have been used to inform this assessment, and the conclusions in this HRA are based on these.
- 1.18 The ExA recommends that the process followed during the examination can be relied on by the SoS for the purposes of Regulation 61(3) of the Habitats Regulations in the event that it is concluded that a HRA is required.
- *1.19* The SoS issued a consultation on 14 September 2015 asking for further environmental information to inform her in her decision-making and responses were submitted by the Applicant, The Welsh Government, NRW and Peter Foulkes.

<sup>&</sup>lt;sup>1</sup> <u>http://infrastructure.planningportal.gov.uk/wp-content/ipc/uploads/projects/EN010051/2.%20Post-Submission/EIA/Habitat%20Regulations/Report%20on%20the%20Implications%20for%20European%20Sites%20(RIES).pdf</u>

# **Development Description**

- 2.0 The Project will comprise the construction and operation of up to 27 wind turbine generators (WTG), each with a generating capacity of between 3 and 3.3MW, with a total installed capacity of up to 89.1MW, as well as:
  - Electrical cables
  - Substation, control building and satellite link
  - Widening of approximately 9.5km of existing tracks
  - Approximately 6.9km of new tracks,
  - Improvement to existing site access, and
  - Erection of a meteorological mast up to 80m high
- 2.1 Each of the turbines will have a maximum blade tip height of up to 125 meters, a maximum hub height of 80 meters and the blades will have a swept diameter of between 90-105 metres. Each turbines base would have an approximate diameter of 17.6 metres and be on average 2.2 metres deep. The bottom of the excavation would typically be between 2.5 and 3 metres below existing ground level.
- 2.2 No specific make or model of turbine has been applied for, but the visualisation and noise calculations have been based on a Vestas V90 3MW turbine.
- 2.3 Up to 9.5km of existing tracks will be widened within the Sweet Lamb Rally Complex to a minimum running surface width of 5 metres; in addition approximately 6.9 km of new tracks will be built. Access to the site off the A44 will be improved. Some offsite highway works will be required, including adaptations to street furniture, the extension of three lay-bys and the construction of 2 new lay-bys.
- 2.4 A high voltage electrical network will be connected to each of the turbines. The turbines will be connected to the site substation by underground, armoured, electrical cables, laid in trenches generally following the line of the access tracks. Electricity produced by the wind farm will be exported via a 132kV line, which will be either overhead or underground, or both, to the SP Manweb Plc substation, currently planned to be constructed near Cefn Coch (the Carno substation). There are two options proposed to achieve this.
- 2.5 There will be a substation and control building located within the central part of the site, the substation will be 58metres x 35metres and the control room 18metres x 9metres.
- *2.6* Full details of the infrastructure to be used in the Development will be detailed in the DCO if made. The offsite highway improvements and grid connections are not included in the DCO.

## **Grid connection**

- 2.7 It is proposed that the grid connection from the Project would comprise of three stages:
  - Stage 1: a 132kV connection between the Project site and the Carno substation, near Cefn Coch.
  - Stage 2: a 132kV connection between the Carno substation and the Mid Wales substation
  - Stage 3: a 400kV connection between the Mid Wales substation and the existing national electricity network at Lower Frankton, Shropshire. This is National Grid's Mid-Wales Connection Project.
- 2.8 Further details are within the Applicant's grid connection statement (AD-351).
- 2.9 The grid connection does not form part of the Project that is currently being assessed, however the in-combination impacts of the grid connections with the Project have been raised by NRW in the examination process (D5-018) and have been partly considered by the Applicant, and they form part of the assessment later in this document.

## **Development stages**

#### Construction

2.10 The Applicant states in their ES that the construction of the windfarm is expected to take 56 weeks from the start of work on site. Approximately 16,500m<sup>3</sup> of stone will be delivered to the site and stockpiled for 3 months prior to the start of construction on site. Off-site highway works will occur before the on-site works begin to reduce the impact on local traffic prior to the start of the on-site works. Prior to the delivery of the turbines works will commence on: the contractor's compound and facilities, concrete batching plant, on-site access tracks and cable trench works.

#### **Operation and Maintenance**

2.11 Routine maintenance will be carried out using a Light Duty Vehicle or 4-wheel drive vehicle on a daily basis.

#### Decommissioning

- 2.12 The anticipated operational lifetime of the project is 25 years. A decision will be made at this point if it is appropriate to extend the life of the project. At the end of its useful life, decommissioning must take place. A Decommissioning Plan will be prepared and submitted to the Local Planning Authority for approval 18 months before work commences. It is anticipated that the works will take approximately 5 months to complete and that all above ground elements of the development will be removed, including the turbine bases and foundations, and cabling to a depth of 1m below ground level. The underground cables will either be left in-situ or removed.
- 2.13 It is not possible at this stage to predict with any certainty what the European and Ramsar site context of the Project will be in the future as sites may increase or decrease in importance over

that time. Decommissioning activities will need to comply with all relevant UK legislation at the time. Separate authorisations will also be required as part of decommissioning, after the preparation of an ES and HRA by the authorising body (including appropriate consultation with the relevant statutory nature conservation bodies). The decommissioning programme would be included as a requirement of the DCO for this project, if it is made.

2.14 If the environmental baseline were to be similar to the current situation, then the impacts of decommissioning of the Project could be expected to be similar to the anticipated impacts of construction. There is no reason to suppose that the impacts of decommissioning will cause an adverse effect on site integrity and on this basis, the SoS considers that it is reasonable not to include a detailed discussion on decommissioning impacts in this report. She is satisfied that decommissioning effects will be addressed fully by the relevant authorities, prior to decommissioning and in light of more detailed information on decommissioning processes and environmental conditions at that time.

# **Development location and designated sites**

## Location

3.0 The Project is located at the Sweet Lamb Rally Complex, north of the A44 in the Cambrian Mountains, approximately 25km east of Aberystwyth, 9.5km east of Ponterwyd and 8km west of Llangurig. The highest point of the development site is at Y Foel and is 546m above ordnance datum (AOD). A location plan is found in Figure 1.



#### Figure 1. Mynydd y Gwynt wind farm location plan

(Source: MYG ES Figure 1.1)

# **European and International Sites**

- 3.1 The Applicant identified five European sites to be screened for LSE and stated that there would be no likely significant effect on any of the sites either alone or in-combination with other plans or projects, in their Habitats Regulations Screening Reports (AD-350, D3-006, D5-005, D5-006, D6-028, D7-002). The RIES lists these sites and provides a summary on whether the or not the Applicant's conclusion for no likely significant effect or adverse effect was disputed by any interested party.
- 3.2 The sites listed below were identified in the RIES as sites where the Applicant had screened for LSE (D7-022), these are shown in Figure 2:
  - Afon Gwy (River Wye) SAC

- Elenydd Mallaen SPA
- Elenydd SAC
- Coedydd Llawr-y-glyn SAC
- Coedydd a Cheunant Rheidol (Rheidol Woods and Gorge) SAC

Figure 2: Location of European Sites screened for LSE by the Applicant



(Source: ES Figure 11.12a, Appendix 12)

- 3.3 NRW agreed with the sites that had been included in the screening report in relation to the Project site; however they disputed the Applicant's conclusions on LSE. In their response to the ExA's Second Round of written questions (ExA question 4.18 (D5-018)), NRW made reference to the potential impacts on bats from the Tanat and Vyrnwy Bat Sites SAC as a result of the Mid Wales grid connection between Powys and Shropshire, which will form part of the necessary grid connection and consider that this site should be included in the in-combination assessment.
- 3.4 The Applicant's HRA assessment did not identify any potential for the Project to affect European sites located in other countries and no other parties made reference to any site's located in other countries (RIES).

# Likely Significant Effects Test

- 4.0 Under Regulation 61 of the Habitats Regulations, the SoS must consider whether a development will have a LSE on a European site, either alone or in combination with other plans or projects. A LSE is, in this context, any effect that may be reasonably predicted as a consequence of a plan or project that may affect the conservation objectives of the features for which the site was designated, but excluding trivial or inconsequential effects. An AA is required if a plan or project is likely to have a significant effect on a European site, either alone or in combination with other plans or projects.
- 4.1 The purpose of this test is to identify LSEs on European sites that may result from the Project and to record the SoS's conclusions on the need for an AA and her reasons for screening activities, sites or plans and projects for further consideration in the AA. For those features where a LSE is identified, these must be subject to an AA. This review of potential implications can be described as a 'two-tier process' with the LSE test as the first tier and the review of effects on integrity (AA) as the second tier.
- 4.2 This section addresses this first step of the HRA, for which the SoS has considered the potential impacts of the Project both alone and in combination with other plans and projects on each of the interest features of the European sites identified in the RIES and the Tanat and Vyrnwy Bat Sites SAC, to determine whether or not there will be a LSE. This site has been included by the SoS as she cannot rule out LSE in-combination with the necessary grid connection.
- 4.3 The Applicant's HRASR (ver 6) has only considered the LSE of the proposed grid connection from the Project to a substation at Cefn Coch (the Carno substation). It has not made an assessment of the likely significant effects of the other necessary grid connections from the Carno substation to the Mid Wales substation, and the Mid Wales substation to Shropshire. These do not form part of the current Project, but paragraph 4.9.1 to 4.9.3 of EN-1<sup>2</sup> make it clear that the potential effects of the related infrastructure, including grid connections, should be considered when applications for new generating stations are submitted at different times to the related infrastructure.
- 4.4 Paragraph 4.9.2. of EN-1 states:

'The Planning Act 2008 aims to create a holistic planning regime so that the cumulative effect of different elements of the same project can be considered together'. 'In some cases applicant(s) may decide to put in an application that seeks consent only for one element but contains some information on the second'.

Para 4.9.3 states:

<sup>&</sup>lt;sup>2</sup> <u>https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/47854/1938-overarching-nps-for-energy-en1.pdf</u>

"...the applicant(s) ...must ensure they provide sufficient information to comply with the EIA Directive including the indirect, secondary and cumulative effects, which will encompass information on grid connections'.

4.5 There is information in the public domain on the PINS National Infrastructure Programme of Projects from NRW on the LSE on the Tanat and Vyrnwy Bat Sites SAC from the Mid Wales substation to Shropshire. Based on her understanding of EN1, the SoS considers that potential impacts on these sites should be considered as part of the in-combination impact of the Project and its grid connections.

## **Likely Significant Effects Test**

- 4.0 The RIES compiles, documents and signposts information submitted throughout the examination by both the Applicant and Interested Parties. The RIES sets out the European sites identified by the Applicant and considered during the examination. Annex 2 of the RIES identifies the European sites and features for which the Applicant's conclusions were disputed by interest parties during the examination.
- 4.1 Decommissioning impacts are not considered further within this report for the reasons discussed within section 2.
- 4.2 The Applicant's Habitats Regulations Assessment Screening Report (HRASR) (D7-022) concluded that the Project would have no likely significant effects, either alone or in-combination with other plans or projects, on the qualifying features of the 5 European sites that they screened for LSE, listed below:
  - Afon Gwy (River Wye) SAC
  - Elenydd Mallaen SPA
  - Elenydd SAC
  - Coedydd Llawr-y-glyn SAC
  - Coedydd a Cheunant Rheidol (Rheidol Woods and Gorge) SAC
- 4.3 The Applicant provided an in-combination assessment for Afon Gwy (River Wye) SAC and Elenydd-Mallaen SPA, and concluded that there was no LSE, because of the proposed mitigation which will be requirements of the DCO, if made, and because there is no connectivity between the SPA and the Project site.
- 4.4 NRW does not agree with the statements made by the Applicant regarding the absence of LSE from the Project alone and in-combination with other plans and projects for the following two European sites:
  - Afon Gwy (River Wye) SAC
  - Elenydd Mallaen SPA

- 4.5 NRW also considers that there is a LSE from the Project in-combination with other plans and projects, namely the grid connection, for the following three European sites:
  - Elenydd SAC
  - Coedydd Llawr-y-glyn SAC
  - Coedydd a Cheunant Rheidol (Rheidol Woods and Gorge) SAC
- 4.6 NRW also considers that there is an LSE in-combination from the necessary grid connections, which should be considered when assessing the impacts of the whole project, on the following site:
  - Tanat and Vyrnwy Bat Sites SAC
- 4.7 The ExA concludes that there is no LSE for all 5 sites from the Project (para 5.2.53 to 5.2.55 of ExA report), but states that the SoS may wish to carry out an AA for the Elenydd-Mallaen SPA, as NRW's position is that there is a LSE and insufficient information to conclude whether there will be an adverse effect on integrity. In relation to the Tanat and Vyrnwy Bat Sites SAC, the ExA concludes that as this will be part of a separate NSIP application, relevant impacts will be assessed during this process, and that a Grampian style condition could be attached to the DCO for the Project, if made, which would mean that no works on the Project could commence until all the necessary consents for the grid connections had been obtained.
- 4.8 Having had full regard for the information provided within the ExA's report, NRW's and the Applicant's submissions, the SoS considers that LSE cannot be ruled out from the Project alone, on the features of two European sites, and in-combination with other plans and projects on six European sites, as listed in Table 1 below. An AA is therefore required.

