national**grid**

5.23.2.2

Integrity Matrices Document 23 – Appendix 2

National Grid (North Wales Connection Project)

Regulation 5(2)(g) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009



North Wales Connection Project

Volume 5

Document 5.23.2.2 Appendix 2 Integrity Matrices

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1 Integrity Matrices

1.1 POTENTIAL EFFECTS

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1.1.1 The tables below set out integrity matrices for those sites where a likely significant effect cannot be ruled out at screening.

STAGE 2 INTEGRITY MATRICES

The integrity matrices below should be read in conjunction with the Habitat Regulations Assessment Report (**Document 5.23**)

Likely significant effects have been identified for the following sites:

- Corsydd Môn/Anglesey Fens Ramsar;
- Corsydd Môn/Anglesey Fens SAC;
- Y Fenai a Bae Conwy/Menai Strait and Conwy Bay SAC;
- Eryri/Snowdonia SAC
- Afon Gwyrfai a Llyn Cwellyn SAC;
- Pen Llyn a'r Sarnau/Lleyn Peninsula and the Sarnau SAC;
- Cardigan Bay SAC;
- North Anglesey Marine/Gogledd Môn Forol cSAC;
- West Wales Marine cSAC;
- Liverpool Bay/Bae Lerpwl SPA (including proposed extension);
- Ynys Seiriol/Puffin Island SPA; and
- Dyfi Estuary SPA.

These sites have been subject to further assessment in order to establish if the Proposed Development could have an adverse effect on their integrity. Evidence for the conclusions reaches on integrity is detailed within the footnotes to the matrices below.

Matrix Key:

- ✓ = Adverse effect on integrity **cannot** be excluded
- **x** = Adverse effect on integrity **can** be excluded
- C= construction
- O = operation (including maintenance)
- D = decommissioning

Where effects are not relevant to a particular feature the matrix cell is formatted as follows:



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HRA INTEGRITY MATRIX 1: CORSYDD MÔN A LLYN/ANGLESEY AND LLYN FENS RAMSAR

Integrity Matrix 1: Corsydd Môn a Llyn/Anglesey and Llyn Fens Ramsar

EU Code: UK14005

Distance to NSIP: 0 km

European site features	Adve	erse eff	ect or	n integ	rity																			
Effect	Direc habit	ct loss c cat	of		t loss c orting h		and/o		/ injury nt	Wate	r qualit	ý	Air Qu	uality		INNS	/ disea	ses	Hydro regim	ological le		In cor effect	nbinati s	on
Stage of the Proposed Development	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Hard oligo-mesotrophic waters with benthic vegetation of Chara sp.										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (f)	× (f)	× (f)
Northern Atlantic wet heaths with <i>Erica tetralix</i>										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (f)	× (f)	× (f)
Molinia meadows on calcareous, peaty or clayey— silt-laden soils										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (f)	× (f)	× (f)
Calcareous fens with <i>Cladium</i> <i>mariscus</i> and species of the <i>Caricion davallinae</i>										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (f)	× (f)	× (f)
Alkaline fens										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (f)	× (f)	× (f)
Geyer's Whorl Snail										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (f)	× (f)	× (f)
Marsh fritillary butterfly										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (f)	× (f)	× (f)
Narrow-leaved Marsh-orchid										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (f)	× (f)	× (f)
Compact stonewort										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (f)	× (f)	× (f)
Otter							× (e)	× (e)	× (e)	× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (f)	× (f)	× (f)

(a) Commitments SAC001-SAC008 in the Schedule of Environmental Commitments (**Document 7.4.2.1**) would prevent all authorised works other the drainage mitigation works within the boundaries of the site. A site specific drainage management plan and the detailed drainage design for any temporary outfalls into the perimeter drain will be agreed with NRW prior to the commencement of construction. Taking into account the reasons set out in Table 7.3 of the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) the Proposed Development would not result in any implications on the conservation objectives related to water quality and therefore would not result in an adverse effect on site integrity.

(b) ES Chapter 14, Air Quality (**Document 5.14**) concludes that the stated dust and air emission control measures, when implemented throughout the works, as appropriate, would mean that residual effects as a result of construction dust and PM₁₀ deposition would not be significant. Also, in Chapter 14 (**Document 5.14**), the contribution of the Proposed Development has been shown

Integrity Matrix 1: Corsydd Môn a Llyn/Anglesey and Llyn Fens Ramsar

EU Code: UK14005

Distance to NSIP: 0 km

European site features	Adver	rse effe	ect on	integr	ity													
Effect	Direct habita	loss of t			t loss of orting ha		Distur and/o displa	r		Water	r quality	/	Air Qu	uality		INNS/	diseas	ses
Stage of the Proposed Development	С	0	D	с	ο	D	С	0	D	с	0	D	С	0	D	с	0	D

to fall below 1% of the Critical Load/Level for all determinants. In line with EA guidance, the predicted impacts are considered insignificant. Taking into according the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) the Proposed Development wo conservation objectives related to air quality and therefore would not result in an adverse effect on site integrity.

