



The Planning Inspectorate  
Yr Arolygiaeth Gynllunio

# REPORT on the IMPLICATIONS for EUROPEAN SITES Proposed Glyn Rhonwy Pumped Storage

An Examining Authority report prepared with the support  
of the Environmental Services Team

20 July 2016



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Report on the Implications for European Sites for Glyn  
Rhonwy Pumped Storage

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# 1.0 INTRODUCTION

## Background

- 1.1 Snowdonia Pumped Hydro Ltd (the Applicant) has applied to the Secretary of State for a development consent order (DCO) under section 37 of the Planning Act 2008 (as amended) for the proposed 'Glyn Rhonwy Pumped Storage (Generating Station)' (the application). The Secretary of State has appointed an Examining Authority (ExA) to conduct an examination of the application, to report its findings and conclusions, and to make a recommendation to the Secretary of State as to the decision to be made on the application.
- 1.2 The relevant Secretary of State is the competent authority for the purposes of the Habitats Directive<sup>1</sup> and the Habitats Regulations<sup>2</sup> for applications submitted under the Planning Act 2008 regime (as amended). The findings and conclusions on nature conservation issues reported by the ExA will assist the Secretary of State in performing their duties under the Habitats Regulations.
- 1.3 This report compiles, documents and signposts information provided within the application, and the information submitted throughout the examination by both the Applicant and interested parties, up to and including the 4 July 2016 (Deadline 6) in relation to potential effects on European sites<sup>3</sup>. It is not a standalone document and should be read in conjunction with the examination documents referred to in this report.
- 1.4 It is issued to ensure that interested parties including the statutory nature conservation body (SNCB) Natural Resources Wales (NRW), is consulted formally on Habitats Regulations matters. This process may be relied on by the Secretary of State for the purposes of Regulation 61(3) of the Habitats Regulations. Following consultation the responses will be considered by the ExA in making their recommendation to the Secretary of State and made available to the Secretary of State along with this report. The Report on the Implications for European Sites (RIES) is not revised following consultation.
- 1.5 The Applicant has not identified any potential impacts on European sites in other European Economic Area States [REP1-001]. Only UK European sites are addressed in this report.

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<sup>1</sup> Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (as codified) (the 'Habitats Directive').

<sup>2</sup> The Conservation of Habitats and Species Regulations 2010 (as amended) (the Habitats Regulations).

<sup>3</sup> In this context, 'European sites' include: Sites of Community Importance (SCIs); Special Areas of Conservation (SACs); candidate SACs; Special Protection Areas (SPAs); possible SACs; potential SPAs; and Ramsar sites. For a full description of European sites see PINS Advice Note 10.

## Documents used to inform this RIES

- 1.6 The Applicant provided a No Significant Effects Report (NSER) [APP-054] with the application, together with screening matrices. The Applicant concluded within their NSER that there would be no likely significant effects (LSE) on the European sites screened into the assessment.
- 1.7 The ExA made a request in the Rule 6 letter dated 9 February 2016 [PD-005] for the Applicant to submit revised screening matrices to address discrepancies identified with the qualifying features/ interests reflected in the matrices and to ensure that the footnotes to the screening matrices provided an appropriate level of detail. In response, the Applicant provided an updated NSER and updated screening matrices at Deadline 1 [REP1-001].
- 1.8 The ExA highlighted further discrepancies with the qualifying features/ interests reflected in the screening matrices within the second written questions (SWQs) [PD-015]. The Applicant responded to these points within [REP5-005], and provided further revised screening matrices [REP5-034]. A copy of these screening matrices is provided in Annex 2 of the RIES. HRA Screening Matrix D: Traeth Lafan/ Lavan Sands, Conway Bay SPA has been updated by the ExA, with the support of the Planning Inspectorate's Environmental Services Team, to reflect the correct qualifying features of this European site.
- 1.9 In addition to the revised matrices, clarification regarding information provided in the updated NSER was provided by the Applicant in their responses to the ExA's first written questions (FWQs) [REP2-011] and SWQs [REP5-005].
- 1.10 A list of the documents reviewed to inform the RIES and the accompanying examination library references is provided in Annex 3 of this report.

## Structure of this RIES

- 1.11 The remainder of this report is as follows:
  - **Section 2** identifies the European sites that have been considered within the application and during the examination period, up to and including 4 July 2016 (Deadline 6). It summarises the matters discussed during the examination.
  - **Section 3** describes the HRA matters that emerged during the examination. It also summarises the outcome of the screening assessment in the examination.
  - **Annex 1** presents the European sites screened into the NSER by the Applicant and their qualifying features/ interests.

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- **Annex 2** comprises screening matrices for those European sites and qualifying features with a potential for LSE.
- **Annex 3** comprises a list of the documents reviewed to produce the RIES.

## 2.0 OVERVIEW

### European Sites Considered

- 2.1 The Applicant [REP2-011] and NRW [REP2-047] confirm in response to Question 3.3 of the ExA's first written questions (FWQs) that the proposed development is not connected with or necessary to the management for nature conservation of any of the European sites considered within the NSER.
- 2.2 The Applicant adopted the following buffer zones to identify European sites for inclusion within the assessment (paragraph 1.6.3) [APP-054]:
- all European sites within 2km;
  - all European sites within 10km designated for bats; and
  - all European sites within 30km with possible hydrological links to the proposed development.
- 2.3 Based on the buffers specified above, the Applicant's NSER [APP-054] identified thirteen European sites for inclusion within the assessment:
- Afon Gwyrfaï a Llyn Cwellyn Special Area of Conservation (SAC);
  - Eryri/ Snowdonia SAC;
  - Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay SAC;
  - Traeth Lafan/ Lavan Sands, Conway Bay Special Protection Area (SPA);
  - Glynllifon SAC;
  - Glannau Môn: Cors heli/ Anglesey Coast: Saltmarsh SAC;
  - Y Twyni o Abermenai i Aberffraw/ Abermenai to Aberffraw Dunes SAC;
  - Coedydd Derw a Safleoedd Ystlumod Meirion/ Meirionnydd Oakwoods and Bat Sites SAC;
  - Liverpool Bay/ Bae Lerpwl SPA;
  - Corsydd Môn a Llyn/ Anglesey and Llyn Fens Ramsar;
  - Corsydd Môn/ Anglesey Fens SAC;
  - Pen Llyn a'r Sarnau/ Llyn Peninsula and the Sarnau SAC; and
  - Ynys Seiriol/ Puffin Island SPA.
- 2.4 The European sites screened into the assessment remained unaltered in the updated NSER [REP1-001]. NRW list all the European sites considered relevant to the assessment in Part 3.N.1 of their Statement of Common Ground (SoCG) with the applicant [REP3-010] with the exception of the Traeth Lafan/ Lavan Sands, Conway Bay SPA, and confirm "*that adequate and sufficient consideration for potential impacts on...statutory designated*

*sites has been undertaken.*" NRW later confirmed in response to Question 3.10 of the ExA's SWQs that the same conclusion applies to the Traeth Lafan / Lavan Sands, Conway Bay SPA [REP5-049].

- 2.5 The qualifying features/ interests of these European sites as identified in the relevant Natura 2000 data forms are presented in Annex 1 of this Report.

## Summary of the Applicant's HRA assessment

- 2.6 The Applicant concluded in both their NSER [APP-054] and their updated NSER [REP1-001] that there would be no LSE on any of the thirteen European sites screened into the assessment.
- 2.7 NRW provided confirmation in their relevant representation [RR-053], response to Question 3.11 of the ExA's FWQs [REP2-047], section 3.N.2 of their SoCG with the Applicant [REP3-010] and in their response to Question 3.10 of the ExA's SWQs [REP5-049] of their agreement that the proposed development would have no LSE, either alone or in-combination with other projects or plans, on the qualifying features/ interests of the European sites listed above.
- 2.8 As a result of the conclusion that there are no LSE on any European sites, the Applicant has not undertaken an assessment of adverse effects on the integrity of the European sites. The Applicant has, however, provided the conservation objectives for the European sites in Appendix A of the NSER [APP-054] and updated NSER [REP1-001], should these be required by the Secretary of State.