Site	Qualifying feature	Effect	Project Alone	Project in- combination
Elenydd-Mallaen SPA	Red Kite	Collision risk during operation	Y	Y
	Merlin			
	Peregrine			
Afon Gwy (River	Atlantic Salmon	Sedimentation, surface water run-off, importation of invasive species, heavy metals, chemical pollution, and disturbance.	Y	Y
Wye) SAC	Otter			
	Bullhead			
	Sea Lamprey			
	Brook Lamprey			
	River Lamprey			
	Watercourses of plain to montane levels		Ν	Y

Table	1. European site	s where LSE cannot	be ruled out alone	and/or in-combination	ation with other
plans	or projects				

Site	Qualifying feature	Effect	Project Alone	Project in- combination
	Twaite Shad			
	White Clawed Crayfish			
	Alice Shad			
	Transition Mires		N	N
Elenydd SAC	Calaminarian grasslands	Habitat destruction	Ν	Y
	Oligotrophic to mesotrophic standing waters			
	Floating water- plantain			
	Blanket Bogs			
	European dry heaths			
Coedydd Llawr-y- glyn SAC	Old sessile oak woods with llex and Blechnum	Habitat destruction	Ν	Y
Coedydd a Cheunant Rheidol SAC	Old sessile oak woods with llex and Blechnum	Habitat destruction	Ν	Y
Tanat and Vyrnwy Bat Sites SAC	Lesser Horseshoe bats	Disturbance, loss of foraging areas, loss of vegetation used as flight lines	Ν	Y

4.9 The information within the RIES presents the potential interactions of each stage of the Project (construction and operation) with the qualifying features of the sites. The sites and features shown in Table 1 have been taken forward to the AA.

## **Potential Impacts**

4.10 During the examination the Applicant updated their HRASR several times to reflect the ongoing discussions, however by the end of the examination there was still disagreement between the Applicant and NRW over the potential impacts of the Project on the six European sites listed in Table 1. NRW consider that there would be LSE's on the European sites from collision risk to birds during the operation phase, electrocution from power lines from the grid connection, sedimentation, habitat destruction, disturbance, surface water run-off, importation of invasive species, heavy metals and chemical pollution.

# **Likely Significant Effects**

4.11 The Secretary of State (SoS) has considered the potential construction and operational impacts of the Project on all relevant interest features to determine whether there will be LSE in the

context of the Habitats Regulations. LSEs as a result of the project are summarised in Table 1, followed by a site by site description.

## **Elenydd-Mallaen SPA**

- 4.12 NRW identified a LSE for this site for direct collision with the turbines during operation alone and in-combination with other plans and projects, for all three features of the SPA: red kite, merlin and peregrine, and for electrocution to red kite from the grid connection (RIES). The Applicant stated that there would be no LSE for any of the features, and the ExA supported this view.
- 4.13 The SPA is located approximately 3.4km from the Project site and the Applicant's bird surveys recorded red kite using the Project site frequently and regularly and also contained records of peregrine and merlin using the site. The SoS concludes, based on the evidence provided, that it has not been proven beyond reasonable scientific doubt that the birds using the Project site do not originate from the SPA, as the Project site lies within the birds' foraging range.
- 4.14 NRW raised concerns about possible electrocution of red kites using the SPA, from the grid connection from the Project site to the Carno substation. The Applicant has proposed mitigation to reduce the potential impact, which they have proposed could be a condition of any future consent for the grid connection, and the ExA has agreed with this proposal. However the SoS concludes that further assessment is required at this stage in order to understand this incombination impact.
- 4.15 Having considered the evidence and the advice of NRW, as the statutory nature conservation adviser, the SoS concludes that she cannot rule out likely significant effects on red kite, merlin and peregrine from collision risk during the operation of the turbines, alone and in-combination with other plans and projects, and to red kite from electrocution in combination with the necessary grid connection, for Elenydd Mallaen SPA, and an Appropriate Assessment is therefore required.

## Afon Gwy (River Wye) SAC

- 4.16 The Applicant stated in its Screening Report (HRASR) that there would be no LSE on any of the features of the Afon Gwy SAC, either alone or in-combination with other plans or projects from the effects of sedimentation, surface water run-off, importation of invasive species, heavy metals, chemical pollution, and disturbance.
- 4.17 NRW disagreed with the Applicant and identified a LSE both alone and in-combination for the following features: Otter, Atlantic Salmon, Bullhead, Sea Lamprey, Brook Lamprey and River Lamprey (D6-010). NRW also identified an LSE in-combination with other plans and projects for the following features: watercourses of plain to montane levels, Twaite Shad, White Clawed Crayfish and Alice Shad (D6-010, D7-012). They agreed with the Applicant that there was not the potential for LSE alone for watercourses of plain to montane levels, Twaite Shad, White Clawed Crayfish or Alice Shad as the features were located some distance downstream of the

Project (D10-002 NRW 14.05.15: P2). NRW also agreed with the applicant that there was no potential for LSE either alone or in-combination for the Transition Mires feature as it is confined to one location within the SAC (D10-002 NRW 14.05.15: P2).

- 4.18 The ExA noted that at the close of examination, NRW had remaining uncertainties as to the impact on the Afon Gwy SAC in respect of water and sediment control and otter disturbance. However, the ExA considers that 'despite NRW's uncertainties, there is sufficient evidence to conclude that, through the operation of the various Requirements of the recommended DCO the proposed development, either alone or in combination with other projects, would not have any LSE on the integrity of this European site' (ExA: 5.2.54).
- 4.19 Having considered the evidence and the advice of NRW, as the statutory nature conservation adviser, the SoS concludes that she cannot rule out likely significant effects on features of the Afon Gwy SAC, specifically the Atlantic Salmon, Otter Bullhead, Sea Lamprey, Brook Lamprey and River Lamprey features both alone and in-combination, and on watercourses of plain to montane levels, Twaite Shad, White Clawed Crayfish and Alice Shad features in-combination with other plans and projects only. She therefore considers that an Appropriate Assessment is required.

# Elenydd SAC, Coedydd Llawr-y-glyn SAC and Coedydd a Cheunant Rheidol SAC

- 4.20 The Applicant states that there would be no LSE on these three SACs from the Project alone or in-combination with other plans or projects. NRW agreed that there would be no LSE alone from the Project site, but advises that there could be an LSE in-combination from the necessary onward grid connection on the features of all three sites. The Applicant stated that the grid connections would be subject to their own consenting process and did not need to be considered as part of the HRA for this Project. The ExA concluded that a Grampian style condition could be added as requirement in the DCO, if made, that would prevent the carrying out of development on the Project until such a time that a grid connection was in place, which would ensure that the Project could not progress unless it could be demonstrated that a grid connection had no adverse effect on the integrity on the features of the three SACs alone or incombination with other plans or projects (para 5.2.38 ExA Report).
- 4.21 The SoS wishes to have assurance that sufficient investigations have been undertaken to inform her view of in combination impacts before determining this application in line with EN-1. She therefore considers, on the basis of the evidence before her, that there is a LSE from the Project in combination with the necessary grid connection on the Elenydd SAC, Coedydd Llawr-y-glyn SAC and Coedydd a Cheunant Rheidol SAC and an Appropriate Assessment is required.

## Tanat and Vyrnwy Bat Sites SAC

*4.22* The Applicant has considered stage 1 of the three grid connection stages, which is the stage between the Project site and the Carno substation. They have not provided an LSE assessment

of stages 2 and 3. NRW advise that this does not fulfil the requirements of the Habitats Regulations as there should be an assessment of all the necessary three stages of the grid connection.

- 4.23 Stage 3 of the grid connection, is the mid Wales Connection Project, between the mid Wales substation to Lower Frankton, Shropshire and information regarding the project is publically available on the PINS National Infrastructure Programme of Projects. From this, the SoS notes that it will pass in close proximity to the bat roosts within the Tanat and Vyrnwy Bat Sites SAC, and NRW have stated that there is likely to be a significant effect from this project on the SAC.
- 4.24 The ExA concluded that a Grampian style condition could be added as requirement in the DCO, if made, that would prevent the carrying out of works on the Project until such a time as consents were in place for a grid connection from the on-site substation to the National Grid. This would provide a mechanism to ensure that Project could not be developed if future HRAs of the grid connections demonstrated that there would be an LSE on the Tanat and Vyrnwy Bat Sites SAC.
- 4.25 The SoS wishes to have assurance that sufficient investigations have been undertaken to inform her view of in combination impacts before determining this application in line with EN-1. She therefore considers that there is a LSE from the Project in combination with the necessary grid connection on the Tanat and Vyrnwy Bat Sites SAC and an Appropriate Assessment is required.

## Scope of in combination assessment

*4.26* Under the Habitats Regulations, the SoS is obliged to consider whether other plans or projects in combination with the Project might affect European sites. In this case there are a number of other plans and projects which could potentially affect some of the same European sites. These are listed in Table 2 and include proposed wind farms, tree felling and rallying.

Table 2 Plans and Proj	ects considered in-c	ombination with th	e Project
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Project type	Project name
Proposed wind farm	Bryn Blaen
	Hirddywell
	Llaithddu
	Pantyceln Farm
	Garreg Lwyd
	Hendy
	Llandinam
	Llanbadam Fynydd

Neuadd-goch Bank	
Tree felling	In Hafren Forest and Esgair Ychion woods
Grid connection	Mynydd y Gwynt Option 1 and Option 2 grid connection routes
Other	Rallying activity on Project site

- 4.27 During the examination there was disagreement between NRW and the Applicant about the incombination impacts of the Project. The Applicant only provided an in-combination assessment for the Afon Gwy SAC and Elenydd-Mallaen SPA and concluded that there was no LSE from the Project in-combination with other plans and projects on these two European sites. NRW considered that the in-combination impacts in relation to the grid connection from the Project to the Carno substation should also be assessed for Elenydd SAC, Coedydd Llawr-y-glyn SAC and Coedydd a Cheunant Rheidol (Rheidol Woods and Gorge) SAC (D2-011). They also consider that the potential in-combination impacts on the Tanat and Vyrnwy Bat Sites SAC from the Mid Wales to Shropshire grid connection should be assessed.
- 4.28 There was also disagreement between the Applicant and NRW about which plans and projects should be considered as part of the in-combination assessment, with NRW considering that all 3 stages of the grid connections should form part of the assessment.
- 4.29 The Applicant and ExA considered that the in-combination impacts of the necessary grid connection did not need to be considered as part of the HRA for the Project, as the gird connections would be subject to their own HRA. The ExA proposed a requirement for the DCO, if made, that would prevent any development until the necessary grid connections had been consented (para 5.2.53 of ExA's report).
- 4.30 The SoS wishes to have assurance that sufficient investigations have been undertaken to inform her view of in combination impacts before determining this application in line with EN 1 and therefore considers that the in-combination impacts of the grid connection with the Project should be assessed as part of the HRA for this Project.
- 4.31 The SoS considers that insufficient information has been provided to inform a robust in combination assessment of LSE in line with her duties under the Habitats Regulations. The SoS is therefore unable to exclude LSEs from the 6 sites identified in Table 1, for those reasons outlined above, and has focussed her AA on these features.

# **Appropriate Assessment**

#### Test for Adverse Effect on Site Integrity

- 5.0 The requirement to undertake an AA is triggered when a competent authority, in this case the SoS, determines that a plan or project is likely to have a significant effect on a European site either alone or in combination with other plans or projects. Guidance issued by the European Commission states that the purpose of an AA is to determine whether adverse effects on the integrity of the site can be ruled out as a result of the plan or project, either alone or in combination with other plans and projects, in view of the site's conservation objectives (European Commission, 2000).
- 5.1 The purpose of this AA is to determine whether or not AEoI of those sites and features identified during the LSE test can be ruled out as a result of the Project alone or in combination with other plans and projects in view of the site's conservation objectives and using the best scientific evidence available.
- 5.2 If the competent authority cannot ascertain the absence of an AEoI within reasonable scientific doubt, then under the Habitats Regulations, alternative solutions should be sought. In the absence of an acceptable alternative, the project can proceed only if there are imperative reasons of overriding public interest ("IROPI") and suitable compensation measures identified. Considerations of IROPI and compensation are beyond the scope of an AA.

#### **Conservation Objectives**

5.3 Guidance from the European Commission indicates that disturbance to a species or deterioration of a European site must be considered in relation to the integrity of that site and its conservation objectives (European Commission, 2000). Section 4.6.3 of that guidance defines site integrity as:

...the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be classified.

- 5.4 Conservation objectives outline the desired state for a European site, in terms of the interest features for which it has been designated. If these interest features are being managed in a way which maintains their nature conservation value, they are assessed as being in a 'favourable condition'. An AEoI is likely to be one which prevents the site from making the same contribution to favourable conservation status for the relevant feature as it did at the time of its designation (English Nature, 1997).
- 5.5 There are no set thresholds at which impacts on site integrity are considered to be adverse. This is a matter for interpretation on a site-by-site basis, depending on the designated feature and nature, scale and significance of the impact. Conservation objectives have been used by the SoS to consider whether the Project has the potential for having an AEoI, either alone or in combination. The potential for the Project to have an adverse effect is considered for each site in turn.

