

Wylfa Newydd Project Signposting Report for the Shadow Habitats Regulations Assessment (HRA) Report

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1 About this Report

1.1 Purpose and Applicability

- 1.1.1 Construction and decommissioning of the Wylfa Newydd Project would involve works in the marine environment. Marine Licences are therefore required for these activities. Two applications for a Marine Licence have been made in parallel with the application for a Development Consent Order (DCO), one for marine construction and one for capital dredging (i.e. dredging to deepen an area to a depth beyond that dredged in the past) and disposal in the construction phase. It is however understood that Natural Resources Wales (NRW) would issue one inclusive licence for these activities (should they be minded to approve the applications). A Marine Licence for decommissioning activities would be sought in the future.
- 1.1.2 No activities in the marine environment are expected to occur in the operational phase, with the potential exception of maintenance dredging. However, because the requirement for maintenance dredging is currently unknown, a Marine Licence for this activity cannot be sought at this stage. Monitoring would be undertaken to establish this requirement and a licence application made at the time, should maintenance be required. However, as explained further below, the potential for maintenance dredging to occur has been taken into account for the purposes of the Shadow Habitats Regulations Assessment (HRA).
- 1.1.3 The construction activities in the marine environment (for which a Marine Licence is sought) have the potential to affect European Designated Sites. European Designated Sites comprise Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and sites that are in the process of designation as SACs and SPAs (these are known as candidate SACs (cSACs), potential SPAs (pSPAs) and Sites of Community Importance (SCIs)). As a matter of policy, the Welsh Government also applies the HRA process to designated Ramsar sites (wetlands of international importance designated under the Ramsar Convention 1971), pSPAs and possible SACs (pSACs). A HRA of the Project activities to which these Marine Licence applications relate is therefore required.
- 1.1.4 A Shadow HRA (prepared in accordance with The Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats Regulations 2017 (the Habitats Regulations)) has been produced that assesses the potential effects of the construction, operation and decommissioning of the entire Project on European Designated Sites (Application Reference Number: 5.2). The Shadow HRA accompanies the DCO, Marine Licence applications and Environmental Permit (EP) applications for the Project and is intended to provide the competent authority (i.e. the determining body for each consent, licence or permit) with the information it requires to make its assessment of the Project under the Habitats Regulations. Of particular relevance to the Marine Licence applications, it considers the effects of activities in the marine environment

on European Designated Sites during the construction of the Power Station. The relationship between the Shadow HRA and the various applications for consent is summarised in figure 1-1.

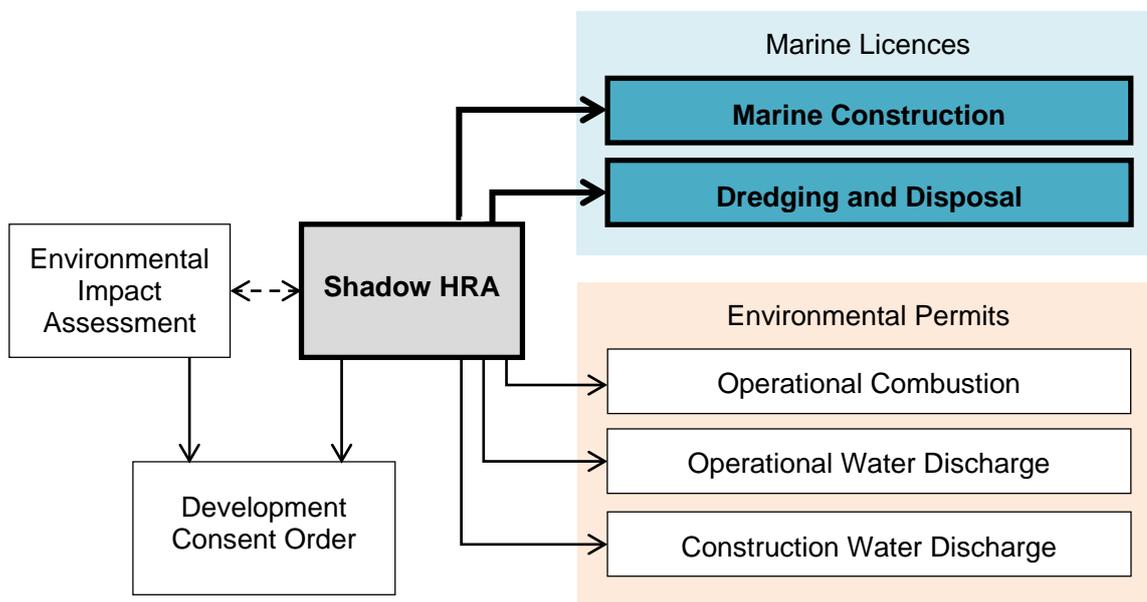


Figure 1-1 Relationship between the Shadow HRA and the various applications to which it relates

- 1.1.5 The Shadow HRA also takes account of the potential for maintenance dredging to occur in the operational phase (e.g. this is allowed for in the assumptions made about activity for the air quality and noise modelling, and in the predictions of vessel movements).
- 1.1.6 The purpose of this Marine Licence Signposting Document is to summarise those findings of the Shadow HRA that are relevant to the Marine Licence applications, and to direct the competent authority (in this case NRW) to those sections of the Shadow HRA where the supporting evidence is provided to enable it to undertake its HRA of the proposed Licensable Marine Activities.