## Screening matrices

- 2.9 The screening matrices provided in the NSER [APP-054] submitted with the application did not reflect the correct qualifying features/ interests of the European sites screened into the assessment as set out in the Natura 2000 data forms and Ramsar Information Sheets. Updated screening matrices were therefore requested by the ExA in the Rule 6 letter [PD-005] to address this matter. The ExA also specified in the Rule 6 letter that the screening matrices should be amended to accurately reflect the effects considered within the NSER, to include information on any mitigation measures relied upon, and to include references to the evidence used to reach the screening conclusions [PD-005].
- 2.10 The Applicant provided an updated NSER and screening matrices at Deadline 1 in response to the points raised by the ExA in the Rule 6 letter [REP1-001].
- 2.11 Further discrepancies with the qualifying features/ interests reflected in the screening matrices were identified in the updated NSER [REP1-001],

and it remained unclear whether all of the effects assessed in the NSER had been accurately reflected in the screening matrices. The ExA subsequently requested revised screening matrices in the SWQs [PD-015].

- 2.12 The Applicant submitted revised screening matrices at Deadline 5 [REP5-034] which addressed all of the outstanding discrepancies with the exception of the Traeth Lafan/ Lavan Sands, Conway Bay SPA which still did not reflect the correct qualifying features. Consequently, HRA Screening Matrix D: Traeth Lafan/ Lavan Sands, Conway Bay SPA has been updated by the ExA, with the support of the Planning Inspectorate's Environmental Services Team, in order to accurately reflect the correct qualifying features of this European site.
- 2.13 Despite the inaccuracy referred to above, NRW provided confirmation in their comments on the responses to the ExA's SWQs that they were satisfied with the updated NSER and screening matrices [REP6-017].
- 2.14 It should be noted that whilst some of the Applicant's screening matrices make reference to the potential effects on the 'integrity' of European sites, the Applicant has concluded that there would be no LSE on any European site screened into the assessment. Agreement of no LSE has been reached with NRW [RR-053, REP2-047, REP3-010 and REP5-049].
- 2.15 The final screening matrices are provided in Annex 2 of the RIES.

## HRA Matters considered during the examination

- 2.16 The following matters were discussed:
  - the scope of the in-combination assessment; and
  - the mitigation measures relied on to reach the conclusion that there would be no LSE on any European sites screened into the assessment and confirmation of how these measures would be secured in the DCO and via other mechanisms.

## 3.0 LIKELY SIGNIFICANT EFFECTS

### HRA matters during the examination

3.1 This section of the RIES provides a summary of the HRA matters considered during the examination.

#### **In-combination effects**

3.2 The Applicant describes the approach taken to assessing in-combination effects within Chapter 5 of the NSER [APP-054]. The Applicant did not carry out an in-combination assessment as part of the HRA on the basis that there is lack of shared receptors between the proposed development and other projects or plans. The Applicant confirms that potential cumulative effects associated with the two proposed developments considered in the Environmental Statement (ES), the Wylfa C Nuclear Power Station and the Bontnewydd Bypass, were limited to socio-economic and transport considerations and therefore unlikely to result in any in-combination effects.

3.3 The ExA asked NRW whether the Dinorwig Hydroelectric Scheme should be included in the in-combination assessment in the NSER [APP-054] as it featured within the cumulative assessment in the ES [APP-084]. NRW confirmed in their response to Question 3.10 of the ExA's FWQs that as the Dinorwig Hydroelectric Scheme is an operational development and is therefore already accounted for in the project baseline assessment, it does not need to be included in the in-combination assessment [REP2-047].

3.4 NRW confirmed in their response to Question 3.10 of the ExA's FWQs that they were satisfied that the grid connection works would not result in any likely significant in-combination effects [REP2-047].

#### **Mitigation measures**

3.5 The Applicant considers that the conclusions of the NSER [REP1-001] are reliant on a number of mitigation measures relating to water pollution control and habitat management. The scope of the measures and the means of securing these measures either in the draft DCO or through other consenting regimes was explored during the examination and is set out below.

##### *Water Pollution*

3.6 The Applicant explained in response to Question 3.8 of the ExA's SWQs [REP2-011] that water quality monitoring would be undertaken before and during the abstraction process from Llyn Padarn to ensure that risks to water quality with the potential to affect qualifying features/ interests of

European sites screened into the assessment can be monitored and mitigated via a Water Management Plan.

3.7 A description of other measures that would be adopted to avoid and manage pollution risks are described in the Applicant's response to Question 3.8 of the ExA's SWQs [REP2-011]. These measures are reflected in the Schedule of Mitigation (Revision 2) [REP6-003]. This Schedule confirms the delivery mechanisms for these mitigation measures:

- Code of Construction Practice (CoCP);
- Water Management Plan (WMP);
- Pollution Prevention Plan (PPP); and
- Excess Water Management Strategy (EWMS).

*Code of Construction Practice and Pollution Prevention Plan*

3.8 The scope of the final CoCP and the need to agree this with the relevant planning authority in consultation with NRW is secured in Requirement 6 of the draft DCO [REP6-012]. The need to agree a PPP is secured in subsection (2)(b) of Requirement 6.

3.9 An outline CoCP was provided with the original DCO application [APP-142] and updated during the course of the examination [REP2-013, REP5-018 and REP6-007] to provide additional clarity on the proposed mitigation strategy. The minimum measures to be included in the final PPP are included in section 4.2 of the outline CoCP [REP6-007]. NRW confirm in their Deadline 6 response that they are satisfied with the outline CoCP [REP6-017].

3.10 At the time of the RIES publication the need for the final version of the CoCP to comply with the provisions of the latest outline CoCP [REP6-007] was not secured in the latest version of the draft DCO [REP6-012]. In addition, the outline CoCP was not listed as a document to be certified under Article 36 of the draft DCO [REP6-012]. These matters have been raised for consideration in the ExA's draft DCO issued on 20 July 2016 [PD-023].

*Water Management Plan*

3.11 The scope of the final WMP and the need to agree this with the relevant planning authority in consultation with NRW is secured in Requirement 6(2)(a) and Requirement 9 in the latest version of the draft DCO [REP6-012]. The wording of Requirement 9 has been subject to discussion with NRW during the course of the examination [REP3-032, OD-007 and REP5-048]. NRW consider that both pre and post construction monitoring is required for a minimum of 12 months, which is not currently reflected in the wording of Requirement 9(5) in the draft DCO [REP6-012]. This

matter has been raised for consideration in the ExA's draft DCO issued on 20 July 2016 [PD-023].

- 3.12 Gwynedd Council (GC) confirmed in their response to the ExA's action points arising from the Issue Specific Hearing on 18 May 2016 that they were content with the wording of the Applicant's updated Requirement 8 [REP4-027] (Requirement 9 in the latest version of the draft DCO [REP6-012]).
- 3.13 The first version of the outline WMP was originally included in the outline CoCP provided with the DCO application [APP-142]. A revised outline WMP was provided at Deadline 3 [REP3-012] in response to Question 8.23 of the ExA's FWQs which requested more detail on water quality monitoring to be provided in the outline plan [PD-015]. NRW confirmed in [REP4-035] that they were satisfied with the content of the revised outline WMP.
- 3.14 GC raised some concerns over the proposed sampling methods for the water quality monitoring in [REP4-024]. The ExA sought a response from the Applicant on GC's comments in SWQ 8.12 [PD-015] and in response the Applicant submitted a further revised WMP at Deadline 5 [REP5-020]. GC did not comment on the suitability of the revised WMP within their Deadline 6 response and therefore clarity has been sought on this matter in the ExA's Requests for further information under Rule 17 [PD-025].
- 3.15 Notwithstanding their comments on the scope of the final WMP as set out in Requirement 9 of the draft DCO [REP6-012], NRW confirm in their Deadline 6 response that they are satisfied with the revised outline WMP submitted at Deadline 5 [REP6-017].
- 3.16 The need for the final WMP to comply with the provisions of the outline WMP is secured in Requirement 8 of the draft DCO [REP6-012].