# Elenydd-Mallaen SPA

- 6.0 The Elenydd-Mallaen SPA is located in the uplands of central Wales. It contains extensive heath and blanket mire-dominated uplands and is intersected by valleys containing woodlands and grasslands. It is one of the most important areas of hill land for nature conservation in Wales. Crags are frequent throughout the site. The site is important for a number of breeding raptors, some of which are resident throughout the year (CCW core management plan, 2008).
- *6.1* The site qualifies under Article 4.1 of the Birds Directive by supporting populations of European importance of the following species listed on Annex 1 of the Directive (JNCC, 2005):
  - Merlin *Falco columbarius*, 7 pairs representing at least 0.5% of the breeding population in Great Britain (5 year mean, 1987-1991)
  - Red Kite *Milvus milvus*, 15 pairs representing at least 9.4% of the breeding population in Great Britain (Count as at 1997)
  - Peregrine *Falco peregrinus*, 15 pairs representing at least 1.3% of the breeding population in Great Britain
- *6.2* The SPA's northern boundary is approximately 3.4km from the Project site (para 5.2.19, ExA report).

#### Table 3 Conservation Objectives for Elenydd-Mallaen SPA (CCW core management plan, 2008)

Conservation Objectives	<ul> <li>Red Kite</li> <li>At least 15 pairs of kites (or 0.5% of the British population) nest regularly within the SPA, or within 2km of the boundary</li> <li>Traditional nest sites within the SPA continue to be used, and there is at least 1 fledged young/nesting pair/year</li> <li>The extent of suitable semi-natural feeding habitat within the SPA is maintained.</li> <li>Availability of corrigon within the SPA is maintained.</li> </ul>
	<ul> <li>Roosting sites within the SPA are maintained.</li> </ul>
	• All factors affecting the achievement of these conditions are under control.
	<ul> <li>Merlin         <ul> <li>The SPA area continues to support at least 7 pairs of breeding merlins, or 0.5% of the British population.</li> <li>Traditional nest sites within the SPA continue to be used.</li> <li>The extent of suitable semi-natural feeding habitat within the SPA is maintained.</li> <li>All factors affecting the achievement of these conditions are under control.</li> </ul> </li> </ul>
	<ul> <li>Peregrine</li> <li>The SPA area continues to support at least 15 pairs of breeding peregrines.</li> </ul>
	or 0.5% of the British population.
	Traditional nest sites within the SPA continue to be used.     The avtent of avitable appring to avitable appring the set of th
	maintained.
	• All factors affecting the achievement of these conditions are under control.

6.3 The SoS has identified a LSE upon the interest features of the site because of the potential for the Project, both alone and in combination with other plans and projects, to cause collision mortality to red kite, merlin and peregrine, and electrocution to red kite. The potential for this impact to constitute an adverse effect on integrity is considered below for each species of the SPA.

## Red kite

- 6.4 Nationally, red kite numbers have increased since classification of the SPA in 1996, when the SPA accounted for 9.3% of the GB breeding population. In 1997 the number of breeding pairs within the SPA and its 2km buffer was 41, and the GB population was at around 440 breeding pairs. Recent population estimates put the Welsh population at 1,200 pairs and the GB population at greater than 1,700 pairs. The Designated Sites Bird Monitoring Project (Vanstone et al, 2012) identified the number of breeding pairs within the SPA in 2011 at 18 pairs while the population within the SPA and 2km of the boundary buffer is recorded at 66 pairs. The data therefore suggests that the population of red kite within and adjacent to the SPA has increased since classification of the site in 1996. (HRASR v 6, para 82 D6-010).
- 6.5 The Applicant carried out bird surveys at the Project site in 2005 and 2010 during the breeding season and 2009/10 and 2010/11 during the winter season. They also undertook Vantage Point surveys between November 2009 and November 2010. They also undertook an additional red kite nest survey in 2014, that showed there were no red kite nests within 2km of the Project site, and an early breeding season survey was undertaken 2015 of all areas of the SPA and its buffer that lie within 6km of the Project site, in which no nesting sites were found (D10-007 Annex 3).
- 6.6 The breeding bird survey and the winter bird survey in spring and summer 2010 and winter 2010/2011, recorded red kite using the whole site frequently and regularly as hunting territory and passage, although they were not found to be breeding on site. Red kite was also one of the most frequent species recorded during the Vantage Point surveys undertaken between November 2009 to November 2010 (para 89 HRASR v6). The Applicant states that a high proportion of red kite sightings were at the height that is potentially at risk from collision strike and that in comparison to previous surveys undertaken at the site in 2004, red kite activity levels over the Project site appear to have increased which is consistent with the apparent increasing populations of red kite in Mid Wales.
- 6.7 NRW has stated that the 2005, 2009/10 and 2010/11 red kite survey data is now older than good practice guidance suggests is suitable to inform an assessment, and that they do not always comply with good practice guidance with regard to bird surveys for windfarm assessments (para 81 D6-010), as they did not include surveys of nest locations. The Applicant used these surveys to determine the collision risk mortality of red kite using the Project site.
- *6.8* When determining the potential effect of the Project on the SPA the Applicant has used guidelines produced by Scottish Natural Heritage (SNH) 2013 (Assessing connectivity with Special Protection Areas) to determine the foraging distance of red kite, in order to predict the connectivity of the Project site with the SPA. The guidance states that the core foraging range of red kite during the breeding season from nests is 4km, with a maximum foraging range of 6km.

- 6.9 NRW considers that the non-breeding season should also be considered as red kites remain in the area outside of the breeding season. A literature review undertaken for SNH by Pendlebury et al (2011), which underpins the SNH (2013) guidance used by the Applicant, shows that red kite can forage up to 10km from roosting locations during the non-breeding season (D6-023, D7-012).
- 6.10 The Applicant does not believe that there is a requirement to consider the non-breeding foraging range (para 5.2.27 ExA report, D10-007 Annex 3) as the SNH 2013 only gives foraging ranges for the breeding season. The Applicant does not provide any reasoning or alternative research which challenges the findings of the Pendlebury literature review.
- 6.11 The Applicant suggests that the red kites found on the Project site come from roost and breeding sites in the valleys around Llangurig and other locations outside of the SPA (para 5.2.25 of ExA report). They state that only a small number of the birds within the SPA and its 2km buffer are likely to be in foraging distance of the Project site, with the vast majority of the SPA being outside this distance. They assert that 'it is extremely unlikely that in this area, red kite would fly 6km to the Project site from the SPA when there is an abundance of intervening foraging habitat. Red kite are generalist feeders, and will feed on invertebrates and carrion; most forage within 1km of the breeding area because outside of their home territory they would be competing against individuals who derive from much closer breeding populations'(D6-015 para 76).
- 6.12 NRW asserts that as the Applicant has no data to demonstrate the origin of the red kite using the Project site during the breeding or non-breeding season, then it cannot be stated that they do not come from the SPA. Based on foraging ranges quoted in the literature (Pendlebury et al 2011) they consider that it should be assumed that the red kite using the site may be connected to the SPA population as it cannot be demonstrated that this is not the case (D5-013). The SoS has not been made aware of any study which supports the Applicant's view and in such cases must adopt a precautionary approach, that is that red kites using the site may originate from Elenydd-Mallaen SPA.
- 6.13 Further weight is added to this view by the Applicant's 2014 nest survey which shows no red kites are nesting within 2km of the Project site boundary and the data from the Red Kite Trust which shows 1 known nest within 3-4km of the Project site, and a further 7 known nests within 4-6km of the Project site. NRW highlight that if the red kites using the Project site are from the known nest locations from the Red Kite Trust data, then they must be travelling around 6km to forage in the Project site. NRW state that there may be further unknown nests to the north-west of the Project site which are nearer but they are not aware of any data to demonstrate if this is the case or not. They therefore ascertain that there is no certainty regarding the origin of red kites using the site in the breeding season and their connectivity to the SPA (Para 21 D7-012).
- 6.14 The Applicant has undertaken collision risk modelling for red kite using the Vantage point surveys from November 2009 to November 2010, which concluded that the predicted collision risk from the Project for red kite is less than one pair per annum, and that this is more likely to affect the population outside rather than within the SPA (para .5.2.25 ExA's Report, AD-064 para 1.431, AD-092, D10-007 Annex 3).

- 6.15 NRW have concerns about the age and methodology of the surveys that informed the assessment, as they did not conform to recommended good practice guidance (D3-013, RR-66, D2-011).
- *6.16* Mitigation has been proposed by the Applicant to address the issue of collision risk through aiming to avoid making the area under and around turbines attractive to red kite. This would be through reducing the available food sources, by not allowing within 150m of turbine hubs: lambing of more than 15% of the flock; docking tails using constricting bands (cauterising irons would be used instead), spreading of manures and the cutting for hay or silage. This would be stipulated within the Habitat Management Plan (HMP), which would be secured as a requirement of the DCO, if it was made.
- *6.17* The Applicant states that this represents a change from the current position, where most of the flock is lambed on the hill and tail docking is carried out using a rubber constrictor ring, which means the tails fall off on the hill. These then provide carrion which is likely to attract red kite.
- *6.18* NRW (Para 85 D6-010, D6-023, para 4.5.16 ExA's Report, D10-002) has stated that this mitigation may reduce red kite numbers, but there is no certainty that this will be the result, and there has been no quantification of the reduction in the likely collision numbers. It is also unclear whether these activities actually currently occur in the areas around the turbines and whether a commitment not to undertake them would lead to any reduction in the numbers of red kites using the area. The SoS agrees that as there has been no quantification of the reduction in likely collision numbers, that it is not possible to ascertain the efficacy of the proposed mitigation.

#### **Conclusions- alone**

- *6.19* In their Habitats Regulations Assessment Screening Report (HRASR ver 6) the Applicant states that there will be no LSE on the red kite population of the SPA, as the birds using the site are not from the SPA. In the view of the SoS, the Applicant does not give evidence to support this statement.
- 6.20 The ExA concluded that on the basis of the evidence presented, there is a reasonable certainty that red kite observed on the Project site do not originate from the SPA, and therefore the Project will not have a LSE alone on the SPA (paras 5.2.34, 5.2.55 ExA Report).
- *6.21* At the end of the examination NRW advised that it should be assumed that the red kite that use the application site may be connected to the SPA, and that the HRA should assess whether the possible mortality rates are likely to affect the SPA red kite population (D7-012). They do not agree that it has been demonstrated that adverse effects on the red kite feature of the site as a result of collisions can be ruled out alone (D6-010, D6-023).
- *6.22* The SoS, having considered the information provided during and after the examination, agrees with NRW, as the statutory nature conservation body and concludes that there is not enough information to ascertain that there will be no adverse effect on the integrity of the red kite feature of Elenydd-Mallaen SPA from the Project alone. The SoS is of the opinion that:

- It has not been proven beyond reasonable scientific doubt that the red kite using the Project site do not come from the SPA, and accepts NRW's advice on this matter.
- Mitigation proposed by the Applicant to address the issue of collision risk through aiming to avoid making the area under and around turbines attractive to red kite may reduce red kite numbers, there is no certainty that this will be the result, and there has been no quantification of the reduction in the likely collision numbers. It is also unclear whether these activities actually already currently occur.
- The Secretary of State shares the concerns of NRW as to the age and methodology of the surveys that informed the Applicant's assessment, as they did not conform to recommended good practice guidance

#### In combination

- *6.23* The Applicant states that there will be no LSE on the Elenydd-Mallaen SPA from the Project incombination with other plans and projects, as it believes that there is no connectivity between the SPA and the Project site. Consequently, it states that there is no risk of mortality through collision of the red kite from the SPA, or from electrocution from the proposed grid connection.
- *6.24* In their in-combination assessment the Applicant included all plans and projects within 10km of the Elenydd-Mallaen SPA (Para 40 HRASR v6).
- 6.25 The Applicant lists four proposed wind farms within 10km of the Elenydd Mallaen SPA: Bryn Blaen (6.7km from SPA), Hirddywell (7.4km from SPA), Llaithddu (7.2km from SPA), and Pantycelyn Farm (8.3km from SPA). The Applicant has concluded that there would be no connectivity with the SPA from these proposals, as they are outside of the 6km maximum breeding foraging range of red kite (para 132 HRASR v6).
- *6.26* NRW have advised that the Llandinam windfarm should also be included in the in-combination assessment for this SPA, as they consider that it has turbines within 10km of the SPA (D6-023).
- 6.27 The Applicant notes that the population of red kite in the SPA area has increased from 41 pairs in 1997, to 66 pairs in 2011, despite there being two operational wind farms in close proximity to its boundary; Bryn Titli, which started operation in 1994 and Cefn Croes which started operation in 2005. It states, therefore, that there is no evidence that the operational wind farms have had a negative impact on the red kite population within the SPA area (Para 134 v 6).
- 6.28 NRW does not agree with this rationale because there has been no monitoring of the effects of the existing windfarms on red kites, and risk of collision is likely to be determined by the numbers of red kites using an area which is not necessarily directly correlated with distance from the SPA (Para 26 – D7-012).
- *6.29* NRW do not agree that it has been demonstrated that there is unlikely to be a significant incombination effect on red kite, as the red kite collision risk figures for the other developments have not been provided and considered by the Applicant. NRW have advised that there should be an assessment of whether the likely mortality rates alone or in-combination with other projects,

including the grid connection and other proposed wind farms are likely to effect the population of red kite for which the SPA is designated (RR-66, D7-012).