(c) Commitments SAC001-SAC008 in the Schedule of Environmental Commitments (**Document 7.4.2.1**) would prevent all authorised works other the drainal boundaries of the site. In accordance with CEMP measure BS11 an INNS Method Statement (INNSMS) will be produced in line with the Outline INNSMS (we Assessment (BRA)) as set out in the Biodiversity Mitigation Strategy (**Document 7.7**). Taking into account the reasons set out in Table 7.3 of the HRA Report (**Document 5.23**) the Proposed Development would not result in any implications on the conserve therefore would not result in an adverse effect on site integrity.

(d) Commitments SAC001-SAC008 in the Schedule of Environmental Commitments (**Document 7.4.2.1**) would prevent all authorised works other the drainal boundaries of the site. Pylon 4AP051 is located 20 m outside of the designated sites but in the same superficial aquifer. The depth of the footings for Pylon hence the maximum drawdown required to provide a dry working area would be less than 3.4 m. Due to the limited drawdown, short duration of pumping, di soak away in the original catchment, and relatively small area of catchment affected the Proposed Development would not result in any implications on the cateration of hydrological fluvial regime and therefore would not result in an adverse effect on site integrity.

(e) Commitments SAC001-SAC008 in the Schedule of Environmental Commitments (**Document 7.4.2.1**) would prevent all authorised works other the drainal boundaries of the site. No evidence of otter was identified within the vicinity of the designated site; refer to ES Figure 2 of Otter and Water Vole Report (**Document 5.23**) reasons set out in Table 7.3 of the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) result in any implications on the conservation objectives related to disturbance/injury and/or displacement and therefore would not result in an adverse effect

(f) There are no other proposed developments with shared receptors for this site therefore there is no potential for an in-combination effect and the Proposed adverse effect on site integrity either alone or in-combination. Refer to section 8.2 and Table 8.1 of the HRA Report (**Document 5.23**).

Hydrological regime In combination effects C O D C O D ount the reasons set out in Table 7.3 of ould not result in any implications on the age mitigation works within the which includes a Biosecurity Risk ort (Document 5.23) and with the vation objectives related to INNS and age mitigation works within the h 4AP051 would be approximately 3.4 m, lischarge of treated pumped water to a conservation objectives related to the age mitigation works within the h 4AP051 would be approximately 3.4 m, lischarge of treated pumped water to a conservation objectives related to the age mitigation works within the h 4AP051 would be approximately 3.4 m, lischarge of treated pumped water to a conservation objectives related to the age mitigation works within the h 4AP051 would be approximately 3.4 m, lischarge of treated pumped water to a conservation objectives related to the age mitigation works within the h 4AP051 would be approximately 0.4 m, lischarge of treated pumped water to a conservation objectives related to the age mitigation works within the h 4AP051 would be approximately 0.4 m, lischarge of treated pumped water to a conservation objectives related to the age mitigation works within the by the							
regime effects C O D C O D ount the reasons set out in Table 7.3 of ould not result in any implications on the ould not result in any implications on the which includes a Biosecurity Risk ort (Document 5.23) and with the vation objectives related to INNS and age mitigation works within the output of the approximately 3.4 m, lischarge of treated pumped water to a conservation objectives related to the age mitigation works within the output of the Proposed Development would not to not not							
regime effects C O D C O D ount the reasons set out in Table 7.3 of ould not result in any implications on the ould not result in any implications on the which includes a Biosecurity Risk ort (Document 5.23) and with the vation objectives related to INNS and age mitigation works within the output of the approximately 3.4 m, lischarge of treated pumped water to a conservation objectives related to the age mitigation works within the output of the Proposed Development would not to not not							
regime effects C O D C O D ount the reasons set out in Table 7.3 of ould not result in any implications on the ould not result in any implications on the which includes a Biosecurity Risk ort (Document 5.23) and with the vation objectives related to INNS and age mitigation works within the output of the approximately 3.4 m, lischarge of treated pumped water to a conservation objectives related to the age mitigation works within the output of the Proposed Development would not to not not							
regime effects C O D C O D ount the reasons set out in Table 7.3 of ould not result in any implications on the ould not result in any implications on the which includes a Biosecurity Risk ort (Document 5.23) and with the vation objectives related to INNS and age mitigation works within the output of the approximately 3.4 m, lischarge of treated pumped water to a conservation objectives related to the age mitigation works within the output of the Proposed Development would not to not not							
ount the reasons set out in Table 7.3 of build not result in any implications on the age mitigation works within the which includes a Biosecurity Risk ort (Document 5.23) and with the vation objectives related to INNS and age mitigation works within the age mitigation works within the atomservation objectives related to the age mitigation works within the conservation objectives related to the age mitigation works within the cument 5.9.2.8). Taking into account the of the Proposed Development would not at on site integrity.		•	-				on
age mitigation works within the which includes a Biosecurity Risk ort (Document 5.23) and with the vation objectives related to INNS and age mitigation works within the h 4AP051 would be approximately 3.4 m, lischarge of treated pumped water to a conservation objectives related to the age mitigation works within the cument 5.9.2.8). Taking into account the h the Proposed Development would not et on site integrity.		С	0	D	С	0	D
	ag wh or ag ag ag cu th t	Id not r ge mitig nich inc t (Doc t (Doc tion ob ge mitig AP051 charge nserva ge mitig iment ne Prop on site	result ir gation v cludes a ument jectives gation v l would of trea tion ob gation v 5.9.2.8 posed I integrit	vorks v a Biose 5.23) a s relate works v l be ap ted pu jective vorks v). Takir Develo y.	nplicati vithin th ecurity I and with ed to IN vithin th proxim mped v s relate vithin th ng into pment	ions on ne Risk h the INS and ne ately 3 water to ed to th ne accour would i	d d .4 m, o a e nt the not