#### *Excess Water Management Strategy*

- 3.17 The scope of the final EWMS and the need to agree this with the relevant planning authority in consultation with NRW is secured in Requirement 16 of the draft DCO [REP6-012].
- 3.18 An outline EWMS was provided by the Applicant at Deadline 3 [REP3-013] and Deadline 6 [REP6-009]. NRW provided comments in [REP4-035] on information they would expect to see secured in the final EMWS, but confirmed they are satisfied with the outline strategy and approach.
- 3.19 GC confirmed in [REP4-024] that they have no comments to make on the outline EWMS.
- 3.20 At the time of the RIES publication the need for the final version of the EWMS to comply with the provisions of the outline EWMS [REP3-013] was not secured in the latest version of the draft DCO [REP6-012]. In addition, the outline EWMS was not listed as a document to be certified under

Article 36 of the draft DCO [REP6-012]. These matters have been raised for consideration in the ExA's draft DCO issued on 20 July 2016 [PD-025].

*Environmental permit*

- 3.21 The Applicant proposes to discharge excess water from Quarry 1 into the Nant-y-Betws surface water body, which is hydrologically connected to the Afon Gwyrfai a Llyn Cwellyn SAC [REP1-001]. The Applicant has confirmed that separate discharge permits for Quarry 1 and Quarry 6 under the Environmental Permitting (England and Wales) Regulations 2010 (as amended) would be required to manage discharges into surrounding watercourses [REP5-005]. Suitable conditions to discharge permits for Q1 would be applied in order to avoid the potential for LSE on the Afon Gwyrfai a Llyn Cwellyn SAC (Applicant's response to Question 3.8 of the FWQs) [REP2-011]. NRW are the body responsible for issuing these environmental permits.
- 3.22 The Applicant submitted the discharge permit applications to NRW in January 2016. The Applicant advised in their response to the ExA's SWQs at Deadline 5 [REP5-005] that they had been recently advised that "*due to the lack of technical information required from a Principal Contractor and lack of clarity on the Operator they cannot determine the [permit] applications and have invited the Applicant to withdraw them and re-submit them when the Principal Contractor and Operator are formally in place.*" The Applicant confirmed in their response [REP5-005] that they have subsequently withdrawn the permit applications.
- 3.23 The positions of the Applicant and NRW are reiterated further in their responses to the ExA's Rule 17 Letter dated 27 June 2016 [REP6-001 and REP6-017].
- 3.24 NRW confirm in their response to Question 3.12 of the ExA's SWQs [REP5-005] that whilst some reliance is placed on the permitting system to ensure no LSE on the Afon Gwyrfai a Llyn Cwellyn SAC, NRW's own permitting function would have to undertake its own HRA and if necessary would impose appropriate conditions to ensure no LSE on this European site.
- 3.25 NRW have repeatedly confirmed throughout the course of the examination [RR-053, REP3-10 and REP5-005] their agreement that the proposed development would have no LSE on the qualifying features of the Afon Gwyrfai a Llyn Cwellyn SAC, either alone or in-combination with other projects or plans.

*Lesser horseshoe bat mitigation*

- 3.26 The updated NSER confirms that there is potential for the population of lesser horseshoe bats at Glynllifon SAC to be affected by habitat loss,

including the loss of tunnel hibernation and summer roosts within the development site (Table 3.3) [REP1-001].

- 3.27 The ExA sought clarity from NRW in Question 3.6 of the FWQs [PD-009] on whether the potential indirect noise effects on lesser horseshoe bats linked to Gyllifon SAC had been appropriately assessed in the NSER [APP-054] and the necessary mitigation proposed and secured.
- 3.28 NRW confirmed that they have no records of the lesser horseshoe bats from Gyllifon SAC using tunnels within the development site, however it is within their commuting range and therefore their presence cannot be ruled out [REP2-047]. NRW concluded that effects on lesser horseshoe bats as a result of noise from blasting and drilling would not have a significant effect on the bats using the tunnels to be maintained as roosts [REP2-047]. This position was reiterated by NRW in response to Question 3.13 of the ExA's SWQs, although they did acknowledge that they did not have any information regarding the potential effects of air overpressure on bats [REP5-049]. Notwithstanding this, NRW confirmed that they are content with the level of detail provided on the mitigation/enhancement measures for lesser horseshoe bats which are appropriately covered in both the Habitat Management Plan secured within Requirement 6(2)(i) (CoCP) of the draft DCO [REP6-012] and within the European Protected Species Licence. NRW also confirm that these measures do not need to be relied on to reach the conclusion of no LSE [REP2-047 and REP5-049].
- 3.29 The applicant voluntarily provided more information on the potential effects of air overpressure on bats in their response to NRW's comments [REP6-001]. The applicant concludes that air overpressure is not anticipated to result in an LSE on lesser horseshoe bats due to the distances between the tunnels with the potential to be used by bats, and blasting locations in Q1/Q6 and the anticipated limits on air overpressure which will be determined through the DCO. Comments on the applicant's assessment of air overpressure have been sought from NRW in the ExA's Requests for further information under Rule 17 [PD-025].
- 3.30 The latest 'Other Consents and Licences Status Document' [REP6-008] provided by the Applicant confirms that a European Protected Species Licence has been granted for lesser horseshoe bats, but the Applicant intends to submit a variation to this Licence to reflect the results of an additional bat survey of Tunnel 16 undertaken in summer 2015 and January/February 2016 for completeness (response to Question 3.13 of the ExA's FWQs) [REP2-011].
- 3.31 The Applicant confirmed in response to Question 3.14 of the ExA's SWQs that the licence variation application will be submitted prior to Deadline 6 (4 July 2016) [REP5-005]. The Applicant states that the content of the licence variation application will not lead to an alteration to the conclusion

of no LSE on European sites because it relates to timings and additional survey data; and not the scale of the predicted effects or the measures previously agreed in the Bat Licence Method Statement [REP5-005]. It was not evident from the Deadline 6 responses whether the Applicant has submitted the bat licence variation application. An update on progress made to obtain the bat variation licence has been sought in the ExA's Requests for further information under Rule 17 [PD-025].

- 3.32 NRW reiterates that the conditions imposed by the European Protected Species Licence do not need to be relied on to reach the conclusion of no LSE on the Glynllifon SAC [REP5-049].

*General opinions on mitigation measures*

- 3.33 NRW confirmed in their response to Question 3.11 of the ExA's FWQs [REP2-047] that LSE on European sites could be excluded providing the mitigation measures identified in the Schedule of Mitigation [APP-085], the various plans secured in the DCO requirements, and the conditions within any future discharge consents are met. NRW confirmed in response to Question 3.11 of the ExA's SWQs that they were content that the mitigation measures to be delivered through the DCO have been adequately defined and secured [REP5-049].

- 3.34 GC confirmed that they are satisfied with the applicant's approach to the delivery of mitigation via specific management plans and are content that the mitigation strategies can be refined through the process of agreeing the final mitigation/management plans [REP6-016].