6.30 There are two proposed grid connection routes to connect the Project to the Carno substation, though the Applicant has advised that Option 1 has now been superseded by Option 2, but as of yet there is no accepted agreement on either route. Option 1 of the grid connection (figure 17.1 of the ES) follows a route that would pass within 3km of the SPA. A report from English Nature (2002), which has been cited by the Applicant in their HRASR, highlights that electrocution from power lines is a potential threat to red kites. The Applicant states that 85% of the proposed grid connection route falls outside of the 10km normal winter foraging range of red kites within the SPA and its buffer, and 94% outside of the breeding foraging range. As 85% of the activity of red kite on the Project site was recorded during the summer period, the Applicant concludes that Option 1 would not affect the population of red kite within the SPA or its buffer in-combination with the Project (HRASR v6). They do however suggest that the risk of electrocution could be reduced through insulating parts of the power lines in the section of the route that lies within the breeding foraging range of the SPA, but this would have to be secured through the consent process for the grid connection.

#### **Conclusion in-combination**

- *6.31* The ExA concluded that on the basis of the evidence presented, there was a reasonable certainty that the red kite found on the Project site do not originate from the SPA, and that on this basis the Project would not have a LSE on the red kite feature of the SPA alone or in-combination with other plans or projects. The ExA was therefore satisfied that the Project would not contribute to any adverse effect on the integrity of the SPA for the red kite feature (para 5.2.24 ExA report).
- *6.32* At the end of the examination NRW considered that it had insufficient information to advise whether there would be an adverse effect on the integrity of the red kite feature of the SPA incombination with other plans and projects (AS-15, para 5.2.34 ExA report).
- 6.33 Having considered all the information provided during and after the examination, the SoS concludes that there is insufficient information to reach a firm conclusion of no adverse effects on the integrity of the Elenydd-Mallaen SPA, in-combination with other plans and projects This is in line with advice from her statutory nature conservation advisors, NRW.
- *6.34* The SoS has reached this conclusion, bearing in mind the high levels of proof set in case law on such matters, including ECJ case C-127/02 (Waddenzee). She considers that:
  - It has not been proven beyond reasonable scientific doubt that the red kite using the Project site do not come from the SPA, and accepts NRW's advice on this matter.
  - The Applicant has not provided information on the in-combination impact of the Project with
    other wind farms as they state that there is no connectivity between the wind farms and the
    SPA. The Secretary of State, however, considers that the Applicant has not demonstrated
    sufficiently that there is unlikely to be a significant in-combination effect on red kite, as the

red kite collision risk figures for the other developments have not been provided and considered by the Applicant.

- Mitigation has been proposed by the Applicant to address the issue of collision risk through aiming to avoid making the area under and around turbines attractive to red kite. Although this mitigation may reduce red kite numbers, there is no certainty that this will be the result and there has been no quantification of the reduction in the likely collision numbers.
- The Secretary of State shares the concerns of NRW as to the age and methodology of the surveys that informed the Applicant's assessment, as they did not conform to recommended good practice guidance.

## **Merlin and Peregrine**

- 6.35 The Applicant's survey results of the Project site found only two records of merlin in the Vantage Point surveys carried out in 2009/2010, one of these was during the breeding season, and no records from the 2010/2011 winter bird survey. One merlin was recorded during the breeding bird survey in 2005 and one during the 2004/2005 non-breeding bird survey. The Applicant states that merlin are known to breed on the Plynlimon (Pumlumon) SSSI, which covers a large area adjacent to the north east of the Project site, and consequently this was possibly the observed birds' place of origin. The Applicant concluded that merlin do not breed at the Project site and only very occasionally hunt over the site (HRASR v6).
- 6.36 The Applicant's surveys of the Project site recorded only one peregrine during the Vantage Point survey in 2009/2010 and one peregrine in the 2004/2005 non-breeding bird surveys. They concluded that peregrine do not breed at the Project site and only very occasionally hunt over the site. They stated that peregrine are known to breed on the Plynlimon (Pumlumon) SSSI and consequently this was possibly the observed birds' place of origin, but peregrine are known to travel long distances (up to 18km Pendlebury et al 2011)(Para 95 HRASR v6).
- 6.37 NRW advised the Applicant that tracking and monitoring studies would need to be undertaken to determine whether or not merlin and peregrine found on the Project site originate from the SPA. In the absence of such studies then the Applicant should make a precautionary assumption that all peregrine and merlin recorded at the site originate from the SPA and assessments should be undertaken on this basis (D2-011). The core foraging area for peregrine is 2km with a maximum of 18km, and the core foraging area for merlin is 5km (Pendlebury et al. (2011). The nearest turbines to the SPA are approximately 4.2km, there is therefore a potential that merlin and peregrine using the Project site could be from the SPA (D10-002).
- *6.38* NRW expressed a number of concerns in relation the baseline bird surveys for merlin and peregrine (D10-002). These are:
  - That they do not comply with good practice guidance, as the surveys do not cover a 2km distance from the site boundary, which is set out in SNH good practice guidance for surveys published in 2005, 2010 and 2014, so did not contain any nest surveys.

- Concerns about the methodology of the surveys.
- Concerns about the age of the surveys as the last of the surveys for the two species were completed in 2010 and the relevance of the data to the current baseline is uncertain.
- *6.39* NRW advise, therefore that these surveys cannot be relied upon. In particular, they are concerned that merlin may have been under-recorded given the acknowledged difficulties with recording this species in Vantage point surveys.
- 6.40 In response, the Applicant has stated that they do not feel that nesting surveys are required as they know where these species nest in the areas surrounding the Project site. Furthermore, there are no merlin nests within 3km of the site and no peregrine nests within 5km of the site. NRW states that no evidence has been provided to support this statement.

#### Conclusion alone and in-combination

- 6.41 The ExA concluded that, as the Applicant's survey results have shown that the use of the Project site by merlin and peregrine is very low, a significant impact is not predicted on the SPA population of either of these species (para 5.2.22 ExA report). The ExA also notes that, despite NRW's concerns about the surveys, they do not conclude that the Project will have a significant effect on merlin or peregrine (para 5.2.24 ExA report). However NRW's response to the RIES (D10-002), states that the summary in Annex 2 is an accurate representation of their outstanding concerns, which are listed in paragraphs 6.37- 6.38 above.
- 6.42 Having assessed the information provided by the Applicant, NRW and the ExA, the SoS concludes that there is insufficient information to ascertain that there will no adverse effect on the integrity of the peregrine and merlin features of the Elenydd-Mallaen SPA either alone or incombination with other plans or projects. She does, however, recognise that the surveys indicate that the use of the site by peregrine and merlin is low and that representations made during the examination by NRW focussed on their concerns about red kite.

# Afon Gwy (River Wye) Special Area of Conservation (SAC)

- *6.43* The Afon Gwy (River Wye) is designated as a SAC and Site of Special Scientific Interest (SSSI). The Afon Gwy and several of its tributaries represent a large ecosystem which acts as an important wildlife corridor, a migration route and a key breeding area for many nationally and internationally important species.
- *6.44* The Afon Gwy was designated as a SAC in 2005. It hosts the following habitats listed in Annex I and species listed in Annex II of the Directive:
  - Allis shad *Alosa alosa*
  - Atlantic salmon Salmo salar
  - Brook lamprey Lampetra planeri
  - Bullhead Cottus gobio
  - Otter Lutra lutra
  - River lamprey Lampetra fluviatilis
  - Sea lamprey *Petromyzon marinus*
  - Transition mires and quaking bogs
  - Twaite shad *Alosa fallax*
  - Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation
  - White-clawed (or Atlantic stream) crayfish Austropotamobius pallipes (NE,2005)
- *6.45* Broadly, the site's conservation objectives aim to ensure the maintenance of the capacity of the habitats to support each feature at near-natural population levels, and the maintenance of water quantity and quality, physical habitat, and community composition and structure (ExA: 5.2.6). The conservation objectives are set out in Table 4. The detailed conservation objectives for each of the features of the SAC are outlined in the Core Management Plan (CCW, 2008) and replicated in the Applicant's HRA Screening Report (HRASR: P45-48).

#### Table 4 Conservation Objectives for Afon Gwy SAC

Conservation Objectives	Ensure that the integrity of the site is maintained or restored as appropriate,
	and ensure that the site contributes to achieving the Favourable
	Conservation Status of its Qualifying Features, by maintaining or restoring;
	- The extent and distribution of qualifying natural habitats and
	habitats of qualifying species
	- The structure and function (including typical species) of qualifying
	natural habitats
	- The structure and function of the habitats of qualifying species
	- The supporting processes on which qualifying natural habitats and
	habitats of qualifying species rely
	<ul> <li>The populations of qualifying species, and,</li> </ul>
	- The distribution of qualifying species within the site. (NE, 2014)

- 6.46 The Afon Gwy is a SAC for the majority of its length and at its closest it is less than 100m from the southern limit of the application site although it is 858m from the nearest proposed turbine (HRASR:P45). The Afon Gwy SAC has a direct connection with the Project site, in that the majority of the site lies either within its catchment or that of the Afon Bidno, which drains into the Wye several kilometres downstream. (HRASR:P116)
- *6.47* Features for which a LSE could not be ruled out, alone or in-combination, are described in the Applicants HRASR, and summarised below:
- 6.48 Atlantic Salmon: Historically, the Wye is the most famous and productive river in Wales for Atlantic salmon, with high-quality spawning grounds and juvenile habitat in both the main channel and tributaries; water quality in the system is generally favourable. There has been a marked decline in the population since the 1980s (JNCC, 2015). The conservation status for Atlantic Salmon is considered unfavourable due to the failure of the Management Target for adult run size and a precautionary assessment of juvenile distribution and abundance. Environment Agency (now NRW) data covering 1975 2009 show that Salmon are rare, though occasionally present at the adjacent sampling station just to the west of the Mynydd y Gwynt Wind Farm sites at SN 824 854, with low numbers recorded in 2005-6 and 2008. At Pont Rhydgaled where the Afon Gwy (River Wye) crosses the A44 and the site entrance is located, Salmon numbers over the years have been variable. However, since 2006 Salmon counts have been good, the latest 2009 data rated the fishery here as overall A for Salmon, on an A to F scale.
- *6.49* **Bullhead:** The Wye has a range of nutrient conditions and aquatic habitats and generally good water quality for fish species (JNCC, 2015). Bullhead are considered to be widespread in the main Afon Gwy and its tributaries, however the conservation status is considered unfavourable due to the presence of adverse factors, in particular localised water quality failures.
- 6.50 Sea Lamprey, River Lamprey and Brook Lamprey: The site provides exceptionally good quality habitat for lampreys and supports healthy populations. The sea lamprey population is found in the main stem below Llyswen, whilst river and brook lampreys are widely distributed in the catchment (NE, 2005). The Core Management Plan states that Sea Lamprey feature is in a favourable condition but Brook and River Lamprey are unfavourable. Furthermore it states that "further clarification is needed concerning a number of sample sites in the upper reaches (Upper Wye and Elan), which may reflect unsuitable habitat and be outside the natural ranges of the species".
- 6.51 Otter: The Wye holds the densest and most well-established otter population in Wales, representative of otters occurring in lowland freshwater. The river has bank-side vegetation cover, abundant food supply, clean water and undisturbed areas of dense scrub suitable for breeding, making it particularly favourable as otter habitat (JNCC, 2015). The Afon Gwy (River Wye) SAC Core Management Plan states that the condition of this feature is considered unfavourable due a lack of suitable breeding sites around the middle reaches of the river (CCW, 2008). Otter surveys undertaken by the Applicant in 2005, 2009 and 2014 of the Mynydd y Gwynt Wind Farm site and

adjacent Afon Gwy identified otter spraints along the Afon Gwy however no signs of Otter resting places, such as holts or couches were seen and the Applicant states that use of wind farm site appears to be modest.

- 6.52 **Twaite Shad and Allis Shad:** Twait Shad have long been abundant in the Afon Gwy. Twaite shad often spawn at or just above the tidal limit, but in the Wye they migrate over 100 km upstream. Data held by the Environment Agency indicate that the largest spawning areas for this species occur on the Wye. The river has relatively good water quality, adequate flows through an unobstructed main channel and a wide range of aquatic habitats conducive to supporting this fish species. In particular, there are a number of deep pools essential for congregation before spawning (NE, 2005) The conservation status for Twaite Shad and Allis Shad is also unfavourable.
- 6.53 Watercourses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation: The Wye demonstrates a clear transition between the upland reaches, with characteristic bryophyte-dominated vegetation, and the lower reaches, with extensive *Ranunculus* beds. There is an exceptional range of aquatic flora in the catchment (JNCC, 2015). The conservation status is considered unfavourable due to reduced water quality in some tributaries of the River Wye and due to abundance of invasive non-native species of bankside plant communities.
- *6.54* White-clawed crayfish: The Welsh River Wye system is the best site known in Wales for whiteclawed crayfish. The tributaries are the main haven for the species (JNCC, 2015). The conservation status for White-clawed Crayfish is considered unfavourable. According to the Core Management Plan they are not present within the two units closest to Mynydd y Gywnt (Unit 2B and 8).
- *6.55* Throughout the examination, the Applicant maintained that the Project will not have any LSE on any European site either alone or in combination with other plans and projects, and so has not provided information on any potential effects on the integrity of any European site (RIES 3.11).
- *6.56* The potential for the impact of the project, both alone and in-combination, to constitute an adverse effect on the integrity of the SAC and the ability of proposed mitigation measures to prevent any adverse effects are considered below.