HRA INTEGRITY MATRIX 2: CORSYDD MÔN/ANGLESEY FENS SAC

EU Code: UK0012884																								
Distance to NSIP: 0 km																								
European site features	Adve	rse eff	ect on	integrit	у																			
Effect	Direc habita	t loss o at	f		loss of orting h		and/o	bance/ r cemen [:]		Water	quality		Air Qu	uality		INNS/	diseas	es	Hydro	logical	regime	In con effects	nbinatio s	วท
Stage of the Proposed Development	С	0	D	С	0	D	С	0	D	c	0	D	с	ο	D	C	0	D	С	0	D	С	0	D
Hard oligo-mesotrophic waters with benthic vegetation of Chara sp.										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (g)	× (g)	× (g)
Northern Atlantic wet heaths with <i>Erica tetralix</i>										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (g)	× (g)	× (g)
Molinia meadows on calcareous, peaty or clayey— silt-laden soils										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (C)	× (c)	× (d)	× (d)	× (d)	× (h)	× (h	× (h
Calcareous fens with <i>Cladium</i> <i>mariscus</i> and species of the <i>Caricion davallinae</i>										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (C)	× (c)	× (d)	× (d)	× (d)	× (h	× (h	× (h
Alkaline fens										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (g)	× (g)	× (g)
Geyer's Whorl Snail										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (g)	× (g)	× (g)
Marsh fritillary butterfly										× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (h	× (h	× (h
Great Crested Newt							× (f)	× (f)	× (f)	× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (g)	× (g)	× (g)
Otter							× (e)	× (e)	× (e)	× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	× (c)	× (c)	× (c)	× (d)	× (d)	× (d)	× (g)	× (q)	× (g)

(a) Commitments SAC001-SAC008 in the Schedule of Environmental Commitments (Document 7.4.2.1) would prevent all authorised works other the drainage mitigation works within the boundaries of the site. A site specific drainage management plan and the detailed drainage design for any temporary outfalls into the perimeter drain will be agreed with NRW prior to the commencement of construction. Taking into account the reasons set out in Table 7.3 of the HRA Report (Document 5.23) and with the mitigation measures listed in section 7.3.4 of the HRA Report (Document 5.23) the Proposed Development would not result in any implications on the conservation objectives related to water quality and therefore would not result in an adverse effect on site integrity.
 (b) ES Chapter 14, Air Quality (Document 5.14), concludes that the stated dust and air emission control measures, when implemented throughout the works, as appropriate, would mean that residual

Integrity Matrix 2: Corsydd Môn/Anglesey Fens SAC

EU Code: UK0012884

Distance to NSIP: 0 km

European site features	Adver	se effe	ect on i	ntegrity	y													
Effect	Direct habita	bitat supporting habitat a						Disturbance/ injury and/or displacement			quality		Air Qu	ality		INNS/	diseas	es
Stage of the Proposed Development	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D

effects as a result of construction dust and PM₁₀ deposition would not be significant. Also, in Chapter 14 (**Document 5.14**), the contribution of the Proposed 1% of the Critical Load/Level for all determinants. In line with EA guidance, the predicted impacts are considered insignificant. Taking into account the rease (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) the Proposed Development would not result in an adverse effect on site integrity.

(c) Commitments SAC001-SAC008 in the Schedule of Environmental Commitments (**Document 7.4.2.1**) would prevent all authorised works other the draina the site. In accordance with CEMP measure BS11 an INNS Method Statement (INNSMS) will be produced in line with the Outline INNSMS (which includes out in the Biodiversity Mitigation Strategy (**Document 7.7**). Taking into account the reasons set out in Table 7.3 of the HRA Report (**Document 5.23**) the Proposed Development would not result in any implications on the conservation objectives related to INNS and to on site integrity.

(d) Commitments SAC001-SAC008 in the Schedule of Environmental Commitments (**Document 7.4.2.1**) would prevent all authorised works other the draina the site. Pylon 4AP051 is located 20 m outside of the designated sites but in the same superficial aquifer. The depth of the footings for Pylon 4AP051 would maximum drawdown required to provide a dry working area would be less than 3.4 m. Due to the limited drawdown, short duration of pumping, discharge of original catchment, and relatively small area of catchment affected the Proposed Development would not result in any implications on the conservation object fluvial regime and therefore would not result in an adverse effect on site integrity.