## Summary of the HRA outcome during the examination

- 3.35 The Applicant's screening assessment [REP1-001] concludes that the proposed development would have no LSE either alone or in-combination with other projects or plans, on the qualifying features/ interests of the European sites listed below:

- Afon Gwyrfai a Llyn Cwellyn SAC;
- Eryri/ Snowdonia SAC;
- Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay SAC;
- Traeth Lafan/ Lavan Sands, Conway Bay SPA;
- Glynllifon SAC;
- Glannau Môn: Cors heli/ Anglesey Coast: Saltmarsh SAC;
- Y Twyni o Abermenai i Aberffraw/ Abermenai to Aberffraw Dunes SAC;
- Coedydd Derw a Safleoedd Ystlumod Meirion/ Meirionnydd Oakwoods and Bat Sites SAC;
- Liverpool Bay/ Bae Lerpwl SPA;

- Corsydd Môn a Llyn/ Anglesey and Llyn Fens Ramsar;
- Corsydd Môn/ Anglesey Fens SAC;
- Pen Llyn a'r Sarnau/ Llyn Peninsula and the Sarnau SAC; and
- Ynys Seiriol/ Puffin Island, SPA.

3.36 The Applicant's conclusions in relation to these European sites and their features/ interests were not disputed by any interested parties during the course of the examination to date.

3.37 NRW provided confirmation in their relevant representation [RR-053], response to Question 3.11 of the ExA's FWQs [REP2-047], section 3.N.2 of their SoCG with the Applicant [REP3-010] and in their response to Question 3.10 of the ExA's SWQs [REP5-049] of their agreement that the proposed development would have no LSE, either alone or in-combination with other projects or plans, on the qualifying features/ interests of the European sites listed above.



## **ANNEX 1: EUROPEAN SITES SCREENED INTO THE NSER BY APPLICANT**

## European sites Screened into the NSER

Name of European site	Qualifying features/interests
Afon Gwyrfai a Llyn Cwellyn SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea
	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation.
	Atlantic salmon ( <i>Salmo salar</i> )
	Floating waterplantain ( <i>Luronium natans</i> )
	Otter ( <i>Lutra lutra</i> )
Eryri/ Snowdonia SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea
	Siliceous alpine and boreal grasslands
	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
	Siliceous scree of the montane to snow levels ( <i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i> )
	Calcareous rocky slopes with chasmophytic vegetation
	Siliceous rocky slopes with chasmophytic Vegetation
	Depressions on peat substrates of the <i>Rhynchosporion</i>
	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
	Northern Atlantic wet heaths with <i>Erica tetralix</i>
	Species-rich <i>Nardus</i> grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
	European dry heaths
	Alpine and subalpine calcareous grasslands
	Alkaline fens
	Alpine and Boreal heaths
	Petrifying springs with tufa formation ( <i>Cratoneurion</i> )
Alpine pioneer formations of the <i>Caricion bicoloris-</i>	

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	atrofuscae
	blanket bogs (* if active bog)
	Slender green feather-moss ( <i>Drepanocladus (Hamatocaulis) Vernicosus</i> )
	Floating waterplantain ( <i>Luronium natans</i> )
Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay SAC	Sandbanks which are slightly covered by sea water all the time
	Mudflats and sandflats not covered by seawater at low tide
	Reefs
	Large shallow inlets and bays
	Submerged or partially submerged sea caves
Traeth Lafan/ Lavan Sands, Conway Bay SPA	Great Crested Grebe ( <i>Podiceps cristatus</i> )
	Curlew ( <i>Numenius arquata</i> )
	Oystercatchers ( <i>Haematopus ostralegus</i> )
Glynllifon SAC	Lesser horseshoe bat ( <i>Rhinolophus hipposideros</i> )
Glannau Môn: Cors heli/ Anglesey Coast: Saltmarsh SAC	Salicornia and other annuals colonizing mud and sand
	Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> )
	Estuaries
	Mudflats and sandflats not covered by seawater at low tide
Y Twyni o Abermenai i Aberffraw/ Abermenai to Aberffraw Dunes SAC	Embryonic shifting dunes
	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> ( <i>Salicion arenariae</i> )
	Natural eutrophic lakes with Magnopotamion or Hydrocharition – type vegetation
	Humid dune slacks
	Shore dock ( <i>Rumex rupestris</i> )
	Petalwort ( <i>Petalophyllum ralfsii</i> )
Coedydd Derw a Safleoedd Ystlumod Meirion/ Meirionnydd Oakwoods and Bat Sites SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ( <i>Alno-Padion, Alnion incanae, Salicion</i>

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	albae)
	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche- Batrachion vegetation
	Northern Atlantic wet heaths with Erica tetralix
	European dry heaths
	Tilio-Acerion forests of slopes, screes and ravine
	Bog woodland
	Lesser horseshoe bat ( <i>Rhinolophus hipposideros</i> )
Liverpool Bay/ Bae Lerpwl SPA	Red throated diver ( <i>Gavia stellate</i> )
	Common scoter ( <i>Melanitta nigra</i> )
	Waterfowl assemblage
Corsydd Môn a Llyn/ Anglesey and Llyn Fens Ramsar	Ramsar Criterion 1: The site supports a suite of base-rich, calcareous fens which is a rare habitat type within the United Kingdom's biogeographical zone.  Annex I features present on the SAC include: <ul style="list-style-type: none"> <li>• Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.;</li> <li>• Northern Atlantic wet heaths with <i>Erica tetralix</i> ;</li> <li>• <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>);</li> <li>• Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>;</li> <li>• Alkaline fens;</li> <li>• Geyer's whorl snail (<i>Vertigo geyeri</i>);</li> <li>• Southern damselfly (<i>Coenagrion mercurial</i>); and</li> <li>• Marsh fritillary butterfly (<i>Euphydryas</i> (<i>Eurodryas</i>, <i>Hypodryas</i>) <i>aurinia</i>).</li> </ul>
	Ramsar criterion 3: The site supports a diverse flora and fauna with associated rare species and is of special value for maintaining the genetic and ecological diversity of the region.
Corsydd Môn/ Anglesey Fens SAC	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp
	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>
	Alkaline fens
	Northern Atlantic wet heaths with <i>Erica tetralix</i>

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	Molinia meadows on calcareous, peaty or clayey silt-laden soils ( <i>Molinia caerulea</i> )
	Geyer's whorl Snail ( <i>Vertigo geyeri</i> )
	Southern damselfly ( <i>Coenagrion mercurial</i> )
	Marsh fritillary Butterfly ( <i>Euphydryas</i> ( <i>Eurodryas</i> <i>Hypodryas</i> ) <i>aurinia</i> )
Pen Llyn a'r Sarnau/ Llyn Peninsula and the Sarnau SAC	Sandbanks which are slightly covered by sea water all the time
	Estuaries
	Coastal lagoons
	Large shallow inlets and bays
	Reefs
	Mudflats and sandflats not covered by seawater at low tide
	<i>Salicornia</i> and other annuals colonizing mud and sand
	Atlantic salt meadows ( <i>Glaucopuccinellietalia maritima</i> )
	Submerged or partially submerged sea caves
	Bottle-nosed dolphin ( <i>Tursiops truncatus</i> )
	Otter ( <i>Lutra lutra</i> )
	Grey seal ( <i>Halichoerus grypus</i> )
Ynys Seiriol/ Puffin Island, SPA	Cormorant ( <i>Phalacrocorax carbo</i> )

## **ANNEX 2: SCREENING MATRICES**

## Potential Impacts

Potential impacts upon the European sites which are considered within the submitted No Significant Effects Report [REP1-001] and in the screening matrices [REP5-034] are provided in the table below.

