

# **Habitats Regulations Assessment**

## **Appendix B: Screening Matrices**

## Potential Impacts

Potential impacts upon the European site(s)\* which are considered within the submitted No Significant Effects Report (AECOM, 2015a) are provided in the table below.

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\* As defined in Advice Note 10.  
Appendix B Screening Matrices

## Impacts considered within the screening matrices

<b>Designation</b>	<b>Impacts in submission information</b>	<b>Presented in screening matrices as</b>
Afon Gwyrfai a Llyn Cwellyn SAC	<ul style="list-style-type: none"> <li>• Water Pollution</li> </ul>	<ul style="list-style-type: none"> <li>• Effect 1</li> </ul>
Eryri / Snowdonia SAC	-	<ul style="list-style-type: none"> <li>•</li> </ul>
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 Corsydd Môn a Llyn / Anglesey and Llyn Fens Ramsar Corsydd Mon / Anglesey Fens SAC Pen Llyn a'r Sarnau / Llyn Peninsula and the Sarnau SAC	<ul style="list-style-type: none"> <li>• Disturbance to species (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).</li> </ul>	<ul style="list-style-type: none"> <li>• Effect 2</li> </ul>
Ynys Seiriol / Puffin Island SPA	<ul style="list-style-type: none"> <li>• Flow Regime (applicable to Afon Gwyrfai a Llyn Cwellyn</li> </ul>	<ul style="list-style-type: none"> <li>• Effect 3</li> </ul>

	<p>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.)</p>	
	<ul style="list-style-type: none"> <li>• Nutrient Enrichment (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.)</li> </ul>	<ul style="list-style-type: none"> <li>• Effect 4</li> </ul>

## **STAGE 1: 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.

**Matrix Key:**

✓ = Likely significant effect **cannot** be excluded

✗ = Likely significant effect **can** be excluded

C = construction

O = operation

D = decommissioning

Stage 1 Matrix A: Afon Gwyrfai a Llyn Cwellyn SA

<b>Name of European site: 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 1</i>			<i>Effect 3</i>			<i>Effect 4</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	<b>xa</b>	<b>xa</b>	<b>xc</b>	<b>xa</b>	<b>xa</b>	<b>xa</b>	<b>xg</b>	<b>xh</b>	<b>xg</b>
Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation	<b>xb</b>	<b>xb</b>	<b>xc</b>	<b>xf</b>	<b>xd</b>	<b>xf</b>	<b>xg</b>	<b>xh</b>	<b>xg</b>
Atlantic salmon ( <i>Salmo salar</i> )	<b>xb</b>	<b>xb</b>	<b>xc</b>	<b>xf</b>	<b>xd</b>	<b>xf</b>	<b>xg</b>	<b>xh</b>	<b>xg</b>
Floating water-plantain ( <i>Luronium</i> )	<b>xb</b>	<b>xb</b>	<b>xc</b>	<b>xf</b>	<b>xd</b>	<b>xf</b>	<b>xg</b>	<b>xh</b>	<b>xg</b>



<i>natans</i> )									
Otter ( <i>Lutra lutra</i> )	<b>xb</b>	<b>xb</b>	<b>xc</b>	<b>xf</b>	<b>xd</b>	<b>xf</b>	<b>xg</b>	<b>xh</b>	<b>xg</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).

**f.** 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.

**g.** 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.

**h.** 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.

Stage 1 Matrix B: Eryri / Snowdonia SAC

<b>Name of European site: 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 1</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	<b>xa</b>	<b>xa</b>	<b>xa</b>
Siliceous alpine and boreal grasslands	<b>xa</b>	<b>xa</b>	<b>xa</b>
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	<b>xa</b>	<b>xa</b>	<b>xa</b>
Siliceous scree of the montane to snow levels	<b>xa</b>	<b>xa</b>	<b>xa</b>

( <i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i> )			
Calcareous rocky slopes with chasmophytic vegetation	<b>xa</b>	<b>xa</b>	<b>xa</b>
Siliceous rocky slopes with chasmophytic vegetation	<b>xa</b>	<b>xa</b>	<b>xa</b>
Northern Atlantic wet heaths with <i>Erica tetralix</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
European dry heaths	<b>xa</b>	<b>xa</b>	<b>xa</b>
Alpine and Boreal heaths	<b>xa</b>	<b>xa</b>	<b>xa</b>
Alpine and subalpine calcareous grasslands	<b>xa</b>	<b>xa</b>	<b>xa</b>
Species-rich <i>Nardus</i> grasslands, on silicious substrates in mountain areas (and submountain areas in Continental	<b>xa</b>	<b>xa</b>	<b>xa</b>