(e) Commitments SAC001-SAC008 in the Schedule of Environmental Commitments (**Document 7.4.2.1**) would prevent all authorised works other the drainat the site. No evidence of otter was identified within the vicinity of the designated site; refer to ES Figure 2 of Otter and Water Vole Report (**Document 5.9.2.8** Table 7.3 of the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) the Proposed Deve on the conservation objectives related to disturbance/injury and/or displacement and therefore would not result in an adverse effect on site integrity.

(f) Commitments SAC001-SAC008 in the Schedule of Environmental Commitments (**Document 7.4.2.1**) would prevent all authorised works other the draina the site. No positive GCN ponds within the site, where works would take place within supporting terrestrial habitat have been identified; refer to ES Appendix the reasons set out in Table 7.3 of the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.3.4 the HRA Report (**Document 5.23**) and with the mitigation measures listed in section

(g) There are no other proposed developments that share receptors with this interest feature associated with this site therefore there is no potential for an in-Development would not result in an adverse effect on site integrity either alone or in-combination. Refer to section 8.2 and Table 8.1 for the HRA Report (De

(h) One development has been identified as having the potential to result in an in-combination effect with the Proposed Development on the Caeau Talwrn p Llangefni Campus. For the reasons set out in Table 8.2 of the HRA Report (**Document 5.23**) there is no potential this development to result in an adverse e Proposed Development.

	Hydrol	ogical r	egime	In com effects	binatio	n							
	С	0	D	С	0	D							
sons	Development has been shown to fall below ons set out in Table 7.3 of the HRA Report any implications on the conservation												
age mitigation works within the boundaries of a Biosecurity Risk Assessment (BRA)) as set with the mitigation measures listed in section therefore would not result in an adverse effect													
d be f trea	mitigati approx ated pu s relate	imately mped w	3.4 m, ater to	hence a soak	the away ii	n the							
age mitigation works within the boundaries of 8). Taking into account the reasons set out in relopment would not result in any implications													
age mitigation works within the boundaries of ix 9.6 (Document 5.9.2.6). Taking into account 5.23) the Proposed Development would not at on site integrity.													
	nbinatio nent 5 .		t and th	e Propo	osed								
oart o	of the S t on site	AC, Gr	-			the							

HRA INTEGRITY MATRIX 3: Y FENAI A BAE CONWY/MENAI STRAIT AND CONWY BAY SAC

Integrity Matrix 3: Y Fenai a Bae Conwy/Mena	i Strait aı	nd Conwy	y Bay SA	C											
EU Code: UK0030202															
Distance to NSIP: 0 km															
European site features	Adverse	e effect o	n integrit	y											
Effect	Direct lo	ss of habi	tat	Water	quality		Drilling	iluid		INNS/ c	liseases		In comb	ination eff	ects
Stage of the Proposed Development	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Sandbanks which are slightly covered by sea water all the time										× (c)			× (d)		
Mudflats and sandflats not covered by seawater at low tide	× (a)						× (b)			× (c)			× (d)		
Reefs	× (a)						× (b)			× (c)			× (d)		
Large shallow inlets and bays										× (c)			× (d)		
Submerged or partially submerged sea caves										× (c)			× (d)		

(a) From the baseline information regarding habitat types presented in section 7 of ES Chapter 9 (**Document 5.9**), it is expected that most of the subtidal habitat immediately overlying the tunnel would comprise coarse sediments rather than Annex I reef habitat. There are small areas of mudflat within the order limits, although these do not comprise the main areas as outlined in the SAC Regulation 33 Advice. The vertical LOD for the tunnel would maintain a minimum of 10 m bedrock cover from the top of the tunnel to the bed of the Menai Strait; this, coupled with the measures set out in WE511 of the CEMP, would ensure the probability of a blowout event would be very low. As a result of CEMP measures BNC28 (**Document 7.4**), a small amount of scour may be expected at the base of buoy-mounted acoustic devices (if used) within the Order Limits. In the event of a buoy needing to be deployed within the Menai Strait for the purposes of marine mammal or fish mitigation, this would be deployed within the central part of the Strait, away from rocky reef or other sensitive habitats to reduce the risk of any scour impacts occurring, this is secured through CEMP measure BNC28 (**Document 7.4**). Taking into account the reasons set out in Table 7.5 of the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.4.4 the HRA Report (**Document 5.23**) the Proposed Development would not result in any implications on the conservation objectives related to direct habitat loss associated with blowout and therefore would not result in an adverse effect on site integrity.