<b>Designation</b>	<b>Impacts in submission information</b>	<b>Presented in screening matrices as</b>
Afon Gwyrfai a Llyn Cwellyn SAC	<i>Water Pollution</i>	Effect 1
Eryri / Snowdonia SAC Y Fenai a Bae Conwy / Menai Strait and Conwy Bay SAC Traeth Lafan / Lavan Sands, Conway Bay SPA Glynllifon SAC Glannau Mon: Cors heli / Anglesey Coast: Saltmarsh SAC; Y Twyni o Abermenai i Aberffraw / Abermenai to Aberffraw Dunes SAC Coedydd Derw a Safleoedd Ystlumod Meirion / Meirionnydd Oakwoods and Bat Sites SAC Liverpool Bay / Bae Lerpwl (Wales) SAC	<i>Disturbance to species</i> (Applicable to Glynllifon SAC and Meirionnydd Oakwoods and Bat Sites SAC only as there will be no construction or requirement to remove any habitat within any Natura 2000 sites. Habitat and roost loss within the Order Limits could affect Natura 2000 Bat sites within 10km).	Effect 2
Corsydd Môn a Llyn / Anglesey and Llyn Fens Ramsar Corsydd Mon / Anglesey Fens SAC Pen Llyn a'r Sarnau / Lleyn Peninsula and the Sarnau SAC Ynys Seiriol / Puffin Island SPA	<i>Flow Regime</i> (applicable to Afon Gwyrfai a Llyn Cwellyn SAC only. There will be no discharges to/abstraction from other Natura 2000 sites. There is no abstraction required from the Afon Gwyrfai SAC during construction or operation and therefore water flows will not be depleted as a result of the Development.)	Effect 3

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	<p><i>Nutrient Enrichment</i> (applicable to Afon Gwyrfai a Llyn Cwellyn SAC only. Due to dilution and dispersal, Natura 2000 sites beyond Llyn Padarn and the Afon Gwyrfai are unlikely to be affected by any nutrient enriched water discharged from Q1 or Q6 during operation.)</p>	<p>Effect 4</p>
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## Screening Matrices

The European Sites included within the Applicant's assessment are:

Matrix A: Afon Gwyrfai a Llyn Cwellyn SAC

Matrix B: Eryri / Snowdonia SAC

Matrix C: Y Fenai a Bae Conwy / Menai Strait and Conwy Bay SAC

Matrix D: Traeth Lafan / Lavan Sands, Conway Bay SPA

Matrix E: Glynllifon, SAC

Matrix F: Glannau Mon: Cors heli / Anglesey Coast: Saltmarsh SAC

Matrix G: Y Twyni o Abermenai i Aberffraw / Abermenai to Aberffraw Dune SAC

Matrix H: Coedydd Derw a Safleoedd Ystlumod Meirion / Meirionnydd Oakwoods and Bat Sites SAC

Matrix I: Liverpool Bay / Bae Lerpwl (Wales) SAC

Matrix J: Corsydd Môn a Llyn / Anglesey and Llyn Fens Ramsar

Matrix K: Corsydd Mon / Anglesey Fens SAC

Matrix L: Pen Llyn a'r Sarnau / Llyn Peninsula and the Sarnau SAC

Matrix M: Ynys Seiriol / Puffin Island SPA

Other sites within 30km have been scoped out of the assessment due to a lack of feasible effect pathways (Section 3.5; Tables 3.3 and 3.4 in main HRA document).

Evidence for likely significant effects on their qualifying features is detailed within the footnotes to the screening matrices below.

### Key to Matrices:

- ✓ Likely significant effect cannot be excluded
- × Likely significant effect can be excluded
- C construction
- O operation
- D decommissioning

**HRA Screening Matrix A**

<b>Afon Gwyrfai a Llyn Cwellyn SAC</b>									
<b>EU Code: UK0030046</b>									
<b>Distance to NSIP: 1.6km</b>									
<b>European site features</b>	<b>Likely Effects of NSIP</b>								
<i>Effect</i>	<i>Effect 1</i>			<i>Effect 3</i>			<i>Effect 4</i>		
<i>Stage of development</i>	<i>C</i>	<i>O</i>	<i>D</i>	<i>C</i>	<i>O</i>	<i>D</i>	<i>C</i>	<i>O</i>	<i>D</i>
Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	x <sub>a</sub>	x <sub>a</sub>	x <sub>c</sub>	x <sub>a</sub>	x <sub>a</sub>	x <sub>a</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>f</sub>
Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>e</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>f</sub>
Atlantic salmon	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>e</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>f</sub>

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<i>(Salmo salar)</i>									
Floating water-plantain ( <i>Luronium natans</i> )	x <b>b</b>	x <b>b</b>	x <b>c</b>	x <b>e</b>	x <b>d</b>	x <b>e</b>	x <b>f</b>	x <b>g</b>	x <b>f</b>
Otter ( <i>Lutra lutra</i> )	x <b>b</b>	x <b>b</b>	x <b>c</b>	x <b>e</b>	x <b>d</b>	x <b>e</b>	x <b>f</b>	x <b>g</b>	x <b>f</b>

**Evidence supporting conclusions:**

- a. As stated in Section 4.2.1, the standing water Llyn Cwellyn (SAC feature Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea) is upstream from where the Nant-y-Betws discharges to the Afon Gwyrfai and as such there will be no discharge of water from the Development to this SAC feature.
- b. As stated in Section 4.2.8, following best practice guidelines for construction sites, and during operation, on-site mitigation will be in place to help prevent and limit the effects of any water pollution and/or runoff, and the likelihood of such events. In addition, dilution between the Development and the SAC will reduce the significance of any accidental spills. Mitigation measures will be secured through the DCO Requirement 6 Code of Construction Practice (CoCP) which contains a Pollution Prevention Plan (PPP) and Water Management Plan (WTMP). An outline of the environmental measures to be incorporated is given in the WTMP, ES Chapter 7 Ecology, Section 7.8 and Chapter 16 Environmental Management (AECOM, 2015b)
- c. Decommissioning will not require any works that may cause water pollution incidents.
- d. As stated in Section 4.2.3 and 4.2.20 – 4.2.22 and Appendix C, during operation, discharge from the Q1 spillway has potential to increase the flow regime of the Afon Gwyrfai via the Nant-y-Betws. However, the discharge from the spillway will be infrequent and will not permanently increase the flow regime of the Afon Gwyrfai, and limited by an Environmental Permit secured through a Discharge Consent under the Environmental Permitting Regulations 2010 (as amended).
- e. During construction and decommissioning there will be no discharges from the spillway and as such no change to the flow regime caused by the Development.

- f.** During construction and decommissioning there will be no discharges from the spillway and as such no inputs into Afon Gwyrfai a Llyn Cwellyn SAC from the Development.
- g.** As stated in Section 4.2.10 the water used to fill the pumped hydro system will be taken from Llyn Padarn, which is known to suffer from sporadic nutrient enrichment and algal blooms. The SAC is connected to the Development via the Q1 spillway and Nant-y-Betws watercourse; the discharge from the Q1 spillway will be infrequent. As stated in Sections 4.2.13 – 4.19 one of the most significant sources of phosphorus in Llyn Padarn are discharges from Llanberis Waste Water Treatment Works (WwTW). Measures are being put in place by Llanberis WwTW to limit the occurrences of eutrophication-causing incidences within Llyn Padarn. Water drawn into the system during occasional occurrences of increased level of nutrients (such as during overturn or a stormwater event) will be diluted by the water taken from times when nutrient levels are low/normal. The water within the system will be monitored for nutrient enrichment and appropriate remedial action taken to prevent the addition of nutrient-rich water into the Afon Gwyrfai a Llyn Cwellyn SAC.