1.2 Scope of the Marine Licence Applications

- 1.2.1 The Marine Licence applications cover Licensable Marine Activities undertaken during the construction phase of the Power Station. A description of activities relevant to the Marine Licence applications is provided in chapter 2 of the Shadow HRA (section 2.2) and in the Environmental Statement (ES) (Application Reference Number: 6.4.1) that accompanies the DCO application.
- 1.2.2 The Marine Licence application for the construction phase covers Licensable Marine Activities associated with the Project's major marine infrastructure, namely:

- the Marine Off-Loading Facility (MOLF);
 - the Cooling Water System (CWS) (which includes the breakwaters, intake and outfall);
 - shore protection works;
 - drainage outfalls;
 - the fish recovery and return system;
 - the fish deterrent system; and,
 - the Temporary Marine Works.
- 1.2.3 The MOLF would include two quays (one for bulk materials and one for 'Roll on-Roll off' of construction elements and machinery) and a layby berth.
- 1.2.4 The CWS system would comprise two individual systems, which share a common intake. The first is the CWS itself, which would be used to condense the steam leaving the steam turbine. The second is the Service Water (SW) system, which would comprise the reactor building service water system (RSW) and the turbine building service water system (TSW), both of which would use heat exchangers to remove heat from a number of plant operational and safety critical systems. Seawater for the CWS would be abstracted through a single cooling water intake structure in Porth-y-pistyll and discharged through a common cooling water outfall in Porth Wnal.
- 1.2.5 The intake channel would be dredged or excavated within Porth-y-pistyll. The intake would be designed so that the maximum water velocity at the cooling water intake complies with the Environment Agency's best practice for minimising fish entrapment [RD1]. The walls of the excavated channel immediately in front of the cooling water intake structure would be cut through the natural rock. Further passive and/or active stabilisation and protection of the rock face could be required. Two breakwaters (western and eastern) would be constructed extending out into Porth-y-pistyll to provide protection and create acceptable wave conditions for the operation of the cooling water intake equipment, as well as providing sheltered conditions for vessels accessing and berthing at the MOLF.
- 1.2.6 The Marine Licence application for dredging and disposal covers capital dredging or excavation within Porth-y-pistyll to prepare the seabed for construction of the MOLF and configuration of the seabed bathymetry to enable safe and effective operation of the cooling water intake channel. The resulting dredged material would be re-used within the Wylfa Newydd Project, re-used off-site if a suitable opportunity is available through a third party, or – as a last resort – deposited at sea. It is currently anticipated that the dredging works could generate up to approximately 242,000m³ of soft sediment (i.e. approximately 352,000 tonnes) and up to approximately 368,000m³ of fractured bedrock (i.e. approximately 709,700 tonnes).

- 1.2.7 Adequate shore protection would be provided where dredging or excavation could lead to shore erosion and/or unacceptable wave overtopping.
- 1.2.8 In the absence of an available re-use option, the residual dredged material would be disposed of at sea in the Holyhead North (IS043) Disposal Site (Disposal Site). The Marine Licence application for capital dredging and disposal, therefore, also covers sediment disposal at the Disposal Site. The proposed Disposal Site is situated partly within the Morwenoliaid Ynys Môn/Anglesey Terns SPA and fully within the Gogledd Môn Forol/North Anglesey Marine cSAC (as shown in figure 8, appendix E (for the SPA) and figure 3, appendix C (for the cSAC) of the Shadow HRA).
- 1.2.9 The Shadow HRA identifies ten main pathways (described as ‘screening categories’) through which the Project has the potential to affect European Designated Sites. Of those ten, six screening categories are relevant to Licensable Marine Activities, that is:
- Changes in visual and acoustic stimuli above ground and underwater during construction, and the resultant effects on terrestrial, freshwater and coastal species, including migratory fish (Atlantic salmon and sea trout), marine mammals and terrestrial and marine birds.
 - Land take, including seabed or intertidal land (defined as below Mean High Water Springs (MHWS)), within the Wylfa Newydd Development Area and within the footprint of the Disposal Site, and the resultant effects on coastal habitats and, potentially, on marine mammals and marine bird species.
 - Changes in marine water quality (water temperature; chemical parameters including pH, nitrates, ammonia, phosphates and dissolved oxygen; suspended sediment and potential contaminant re-mobilisation; and freshwater flow) and the resultant effects on marine and coastal habitats and species (as features and as prey species).
 - Change in air quality from construction dust and construction plant, machinery and vessel emissions, and the resultant effects on nearby marine and coastal habitats and species.
 - Alteration of coastal processes and hydrodynamics during construction (changes to currents, bed shear and waves and coastal squeeze), and the resultant effects on marine and coastal habitats and species (as qualifying features of European Designated Sites and as prey species).
 - Physical interaction between species and Project infrastructure through trampling, vessel strike and entrainment/entrapment, and the resultant effects on coastal species including fish (as qualifying features of European Designated Sites and as prey species), marine mammals and birds.

1.2.10 Further details regarding these screening categories (pathways for Project effects) and their relevant Zones of Influence (ZOI), through which potential receptors were identified, are provided in table 4-2 in chapter 4 of the Shadow HRA.

2 Signposting to the Shadow HRA

2.1 Screening for likely significant effects (LSE)

- 2.1.1 A screening exercise relating to the likely significant effects (LSE) of the Licensable Marine Activities on European Designated Sites was undertaken at Stage 1 of the Shadow HRA process.
- 2.1.2 Full details of the Stage 1 Screening assessment are provided in chapter 5 of the Shadow HRA.
- 2.1.3 The approach adopted for screening and the methodology for the identification of the potential for LSE to arise (alone and in-combination with other plans and project) is provided in section 5.3 of the Shadow HRA.
- 2.1.4 As noted previously, the Shadow HRA identifies the potential for the Project to affect European Designated Sites according to 10 screening categories (see table 4-1 of the Shadow HRA), of which six are relevant to Licensable Marine Activities. In the context of the Marine Licence applications, at Stage 1 of the Shadow HRA process, it was concluded that the potential for LSE could not be excluded for the following screening categories, European Designated Sites and specific qualifying features within those European Designated Sites (table 2-1).
- 2.1.5 The results of the Stage 1 screening exercise are presented in the screening matrices provided in appendix F of the Shadow HRA. Appendix F has been subdivided into appendices F.1, F.2 and F.3 (the results for the whole Project, alone and in-combination with other plans and projects) and Appendix F.4 (the results for the Environmental Permits and the Licensable Marine Activities alone). The specific results that are relevant to the Licensable Marine Activities are shown in appendix F.4 and identified by the inclusion of **[Marine Licence]** in tables 5-1 to 5-4 (chapter 5) of the Shadow HRA.
- 2.1.6 The evidence that supports the results of Stage 1 Screening is provided in sections 5.4 and 5.5 of the Shadow HRA.