## Assessment of Effects on Integrity – Alone

#### Physical damage and proposed mitigation

- 6.57 The SoS was unable to rule out LSE from the Project alone upon six interest features of the site (Atlantic Salmon, Bullhead, Brook Lamprey, River Lamprey, Sea Lamprey, and Otter) because of the potential for:
  - increased sedimentation caused by surface run-off from roads, the substation, contractor's compound and foundation pits and as a result of disturbance during the construction of culverts;
  - increased runoff leading to flash flooding;

- invasive species brought into the development on wheels;
- transportation of heavy metal elements into the river;
- effects of concrete residue and spilt fuel and oils; and
- disturbance to otters during construction.
- *6.58* The effects of each of these impacts and the Applicant's proposed mitigation are outlined in detail in the Applicants HRA (HRASR: P49-65) and secured by requirements In the DCO, if made. This is summarised in Table 5.

#### Table 5 Effects of Project alone on features of the Afon Gwy SAC and proposed mitigation

Source	Effect on features of SAC	Summary of Applicant's
		proposed mitigation
Sedimentation Sedimentation could be caused by surface run- off from roads, substation, contractor's compound and foundation pits; as well as disturbance caused during construction of culverts. (HRASR:P49 and RIES)	The Applicant states that potential effects of sedimentation could be the occlusion of <b>Salmon and Sea</b> <b>Lamprey</b> spawning beds, increased turbidity (heavier sediment loads), blockage of minor watercourses and drains and detrimental impacts on biological oxygen demand (BOD). The Applicant states that effects will be more pronounced during construction and decommissioning and that prior to mitigation there is a relatively high risk of this effect occurring, which will be a short-term, one-off, irreversible effect. (HRASR:P49 and RIES)	<ul> <li>Swales, cross drains, and check dams will be installed beside new and upgraded tracks to allow temporary storage of run- off and allow fallout of sediment while collected water soaks away.</li> <li>Slope stabilisation to prevent erosion</li> <li>Surface Water cut-off ditches to intercept water.</li> <li>Culverts installed</li> <li>Water Quality monitoring and treatment if sediment levels breach thresholds</li> <li>Locating infrastructure more than 50m from water courses.</li> <li>(Mitigation detailed in HRASR: p49-53, draft SWMP and draft CEMP)</li> </ul>
Increased runoff Run-off could occur from roads, contractors' compounds and other laydown areas. The track system crosses catchments and water could run along tracks to enter another catchment. This effect will be exacerbated as semi-natural vegetation is replaced by hard surface. (HRASR:P54).	The Applicant states that, apart from sedimentation, potential effects of run off include an increased risk of flash flooding, which could damage <b>vegetation</b> such as that which is a feature of the SAC, and have effects on <b>otter</b> lie-up areas or holts. The applicant states that an increased area subject to run- off could also exacerbate sediment and pollutant loading in the watercourse, with concomitant effects on BOD and water quality. The applicant notes that during periods of lower water levels in the Afon Gwy there is a decreased ability of the river to dilute pollutants. (HRASR:P54 and RIES).	<ul> <li>Tracks contoured</li> <li>Blind ditches to promote collection and infiltration.</li> <li>Interceptor ditches to regulate discharge rate and provide buffer storage, slowing speed of water.</li> <li>Suitable sustainable drainage measures incorporated into design. (Mitigation detailed in HRASR:P54-55) and draft SWMP and draft CEMP)</li> </ul>

Source	Effect on features of SAC	Summary of Applicant's proposed mitigation
Invasive species Japanese knotweed and Himalayan balsam are present. Invasive species brought into site on wheels could be transported into the river and affect the habitat through importation of alien species. (HRASR:P56)	The Applicant states that invasive species could affect the features of the SAC through importation of alien species. (HRASR:P56)	<ul> <li>Relevant guidance from Defra and NRW will be followed. E.g. plant equipment washed and disinfected.</li> <li>(Mitigation detailed in Applicant's HRASR:P56) and in draft CEMP).</li> </ul>
Heavy metal pollution Run-off could transport heavy metal elements that adsorb to soils particles and transport them via run-off to river systems where they will collect in sediments. Acid conditions could dissolve lead and lead to contaminated leachate reaching the river. (HRASR:P57-58)	The Applicant states that an increase in heavy metal concentrations in the Afon Gwy could have detrimental impacts on water quality, and by extension, on <b>aquatic fauna (including Salmon and Otter)</b> . Potential effects are confined to the construction and decommissioning phases when there is a much greater movement of materials around the site. (HRASR:P57-58)	The Applicant's sampling of the area around the mine shaft (Appendix 6.2 of the ES) and compound has indicated lead levels in leachate below the levels of the Drinking Water Directive and levels in the soil below the Contaminated Land Exposure Assessment Model intervention levels. (HRASR:P57-58). As a result no mitigation is proposed by the Applicant.
<b>Concrete residue</b> Contamination caused by spills from concrete batching plant and vehicle wash out areas.	The Applicant states that this could lead to chemical pollution of water which could have detrimental effects on <b>aquatic species (including</b> <b>Otter and fish).</b> Increase in pH levels could also have an effect on <b>aquatic vegetation</b> <b>such as that which is a</b> <b>feature of the SAC.</b> (HRASR:P59-60 and RIES)	<ul> <li>If ready mixed concrete is brought on to site, vehicles will wash out at their point of origin off-site.</li> <li>If batching carried out on-site, specialist wash out areas will be used and water treated off-site. (Detailed in draft CEMP)</li> </ul>
Spilt fuel and oils Oil and diesel associated with machinery used during the construction phase, particularly in refuelling areas could potentially leak into watercourses and cause chemical contamination.	The Applicant states that contaminants in the watercourse could have serious detrimental effects on <b>Salmon and Otter</b> in particular and that the impact is confined to the construction and decommissioning phases, when a large volume of machinery will be used. (HRASR:P59-60 and RIES)	<ul> <li>Re-fuelling will only take place at a distance of more than 50m from watercourses and spill trays and kits will be used.</li> <li>Appropriate bunding will also be used, preventing any fuel leakage.</li> <li>Protocols to be adopted in the event of a fuel spillage or similar incident (Detailed in draft CEMP)</li> </ul>
<b>Disturbance to otters</b> Otter breeding or resting sites could be disturbed during construction of culverts. Movement of traffic across bridges or close to watercourses may have disturbance impacts if these are	The Applicant states that disturbance to <b>Otters</b> could interfere with their foraging and affect breeding success and could potentially have an impact on their conservation status. No breeding or resting places	<ul> <li>Carry out a pre-construction survey and provide adequate buffers around holts, taking advice from NRW.</li> <li>If required, apply for European Protected Species (EPS) licence.</li> <li>If pre-construction survey discovers Otter holts or resting</li> </ul>

Source	Effect on features of SAC	Summary of Applicant's
		proposed mitigation
situated too close to resting places or holts. Effects during decommissioning will be similar to that of construction. (HRASR:P60-61)	were recorded by the Applicant during their three surveys, although signs of Otter activity have been recorded in most of the larger watercourses across the site. It is considered that the site may form part of the range of an adult breeding pair. The pattern of use recorded by the Applicant suggests that the main streams are used for foraging, but there is little evidence to suggest that Otters leave the channels and forage across the open summit. (HRASR:P60-61 and RIES)	<ul> <li>places within 200m, work will either be suspended until the pups are sufficiently mobile to move to other breeding sites, or an exclusion buffer zone of at least 100m will be implemented (details would be agreed with NRW).</li> <li>Where an Otter resting place is found (couch), where practicable a 50m permanent exclusion zone will be put in place. Where this is not possible and in consultation and with the agreement of NRW, either a smaller exclusion zone will be used or works within 50m of the couch will cease for 1 week. Couches are daytime resting sites and Otter which are typically mobile, and with large ranges, are only likely to use a couch for one or a few days at a time.</li> <li>No night time working is planned, and work sites which require lighting will be several hundred metres from the Afon Gwy thereby limiting disturbance. Control of lighting as detailed in SPP. (Mitigation detailed in HRASR:P60-61 and draft SPP)</li> </ul>

#### Efficacy of proposed mitigation

- 6.59 As outlined in Table 5, the mitigation proposed by the Applicant is detailed in a number of post consent 'management plans', the commitments of which are secured by requirements in the DCO, if made. These include a:
  - Surface Water Management Plan (SWMP) (Requirement 29)
  - Construction Environmental Management Plan (CEMP) (Requirement 9)
  - Species Protection Plan (SPP) (Requirement 15)
  - Water Quality Monitoring Strategy (WQMS) (Requirement 29)
- *6.60* NRW had a number of concerns about the efficacy of the mitigation measures proposed and considered that 'although in principle it should be possible to demonstrate mitigation measures will avoid likely significant and adverse effects on site integrity there is an insufficient level of certainty at present to demonstrate this is the case' (R-66).

- 6.61 NRW advised later in the examination that 'the effectiveness of mitigation measures for the River Wye SAC will be dependent on the detailed design, implementation and management of the mitigation and much of this work will need to be done post-consent. However it is essential to ensure the necessary measures are secured in the DCO and draft plans.' (D6-010).
- 6.62 NRW's specific concerns are summarised below.
- 6.63 NRW advised that the management plans would need to be produced and agreed with them prior to the commencement of any construction and that the definition in the DCO should include all site clearance and pre-commencement activities to minimise the potential for damage (D2-011). The ExA confirms that 'commencement' means the PA2008 definition of such which in turn refers to the TCPA 1990 definition ('the carrying out of building, engineering, mining or other operations in, on over or under land') and that the activities referred to by NRW would fall within 'other operations' and so the various pre-commencement provisions referred to should be effectively controlled through the DCO, if made. The SoS agrees with the ExA and considers that mitigation is sufficient to ensure no adverse effect on integrity.
- 6.64 NRW raised concerns as to the lack of specificity regarding the final location and size of infrastructure (D1-002) and therefore assessment of the worse-case scenario with the example being given of the lack of reference to the maximum width of upgraded and new tracks within the site. The ES refers to a minimum of 5m width for tracks and includes Figure 6.2 showing typical cross-sections of tracks. The Applicant considers that a requirement for certification of the ES ensures dimensions are therefore specified and secured (D7-006: P6-7). Nevertheless, the absence of a specified maximum for track widths means that they could be increased above 5m. Within the context of HRA, the concern relating to such an increase would be a possible increase in sedimentation and run-off impacts. The CEMP and SWMP would provide the opportunity for detailed agreement of water and sediment control together with the provision of detailed method statements for access track construction in consultation with NRW. Control of surface water from the construction compound, substation and crane hardstandings could include check dams, drainage ditches and swales to capture water and divert it to silt traps or retention/settlement ponds. On this basis, the ExA does not consider the lack of specificity in this regard would be likely to lead to additional uncontrolled impacts that could not be adequately mitigated (ExA: 5.2.10). The SoS agrees with the ExA and considers that mitigation is sufficient to ensure no adverse effect on integrity.
- 6.65 NRW raised concerns that the draft DCO provides for infrastructure to be moved within the Limits of Deviation which would allow infrastructure to be moved close to watercourses draining to the River Wye SAC (D6-010). It considered that mitigation measures are required to ensure that all infrastructure (e.g. crane pads, lay down areas, roads) are located more than 50m from all relevant watercourses, and that a DCO Requirement for agreeing post-consent micrositing protocol with the LPA/NRW to take account of the various constraints is required (D2-11). The ExA amended the draft DCO (power to deviate) to include reference to these additional infrastructure features and considers that this, in conjunction with requirements in the DCO relating to the need for agreement of a CEMP, and a SWMP and WQMS respectively, would

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provide the necessary mitigation. The SoS agrees with the ExA on this point and considers that mitigation is sufficient to ensure no adverse effect on integrity.