Europe)			
Blanket bogs	<b>xa</b>	<b>xa</b>	<b>xa</b>
Depressions on peat substrates of the <i>Rhynchosporion</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
Petrifying springs with tufa formation ( <i>Cratoneurion</i> )	<b>xa</b>	<b>xa</b>	<b>xa</b>
Alkaline fens	<b>xa</b>	<b>xa</b>	<b>xa</b>
Alpine pioneer formations of the <i>Caricion bicoloris-atrofuscae</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	<b>xa</b>	<b>xa</b>	<b>xa</b>
Slender green feather-moss <i>Drepanocladus (Hamatocaulis) vernicosus</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
Floating water-plantain <i>Luronium natans</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>

**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.

Stage 1 Matrix C: Y Fenai a Bae Conwy / Menai Strait and Conwy Bay SAC

<b>Name of European site: 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 1</i>		
	<i>C</i>	<i>O</i>	<i>D</i>
Sandbanks which are slightly covered by sea water all the time	<b>xa</b>	<b>xa</b>	<b>xa</b>
Mudflats and sandflats not covered by seawater at low tide	<b>xa</b>	<b>xa</b>	<b>xa</b>
Reefs	<b>xa</b>	<b>xa</b>	<b>xa</b>
Large shallow inlets and bays	<b>xa</b>	<b>xa</b>	<b>xa</b>
Submerged or partially submerged sea caves	<b>xa</b>	<b>xa</b>	<b>xa</b>

**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.



Stage 1 Matrix D: Traeth Lafan / Lavan Sands, Conway Bay, SPA

<b>Name of European site: 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 1</i>		
	<i>C</i>	<i>O</i>	<i>D</i>
Population of European importance of Oystercatchers <i>Haematopus ostralegus</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>

**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.

Stage 1 Matrix E: Glynllifon, SAC

<b>Name of European site: 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 1</i>			<i>Effect 2</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>xa</b>	<b>xa</b>	<b>xa</b>	<b>xb</b>	<b>xb</b>	<b>xb</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. 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.

Stage 1 Matrix F: Glannau Mon: Cors heli / Anglesey Coast: Saltmarsh SAC

<b>Name of European site: 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 1</i>		
	<i>C</i>	<i>O</i>	<i>D</i>
<i>Salicornia</i> and other annuals colonizing mud and sand	<b>xa</b>	<b>xa</b>	<b>xa</b>
Atlantic salt meadows ( <i>Glaucopuccinellietalia maritimae</i> )	<b>xa</b>	<b>xa</b>	<b>xa</b>
Estuaries	<b>xa</b>	<b>xa</b>	<b>xa</b>
Mudflats and sandflats not covered by seawater at low tide	<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.

Stage 1 Matrix G: Y Twyni o Abermenai i Aberffraw / Abermenai to Aberffraw Dunes, SAC

<b>Name of European site: 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 1</i>		
	<i>C</i>	<i>O</i>	<i>D</i>
Embryonic shifting dunes	<b>xa</b>	<b>xa</b>	<b>xa</b>
"Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")"	<b>xa</b>	<b>xa</b>	<b>xa</b>
"Fixed coastal dunes with herbaceous vegetation ("grey dunes") * Priority feature	<b>xa</b>	<b>xa</b>	<b>xa</b>
Dunes with <i>Salix repens ssp. Argentea</i> ( <i>Salicion arenariae</i> )	<b>xa</b>	<b>xa</b>	<b>xa</b>
Humid dune slacks	<b>xa</b>	<b>xa</b>	<b>xa</b>
Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> – type vegetation	<b>xa</b>	<b>xa</b>	<b>xa</b>

Petalwort <i>Petalophyllum ralfsii</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
Shore dock <i>Rumex rupestris</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>

**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.

Stage 1 Matrix H: Coedydd Derw a Safleoedd Ystlumod Meirion / Meirionnydd Oakwoods and Bat Sites, SAC