Table 2-1 Screening categories, European Designated Sites and qualifying features for which LSE could not be excluded

European Designated Site	Relevant qualifying features	Relevant screening categories for which LSE could not be excluded
SACs and cSACs		
Bae Cemlyn/Cemlyn Bay SAC	Coastal lagoons Perennial vegetation of stony banks	<ul style="list-style-type: none"> • Changes in marine water quality • Change in air quality • Alteration of coastal processes and hydrodynamics
Glannau Ynys Gybi/Holy Island Coast SAC	Vegetated sea cliffs of the Atlantic and Baltic coasts Northern Atlantic wet heaths with <i>Erica tetralix</i> European dry heaths	<ul style="list-style-type: none"> • Change in air quality
Llyn Dinam SAC	Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> -type vegetation	<ul style="list-style-type: none"> • Change in air quality
Afon Gwyrfai a Llŷn Cwellyn SAC	Atlantic salmon (<i>Salmo salar</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Gogledd Môn Forol/North Anglesey Marine cSAC	Harbour porpoise (<i>Phocoena phocoena</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics • Physical interaction between species and Project infrastructure

European Designated Site	Relevant qualifying features	Relevant screening categories for which LSE could not be excluded
Pen Llŷn a'r Sarnau/Llŷn Peninsula and the Sarnau SAC	Grey seal (<i>Halichoerus grypus</i>) Bottlenose dolphin (<i>Tursiops truncatus</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics • Physical interaction between species and Project infrastructure
Gorllewin Cymru Forol/West Wales Marine cSAC	Harbour porpoise (<i>Phocoena phocoena</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics • Physical interaction between species and Project infrastructure
Afon Eden–Cors Goch Trawsfynydd SAC	Atlantic salmon (<i>Salmo salar</i>) Freshwater pearl mussel (<i>Margaritifera margaritifera</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Afon Dyfrdwy a Llŷn Tegid/River Dee and Bala Lake SAC	Atlantic salmon (<i>Salmo salar</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Bae Ceredigion/ Cardigan Bay SAC	Grey seal (<i>Halichoerus grypus</i>) Bottlenose dolphin (<i>Tursiops truncatus</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics • Physical interaction between species and Project infrastructure

European Designated Site	Relevant qualifying features	Relevant screening categories for which LSE could not be excluded
Afon Teifi/River Teifi SAC	Atlantic salmon (<i>Salmo salar</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Dynesfeydd Môr Hafren/Bristol Channel Approaches cSAC	Harbour porpoise (<i>Phocoena phocoena</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics • Physical interaction between species and Project infrastructure
Sir Benfro Forol/ Pembrokeshire Marine SAC	Grey seal (<i>Halichoerus grypus</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics • Physical interaction between species and Project infrastructure
North Channel cSAC	Harbour porpoise (<i>Phocoena phocoena</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics • Physical interaction between species and Project infrastructure
Murlough SAC	Harbour seal (<i>Phoca vitulina</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics

European Designated Site	Relevant qualifying features	Relevant screening categories for which LSE could not be excluded
		<ul style="list-style-type: none"> Physical interaction between species and Project infrastructure
Strangford Lough SAC	Harbour seal (<i>Phoca vitulina</i>)	<ul style="list-style-type: none"> Changes in visual and acoustic stimuli Land take, including seabed or intertidal land Changes in marine water quality Alteration of coastal processes and hydrodynamics Physical interaction between species and Project infrastructure
The Maidens SAC	Grey seal (<i>Halichoerus grypus</i>)	<ul style="list-style-type: none"> Changes in visual and acoustic stimuli Land take, including seabed or intertidal land Changes in marine water quality Alteration of coastal processes and hydrodynamics Physical interaction between species and Project infrastructure
Rockabill to Dalkey SAC	Harbour porpoise (<i>Phocoena phocoena</i>)	<ul style="list-style-type: none"> Changes in visual and acoustic stimuli Land take, including seabed or intertidal land Changes in marine water quality Alteration of coastal processes and hydrodynamics Physical interaction between species and Project infrastructure
Lambay Island SAC	Grey seal (<i>Halichoerus grypus</i>) Harbour seal (<i>Phoca vitulina</i>)	<ul style="list-style-type: none"> Changes in visual and acoustic stimuli Land take, including seabed or intertidal land Changes in marine water quality Alteration of coastal processes and hydrodynamics Physical interaction between species and Project infrastructure
Slaney River Valley SAC	Harbour seal (<i>Phoca vitulina</i>)	<ul style="list-style-type: none"> Changes in visual and acoustic stimuli

European Designated Site	Relevant qualifying features	Relevant screening categories for which LSE could not be excluded
		<ul style="list-style-type: none"> • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics • Physical interaction between species and Project infrastructure
Saltee Islands SAC	Grey seal (<i>Halichoerus grypus</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics • Physical interaction between species and Project infrastructure
SPAs and pSPAs		
Morwenoliaid Ynys Môn/Anglesey Terns SPA	Arctic tern (<i>Sterna paradisaea</i>) Sandwich tern (<i>Sterna sandvicensis</i>) Roseate tern (<i>Sterna dougallii</i>) Common tern (<i>Sterna hirundo</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Change in air quality • Alteration of coastal processes and hydrodynamics
Glannau Ynys Gybi/Holy Island Coast SPA	Red billed chough (<i>Pyrrhocorax pyrrhocorax</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Change in air quality
Ynys Seiriol/Puffin Island SPA	Great cormorant (<i>Phalacrocorax carbo</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality

European Designated Site	Relevant qualifying features	Relevant screening categories for which LSE could not be excluded
		<ul style="list-style-type: none"> • Alteration of coastal processes and hydrodynamics
Glannau Aberdaron and Ynys Enlli/Aberdaron Coast Bardsey Island SPA	Manx shearwater (<i>Puffinus puffinus</i>) Red billed chough (<i>Pyrrhocorax pyrrhocorax</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Change in air quality • Alteration of coastal processes and hydrodynamics
Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal/Mynydd Cilan, Trwyn y Wylfa and the St. Tudwal Islands SPA	Red billed chough (<i>Pyrrhocorax pyrrhocorax</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Change in air quality
Aber Afen Dyfrdwy/Dee Estuary SPA	Sandwich tern (<i>Sterna sandvicensis</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Skomer, Skokholm and the seas off Pembrokeshire/Sgomer, Gogwm a moroedd Benfro SPA	Manx shearwater (<i>Puffinus puffinus</i>) Seabird assemblage of international importance	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics

European Designated Site	Relevant qualifying features	Relevant screening categories for which LSE could not be excluded
Grassholm SPA	Gannet (<i>Morus bassanus</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Mersey Narrows and North Wirral Foreshore SPA	Common tern (<i>Sterna hirundo</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Ribble and Alt Estuaries SPA	Lesser black-backed gull (<i>Larus fuscus</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Morecambe Bay SPA	Seabird assemblage of international importance (herring gull and lesser black-backed gull)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Morecambe Bay and Duddon Estuary SPA	Lesser black-backed gull (<i>Larus fuscus</i>) Seabird assemblage of international importance (herring gull and lesser black-backed gull)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Bowland Fells SPA	Lesser black-backed gull	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli

European Designated Site	Relevant qualifying features	Relevant screening categories for which LSE could not be excluded
	<i>(Larus fuscus)</i>	<ul style="list-style-type: none"> • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Lambay Island SPA	Fulmar (<i>Fulmarus glacialis</i>) Lesser black-backed gull (<i>Larus fuscus</i>) Guillemot (<i>Uria aalge</i>) Puffin (<i>Fratercula arctica</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Ireland's Eye SPA	Guillemot (<i>Uria aalge</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
East Coast Marine pSPA	Manx shearwater (<i>Puffinus puffinus</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Copeland Islands SPA	Manx shearwater (<i>Puffinus puffinus</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics

European Designated Site	Relevant qualifying features	Relevant screening categories for which LSE could not be excluded
Saltee Islands SPA	Fulmar (<i>Fulmarus glacialis</i>) Gannet (<i>Morus bassanus</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Rathlin Island SPA	SBA Seabird assemblage of international importance (herring gull and lesser black-backed gull)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Horn Head to Fanad Head SPA	Fulmar (<i>Fulmarus glacialis</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
West Donegal Coast SPA	Fulmar (<i>Fulmarus glacialis</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Tory Island SPA	Fulmar (<i>Fulmarus glacialis</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Ailsa Craig SPA	Gannet (<i>Morus bassanus</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land

European Designated Site	Relevant qualifying features	Relevant screening categories for which LSE could not be excluded
		<ul style="list-style-type: none"> • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Ramsar sites		
Aber Afen Dyfrdwy/Dee Estuary	Sandwich tern (<i>Sterna sandvicensis</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Mersey Narrows and North Wirral Foreshore	Common tern (<i>Sterna hirundo</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Ribble and Alt Estuaries	Lesser black-backed gull (<i>Larus fuscus</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics
Morecambe Bay	Lesser black-backed gull (<i>Larus fuscus</i>)	<ul style="list-style-type: none"> • Changes in visual and acoustic stimuli • Land take, including seabed or intertidal land • Changes in marine water quality • Alteration of coastal processes and hydrodynamics

2.2 Baseline information

- 2.2.1 Baseline information for the Ramsar sites, SPAs, pSPAs, SACs and cSACs listed in table 2-1 is provided in section 6 of the Shadow HRA. Details of the habitat and species features, marine mammals, migratory fish and seabirds listed above are provided in sections 6.2, 6.3, 6.4 and 6.5 (respectively) of the Shadow HRA.
- 2.2.2 The conservation objectives and status for the European Designated Sites listed above are included in section 7.2 (for habitats and species), sections 8.5 to 8.10 (for marine mammals), section 9.2 (for Atlantic salmon and freshwater pearl mussel) and sections 10.3 to 10.6 (for birds) of the Shadow HRA.

2.3 Assessment of adverse effect on integrity (AEOI)

- 2.3.1 Assessments of the potential for the Licensable Marine Activities to have adverse effects on the integrity (AEOI) of European Designated Sites were undertaken as part of Stage 2 of the Shadow HRA for the Project. This Stage 2 assessment was based on a more detailed assessment of the European Designated Sites, qualifying features and effects (screening categories) for which LSE was determined in Stage 1.
- 2.3.2 Full details of the information provided for Appropriate Assessment (the assessment of a Project's effects on the integrity of European Designated Sites) are included in chapters 7 to 10 of the Shadow HRA.
- 2.3.3 Supporting evidence is provided for each qualifying feature for which LSE has been determined, structured by habitat and species features (chapter 7), marine mammals (chapter 8), Atlantic salmon and freshwater pearl mussel (chapter 9) and birds (chapter 10). The risk of an AEOI is discussed for each qualifying feature and effect (first alone and then in-combination) relevant to the Licensable Marine Activities.
- 2.3.4 Signposts [cross-references] to the relevant discussions and assessments (for each European Designated Site, qualifying feature and effect) are provided in table 2-2 below. In the shadow Appropriate Assessment, for each site (e.g. Bae Cemlyn/Cemlyn Bay SAC), qualifying feature (e.g. coastal lagoons) and effect (e.g. changes in marine water quality (effect 'A')) for which LSE was determined, potential specific effects were examined (e.g. increase in suspended sediment from drainage discharge) and distinguished by a unique identifier (e.g. A1). This is intended to help in the identification of specific effects that are relevant to the Licensable Marine Activities.
- 2.3.5 For each specific effect considered in the shadow Appropriate Assessment (e.g. A1), a flag is provided in the effect heading if it considers Licensable Marine Activities [**Marine Licence**]. Note, however, that everything discussed under a particular effect heading (such as 'increase in suspended sediment from drainage discharge'), may not be relevant to the Marine Licence; with only part of the effect influencing the marine environment.