(b) From the baseline information regarding habitat types presented in section 7 of ES Chapter 9 Ecology and Nature Conservation (**Document 5.9**), it is expected that most of the subtidal habitat immediately overlying the tunnel would comprise coarse sediments rather than Annex I reef habitat. There are small areas of mudflat within the order limits, although these do not comprise the main areas as outlined in the SAC Regulation 33 Advice. The vertical LOD for the tunnel would maintain a minimum of 10 m bedrock cover from the top of the tunnel to the bed of the Menai Strait; this, coupled with the measures set out in WE511 of the CEMP, would ensure the probability of a blowout event would be very low. Taking into account the reasons set out in Table 7.5 of the HRA Report (**Document 5.23**) and with the mitigation measures listed in section 7.4.4 the HRA Report (**Document 5.23**) the Proposed Development would not result in any implications on the conservation objectives related to water quality associated with blowout and therefore would not result in an adverse effect on site integrity.

(c) In accordance with CEMP measure BS11 (Document 7.4) an INNS Method Statement (INNSMS) will be produced in line with the Outline INNSMS (which includes a Biosecurity Risk Assessment (BRA)) as set out in the Biodiversity Mitigation Strategy (Document 7.7). In accordance with CEMP measure BS301 marine mammal surveillance operations during tunnel construction under the Menai Strait will, where possible, be carried out with observers based on land. Where vessels or equipment (such as Acoustic Deterrent Devices (ADDs) are needed these will be uncontaminated (e.g. those that that have been thoroughly cleaned immediately prior to deployment in the Menai Strait), particularly if they have originated from outside of the waterway. A biosecurity risk assessments, which will outline how they will mitigate the risk (if any) of the transfer of *Didemnum vexillum* and other organisms that may be transported via vessel hulls or

Integrity Matrix 3: Y Fenai a Bae Conwy/Menai Strait and Conwy Bay SAC

EU Code: UK0030202 Distance to NSIP: 0 km Adverse effect on integrity European site features Effect Drilling fluid INNS/ diseases Direct loss of habitat Water quality С 0 D С 0 С 0 С D D 0 Stage of the Proposed Development equipment will be produced as part of the INNMS. Taking into account the reasons set out in Table 7.5 of the HRA Report (Document 5.23) and with the mit the HRA Report (Document 5.23) the Proposed Development would not result in any implications on the conservation objectives related to INNS and therefore on site integrity.

(d) Two developments have been identified as having the potential to result in in-combination effects with the Proposed Development, Glyn Rhonwy Pumped For the reasons set out in Table 8.2 of the HRA Report (**Document 5.23**) there is no potential for either development to result in an adverse effect on site int Development.

		In combir	ation effe	cts
	D	С	0	D
-		isures liste ot result in		
			rd Menai C	

HRA INTEGRITY MATRIX 4: ERYRI/SNOWDONIA SAC

Integrity Matrix 4: Eryri/Snowdonia SAC						
EU Code: UK0012946						
Distance to NSIP: 2.5 km						
European site features	Adverse effec	t on integrity				
Effect	Air Quality			In combina	tion effects	
Stage of the Proposed Development	С	0	D	С	0	D
Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Siliceous alpine and boreal grasslands	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia</i> ladani)	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Calcareous rocky slopes with chasmophytic vegetation	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Siliceous rocky slopes with chasmophytic vegetation	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Northern Atlantic wet heaths with Erica tetralix	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
European dry heaths	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Alpine and Boreal heaths	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Alpine and subalpine calcareous grasslands	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Species-rich <i>Nardus</i> grasslands, on <i>silicious</i> substrates in mountain areas (and submountain areas in Continental Europe)	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Blanket bogs	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Depressions on peat substrates of the Rhynchosporion	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Petrifying springs with tufa formation (Cratoneurion) * Priority feature	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Alkaline fens	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Alpine pioneer formations of the Caricion bicoloris-atrofuscae	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Old sessile oak woods with <i>llex</i> and <i>Blechnum</i> in the British Isles	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)
Slender green feather-moss	× (a)	× (a)	× (a)	× (c)	× (c)	× (c)

Integrity Matrix 4: Eryri/Snowdonia SAC

EU Code: UK0012946

Distance to NSIP: 2.5 km

European site features	Adverse effect of	on integrity		
Effect	Air Quality			In combination
Stage of the Proposed Development	С	0	D	С
Floating water-plantain	× (a)	× (a)	× (a)	× (c)

(a) The contribution of the Proposed Development as a result of lying within 10 km of the construction phase emergency generator, remains less than 1% of Critical Loads/Level, and is therefore considered insignificant (not significant) within the air quality assessment in ES Chapter 14, Air Quality (**Document 5.1**, quality change, which is less than 10% of the Critical Load/Level, is also considered insignificant (not significant). Taking into account the reasons set out in **5.23**) and with the mitigation measures listed in section 7.5.4 the HRA Report (**Document 5.23**) the Proposed Development would not result in any implication related to air quality and therefore would not result in an adverse effect on site integrity.