**HRA Screening Matrix B**

<b>Eryri / Snowdonia SAC</b>			
<b>EU Code: UK0012946</b>			
<b>Distance to NSIP: 2.2km</b>			
<b>European site features</b>	<b>Likely Effects of NSIP</b>		
<i>Effect</i>	<i>Effect 1</i>		
<i>Stage of development</i>	<i>C</i>	<i>O</i>	<i>D</i>
Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	xa	xa	xa
Siliceous alpine and boreal grasslands	xa	xa	xa
Hydrophilous tall herb fringe communities of plains and of the montane to alpine	xa	xa	xa

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levels			
Siliceous scree of the montane to snow levels ( <i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i> )	x a	x a	x a
Calcareous rocky slopes with chasmophytic vegetation	x a	x a	x a
Siliceous rocky slopes with chasmophytic vegetation	x a	x a	x a
Northern Atlantic wet heaths with <i>Erica tetralix</i>	x a	x a	x a
European dry heaths	x a	x a	x a
Alpine and Boreal heaths	x a	x a	x a
Alpine and subalpine calcareous grasslands	x a	x a	x a
Species-rich <i>Nardus</i> grasslands,	x a	x a	x a

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on silicious substrates in mountain areas (and submountain areas in Continental Europe)			
Blanket bogs	x a	x a	x a
Depressions on peat substrates of the <i>Rhynchosporion</i>	x a	x a	x a
Petrifying springs with tufa formation ( <i>Cratoneurion</i> )	x a	x a	x a
Alkaline fens	x a	x a	x a
Alpine pioneer formations of the <i>Caricion bicoloris-atrofuscae</i>	x a	x a	x a
Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	x a	x a	x a
Slender green feather-moss <i>Drepanocladus</i> ( <i>Hamatocaulis</i> )	x a	x a	x a

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<i>vernicosus</i>			
Floating water-plantain <i>Luronium natans</i>	×a	×a	×a

**Evidence supporting conclusions**

- a. As stated in Section 4.3.1 – 4.3.2 small watercourses run from the SAC into Llyn Padarn, due to the direction of flow any feasible pathways for water pollution are eliminated. No watercourses flow into the SAC from the Order Limits.

**HRA Screening Matrix C**

<b>Y Fenai a Bae Conwy / Menai Strait and Conwy Bay SAC</b>			
<b>EU Code: UK0030202</b>			
<b>Distance to NSIP: 7.0km</b>			
<b>European site features</b>	<b>Likely Effects of NSIP</b>		
<i>Effect</i>	<i>Effect 1</i>		
<i>Stage of development</i>	<i>C</i>	<i>O</i>	<i>D</i>
Sandbanks which are slightly covered by sea water all the time	xa	xa	xa
Mudflats and sandflats not covered by seawater at low tide	xa	xa	xa
Reefs	xa	xa	xa
Large shallow inlets and bays	xa	xa	xa
Submerged or partially submerged sea caves	xa	xa	xa

**Evidence supporting conclusions**

- a.** As stated in Section 4.4.2 it is unlikely that pollution during construction, operation or decommissioning will reach or significantly affect this SAC due to distance, dilution and dispersal. As stated in Section 4.4.3 there will be no effect on any of the features of this Natura 2000 site as result of water pollution from any phase of the Development.

**HRA Screening Matrix D**

<b>Traeth Lafan / Lavan Sands, Conway Bay, SPA</b>			
<b>EU Code: UK9013031</b>			
<b>Distance to NSIP: 11.8km</b>			
<b>European site features</b>	<b>Likely Effects of NSIP</b>		
<i>Effect</i>	<i>Effect 1</i>		
<i>Stage of development</i>	<i>C</i>	<i>O</i>	<i>D</i>
Great Crested Grebe ( <i>Podiceps cristatus</i> )	xa	xa	xa
Curlew ( <i>Numenius arquata</i> )	xa	xa	xa
Population of European importance of Oystercatchers <i>Haematopus ostralegus</i>	xa	xa	xa

**Evidence supporting conclusions**

- a. As stated in Section 4.5.2 it is unlikely that water pollution from any phase of the development will reach or significantly affect the features and/or integrity of the SPA due to distance, dilution and dispersal.

**Screening Matrix E**

<b>Glynllifon, SAC</b>						
<b>EU Code: UK0012661</b>						
<b>Distance to NSIP: 7.5km</b>						
<b>European site features</b>	<b>Likely Effects of NSIP</b>					
<i>Effect</i>	<i>Effect 1</i>			<i>Effect 2</i>		
<i>Stage of development</i>	<i>C</i>	<i>O</i>	<i>D</i>	<i>C</i>	<i>O</i>	<i>D</i>
Lesser horseshoe bat <i>Rhinolophus hipposideros</i>	<b>x<sub>a</sub></b>	<b>x<sub>a</sub></b>	<b>x<sub>a</sub></b>	<b>x<sub>b</sub></b>	<b>x<sub>b</sub></b>	<b>x<sub>b</sub></b>

**Evidence supporting conclusions**

- a. There are no hydrological links between this SAC and the Development and therefore no water pollution or alteration of flow regime from any phase of the development will reach or significantly affect the features and/or integrity of the SAC.
- b. As stated in Section 4.6.1 – 4.6.6 there is potential for lesser horseshoe bats to be affected by the loss of habitat and loss of tunnel hibernation and summer roosts within the Order Limits. There will be loss of some tunnel roosts within the Development. However, other tunnels at the Development will be retained and enhanced to maintain a summer and winter roosting resource within the Development. Through pre-application email correspondence with NRW on the scope of the HRA, NRW have confirmed that they have limited information on the flight lines of lesser horseshoe bats outside the Glynllifon SAC. Some radio tracking mapping of lesser horseshoe bats has been undertaken in the vicinity of Glynllifon but, in the wider landscape they have no information to confirm that the SAC is connected to the Glyn Rhonwy Development.

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Glyn Rhonwy is approx. 10km (direct distance) from the Glynllifon SAC, and there is the potential for lesser horseshoe bats from the Glynllifon SAC to be using the Development. However, NRW noted both the low numbers of bats at the Development and stated that the mitigation and compensation measures proposed should ensure that there will be no adverse effects on the Glynllifon SAC. Based on the lack of foraging habitat, lack of foraging and commuting bats recorded during summer walked transects, and the retention of the broadleaved woodland and enhancement of the retained tunnels there will be no LSE at any phase of the Development.

**HRA Screening Matrix F**

<b>Glannau Mon: Cors heli / Anglesey Coast: Saltmarsh SAC</b>			
<b>EU Code: UK0020025</b>			
<b>Distance to NSIP: 9.8km</b>			
<b>European site features</b>	<b>Likely Effects of NSIP</b>		
<i>Effect</i>	<i>Effect 1</i>		
<i>Stage of development</i>	<i>C</i>	<i>O</i>	<i>D</i>
<i>Salicornia and other annuals colonizing mud and sand</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
<i>Atlantic salt meadows (Glaucopuccinellietalia maritima)</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
<i>Estuaries</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
<i>Mudflats and sandflats not covered by seawater at low tide</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>

**Evidence supporting conclusions**

- a. As stated in Section 4.7.2 it is unlikely that water pollution from any phase of the development will reach or significantly affect the features and/or integrity of the SAC due to distance, dilution and dispersal.