- 2.3.6 The outcomes of the shadow Appropriate Assessment are presented in the integrity matrices provided in appendix H of the Shadow HRA. Appendix H has been subdivided into appendices H.1, H.2 and H.3 (the results for the Project, alone and in-combination with other plans and projects) and appendix H.4 (the results for the Environmental Permits and the Licensable Marine Activities alone).

Table 2-2 Signposts to the relevant discussions and assessments for each European Designated Site, qualifying feature and effect relating to Licensable Marine Activities

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
Habitats	<ul style="list-style-type: none"> Bae Cemlyn/Cemlyn Bay SAC 	<p>Changes in marine water quality (alone):</p> <p>Coastal lagoon</p> <ul style="list-style-type: none"> Section 7.4, effect A1 (Increase in suspended sediment from drainage discharge, dewatering, sewage, capital dredging and disposal of dredged material) Section 7.4, effect A2 (Change in water chemistry) Section 7.4, effect A3 (Change in surface and ground water flow - affecting salinity) Section 7.4, effect A4 (Change in salinity at Cemlyn lagoon due to overtopping of the shingle ridge (Esgair Gemlyn)). <p>Perennial vegetation of stony banks</p> <ul style="list-style-type: none"> Section 7.4, effect E1 (Increase in suspended sediment from drainage discharge, dewatering, sewage, capital dredging and disposal of dredged material) <p>In-combination effects</p> <ul style="list-style-type: none"> Section 7.5 <p>Changes in air quality (alone):</p> <p>Coastal lagoon</p> <ul style="list-style-type: none"> Section 7.4, effect C1 (Construction dust (earthworks and material handling)) Section 7.4, effect C2 (Construction plant, machinery and marine vessels emissions)

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
		<p>Perennial vegetation of stony banks</p> <ul style="list-style-type: none"> • Section 7.4, effect G1 (Construction dust (earthworks and material handling)) • Section 7.4, effect G2 (Construction plant, machinery and marine vessels emissions) <p>In-combination effects</p> <ul style="list-style-type: none"> • Section 7.5 <p>Alteration of coastal processes and hydrodynamics (alone):</p> <p>Coastal lagoon</p> <ul style="list-style-type: none"> • Section 7.4, effects D1 and D3 (Change in waves, tidal currents, bed shear stress and sediment regime and effect on Esgair Gemlyn) • Section 7.4, effect D2 (Potential for blockage of the outflow from Cemlyn lagoon due to sediment deposition during dredging activities) • Section 7.4, effect D2 (Coastal squeeze) <p>Perennial vegetation of stony banks</p> <ul style="list-style-type: none"> • Section 7.4, effect H1 (Increase in sediment deposition during dredging activities) • Section 7.4, effect H2 (Change in wave, tidal currents, bed shear stress and sediment regime and effect on Esgair Gemlyn) <p>In-combination effects</p> <ul style="list-style-type: none"> • Section 7.5

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
	<ul style="list-style-type: none"> Glannau Ynys Gybi/Holy Island Coast SAC 	<p>Changes in air quality (alone):</p> <p>Vegetated sea cliffs of the Atlantic and Baltic coasts; Northern Atlantic wet heaths with <i>Erica tetralix</i> and European dry heaths</p> <ul style="list-style-type: none"> Section 7.7, effect C1 (Construction plant, machinery and marine vessels emissions) <p>In-combination effects Section 7.8</p>
	<ul style="list-style-type: none"> Llyn Dinam SAC 	<p>Changes in air quality (alone):</p> <p>Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i>-type vegetation</p> <ul style="list-style-type: none"> Section 7.7, effect C1 (Construction plant, machinery and marine vessels emissions) <p>In-combination effects</p> <ul style="list-style-type: none"> Section 7.8
Marine mammals	<ul style="list-style-type: none"> Gogledd Môn Forol/North Anglesey Marine cSAC (harbour porpoise <i>Phocoena phocoena</i>) 	<p>Changes in visual and acoustic stimuli (alone):</p> <ul style="list-style-type: none"> Section 8.5, effect A1 (Underwater noise during marine construction works)

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
		<p>Land take, including seabed or intertidal land (alone):</p> <ul style="list-style-type: none"> Section 8.5, effect B1 (Change and/or loss of habitat)¹ <p>Changes in marine water quality (alone):</p> <ul style="list-style-type: none"> Section 8.5, effect C2 (Increase in suspended sediment concentration and contaminant re-mobilisation during dredging and disposal) <p>Alteration of coastal processes and hydrodynamics (alone):</p> <ul style="list-style-type: none"> Section 8.5, effect D1 (Potential effect on habitat for prey species)² <p>Physical interaction between species and Project infrastructure (alone):</p> <ul style="list-style-type: none"> Section 8.5, effect E1 (Vessel collision risk)

¹ Section 8.5, effect B1 (*Change and/or loss of habitat*) refers to the assessment of AEOI during operation. Construction effects (which are the effects relevant to the Marine Licence) are considered to be of a lesser magnitude than the changes predicted for the operational phase, as discussed at the start of Section 8.5, effect B.

² Section 8.5, effect D1 (*Potential effect on habitat for prey species*) refers to the assessment of AEOI during operation. Construction impacts (which are the impacts relevant to the Marine Licence) are considered to be of a lesser magnitude than the changes predicted for the operational phase, as discussed at the start of Section 8.5, effect D.