(c) There are no other proposed developments that share receptors with this site therefore there is no potential for an in-combination effect and the Propose adverse effect on site integrity either alone or in-combination. Refer to section 8.2 and Table 8.1 for the HRA Report (**Document 5.23**).

ation ef	fects				
	0	D			
	× (c)	× (c)			
f the relevant air quality objective and (4). The impact of the short-term air Table 7.7 of the HRA Report (Document ons on the conservation objectives					
ed Development would not result in an					

HRA INTEGRITY MATRIX 5: AFON GWYRFAI A LLYN CWELLYN SAC

ntegrity Matrix 5: Afon Gwyrfai a Llyn Cwellyn SAC												
EU Code: UK0030046												
Distance to NSIP: 8.6 km												
European site features	Adverse e	dverse effect on integrity										
Effect	Disturbanc displaceme	e/ injury and/o ent	or	Drilling fluid			EMFs			In combinati	on effects	
Stage of the Proposed Development	С	0	D	С	0	D	С	0	D	С	0	D
Atlantic salmon	× (a)			× (b)				× (c)		× (d)	× (d)	

(a) With regards to the TBM tunnelling construction method the sound generated would be primarily low frequency in nature (<500 Hz). It is therefore evident from the hearing ranges presented in ES Appendix 9.18 (Document 5.9.2.18) that acoustic energy from TBM activities would fall outside the peak hearing sensitivity of fish. CEMP measures NV32 and NV33 (Document 7.4) would control the design of the blast to ensure potential effects were no greater than those reported in Chapter 9 Ecology and Nature Conservation (Document 5.9). In addition BNC28 (Document 7.4) requires Acoustic Deterrent Devices (ADDs) to be used at all time during the blasting of the tunnel beneath the Menai Strait. Taking into account the reasons set out in Table 7.9 of the HRA Report (Document 5.23) and with the mitigation measures listed in section 7.6.4 the HRA Report (Document 5.23) the Proposed Development would not result in any implications on the conservation objectives related to disturbance/injury and/or displacement and therefore would not result in an adverse effect on site integrity.

(b) The vertical LOD for the tunnel would maintain a minimum of 10 m bedrock cover from the top of the tunnel to the surface level of the Menai Strait; this, coupled with the measures set out in WE511 of the CEMP, would ensure the probability of a blowout event would be very low. Atlantic salmon are likely to avoid areas of contamination and if drilling fluid was to be released in the unlikely event of a blowout, this is likely to be in a very small quantity in comparison to the volume of the receiving water. Taking into account the reasons set out in Table 7.9 of the HRA Report (Document 5.23) and with the mitigation measures listed in section 7.6.4 the HRA Report (Document 5.23) the Proposed Development would not result in any implications on the conservation objectives related to water quality associated with blowout and therefore would not result in an adverse effect on site integrity.

(c) Studies on the potential effects of EMFs generated by wind farm submarine cables on the marine environment have shown effects to be not-significant. In addition, mitigation listed in The NPS EN-3 (Ref 7.2) states that a cable buried greater than 1.5m or more below the seabed would provide sufficient mitigation from the effects of EMF. Although windfarm cables are lower kV than that required for the Project (i.e. 33/132 kV compared to 400 kV), evidence has shown that at 1 m above ground level, EMFs produced by 400 kV cables approach background at approximately 10 m from the centreline. Field measurements have shown that maximum magnetic flux (measured in µT) reduces from approximately 96 to 3 (0 to 10 m away from centreline) and typical µT reduces from 24 to 0.9 at the same distances¹. As the cables would be housed in a tunnel at least 10 m below the seabed the EMFs generated by cables beneath the Menai would therefore be expected to be approaching background levels within the water column and the Proposed Development would not result in any implications on the conservation objectives related to Disorientation of species from EMF. Refer to Table 7.9 of the HRA Report (Document 5.23).

(d) Two developments have been identified as having the potential to result in in-combination effects with the Proposed Development, Glyn Rhonwy Pumped Storage and the Third Menai Crossing. For the reasons set out in Table 8.2 of the HRA Report (Document 5.23) there is no potential for either development to result in an adverse effect on site integrity in-combination with the Proposed Development.

¹ http://www.emfs.info/sources/overhead/specific/400-kv/

HRA INTEGRITY MATRIX 6: PEN LLYN A'R SARNAU/LLEYN PENINSULA AND THE SARNAU SAC

Integrity Matrix 6: Pen Llyn a'r Sarnau/Lleyn Peninsula an	nd the Sarnau	I SAC					
EU Code: UK0013117							
Distance to NSIP: 36.7 km							
European site features	Adverse effect on integrity						
	Disturbance/ injury and/or displacement			EMFs			In combination
Stage of the Proposed Development	С	0	D	С	0	D	С
Bottlenose dolphins	× (a)				× (b)		× (c)
Grey seal	× (a)						× (c)
Stage of the Proposed Development Bottlenose dolphins	displacement C × (a)	t				D	C × (c)