**HRA Screening Matrix G**

<b>Y Twyni o Abermenai i Aberffraw / Abermenai to Aberffraw Dunes, SAC</b>			
<b>EU Code: UK0020021</b>			
<b>Distance to NSIP: 11km</b>			
<b>European site features</b>	<b>Likely Effects of NSIP</b>		
<i>Effect</i>	<i>Effect 1</i>		
<i>Stage of development</i>	<i>C</i>	<i>O</i>	<i>D</i>
Embryonic shifting dunes	×a	×a	×a
"Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")"	×a	×a	×a
"Fixed coastal dunes with herbaceous vegetation ("grey dunes")" * Priority feature	×a	×a	×a
Dunes with <i>Salix repens ssp. Argentea</i> ( <i>Salicion arenariae</i> )	×a	×a	×a
Humid dune slacks	×a	×a	×a
Natural eutrophic	×a	×a	×a

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lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> – type vegetation			
Petalwort <i>Petalophyllum ralfsii</i>	×a	×a	×a
Shore dock <i>Rumex</i> <i>rupestris</i>	×a	×a	×a

**Evidence supporting conclusions**

- a. As stated in Section 4.8.2 it is unlikely that water pollution from any phase of the development will reach or significantly affect the features and/or integrity of the SAC due to distance, dilution and dispersal.

**HRA Screening Matrix H**

Coedydd Derw a Safleoedd Ystumod Meirion / Meirionnydd Oakwoods and Bat Sites, SAC						
EU Code: UK0014789						
Distance to NSIP: 12.3km						
European site features	Likely Effects of NSIP					
Effect	Effect 1			Effect 2		
Stage of development	C	O	D	C	O	D
Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	x a	x a	x a	x b	x b	x b
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ( <i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i> ) * Priority feature	x a	x a	x a	x b	x b	x b
Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and	x a	x a	x a	x b	x b	x b

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<i>Callitricho-Batrachion</i> vegetation						
Northern Atlantic wet heaths with <i>Erica tetralix</i>	x a	x a	x a	x b	x b	x b
European dry heaths	x a	x a	x a	x b	x b	x b
Tilio-Acerion forests of slopes, screes and ravine	x a	x a	x a	x b	x b	x b
Bog woodland	x a	x a	x a	x b	x b	x b
Lesser horseshoe bat <i>Rhinolophus hipposideros</i>	x a	x a	x a	x b	x b	x b

**Evidence supporting conclusions**

- a. As stated in Section 4.9.1 the SAC and the Development are hydrologically linked. However the water source from the Development flows away from the SAC. Therefore there are no feasible effect pathways. As stated in Section 4.9.2 due to the lack of effect pathways there will be no effect on the features of this SAC at any phase of the Development.
- b. As stated in Section 4.9.3 the SAC is over 10km from the Development and therefore there are considered to be no effect pathways between this SAC and the Development for disturbance to bats.

**HRA Screening Matrix I**

<b>Liverpool Bay / Bae Lerpwl (Wales), SPA</b>			
<b>EU Code: UK9020294</b>			
<b>Distance to NSIP: 17.6km</b>			
<b>European site features</b>	<b>Likely Effects of NSIP</b>		
<i>Effect</i>	<i>Effect 1</i>		
<i>Stage of development</i>	<i>C</i>	<i>O</i>	<i>D</i>
Supports overwintering populations of red throated divers <i>Gavia stellata</i>	xa	xa	xa
Supports wintering populations of common scoter <i>Melanitta nigra</i>	xa	xa	xa
Supports an internationally important assemblage of birds	xa	xa	xa

**Evidence supporting conclusions**

- a. As stated in Section 4.10.1 there are two hydrological links and feasible pathways between the SPA and the Development. As stated in 4.10.2 it is unlikely that any pollution at any phase of the Development will reach or significantly affect the features and/ or the integrity of the SPA due to the distance between the Development and the SPA and the level of dilution and dispersal between the spillways and watercourses/ waterbodies.

**HRA Screening Matrix J**

<b>Corsydd Môn a Llyn / Anglesey and Llyn Fens, Ramsar</b>			
<b>EU Code: UK14005</b>			
<b>Distance to NSIP: 20km (Anglesey) 32km (Llyn Fens)</b>			
<b>European site features</b>	<b>Likely Effects of NSIP</b>		
<i>Effect</i>	<i>Effect 1</i>		
<i>Stage of development</i>	<i>C</i>	<i>O</i>	<i>D</i>
Ramsar criterion 1: The site supports a suite of base-rich, calcareous fens which is a rare habitat type within the United Kingdom's biogeographical zone.	xa	xa	xa
Ramsar criterion 3: The site supports a diverse flora and fauna with associated rare	xa	xa	xa

species and is of special value for maintaining the genetic and ecological diversity of the region.			
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**Evidence supporting conclusions**

- a. As stated in Section 4.11.1 the Ramsar and the development are hydrologically connected, however the watercourses within the Anglesey and Llyn Fens Ramsar flow out of the Ramsar sites and towards the Development. Therefore there are no feasible effect pathways. Due to the lack of effect pathways there will be no effects on the features of this Ramsar from any phase of the Development.

HRA Screening Matrix K

<b>Corsydd Mon / Anglesey Fens, SAC</b>			
<b>EU Code: UK0012884</b>			
<b>Distance to NSIP 20km</b>			
<b>European site features</b>	<b>Likely Effects of NSIP</b>		
<i>Effect</i>	<i>Effect 1</i>		
<i>Stage of development</i>	<i>C</i>	<i>O</i>	<i>D</i>
Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp	×a	×a	×a
Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davalliana</i> * Priority feature	×a	×a	×a
Alkaline fens	×a	×a	×a
Northern Atlantic wet heaths with <i>Erica tetralix</i>	×a	×a	×a

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Molinia meadows on calcareous , peaty or clayey-silt-laden soils ( <i>Molinia caeruleae</i> )	x a	x a	x a
Geyer`s whorl snail <i>Vertigo geyeri</i>	x a	x a	x a
Southern damselfly <i>Coenagrion mercuriale</i>	x a	x a	x a
Marsh fritillary butterfly Euphydryas ( <i>Eurodryas Hypodryas</i> ) <i>aurinia</i>	x a	x a	x a

**Evidence supporting conclusions**

- a. As stated in Section 4.12.1 the SAC and the development are hydrologically connected, however the watercourse flows out of the SAC and towards the Development. Therefore, there are no feasible effect pathways. Due to the lack of effect pathways there will be no effects on the features of this SAC from any phase of the Development.

**HRA Screening Matrix L**

<b>Pen Llŷn a'r Sarnau / Lleyn Peninsula and the Sarnau, SAC</b>			
<b>EU Code: UK0013117</b>			
<b>Distance to NSIP: 21.7km</b>			
<b>European site features</b>	<b>Likely Effects of NSIP</b>		
<i>Effect</i>	<i>Effect 1</i>		
<i>Stage of development</i>	<i>C</i>	<i>O</i>	<i>D</i>
Sandbanks which are slightly covered by sea water all the time	xa	xa	xa
Estuaries	xa	xa	xa
Coastal lagoons * Priority feature	xa	xa	xa
Large shallow inlets and bays	xa	xa	xa
Reefs	xa	xa	xa
Mudflats and sandflats not covered by seawater at low tide	xa	xa	xa

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Salicornia and other annuals colonizing mud and sand	×a	×a	×a
Atlantic salt meadows ( <i>Glaucopuccinellietalia maritimae</i> )	×a	×a	×a
Submerged or partially submerged sea caves	×a	×a	×a
Bottlenose dolphin <i>Tursiops truncates</i>	×a	×a	×a
Otter <i>Lutra lutra</i>	×a	×a	×a
Grey seal <i>Halichoerus grypus</i>	×a	×a	×a

**Evidence supporting conclusions**

- a. As stated in Section 4.13.1 the SAC and the development are hydrologically connected; however, the aquatic input source from the Development flows away from the SAC. Therefore there are no feasible effect pathways. As stated in Section 4.13.3 due to the lack of effect pathways there will be no effects on the features of this SAC from any phase of the Development.