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
		<p>In-combination effects:</p> <p>Section 8.5 (<i>In-combination for the Gogledd Môn Forol/North Anglesey Marine cSAC for harbour porpoise</i>). The relevant effects are:</p> <p>Changes in visual and acoustic stimuli (in-combination):</p> <ul style="list-style-type: none"> • Section 8.5, effect A1 (Underwater noise during marine construction works) <p>Land take, including seabed or intertidal land (in-combination):</p> <ul style="list-style-type: none"> • Section 8.5, effect B1 (Change and/or loss of habitat) <p>Changes in marine water quality (in-combination):</p> <ul style="list-style-type: none"> • Section 8.5, effect C (Construction) <p>Alteration of coastal processes and hydrodynamics (in-combination):</p> <ul style="list-style-type: none"> • Section 8.5, effect D1 (Potential effect on habitat for prey species) <p>Physical interaction between species and Project infrastructure (in-combination):</p> <ul style="list-style-type: none"> • Section 8.5, effect E1 (Vessel collision risk)
	<p>Other European Designated Sites with harbour porpoise as a qualifying feature:</p> <ul style="list-style-type: none"> • Gorllewin Cymru Forol/West Wales Marine cSAC • Dynesfeydd Môr Hafren/Bristol Channel 	<p>The assessment of the Gogledd Môn Forol/North Anglesey Marine cSAC for harbour porpoise (above) is based on the Celtic and Irish Seas MU. All of the European Designated Sites for harbour porpoise considered here are also located within the CIS MU, therefore, the assessment and conclusions for all of these SACs/cSACs are the same as or smaller than the results for the CIS MU for the Gogledd Môn Forol/North Anglesey Marine cSAC. For these other sites, there is no potential for any direct effects and the only pathway for a potential effect is on the population of the CIS MU (i.e. the individuals associated with the SACs/cSACs).</p>

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
	<p>Approaches cSAC</p> <ul style="list-style-type: none"> • North Channel cSAC • Rockabill to Dalkey SAC 	<p>Section 8.6 assesses the potential in-combination effects on these European Designated Sites. The relevant effects are:</p> <p>Changes in visual and acoustic stimuli (in-combination):</p> <ul style="list-style-type: none"> • Section 8.6, effect A1 (Underwater noise during marine construction works) <p>Land take, including seabed or intertidal land (in-combination):</p> <ul style="list-style-type: none"> • Section 8.6, effect B1 (Change and/or loss of habitat) <p>Changes in marine water quality (in-combination):</p> <ul style="list-style-type: none"> • Section 8.6, effect C (Construction) <p>Alteration of coastal processes and hydrodynamics (in-combination):</p> <ul style="list-style-type: none"> • Section 8.6, effect D1 (Potential effect on habitat for prey species) <p>Physical interaction between species and Project infrastructure (in-combination):</p> <ul style="list-style-type: none"> • Section 8.6, effect E1 (Vessel collision risk)
	<p>European Designated Sites designated for bottlenose dolphin (<i>Tursiops truncatus</i>):</p> <ul style="list-style-type: none"> • Pen Llŷn a'r Sarnau/Llŷn 	<p>Changes in visual and acoustic stimuli (alone):</p> <ul style="list-style-type: none"> • Section 8.7, effect A1 (Underwater noise during marine construction works)

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
	Peninsula and the Sarnau SAC <ul style="list-style-type: none"> Bae Ceredigion/Cardigan Bay SAC 	<p>Land take, including seabed or intertidal land (alone):</p> <ul style="list-style-type: none"> Section 8.7, effect B1 (Change and/or loss of habitat) <p>Changes in marine water quality (alone):</p> <ul style="list-style-type: none"> Section 8.7, effect C2 (Increase in suspended sediment concentration and contaminant re-mobilisation during dredging and disposal) <p>Alteration of coastal processes and hydrodynamics (alone):</p> <ul style="list-style-type: none"> Section 8.7, effect D1 (Potential effect on habitat for prey species)³ <p>Physical interaction between species and Project infrastructure (alone):</p> <ul style="list-style-type: none"> Section 8.7, effect E1 (Vessel collision risk) <p>In-combination effects</p> <p>Section 8.7 (<i>In-combination for the Pen Llyn a'r Sarnau/Llyn Peninsula and the Sarnau SAC and Bae Ceredigion/Cardigan Bay SAC for bottlenose dolphin</i>). The relevant effects are:</p> <p>Changes in visual and acoustic stimuli (in-combination):</p> <ul style="list-style-type: none"> Section 8.7, effect A1 (Underwater noise during marine construction works)

³ Section 8.7, effect D1 (*Potential effect on habitat for prey species*) refers to the assessment of AEOI during operation. Construction effects (which are the effects relevant to the Marine Licence) are considered to be of a lesser magnitude than the changes predicted for the operational phase, as discussed at the start of Section 8.5, effect D.

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
		<p>Land take, including seabed or intertidal land (in-combination):</p> <ul style="list-style-type: none"> Section 8.7, effect B1 (Change and/or loss of habitat) <p>Changes in marine water quality (in-combination):</p> <ul style="list-style-type: none"> Section 8.7, effect C (Construction) <p>Alteration of coastal processes and hydrodynamics (in-combination):</p> <ul style="list-style-type: none"> Section 8.7, effect D1 (Potential effect on habitat for prey species) <p>Physical interaction between species and Project infrastructure (in-combination):</p> <ul style="list-style-type: none"> Section 8.7, effect E1 (Vessel collision risk)
	<ul style="list-style-type: none"> Pen Llŷn a'r Sarnau/Llŷn Peninsula and the Sarnau SAC (grey seal <i>Halichoerus grypus</i>) 	<p>Changes in visual and acoustic stimuli (alone):</p> <ul style="list-style-type: none"> Section 8.8, effect A1 (Underwater noise during marine construction works) Section 8.8, effect A2 (Airborne noise during construction) Section 8.8, effect A3 (Visual stimuli)
	<p>Land take, including seabed or intertidal land (alone):</p> <ul style="list-style-type: none"> Section 8.8, effect B1 (Change and/or loss of habitat) 	
	<p>Changes in marine water quality (alone):</p> <ul style="list-style-type: none"> Section 8.8, effect C2 (Increase in suspended sediment concentration and contaminant re-mobilisation during dredging and disposal) 	