- 6.66 NRW consider that an obligation to agree a final and detailed CEMP and SWMP should be included as requirements in the DCO and that these documents will be necessary to avoid and/or mitigate adverse effects on the River Wye SAC. NRW advise that they agree with the principles of the draft SWMP but there are details yet to be agreed as part of the detailed design, including requirements for Environmental Permit(s) for the discharge of treated surface waters from the areas of work, more details of the use of vegetation to buffer surface water loaded with suspended solids as well as slope stabilisation, and the use of flow retention pits. NRW advise that they agree with the overarching principles outlined in the draft CEMP, but that detailed method statements, including mitigation and contingency plans for each phase of the development must be agreed in writing with NRW prior to the commencement of works (D2-011). NRW also consider that it will be important to ensure that water monitoring is in place to identify any potential pollution issues and prompt effective contingency measures (D1-002). This would be secured via a WQMS. Requirements to agree these plans prior to commencement of works are secured in the draft DCO, if made, and the SoS considers this mitigation is sufficient to ensure no adverse effect on integrity.
- 6.67 NRW was satisfied that the surveys undertaken for otter were adequate but that it would be necessary to ensure that appropriate avoidance and mitigation measures are secured through Requirements of the DCO (RR-66, D2-011 and D3-018). Many of the mitigation measures for otter are contained in the draft SPP, and NRW commented that the draft SPP requires additional detail. NRW considers that update surveys will be required prior to the start of construction because of the length of time that would be likely to have elapsed since the original surveys, their status may have changed by the time of construction. NRW advised that a licence application at that time would have to be considered on its merits. Nonetheless, based on knowledge of the project from the ES and subsequent information, NRW concluded that it should be possible to conclude no detriment to the favourable conservation status of the otter population at the site subject to the agreement of suitable avoidance and mitigation measures (D7-012). The DCO, if made, will include a requirement for the final SPP to be submitted and approved by PCC and NRW prior to commencement of works which would include a plan for the mitigation of potential adverse impacts on otter. This would include a survey method statement for works and proposals for monitoring before, during and post-construction. The ExA considers that such a requirement would adequately ensure mitigation and protection of otter so as to avoid any significant adverse impact on them (ExA 4.5.11). The SoS agrees with the ExA on this point and considers that mitigation is sufficient to ensure no adverse effect on integrity.
- 6.68 NRW raised concerns about disturbance to otters from lighting. NRW advised that whilst no nighttime working is planned, the DCO allows for working from 08:00 to 18:00 which for winter months, could mean that lighting would be necessary (D7-022). However, no otter breeding or resting places have been found on the site, although surveys indicate that occasional otter feeding and travelling takes place to the north-eastern end of the application site (D10-028). The areas where

lighting may be needed would be several hundred metres from the River Wye and the draft SPP provides for mitigation during construction. The ExA considers that, as with other plans, the SPP in its final form would need to be approved by PCC after consultation with and written advice from NRW and that this would provide the opportunity for agreement of any further detailed mitigation that might be deemed to be required. The SoS agrees with the ExA and considers that mitigation is sufficient to ensure no adverse effect on integrity.

- 6.69 Drafts of the environmental management plans have been produced (CEMP (D7-023), SWMP (D10-012), WQMS (D10-021) and SPP (D10-028)) and throughout the examination the Applicant worked with NRW to refine them. However, at the close of examination, none of these documents had been agreed in their final form and NRW had remaining queries as to whether proposed mitigation would be adequately secured to avoid adverse effects on the site integrity of the Afon Gwy SAC. A Statement of Common Ground on HRA matters was never agreed between NRW and the Applicant.
- 6.70 Although NRW had outstanding concerns, in their consultation responses they did not categorically rule out the possibility that these could be overcome. NRW stated during the examination that they consider that it should be possible to secure mitigation in the DCO to ensure that there would be no adverse effect on the integrity of the SAC alone or in-combination (D7-012) (RIES: 3.10).
- 6.71 The Applicant states in its HRASR that it 'understands the need to continue to refine and agree the detail of a number of these post consent' and that 'while some detail will evolve as the project progresses towards construction, there are robust safeguards in place to ensure appropriate mitigation is provided'. The Applicant states that the approach 'provides a high degree of certainty that the mitigation offered as part of the application will be translated into effective mitigation onsite'.
- 6.72 The ExA agrees with the Applicant and considers in its Recommendation Report that any impacts upon the SAC can be mitigated through detailed environmental management plans, for which the DCO, if made, contains requirements for agreement post consent. The ExA considers that the effectiveness of mitigation would be dependent on the detailed design, implementation and management of the mitigation but that the DCO, if made, prevents development until these plans have been submitted to and approved by the relevant planning authority, Powys County Council (PCC) following consultation with and written advice from NRW.
- 6.73 Following receipt of the ExA's Recommendation Report, the SoS issued a consultation on 14 September 2015, asking interested parties whether they could foresee any potential barriers to the final agreement of these environmental management plans). In its response to consultation, NRW stated that they are likely to advise that further provisions and detailed mitigation are added to the final plans but that they indicated that they were unable to comment on whether the Applicant and PCC would agree to these. With regard specifically to the CEMP, SWMP and WQMP, NRW commented that the plans submitted during the Examination include the necessary mitigation for the River Wye SAC, and that although further detailed mitigation would need to be added to the final plans to be approved by PCC following the granting of the DCO and further

detailed site design, NRW could not foresee any issues with the agreement by PCC of these plans subject to NRW's advice with regards to the protection of the water environment and River Wye SAC being accepted by the applicant and PCC. PCC have previously indicated during examination that 'should NRW be satisfied with regard to the impacts on ecology, PCC would accept NRW's position' (PCC: 18.12.14).

## **Conclusion Alone**

- 6.74 The SoS has undertaken this assessment using all of the information available to her including the advice of NRW, the views of Interested Parties, and the recommendation of the ExA. The SoS agrees with the ExA's assessment, that the environmental management plans and other mitigation measures secured in the DCO, if made, would provide the opportunity for detailed agreement with NRW on methods to appropriately and adequately mitigate any potential adverse effect on integrity on those features of the SAC for which a LSE was identified.
- *6.75* The SoS concludes that, with the mitigation measures secured and delivered through the DCO, if made, there will be no adverse effect on integrity of the Afon Gwy SAC from the project alone.

## Assessment of Effects on Integrity – In Combination

#### Physical Damage and proposed mitigation

- *6.76* The SoS was unable to rule out LSE from the Project, in-combination with other plans and projects upon eleven interest features of the Afon Gwy SAC (Otter, Atlantic Salmon, Bullhead, River Lamprey, Sea Lamprey, Brook Lamprey, Allis shad, Twaite shad, White-clawed crayfish, and Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation), and as such an AA of the effects on site integrity is required.
- *6.77* The Applicant provided an in-combination assessment for the Afon Gwy SAC but throughout the examination maintained that the Project will not lead to any LSE, either alone or in-combination with other plans and projects, and so consequently has not provided information on any potential effects on site integrity.
- 6.78 The Core Management Plan (CCW, 2008) divides the Afon Gwy SAC into a number of management units. The lower part of the development site is adjacent to the Afon Gwy (Upper Wye) (Unit 2B) and the lower sections of the Afon Bidno, whose source is within the Project site, is part of the Upper Wye Tributaries (Unit 8). (EXA: 5.2.5). The Applicant has considered those features relevant to management units 2B and 8 in its assessments. In their 'Response to the Examining Authority's Second round of written questions (D5-013), NRW advise that they do not agree the scope of the in-combination assessment, and make reference to the Afon Gwy SAC Management Unit 7, in which salmon spawn, in addition to management units 2B and 8.
- *6.79* The following projects and activities were included in the in-combination assessment carried out by the applicant:
  - Grid connections
  - Rallying activity on the application site

- Other wind farms
- Tree-felling in the Hafren Forest and the Esgair Ychion woods

#### **Grid connections**

- 6.80 As noted, the Applicant's HRASR (ver 6) has only considered the LSE of the proposed grid connection from the Project to the Carno substation (stage 1). It has not made an assessment of the LSE of the other necessary grid connections from the Carno substation to the Mid Wales substation (stage 2), and the Mid Wales substation to Shropshire (stage 3). NRW have advised that in HRA terms this is inadequate as there is a gap in the information provided and assessment of the whole of the necessary three stages needs to be considered; grid connection has not been considered as part of the in-combination assessment with other plans or projects (D5-018) (ExA: 5.2.47)
- 6.81 The Applicant sets out the likely impact of the stage 1 grid connections (Options 1 and 2) and proposed mitigation measures in its HRA Screening Report (HRASR: 153-159). The Applicant states that grid connection Option 2 runs through the Afon Gwy catchment for about 2.1km, and considers that the only disturbance caused would be during the installation of each pole along this section of the route, which they consider covers a very small area unlikely to give rise to significant effects. The Applicant states that grid connection Option 1 runs in the Afon Gwy catchment for about 11.9km, and that the overhead line follows the access track to the site for 3.3km and can be erected from the surfaced track, avoiding the need for vehicles to travel across open ground. The applicant proposes that for the remaining 8.6km, in areas where no existing access route exists temporary access can be provided by trackways which it is suggested will avoid damaging the surface and creating potential flow paths for sedimentation (RIES). With regards to stage 1 grid connections, the Applicant states that 'with suitable planning and the preparation of a CEMP to identify sensitive locations and methods of access, control timing of operations, methods of excavation and removal of soil potential effects can be avoided' (HRASR:155).
- 6.82 The Applicant concludes both no LSE and no effects on the integrity any European site (HRASR:159). NRW considers that it should be possible to impose mitigation measures on any future NSIP consent to avoid adverse effect on the integrity of this SAC (D6-027).
- 6.83 NRW advised the Applicant that potential impacts of all stages of the grid connection should have been assessed as part of the HRA process, given that the Mid-Wales Grid Connection was a known project which was included in the PINS National Infrastructure Programme of Projects and in respect of which a Scoping Opinion had been issued. (ExA:5.2.49). The SoS agrees that the HRA should include an assessment of the potential impacts of the Project, and the onward grid connections, to the extent that details are known, as is set out in para 4.9.3 of EN-1. The SoS considers that the information she has been provided with is so limited as to not enable her to assess any potential in combination effects at this point, although she accepts that the grid will be subject to its own assessments in due course.

#### Rallying activity on the application site

- 6.84 Potential in-combination effects between the Project and rallying activity include run off and sedimentation. The Applicant states that the period of greatest risk would be during construction. During this period it states that no rallying will take place. The applicant proposes mitigation for the wind farm in the form of a signed s106 Unilateral Undertaking (UU) (D10-019 and D10-020) that prohibits rallying on existing tracks during construction until mitigation is agreed with NRW, prohibits the use of new roads for rallying during the operation of the Project, and requires the removal of new roads at decommissioning. The Applicant considers such mitigation would be entirely effective in mitigating the effects of both rallying on the site and the construction and operation of the wind farm (HRASR). NRW state that it is not the case that the s106 prevents all rallying during the construction phase as it allows rallying to occur on the existing tracks to the west of the River Wye and so there is therefore the potential for an in-combination effect (D1-002). The Applicant indicates that, presently, rallying takes place to the east of the River Wye and only testing to the west and that rallying events could not be displaced to the west as the upper car park lies on land which would be used for construction and would therefore not be available. They state that as there are no car park facilities to the west of the river, no rallying events could take place there (D10-007). The ExA considers the possibility of such in-combination effects to be unlikely and that obligations within the s106 would secure mitigation in respect of rallying activity within the site.
- 6.85 NRW advises that the provisions in the s106 should be included as requirements in the DCO (D6-023). The ExA considers that the combination of Articles and Requirements of the recommended DCO, together with the Applicant's development consent obligations within the s106 UU, would provide adequate safeguards (ExA 5.2.18). The SoS considers that the in combination impacts of the Project and rallying on the River Wye SAC could be successfully mitigated so as to rule out AEOI, and that that mitigation could be secured either through a s106 UU or a requirement as appropriate in the DCO, if made.

#### Other wind farms

- *6.86* The Applicant has undertaken a review of environmental information for Llandinam, Llaithddu, Llanbadarn Fynydd, Garreg Lwyd, Hendy, Garreg Lwyd Hill, Bryn Blaen, Neuadd Goch and Hirrdywel wind farms and did not identify the prediction of significant impacts with the incorporation of mitigation (outlined in HRASR: P143-149).
- 6.87 The Applicant states that given the proposed mitigation, the distance from the proposed development and the amount of additional water flows providing dilution, there is unlikely to be a significant cumulative impact even if all of the wind farms were to be constructed at the same time (RIES).

#### Tree-felling in the Hafren Forest and the Esgair Ychion woods

6.88 Two areas of forest fall within the Afon Gwy (River Wye) catchment within 10km of the proposed site: the Hafren Forest and Esagir Ychion. The vast majority of the Hafren Forest lies within the

Severn catchment and of the area that lies within the Afon Gwy (River Wye) Catchment about 14 ha appear to have been recently clear felled (HRAv6). The Applicant considers that as the proposed mitigation outlined in the CEMP and the SWMP is considered to be wholly effective, there would be no in-combination effect with any felling proposed for the Hafren Forest and Esgair Ychion woods (RIES).

## **Conclusion – In combination**

- *6.89* During the examination there was disagreement between NRW and the Applicant about the incombination impacts of the Project. However, the ExA concludes that, despite NRW's concerns, there is sufficient evidence to conclude that, through the operation of the various Requirements of the recommended DCO (Requirements 9, 15 and 29), the proposed development, either alone or in combination with other projects, would not have any LSE on the integrity of this European site (ExA: 5.2.54).
- 6.90 Having assessed the information provided by the Applicant, advice from NRW and the recommendations of the ExA, the SoS concludes that, through the operation of the various Requirements of the recommended DCO and s106 UU, there will be no adverse effect on the integrity of the Afon Gwy SAC as a result of the project, in combination with rallying, tree felling and other wind farms. However, the information that she has been provided with on the grid connection is so limited as to not enable her to assess potential in combination effects at this point, although she accepts that the grid will be subject to its own assessments in due course.