HRA Screening Matrix M

<b>Ynys Seiriol / Puffin Island, SPA</b>			
<b>EU Code: UK9020285</b>			
<b>Distance to NSIP: 22km</b>			
<b>European site features</b>	<b>Likely Effects of NSIP</b>		
<i>Effect</i>	<i>Effect 1</i>		
<i>Stage of development</i>	<i>C</i>	<i>O</i>	<i>D</i>
Breeding colony of Cormorant <i>Phalacrocorax carbo</i> , populations of European importance	xa	xa	xa

- a. As stated in Section 4.14.1 there are two hydrological links and feasible pathways between the SPA and the Development. However as stated in 4.14.2 it is unlikely that water pollution during any phase of the Development will significantly affect the features and/or the integrity of the SPA due to the distance between the Development and the SPA and the level of dilution and dispersal between the spillways and watercourses/ waterbodies.

## REFERENCES

AECOM (2015a) Glyn Rhonwy Pumped Storage Development Consent Order No Significant Effects Report October 2015 [REP1-001].

AECOM (2015b) The Glyn Rhonwy Pumped Storage Development Consent Order (6.02) Environmental Statement Volume 2. June 2015 [APP-063 – APP-234].

## **ANNEX 3: LIST OF DOCUMENTS REVIEWED TO PRODUCE THE RIES**

## Document List

### Application documents:

- Draft Development Consent Order [APP-043]
- No Significant Effects Report [APP-054]
- Details of Other Consents and Licences [APP-055]
- Environmental Statement Volume 2B – Chapter 18 Schedule of Mitigation [APP-085]
- Environmental Statement Volume 2B – Cumulative Effects [APP-084]
- Environmental Statement Volume 3I – Appendix 16.1 Code of Construction Practice [APP-142]

### Representations

- Natural Resources Wales [RR-053]

### Deadline 1 (30 March 2016)

- Applicant: Updated No Significant Effects Report (clean) [REP1-001]
- Applicant: Draft Development Consent Order (revision 2) [REP1-007]
- Applicant: DCO Comparison Document (revision 0 to revision 2) [REP1-008]
- Applicant: Update on Other Consents and Licences [REP1-015]
- Briefing note to NRW on updated No Significant Effects Report and NRW Response [REP1-016]

### Deadline 2 (13 April 2016)

- Applicant: Draft Development Consent Order (revision 3A) [REP2-006]
- Applicant: DCO Comparison Document (revision 2 to revision 3A) [REP2-007]
- Applicant: Schedule of Other Required Consents and Strategies [REP2-010]
- Applicant: Responses to Examining Authority's First Written Questions [REP2-011]
- Applicant: Responses to Relevant Representations [REP2-012]
- Applicant: Updated Code of Construction Practice [REP2-013]
- Applicant: Other Consents and Licences Status Document [REP2-014]
- Gwynedd Council: Local Impact Report (English) [REP2-037]
- Gwynedd Council: Response to the Examining Authority's First Written Questions [REP2-041]

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- Natural Resources Wales: Covering letter [REP2-045]
- Natural Resources Wales: Response to the Examining Authority's First Written Questions [REP2-047]

**Deadline 3 (27 April 2016)**

- Applicant: Statement of Common Ground with Natural Resources Wales [REP3-010]
- Applicant: Water Management Plan [REP3-012]
- Applicant: Excess Water Management Strategy [REP3-013]
- Applicant: Draft Development Consent Order (revision 4) [REP3-016]
- Applicant: DCO Comparison Document (revision 3A to revision 4) [REP3-017]
- Applicant: Other Consents and Licences Status Document [REP3-022]
- Applicant: Schedule of Other Required Plans and Strategies [REP3-024]
- Applicant: Responses to Written Representations [REP3-026]
- Natural Resources Wales: Submission for Deadline 3 [REP3-032]

**Deadline 4 (26 May 2016)**

- Applicant: Signed Statement of Common Ground with Gwynedd Council [REP4-006]
- Applicant: DCO Comparison Document (revision 4 to revision 5) [REP4-008]
- Applicant: Draft Development Consent Order (revision 5) [REP4-009]
- Applicant: Other Consents and Licences Status Document [REP4-010]
- Applicant: Responses to Written Representations [REP4-011]
- Applicant: Summary of Oral Case, and Responses to ExA's Action Points from Issue Specific Hearing on the Development Consent Order [REP4-013]
- Applicant: Written summary of Oral Case, and Responses to ExA's Agenda and Action Points from Issue Specific Hearing on 17 May 2016 [REP4-014]
- Gwynedd Council: Response to the ExA's Agenda items for the Issue Specific Hearing on Tuesday 17 May 2016 (Agenda Item 2.4) [REP4-024]
- Gwynedd Council: Responses to the ExA's action points arising from the Issue Specific Hearing on 17 May 2016 [REP4-026]
- Gwynedd Council: Responses to the ExA's action points arising from the Issue Specific Hearing on 18 May 2016 [REP4-027]

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- Natural Resources Wales: Response to the ExA's action points arising from the Issue Specific Hearing on Tuesday 17 May 2016 (Agenda Items 6.6 and 11.1) [REP4-035]
- Natural Resources Wales: Response to ExA's action points arising from the Issue Specific Hearing on Tuesday 17 May 2016, and comments on the Applicants draft DCO (version 4) [REP4-036]

**Deadline 5 (21 June 2016)**

- Applicant: Draft Development Consent Order (Revision 6A) [REP5-002]
- Applicant: DCO Comparison Document (revision 5 to revision 6a) [REP5-003]
- Applicant: Responses to ExA's Second Written Questions [REP5-005]
- Applicant: Status of Other Consents and Licences Document [REP5-007]
- Applicant: Schedule of Mitigation [REP5-008]
- Applicant: Code of Construction Practice (Revision 2) [REP5-018]
- Applicant: Water Management Plan (Revision 2) [REP5-020]
- Applicant: Appendix B: HRA Screening Matrices [REP5-034]
- Gwynedd Council: Responses to the ExA's Second Written Questions [REP5-044]
- Natural Resources Wales: Comments on draft plans and clarification on agenda items 6.6 and 11.1 relating to the Issue Specific Hearing held on 17 May 2016 [REP5-048].
- Natural Resources Wales: Responses to the ExA's Second Written Questions [REP5-049]

**Deadline 6 (4 July 2016)**

- Applicant: Response to the ExA's Request for Further Information dated 27 June 2016 [REP6-001]
- Applicant: Response to Written Submissions made by Interested Parties at Deadline 5 [REP6-002]
- Applicant: Schedule of Mitigation (Revision 2) [REP6-003]
- Applicant: Addendum to Statement of Common Ground with Natural Resources Wales [REP6-006]
- Applicant: Code of Construction Practice (Revision 3) [REP6-007]
- Applicant: Other Consents and Licences Status Document [REP6-008]
- Applicant: Excess Water Management Strategy (Revision 2) [REP6-009]

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- Applicant: DCO Comparison Document (revision 6a to revision 7) [REP6-011]
- Applicant: Draft Development Consent Order (Revision 7) [REP6-012]
- Gwynedd Council: Response to the ExA's Second Written Questions [REP6-016]
- Natural Resources Wales: Response to the ExA's Request for Further Information dated 27 June 2016 [REP6-017]

**Procedural Decisions**

- Rule 6 Letter [PD-005]
- Examining Authority's First Written Questions [PD-009]
- Examining Authority's Second Written Questions [PD-015]
- Rule 17 Letter to the Applicant and Natural Resources Wales [PD-019]
- Examining Authority's draft Development Consent Order [PD-023]
- Requests for further information under Rule 17 [PD-025]

**Events and Hearings**

- Applicant: DCO Comparison Document (revision 0 to revision 1) [EV-006]
- Applicant: Draft Development Consent Order (revision 1) [EV-008]

**Other Documents**

- Natural Resources Wales: Submission received in advance of ISH held on 17 May 2016 [OD-007]
- Natural Resources Wales: Submission received in advance of ISH held on 18 May 2016 [OD-008]