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
		<p>Alteration of coastal processes and hydrodynamics (alone):</p> <ul style="list-style-type: none"> Section 8.8, effect D1 (Potential effect on habitat for prey species)⁴ <p>Physical interaction between species and Project infrastructure (alone):</p> <ul style="list-style-type: none"> Section 8.8, effect E1 (Vessel collision risk) <p>In-combination effects: Section 8.8 (<i>In-combination for Pen Llyn a'r Sarnau/Llŷn Peninsula and the Sarnau SAC for grey seal</i>). The relevant effects are:</p> <p>Changes in visual and acoustic stimuli (in-combination):</p> <ul style="list-style-type: none"> Section 8.8, effect A1 (Underwater noise during marine construction works) <p>Land take, including seabed or intertidal land (in-combination):</p> <ul style="list-style-type: none"> Section 8.8, effect B1 (Change and/or loss of habitat) <p>Changes in marine water quality (in-combination):</p> <ul style="list-style-type: none"> Section 8.8, effect C (Construction) <p>Alteration of coastal processes and hydrodynamics (in-combination):</p> <ul style="list-style-type: none"> Section 8.8, effect D1 (Potential effect on habitat for prey species)

⁴ Section 8.8, effect D1 (*Potential effect on habitat for prey species*) refers to the assessment of AEOI during operation. Construction impacts (which are the impacts relevant to the Marine Licence) are considered to be of a lesser magnitude than the changes predicted for the operational phase, as discussed at the start of Section 8.5, effect D.

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
		Physical interaction between species and Project infrastructure (in-combination): <ul style="list-style-type: none"> Section 8.8, effect E1 (Vessel collision risk)
	Other European Designated Sites with grey seal as a qualifying feature: <ul style="list-style-type: none"> Bae Ceredigion/Cardigan Bay SAC Sir Benfro Forol/Pembrokeshire Marine SAC The Maidens SAC Lambay Island SAC Saltee Islands SAC 	The assessment of the Pen Llyn a'r Sarnau/LIŷn Peninsula and the Sarnau SAC is based on South and West England and Wales MU. Bae Ceredigion/Cardigan Bay SAC and Sir Benfro Forol/ Pembrokeshire Marine SAC are also located within the MU, therefore, the assessment and conclusions for the Pen Llyn a'r Sarnau/LIŷn Peninsula and the Sarnau SAC will be the same for the other European Designated Sites screened in for grey seal. The other European Designated Sites screened in for grey seal are located outwith the reference MU, however, the assessment and conclusions based for the Pen Llyn a'r Sarnau/LIŷn Peninsula and the Sarnau SAC will apply to the same extent or less for these sites, taking into account the larger MU for the wider area and the distance between the designated sites and the Project.
	European Designated Sites designated for harbour seal (<i>Tursiops truncatus</i>): <ul style="list-style-type: none"> Murlough SAC Strangford Lough SAC Lambay Island SAC Slaney River Valley SAC 	Changes in visual and acoustic stimuli (alone): <ul style="list-style-type: none"> Section 8.10, effect A1 (Underwater noise during marine construction works) Section 8.10, effect A2 (Airborne noise during construction) Section 8.10, effect A3 (Visual stimuli)
		Land take, including seabed or intertidal land (alone): <ul style="list-style-type: none"> Section 8.10, effect B1 (Change and/or loss of habitat)
		Changes in marine water quality (alone): <ul style="list-style-type: none"> Section 8.10, effect C2 (Increase in suspended sediment concentration and contaminant re-mobilisation during dredging and disposal)

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
		<p>Alteration of coastal processes and hydrodynamics (alone):</p> <ul style="list-style-type: none"> Section 8.10, effect D1 (Potential effect on habitat for prey species)⁵ <p>Physical interaction between species and Project infrastructure (alone):</p> <ul style="list-style-type: none"> Section 8.10, effect E1 (Vessel collision risk) <p>In-combination effects: Section 8.10 (<i>In-combination for harbour seal SACs</i>). The relevant effects are:</p> <p>Changes in visual and acoustic stimuli (in-combination):</p> <ul style="list-style-type: none"> Section 8.10, effect A1 (Underwater noise during marine construction works) <p>Land take, including seabed or intertidal land (in-combination):</p> <ul style="list-style-type: none"> Section 8.10, effect B1 (Change and/or loss of habitat) <p>Changes in marine water quality (in-combination):</p> <ul style="list-style-type: none"> Section 8.10, effect C (Construction) <p>Alteration of coastal processes and hydrodynamics (in-combination):</p> <ul style="list-style-type: none"> Section 8.10, effect D1 (Potential effect on habitat for prey species)

⁵ Section 8.10, effect D1 (*Potential effect on habitat for prey species*) refers to the assessment of AEOI during operation. Construction impacts (which are the impacts relevant to the Marine Licence) are considered to be of a lesser magnitude than the changes predicted for the operational phase, as discussed at the start of Section 8.5, effect D.