<b>Name of European site: Coedydd Derw a Safleoedd Ystlumod Meirion / Meirionnydd Oakwoods and Bat Sites, SAC</b>						
<b>EU Code: UK0014789</b>						
<b>Distance to NSIP 12.3km</b>						
<b>European site features</b>	<b>Likely Effects of NSIP</b>					
	<i>Effect 1</i>			<i>Effect 2</i>		
	<i>C</i>	<i>O</i>	<i>D</i>	<i>C</i>	<i>O</i>	<i>D</i>
Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	<b>xa</b>	<b>xa</b>	<b>xa</b>	<b>xb</b>	<b>xb</b>	<b>xb</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	<b>xa</b>	<b>xa</b>	<b>xa</b>	<b>xb</b>	<b>xb</b>	<b>xb</b>
Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>	<b>xb</b>	<b>xb</b>	<b>xb</b>

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



Stage 1 Matrix I: Liverpool Bay / Bae Lerpwl (Wales), SPA

<b>Name of European site: 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 1</i>		
	<i>C</i>	<i>O</i>	<i>D</i>
Supports over wintering populations of red throated divers <i>Gavia stellata</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
Supports wintering populations of common scoter <i>Melanitta nigra</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
Supports an internationally important assemblage of birds	<b>xa</b>	<b>xa</b>	<b>xa</b>

**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.

Stage 1 Matrix J: Corsydd Môn a Llyn / Anglesey and Llyn Fens, Ramsar

<b>Name of European site: 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 1</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.	<b>x a</b>	<b>x a</b>	<b>x a</b>
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	<b>x a</b>	<b>x a</b>	<b>x a</b>

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.

Stage 1 Matrix K: Corsydd Mon / Anglesey Fens, SAC

<b>Name of European site: 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 1</i>		
	C	O	D
Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp	<b>xa</b>	<b>xa</b>	<b>xa</b>
Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davalliana</i> * Priority feature	<b>xa</b>	<b>xa</b>	<b>xa</b>
Alkaline fens	<b>xa</b>	<b>xa</b>	<b>xa</b>
Northern Atlantic wet heaths with <i>Erica tetralix</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
Molinia meadows on calcareous , peaty or clayey-silt-laden soils	<b>xa</b>	<b>xa</b>	<b>xa</b>

( <i>Molinion caeruleae</i> )			
Geyer`s whorl snail <i>Vertigo geyeri</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
Southern damselfly <i>Coenagrion mercuriale</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
Marsh fritillary butterfly <i>Euphydryas (Eurodryas Hypodryas) aurinia</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>

**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.

Stage 1 MatrixL: Pen Llyn a'r Sarnau / Lley Peninsula and the Sarnau, SAC

<b>Name of European site: Pen Llyn a'r Sarnau / Lley 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 1</i>		
	<i>C</i>	<i>O</i>	<i>D</i>
Sandbanks which are slightly covered by sea water all the time	<b>xa</b>	<b>xa</b>	<b>xa</b>
Estuaries	<b>xa</b>	<b>xa</b>	<b>xa</b>
Coastal lagoons * Priority feature	<b>xa</b>	<b>xa</b>	<b>xa</b>
Large shallow inlets and bays	<b>xa</b>	<b>xa</b>	<b>xa</b>
Reefs	<b>xa</b>	<b>xa</b>	<b>xa</b>
Mudflats and sandflats not covered by seawater at low tide	<b>xa</b>	<b>xa</b>	<b>xa</b>
Salicornia and other annuals colonizing mud and sand	<b>xa</b>	<b>xa</b>	<b>xa</b>
Atlantic salt	<b>xa</b>	<b>xa</b>	<b>xa</b>



meadows ( <i>Glaucopuccinellietalia maritimae</i> )			
Submerged or partially submerged sea caves	<b>xa</b>	<b>xa</b>	<b>xa</b>
Bottlenose dolphin <i>Tursiops truncatus</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
Otter <i>Lutra lutra</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>
Grey seal <i>Halichoerus grypus</i>	<b>xa</b>	<b>xa</b>	<b>xa</b>

**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.

Stage 1 Matrix M: Ynys Seiriol / Puffin Island, SPA

<b>Name of European site: 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 1</i>		
	<i>C</i>	<i>O</i>	<i>D</i>
Breeding colony of Cormorant <i>Phalacrocorax carbo</i> , populations of European importance	<b>xa</b>	<b>xa</b>	<b>xa</b>

- 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.

AECOM (2015b) The Glyn Rhonwy Pumped Storage Development Consent Order (6.02) Environmental Statement Volume 2. June 2015.