(a) Sound due to TBM will be primarily low frequency in content (<500 Hz). It is therefore evident from the hearing ranges presented in ES Appendix 9.18 (Document 5.9.2.18) that acoustic energy from TBM activities would fall outside the peak hearing sensitivity of mid frequency and high frequency cetaceans as well as pinnipeds. Even for low frequency cetaceans, a marine mammal would be exposed to SEL levels significantly lower than the onset threshold for TTS or PTS even if it spent 24 hours at the seabed immediately adjacent to the TBM. The baseline data indicate that there is only a very low utilisation of the Menai Strait by marine mammals, with only one record of bottlenose dolphin in the vicinity of the Order Limits within the ten-year period from 2004 to 2014. There would be a relatively short period that construction activities would occur beneath the wetted area of the Menai Strait (approximately three months). Furthermore, in terms of drill and blast, CEMP measures such as the frequency (i.e. a maximum of six separate blasts per 24 hours) and very short duration of blast events (i.e. seconds), the zone of potential noise effect (based on noise modelled (see **Document 5.9.2.18**)) and the very low utilisation of the area by marine mammals indicate there would be an extremely low likelihood of any marine mammals being present in the area defined as having noise levels that would have an effect during a blast. CEMP measures NV32 and NV33 (**Document 7.4**) would control the design of the blast to ensure potential effects were no greater than those reported in ES Chapter 9 Ecology and Nature Conservation (**Document 5.23**) and with the mitigation measures will include the utilisation, as appropriate, of Marine Mammal Observers (MMOs) and Passive Acoustic Monitors (PAMs) as well as Acoustic Deterrent Devices (ADDs) at all times during blasting of the tunnel beneath the Menai Strait. Taking into account the reasons set out in Table 7.11 of the HRA Report (**Document 5.23**) and with the mitigation measures listed

(b) Studies on the potential effects of EMFs generated by wind farm submarine cables on the marine environment have shown effects to be not-significant. In addition, mitigation listed in The NPS EN-3 (Ref 7.2) states that a cable buried greater than 1.5m or more below the seabed would provide sufficient mitigation from the effects of EMF. Although windfarm cables are lower kV than that required for the Project (i.e. 33/132 kV compared to 400 kV), evidence has shown that at 1 m above ground level, EMFs produced by 400 kV cables approach background at approximately 10 m from the centreline. Field measurements have shown that maximum magnetic flux (measured in µT) reduces from approximately 96 to 3 (0 to 10 m away from centreline) and typical µT reduces from 24 to 0.9 at the same distances². As the cables would be housed in a tunnel at least 10 m below the seabed the EMFs generated by cables beneath the Menai would therefore be expected to be approaching background levels within the water column and the Proposed Development would not result in any implications on the conservation objectives related to Disorientation of species from EMF. Refer to Table 7.11 of the HRA Report (**Document 5.23**).

(c) One other development has been identified as having the potential to result in in-combination effects with the Proposed Development, the Third Menai Crossing. For the reasons set out in Table 8.2 of the HRA Report (**Document 5.23**) there is no potential for this development to result in an adverse effect on site integrity in-combination with the Proposed Development.

on effects O D × (c) Image: state s

² http://www.emfs.info/sources/overhead/specific/400-kv/

HRA INTEGRITY MATRIX 7: CARDIGAN BAY SAC

Integrity Matrix 7: Cardigan Bay SAC									
EU Code: UK0012712									
Distance to NSIP: 85.5 km									
European site features	Adverse	Adverse effect on integrity							
Effect	Disturban	ce/ injury an	d/or displacemen	t EMFs			In combi	nation effects	
Stage of the Proposed Development	С	0	D	С	0	D	С	ο	D
Bottlenose dolphins	× (a)				× (b)		× (c)	× (c)	
Grey seal	× (a)						× (c)		

(a) Sound due to TBM will be primarily low frequency in content (<500 Hz). It is therefore evident from the hearing ranges presented in ES Appendix 9.18 (**Document 5.9**.2.18) that acoustic energy from TBM activities would fall outside the peak hearing sensitivity of mid frequency and high frequency cetaceans as well as pinnipeds. Even for low frequency cetaceans, a marine mammal would be exposed to SEL levels significantly lower than the onset threshold for TTS or PTS even if it spent 24 hours at the seabed immediately adjacent to the TBM. The baseline data indicate that there is only a very low utilisation of the Menai Strait by marine mammals, with only one record of bottlenose dolphin in the vicinity of the Order Limits within the ten-year period from 2004 to 2014. There would be a relatively short period that construction activities would occur beneath the wetted area of the Menai Strait (approximately three months). Furthermore, in terms of drill and blast, CEMP measures such as the frequency (i.e. a maximum of six separate blasts per 24 hours) and very short duration of blast events (i.e. seconds), the zone of potential noise effect (based on noise modelled (see **Document 5.9.2.18**)) and the very low utilisation of the area by marine mammals indicate there would be an extremely low likelihood of any marine mammals being present in the area defined as having noise levels that would have an effect during a blast. CEMP measures NV32 and NV33 (**Document 7.4**) would control the design of the blast to ensure potential effects were no greater than those reported in ES Chapter 9 Ecology and Nature Conservation (**Document 5.23**) and with the mitigation measures will include the utilisation, as appropriate, of Marine Mammal Observers (MMOs) and Passive Acoustic Monitors (PAMs) as well as Acoustic Deterrent Devices (ADDs) at all times during blasting of the tunnel beneath the Menai Strait. Taking into account the reasons set out in Table 7.13 of the HRA Report (**Document 5.23**) and with the mitigation measures liste