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
		Physical interaction between species and Project infrastructure (in-combination): <ul style="list-style-type: none"> Section 8.10, effect E1 (Vessel collision risk)
Migratory fish	European Designated Sites designated for Atlantic salmon (<i>Salmo salar</i>): <ul style="list-style-type: none"> Afon Gwyrfai a Llŷn Cwellyn SAC Afon Eden–Cors Goch Trawsfynydd SAC Afon Dyfrdwy a Llŷn Tegid/River Dee and Bala Lake SAC Afon Teifi/River Teifi SAC European Designated Sites designated for freshwater pearl mussel (<i>Margaritifera margaritifera</i>): <ul style="list-style-type: none"> Afon Eden–Cors Goch Trawsfynydd SAC 	Changes in visual and acoustic stimuli (alone): <ul style="list-style-type: none"> Section 9.4, effect A1 (Underwater noise during marine construction works) Section 9.4, effect A2 (Light spill during construction)
		Changes in marine water quality (alone): <ul style="list-style-type: none"> Section 9.4, effect B1 (Suspended sediment input to the marine environment (drainage, dewatering, sewage discharge and capital dredging)) Section 9.4, effect B2 (Increase in suspended sediment concentration during disposal of dredged material)
		Alteration of coastal processes and hydrodynamics (alone): <ul style="list-style-type: none"> Section 9.4, effect C1 (Alteration in coastal processes and hydrodynamic effect)
		Interactions between species – freshwater pearl mussel (only relevant to the Afon Eden – Cors Goch Trawsfynydd SAC): <ul style="list-style-type: none"> Section 9.4, effect E (Interactions between species – freshwater pearl mussel)
		In-combination effects: <ul style="list-style-type: none"> Section 9.5

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
Birds	<ul style="list-style-type: none"> Morwenoliaid Ynys Môn/Anglesey Terns SPA (Arctic tern <i>Sterna paradisaea</i>, Sandwich tern <i>Sterna sandvicensis</i>, roseate tern <i>Sterna dougallii</i>, common tern <i>Sterna hirundo</i>) 	<p>Changes in visual and acoustic stimuli (alone):</p> <ul style="list-style-type: none"> Section 10.3, effect A1 (Disturbance at the breeding colony) Section 10.3, effect A2 (Disturbance in the marine environment) Section 10.3, effect A3 (Light spill during construction) <p>Land take, including seabed or intertidal land (alone):</p> <ul style="list-style-type: none"> Section 10.3, effect B1 (Change and/or loss of habitat) <p>Changes in marine water quality (alone):</p> <ul style="list-style-type: none"> Section 10.3, effect C1 (Suspended sediment input to the marine environment (drainage, dewatering, sewage discharge and capital dredging)) Section 10.3, effect C2 (Increase in suspended sediment concentration during disposal of dredged material) Section 10.3, effect B2 (Increase in suspended sediment concentration during disposal of dredged material) <p>Change in air quality (alone):</p> <ul style="list-style-type: none"> Section 10.3, effect E <p>Alteration of coastal processes and hydrodynamics (alone):</p> <ul style="list-style-type: none"> Section 10.3, effect F1 (Change in waves, tidal currents, bed shear stress and sediment regime and effect on Esgair Gemlyn)

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
		<p>In-combination effects:</p> <ul style="list-style-type: none"> Section 10.3 (with sub-headings for each tern species)
	<p>European Designated Sites designated for red billed chough <i>Pyrhacorax pyrrhacorax</i>:</p> <ul style="list-style-type: none"> Glannau Ynys Gybi/Holy Island Coast SPA Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal/Mynydd Cilan, Trwyn y Wylfa and the St. Tudwal Islands SPA 	<ul style="list-style-type: none"> Section 10.6 (Assessment of potential effects for SPAs screened in on the basis of chough populations) (alone and in-combination).
	<p>Refer to table 2-1 for qualifying bird species screened into the assessment for the following European Designated Sites:</p> <ul style="list-style-type: none"> Ynys Seiriol/Puffin Island SPA Glannau Aberdaron and Ynys Enlli/Aberdaron Coast Bardsey Island SPA Aber Afen Dyfrdwy/Dee Estuary SPA 	<ul style="list-style-type: none"> Section 10.4 (Assessment of potential effects for other SPAs, pSPAs and Ramsar (bird feature) sites screened in on the basis of breeding seabird populations) Section 10.5 (Assessment of potential effects for SPAs and Ramsar sites screened in on the basis of passage seabird populations)

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
	<ul style="list-style-type: none"> • Aber Afen Dyfrdwy/Dee Estuary Ramsar site • Skomer, Skokholm and the seas off Pembrokeshire/Sgomer, Gogwm a moroedd Benfro SPA • Grassholm SPA • Mersey Narrows and North Wirral Foreshore SPA • Mersey Narrows and North Wirral Foreshore Ramsar site • Ribble and Alt Estuaries SPA • Ribble and Alt Estuaries Ramsar site • Morecambe Bay SPA • Morecambe Bay Ramsar site • Morecambe Bay and Duddon Estuary SPA • Bowland Fells SPA • Lambay Island SPA • Ireland's Eye SPA • East Coast Marine pSPA 	

Qualifying feature type	Listed as a qualifying feature of the following European Designated Sites	Reference to assessment for each relevant screening category
	<ul style="list-style-type: none"> • Copeland Islands SPA • Saltee Islands SPA • Rathlin Island SPA • Horn Head to Fanad Head SPA • West Donegal Coast SPA • Tory Island SPA • Ailsa Craig SPA 	

3 Conclusion of the Shadow HRA for Licensable Marine Activities

- 3.1.1 The outcome of the assessment included in the Shadow HRA is that an AEOI from the Licensable Marine Activities is not predicted in the context of the Marine Licence applications alone or in-combination with the wider activities associated with the Wylfa Newydd Project and other relevant plans and projects.
- 3.1.2 It is proposed that the recommended mitigation measures (summarised in chapter 11 of the Shadow HRA; Application Reference Number: 5.2) would be secured, as appropriate, through the DCO, Marine Licence and Environmental Permits.
- 3.1.3 In the context of the HRA process, given the findings of the shadow Appropriate Assessment, this Shadow HRA process has been closed at the end of Stage 2. Hence, Stages 3 (alternative solutions) and 4 (imperative reasons of overriding public interest and compensation) do not need to be considered.

4 References

ID	Reference
RD1	Environment Agency (2010). Cooling Water Options for the New Generation of Nuclear Power Stations in the UK. Report No. UKSC070015/SR3.

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