# Elenydd SAC (in combination)

6.91 The SAC is considered to be one of the best areas in the UK for its blanket bog, floating water plantain and Calaminarian grassland (species rich, open plant communities growing on heavy metal contaminated soils). It also supports a significant presence of European dry heaths and oligotrophic (nutrient poor) to mesotrophic (intermediate nutrient levels) waters (JNCC, 2011(a)). It is located 5.6km south of the Project site (RIES).

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Table 6 Conservation Ob	jectives for Elenydd SA	CCW core mana	gement plan ref 2008)

	Blanket bog
Conservation	• The extent, quality and diversity of blanket bog vegetation is maintained and.
Objectives	where possible, degraded bog is restored to good condition.
Objectives	• Populations of uncommon bog plants, such as tall bog-sedge, slender sedge,
	magellanic bog-moss and round-fruited collar-moss, are stable or increasing.
	• The bog continue to provide suitable habitat for breeding birds, including golden
	plover, dunlin and red grouse, and invertebrates, such as large heath butterfly.
	Peat profiles containing important pollen records are maintained.
	All factors affecting the achievement of these conditions are under control.
	European dry heath
	• The extent, quality and diversity of heath vegetation is maintained and, where
	possible, degraded heath is restored to good condition.
	• The main heathland areas have a varied age structure with a mosaic of young
	heath, mature heath and degenerate heath.
	Sunny slopes in certain areas support vegetation that includes bell heather and
	western gorse and steep north and east facing slopes have a rich variety of
	in some groups
	<ul> <li>Dopulations of uncommon plants, such as losser two/blade, are stable or</li> </ul>
	increasing
	<ul> <li>The larger heathland areas provide suitable habitat for breeding birds, including</li> </ul>
	red grouse and merlin.
	All factors affecting the achievement of these conditions are under control.
	Calaminarian grassland
	The habitat covers at least its current measured area.
	• Lichens dominate large blocks of metal rich spoil from mine workings, tips, walls
	and other built structures.
	• Lichens, mosses, ferns and a few higher plants such as sea campion are
	present on rock outcrops in cliffs, open cuts and about the entrances to shafts
	and adits.
	• On open, usually level ground, plant communities are found represented by the
	moss genus Weissia and a range of crustose metallophyte lichens. The moss
	Ditrictium plumbleola and sea campion occur in the most base-rich areas,
	<ul> <li>Heath shrub trees or other woody species are searce or absent</li> </ul>
	<ul> <li>Light grazing prevents the growth of tall borbs, scrub and woodland. Grazing</li> </ul>
	levels are carefully managed to avoid undesirable levels of ground disturbance
	<ul> <li>Areas of disturbed bare ground occupy less than 10% of potential areas that</li> </ul>
	could be occupied by this habitat.
	• There is less than 1% cover of non-native plants.
	There is no newly dumped material.
	• The habitat is spreading gradually across this extensive site wherever suitable
	conditions exist
	• .All factors affecting the achievement of these conditions are under control.
	Oligotrophic to mesotrophic standing waters

including all of the component species typical of the SAC feature.
• For each of the lakes where it occurs, the extent and species composition of the
oligotrophic lake vegetation is stable or increasing in range and/or diversity.
• The rare stonewort Nitella gracillis, scarce six-stamened waterwort and awlwort
are found in Llyn Gynon. Populations of these water plants are all stable or
increasing and the water quality of the lakes remains suitable for their survival
<ul> <li>Plants indicating unfavourable condition for this feature e.g. filamentous algae</li> </ul>
associated with eutrophication and invasive non-native species will absent or
maintained or restored below an acceptable threshold level.
• Near-natural hydrological and geomorphological processes and forms will be
operating in the lakes e.g. water levels, water depth, stability of bed substrate,
with no artificial regulation of water levels or altered sediment regimes
<ul> <li>Low nutrient and shade levels are maintained.</li> </ul>
• All factors affecting the achievement of these conditions are under control.
Floating water plantain
• The floating water-plantain populations are viable throughout their current
distribution (maintaining themselves on a long-term basis), namely in Llyn
Cerrigilwydion Uchai, Llyn Cerrigilwydion Isai, Gwynllyn and Llyn Gynon.
Each noaling water-plantain population will be able to complete sexual and/or vegetative reproduction successfully.
<ul> <li>Near-natural hydrological and geomorphological processes and forms will be</li> </ul>
operating in the lakes e.g. water levels water denth stability of bed substrate
with no artificial regulation of waterlevels or altered sediment regimes.
• Low nutrient and shade levels will be maintained, with no species present
indicative of unfavourable conditions e.g. filamentous algae.
The dispersal of floating water plantain will be unhindered.
There will be no non-native invasive species present.
All factors affecting the achievement of the above conditions are under control

- *6.92* The Applicant screened the SAC out after their initial assessment concluded no LSE alone, and they did not consider that there was a potential for in-combination effects.
- 6.93 NRW agree that there is no potential pathway of effects on this SAC from the Project site, and there is no potential for LSE alone. However they note that the Project is unable to operate without the construction of a new grid connection (D2-011). Two possible routes for this have been identified: Option 1 and Option 2, the proposed locations of the grid connections are in Chapter 17 of the ES (AD-070). The exact locations of the proposed grid lines have not been agreed yet, but the Applicant states that Option 1 has now been superseded by Option 2; which is now the favoured route for which a connection offer has been made, but not yet agreed (ExA report para 5.2.44).
- 6.94 NRW state that, as a detailed routing study has not been undertaken yet, there is a reasonable likelihood that the potential grid connection corridors could be amended. If the final grid connection route for Option 1 was amended to route to the south of the Project, then it could have a LSE on the Elenydd SAC. This would be from the need to clear a wayleave for the line through the upland habitats that the site is designated for (D2-011). NRW recognises that the connection could be routed to avoid the SAC, however there has been no certainty offered by the Applicant that this would be the case (RR-66).
- *6.95* The Applicant has stated that as the grid connection route will be subject to its own consenting process and HRA, and that it is outside of the scope of its HRASR to speculate on potential changes to another NSIP which are not foreseen at the current time (para 73 HRASR v6).

- 6.96 The ExA concludes that neither; Option 1 or Option 2, of the grid routes passes near to the SAC, and the Applicant has agreed to a requirement in the DCO, if made, that would prevent the carrying out of development on the Project until such a time that a grid connection was in place. This would therefore appear to ensure the Project could not progress unless it could be demonstrated that a grid connection had no adverse effect on the integrity of the SAC alone or incombination (para 5.2.38 ExA Report). NRW was in agreement that this would be the case, providing that the SoS decided that such a requirement was possible (para 5.2.40 ExA Report).
- 6.97 The SoS is of the opinion that the HRA should include an assessment of the potential impacts of the Project as a whole, including the onward grid connections, to the extent that details are known, as is set out in para 4.9.3 of EN-1. She therefore considers that the in-combination impacts of the grid connection with the Project should be assessed in order to ascertain if there will be an adverse effect on the integrity of the Elenydd SAC.
- *6.98* As there is currently no certainty on the exact location of the grid connection from the Project to the Carno substation (stage 1), the SoS believes that there is a potential risk to the SAC from the grid connection which needs to be assessed.
- 6.99 Having assessed the information provided by the Applicant, the advice of NRW and the recommendations of the ExA, the SoS concludes that insufficient information has been provided on the grid connection to enable her to assess potential in-combination effects on the Elenydd SAC at this point, although she accepts that the grid will be subject to its own assessments in due course.

# Coedydd a Cheunant Rheidol (Rheidol Woods and Gorge) SAC (in combination)

6.100 Rheidol Woods provides a very large example (229 hectares) of old sessile oak woods in midwestern Wales, extending along a steep-sided river valley, it is considered to be one of the best areas in the UK for this habitat. The canopy is dominated by sessile oak and the ground flora has the typical acidophile species and well-developed lower plant component of this habitat in Wales. Small-leaved lime occurs in places. The woods are also notable for breeding birds (JNCC 2011(b)). It is located 8.3km to the south west of the Project site.

# Table 7 Conservation Objectives for Coedydd a Cheunant Rheidol (Rheidol Woods and Gorge) SAC (CCW Core Management Plan 2008).

	The woodland area will cover the entire site
Conservation	<ul> <li>The woodland will be maintained as far as possible by natural processes</li> </ul>
	• A quarter of the eapony will be open at any time
Objectives	A quarter of the carlopy will be open at any time
	<ul> <li>Location of open grades will vary over time</li> <li>Trease and obruha will be mainly leastly native breadleaved energies such as</li> </ul>
	<ul> <li>Trees and shrubs will be mainly locally native broadleaved species such as acceled as hybrid cale downly or nondulous hirds, ach, reway, holly, alm hards</li> </ul>
	Sessile of hybrid oak, downy of periodulous birch, ash, rowah, holly, eini, hazer
	<ul> <li>Neither beech or conners will be dominant anywhere in the canopy or under- stered.</li> </ul>
	Storey The alternative and developed in all ideal and increased and if the store store with a store store with a site
	• The abundance and density of individual native species will vary across the site
	• Trees and snrubs of a wide range of ages and sizes will be present
	Iree seedlings will be plentiful throughout the site
	<ul> <li>Tree seedlings will develop into saplings in the open glades</li> </ul>
	<ul> <li>Non-native invasive species such as rhododendron, Japanese knotweed,</li> </ul>
	sycamore and conifer seedlings will be restricted through a rolling programme
	to identify and control/remove the species across all areas of the site where
	they occur
	• There will be abundant dead and dying trees with holes and hollows, rot
	columns, torn off limbs and rotten branches. Some dead and dying trees will be
	partially or completely hollow
	• Fallen dead wood will be dense enough to obstruct progress by foot across the
	entire site, except on established maintained paths
	• Dead wood dependent species of moss, liverwort, fungi and specialised
	invertebrates will be present, in spatially and temporally variable abundance,
	throughout the site
	• Field and ground layers will form a patchwork of vegetation communities
	characteristic of local soil and numidity conditions, including areas dominated
	by neather, bilberry, neather and bilberry, tussocks of wavy hair grass or purple
	The field lower will be feight replaced well developed
	The field layer will be fairly rank and well developed
	<ul> <li>Humidity levels will be high enough to favour the presence of many mosses and liver works.</li> </ul>
	liverworts
	<ul> <li>In rocky areas and areas of thin acidic soil, the ground layer will be a thick,</li> <li>continuous or fairly continuous correct of message and livery orthogen with few other</li> </ul>
	plant appoint procent
	plant species present
	• In the vicinity of the gorge number of wet fock faces on clinis, crays and boulders will be aderned with messee, liverworks and filmy force.
	• Detebes of bare rock and bare wood on older living tree trunks or fallen timber
	• Faiches of bale fock and bale wood off order living free truths of failen timber,
	opportunities for re-colonisation and species succession
	<ul> <li>Lichen flora will vary spatially according to the chemical proportion of rock and</li> </ul>
	tree surfaces and according to light levels
	In the going and other especially damp, shady places, humidity loving lisher
	species will be common
	<ul> <li>Trees with lungwort and associated species will be common, especially on the</li> </ul>
	<ul> <li>Trees with lungwort and associated species will be common, especially on the</li> </ul>

well-lit woodland margins
<ul> <li>The diversity of lower plant flora (mosses, liverworts, lichens and fungi) will be high, corresponding to the range of niches provided by the varied structure of the woodland</li> </ul>
• The woodland will support populations of birds (including pied flycatchers, redstarts, wood warblers) and mammals (including several bat species, otters and badgers).
<ul> <li>All factors affecting the achievement of the foregoing conditions are under control.</li> </ul>

- *6.101* The Applicant screened the SAC out after their initial assessment concluded no LSE alone, and they did not consider that there was a potential for in-combination effects.
- 6.102 NRW agree that there is no potential pathway of effect on this site from the Project site. However, they note that the Project is unable to operate without the construction of a new grid connection (D2-011). Two possible routes for this have been identified: Option 1 and Option 2. The exact locations of the proposed grid lines have not been agreed yet, but the Applicant states that Option 1 has now been superseded by Option 2, which is now the favoured route for which a connection offer has been made, but not yet agreed (ExA report para 5.2.44).
- *6.103* NRW state that, as a detailed routing study has not been undertaken yet, there is a reasonable likelihood that the potential grid connection corridors could be amended. If the final grid connection route was amended to route to the west of the Project, then it could have a LSE on the Coedydd a Cheunant Rheidol (Rheidol Woods and Gorge) SAC. This would be from the need to clear a wayleave for the line through the woodland habitat that the site is designated for. NRW recognises that the connection could be routed to avoid the SAC, however there has been no certainty offered by the Applicant that this would be the case (RR-66).
- *6.104* The Applicant has stated that as the grid connection route will be subject to its own consenting process and HRA, and that it is outside of the scope of its HRASR to speculate on potential changes to another NSIP which are not foreseen at the current time (para 73 HRASR v6).
- *6.105* The ExA concludes that neither; Option 1 or Option 2, of the grid routes passes near to the SAC, and the Applicant has agreed to a requirement in the DCO, if made, that would prevent the carrying out of development on the Project until such a time that a grid connection was in place. See paragraph 6.48 above for further details.
- 6.106 The SoS is of the opinion that the HRA should include an assessment of the potential impacts of the Project as a whole, including the onward grid connections, to the extent that details are known, as is set out in para 4.9.3 of EN-1. She therefore considers that the in-combination impacts of the grid connections with the Project should be assessed in order to ascertain if there will be an adverse effect on the integrity of the Coedydd a Cheunant Rheidol (Rheidol Woods and Gorge) SAC, as the exact route of the grid connection has not yet been determined.
- 6.107 Having assessed the information provided by the Applicant, advice from NRW and the ExA's recommendations, the SoS concludes that insufficient information has been provided on the grid connection to enable her to assess potential in-combination effects on the Coedydd a Cheunant Rheidol (Rheidol Woods and Gorge) SAC at this point, although she accepts that the grid will be subject to its own assessments in due course..

# Coedydd Llawr-y-glyn SAC (in combination)

*6.108* The SAC is designated for the following Annex I habitats: Old Sessile Oak woodland with Ilex and Blechnum . It consists of five complementary blocks of woodland which display a range of upland acid oak woodland ecotypes. Canopy is generally of Sessile Oak. However, there are variable amounts of Downy Birch *Betula pubescens*, Hazel *Corylus avellana*, Holly *Ilex aquifolium* and Rowan *Sorbus aucuparia*. The ground flora is equally diverse with ericaceous species such as Heather *Calluna vulgaris* and Bilberry *Vaccinium myrtillus* dominating in some areas, whilst other locations are grassier. In addition, some locations are notable for their assemblages of ferns and mosses (HRASR v6). It is 7.3km to the north east of the Project site (RIES).

# Table 8 Conservation Objectives for Coedydd Llawr-y-glyn SAC (CCW Core Management Plan 2008).

Conservation Objectives	• It is required that the feature be in favourable conservation status, where all of the conditions set out in the Performance Indicators are satisfied and all factors affecting the achievement of these conditions are under control.
	<ul> <li>Performance Indicators:</li> <li>Maintain the existing extent of oak woodland</li> <li>Maintain a significant presence of the feature in 13 out of 14 management units</li> <li>The canopy cover should be met in at 90% of samples over the site as a whole</li> <li>Regeneration in at least 50% of significant gaps in canopy, consisting of saplings of native species at least 1.5m high within 10-15years of a gap appearing.</li> <li>Presence of understorey and field layer, consisting of locally native species in at least 75% of samples over the site as a whole.</li> <li>Presence of standing and/or fallen deadwood with a minimum diameter of 20cm and minimum length of 2m in at least 75% of samples over the site as a whole.</li> <li>At least 50% cover of bryophytes in selected sample areas.</li> </ul>

- *6.109* The Applicant screened this SAC out of further assessment after concluding that there is no connection between the SAC and the Project site, and therefore the HRASR did not consider any in-combination effects.
- 6.110 NRW agree that there is no potential pathway of effect on this site from the Project site. However they note that the Project is unable to operate without the construction of a new grid connection (D2-011). Two possible routes for this have been identified: Option 1 and Option 2. The exact locations of the proposed grid lines have not been agreed yet, but the Applicant states that Option 1 has now been superseded by Option 2; which is now the favoured route for which a connection offer has been made, but not yet agreed (ExA report para 5.2.44).
- 6.111 NRW state that as a detailed routing study has not been undertaken yet, there is a reasonable likelihood that the potential grid connection corridors could be amended. NRW are concerned that Option 2 of the grid connection routes lies in close proximity to the Coedydd Llawr-y-glyn SAC (approximately 250m at the closest point) and any small amendment to this route could lead to a LSE on the site from the need to clear a wayleave through the woodland.
- *6.112* The Applicant states that the grid line is expected to pass several hundred metres away and will be a wooden pole constructed 132kV line. There is expected to be no direct or indirect impact on

Coedydd Llawr-y-glyn SAC from the construction of the grid line. Nevertheless this will be subject to a separate NSIP application and a separate HRA assessment (para 113 HRASR ver 6).

- *6.113* The ExA concludes that as the Applicant has agreed to a requirement in the DCO, if made, that would prevent the carrying out of development on the Project until such a time that a grid connection was in place. See paragraph 6.48 above for further details.
- *6.114* The SoS is of the opinion that the HRA should include an assessment of the potential impacts of the Project as a whole, including the onward grid connections, to the extent that details are known, as is set out in para 4.9.3 of EN-1. She therefore considers that the in-combination impacts of the grid connection with the Project should be assessed in order to ascertain if there will be an adverse effect on the integrity of the Coedydd Llawr-y-glyn SAC, as the exact route of the grid connection has not yet been determined.
- *6.115* Having assessed the information provided by the Applicant, the advice of NRW and the recommendations of the ExA, the SoS concludes that insufficient information has been provided on the grid connection to enable her to assess potential in-combination effects on the Coedydd Llawr-y-glyn SAC at this point, although she accepts that the grid will be subject to its own assessments in due course.

# Tanat and Vyrnwy Bat Sites SAC (in combination)

*6.116* The SAC is designated for its population of lesser horseshoe bats, which is of European importance. The site consists of six separate sites, all situated within the north-eastern part of Montgomeryshire. Two of the sites contain buildings that house maternity roosts, whilst the other four are disused mines containing hibernation roosts. Five of the sites also contain a small amount of associated habitat, in the form of broadleaved woodland or hedgerows (CCW core management plan, 2008).

Table 9 Conservation	<b>Objectives for</b>	<b>Tanat and Vyrnw</b>	y Bat Sites SAC
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Conservation Objectives	• It is required that the feature be in a favourable conservation status, where all of the conditions set out in the Performance Indicators are satisfied, and all factors affecting the achievement of these conditions are under control.
	<ul> <li><u>Performance Indicators</u></li> <li>The fundamental objective of the site is to maintain, and if possible, increase the number of Lesser Horseshoe Bats it supports.</li> <li>It is essential to minimise disturbance within the roosts and potential harm to the bats.</li> <li>The bats must be able to enter and leave the roost freely</li> <li>The bats must not be deterred from using the roost</li> <li>The condition of buildings and roost areas must be maintained to ensure continued suitability as a roost</li> <li>There should be no net loss of woodland/scrub/hedgerows within the site</li> <li>90% of the habitat should be composed of native broad-leaved species. Hedgerows should be at least 1.5m high with no gaps larger than 5m.</li> </ul>

- *6.117* NRW made several representations during the examination regarding the grid connection. They note that only stage 1 of the three grid connection stages has been considered by the Applicant, they believe that this does not fulfil the requirements of the Habitats Regulations, as there is a gap in the information provided and an assessment of the whole necessary three stages of the grid connection needs to be considered as part of the in-combination assessment with other plans or projects, including the Mid Wales connection project. This is a known project which is included in the PINS National Infrastructure Programme of projects (para 5.2.47 of ExA report).
- *6.118* NRW state that it cannot be said that approval for all of the necessary grid connection elements is likely to be given. This is because stage 3 of the grid connection from the mid Wales substation to Lower Frankton, Shropshire (National Grid's Mid Wales connection project), is planned to pass close to bat roosts within the Tanat and Vyrnwy Bat Sites SAC. NRW considers that there is insufficient information to demonstrate that this grid connection project would not have an adverse effect on the integrity of this SAC (para 5.2.48 of ExA report).
- *6.119* The Applicant does not accept that the stage 2 and 3 grid connections are a consequence of the Project, as they are proposed to be constructed anyway as a result of a number of proposals which are unrelated to this Project (ExA report para 5.2.20, D6-015).
- 6.120 The ExA supported this argument, as he considers that nothing has been provided as part of the examination process that would suggest that the details of the stage 2 and 3 grid connections would materially differ as a result of the Project feeding into the system (para 5.2.20 ExA report).

- *6.121* The Applicant and the ExA have suggested that a requirement could be added to the DCO, if made, which would prevent the carrying out of works on the Project until such a time as a consent was in place for a grid connection from the on-site substation to the National Grid. The ExA asserts that this would provide a mechanism to ensure that Project could not be developed if future HRAs of the grid connections demonstrated that there would be an adverse effect on the integrity of a European site, including the Tanat and Vyrnwy Bat Sites SAC (para 5.2.52 of ExA report).
- 6.122 The SoS is of the opinion that the HRA should include an assessment of the potential impacts of the Project as a whole, including the onward grid connections, to the extent that details are known, as is set out in para 4.9.3 of EN-1. As there is information in the public domain regarding stage 2 and 3 of the grid connections and the potential impacts on the Tanat and Vyrnwy Bat Sites SAC, these should have been included within the in-combination assessment with the Project.
- *6.123* Having assessed the information provided by the Applicant, advice from NRW and the recommendations of the ExA, the SoS concludes that insufficient information has been provided on the grid connection to enable her to assess potential in-combination effects on the Tanat and Vyrnwy Bat Sites SAC at this point, although she accepts that the grid will be subject to its own assessments in due course.

# **Habitats Regulations Assessment Conclusions**

- 7.0 The SoS has carefully considered all of the information presented before and during the Examination, including the ES, representations made by Interested Parties, and the ExA's report itself. She considers that the Project (and its grid connections) have the potential to have an LSE on six European sites when considered alone and in combination with other plans and projects. These are:Elenydd Mallaen SPA
  - Afon Gwy (River Wye) SAC
  - Elenydd SAC
  - Coedydd a Cheunant Rheidol (Rheidol Woods and Gorge) SAC
  - Coedydd Llawr-y-glyn SAC
  - Tanat and Vyrnwy Bat Sites SAC
- 7.1 The SoS has undertaken an AA using the information available, comprising of environmental information provided to the ExA, its report to the SoS, representations from NRW, responses to the SoS's consultation of 14 September 2015 and published data and analysis from other sources.
- 7.2 By the close of the examination there was disagreement between the Applicant and NRW on whether there would be an LSE on all 6 sites where an LSE had been identified by NRW, with the Applicant concluding there would be no LSE on any European site as a result of the Project, and the ExA agreeing with this position.
- 7.3 Having considered all the information available, the SoS concurs with NRW's advice that there is an LSE on all 6 European sites from the Project (and its grid connection), and has undertaken an assessment of the potential for adverse effects on the site integrity of all 6 sites. This assessment was hampered by a lack of information provided to the ExA which led to the SoS to issue a request for further information on 14 September 2015, during her decision making period, to give all parties the opportunity to rectify this position.
- 7.4 A summary of the SoS's reasons for reaching her conclusions are set out below.

## Elenydd - Mallaen SPA

- 7.5 Having considered all of the evidence and information presented, the SoS concludes that there is insufficient information to conclude that there will be no adverse effect on the integrity of the features of this SPA, either alone or in-combination with other plans or projects. This is because insufficient information has been provided to undertake an assessment of the likely impact on these species and site integrity from the Project, specifically:
  - The Secretary of State accepts NRW's advice that it has not been proven beyond reasonable scientific doubt that the red kite using the Project site do not come from the SPA.

- The same applies for merlin and peregrine, although the SoS notes that use of the Application site by these species is very low and NRW responses during the examination focussed on red kite.
- The Applicant has not provided information on the in-combination impact of the Project with
  other wind farms as they state that there is no connectivity between the wind farms and the
  SPA. The Secretary of State, however, considers that the Applicant has not demonstrated
  sufficiently that there is unlikely to be a significant in-combination effect on red kite, as the
  red kite collision risk figures for the other developments have not been provided and
  considered by the Applicant.
- Mitigation has been proposed by the Applicant to address the issue of collision risk through aiming to avoid making the area under and around turbines attractive to red kite. Although this mitigation may reduce red kite numbers, there is no certainty that this will be the result and there has been no quantification of the reduction in the likely collision numbers.
- The Secretary of State shares the concerns of NRW as to the age and methodology of the surveys that informed the Applicant's assessment, as they did not conform to recommended good practice guidance

## Afon Gwy (River Wye) SAC

7.6 The SoS concludes that, with the mitigation measures secured in the DCO, if made, that there will be no adverse effect on the integrity of the Afon Gwy (River Wye) SAC from the Project alone or in-combination with other plans or projects.

# Elenydd SAC, Coedydd a Cheunant Rheidol (Rheidol Woods and Gorge) SAC, Coedydd Llawr-y-glyn SAC and Tanat and Vyrnwy Bat Sites SAC

7.7 The SoS is of the opinion that the HRA should include an assessment of the potential impacts of the Project as a whole, including the onward grid connections, to the extent that details are known, as set out in para 4.9.3 of EN-1. Having assessed the information provided by the Applicant, NRW and the ExA, the SoS concludes that insufficient information has been provided on the grid connection to enable her to assess potential in-combination effects on the Elenydd SAC, Coedydd a Cheunant Rheidol (Rheidol Woods and Gorge) SAC, Coedydd Llawr-y-glyn SAC and the Tanat and Vyrnwy Bat Sites SAC at this point, although she accepts that the grid will be subject to its own assessments in due course.

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#### National Infrastructure Consents Team

**Department of Energy and Climate Change** 

#### Date: 20 November 2015

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