(b) Studies on the potential effects of EMFs generated by wind farm submarine cables on the marine environment have shown effects to be not-significant. In addition, mitigation listed in The NPS EN-3 (Ref 7.2) states that a cable buried greater than 1.5m or more below the seabed would provide sufficient mitigation from the effects of EMF. Although windfarm cables are lower kV than that required for the Project (i.e. 33/132 kV compared to 400 kV), evidence has shown that at 1 m above ground level, EMFs produced by 400 kV cables approach background at approximately 10 m from the centreline. Field measurements have shown that maximum magnetic flux (measured in µT) reduces from approximately 96 to 3 (0 to 10 m away from centreline) and typical µT reduces from 24 to 0.9 at the same distances³. As the cables would be housed in a tunnel at least 10 m below the seabed the EMFs generated by cables beneath the Menai would therefore be expected to be approaching background levels within the water column and the Proposed Development would not result in any implications on the conservation objectives related to Disorientation of species from EMF. Refer to Table 7.13 of the HRA Report (**Document 5.23**).

(c) One other development has been identified as having the potential to result in in-combination effects with the Proposed Development, the Third Menai Crossing. For the reasons set out in Table 8.2 of the HRA Report (**Document 5.23**) there is no potential for this development to result in an adverse effect on site integrity in-combination with the Proposed Development.

³ http://www.emfs.info/sources/overhead/specific/400-kv/

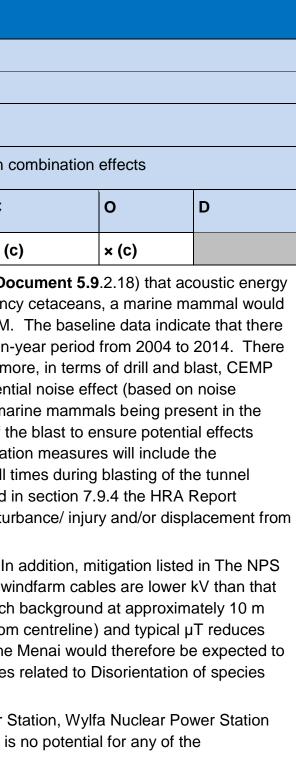
HRA INTEGRITY MATRIX 8: NORTH ANGLESEY MARINE/GOGLEDD MÔN FOROL CSAC

Integrity Matrix 8: North Anglesey Marine/Gogledd Môn Forol cSAC									
EU Code: UK0030398									
Distance to NSIP: 0.23km									
European site features	ean site features Adverse effect on integrity								
Effect	Disturbance/ inj	ury and/or displa	acement	EMFs			In		
Stage of the Proposed Development	С	0	D	С	0	D	С		
Harbour porpoise	× (a)				× (b)		× (

(a) Sound due to TBM will be primarily low frequency in content (<500 Hz). It is therefore evident from the hearing ranges presented in ES Appendix 9.18 (Document 5.9.2.18) that acoustic energy from TBM activities would fall outside the peak hearing sensitivity of mid frequency and high frequency cetaceans as well as pinnipeds. Even for low frequency cetaceans, a marine mammal would be exposed to SEL levels significantly lower than the onset threshold for TTS or PTS even if it spent 24 hours at the seabed immediately adjacent to the TBM. The baseline data indicate that there is only a very low utilisation of the Menai Strait by marine mammals, with only one record of bottlenose dolphin in the vicinity of the Order Limits within the ten-year period from 2004 to 2014. There would be a relatively short period that construction activities would occur beneath the wetted area of the Menai Strait (approximately three months). Furthermore, in terms of drill and blast, CEMP measures such as the frequency (i.e. a maximum of six separate blasts per 24 hours) and very short duration of blast events (i.e. seconds), the zone of potential noise effect (based on noise modelled (see **Document 5.9.2.18**)) and the very low utilisation of the area by marine mammals indicate there would be an extremely low likelihood of any marine mammals being present in the area defined as having noise levels that would have an effect during a blast. CEMP measures NV32 and NV33 (Document 7.4) would control the design of the blast to ensure will include the utilisation, as appropriate, of Marine Mammal Observers (MMOs) and Passive Acoustic Monitors (PAMs) as well as Acoustic Deterrent Devices (ADDs) at all times during blasting of the tunnel beneath the Menai Strait. Taking into account the reasons set out in Table 7.15 of the HRA Report (Document 5.23) and with the mitigation measures listed in section 7.9.4 the HRA Report (Document 5.23) the Proposed Development would not result in any implications on the conservation objectives related to water

(b) Studies on the potential effects of EMFs generated by wind farm submarine cables on the marine environment have shown effects to be not-significant. In addition, mitigation listed in The NPS EN-3 (Ref 7.2) states that a cable buried greater than 1.5m or more below the seabed would provide sufficient mitigation from the effects of EMF. Although windfarm cables are lower kV than that required for the Project (i.e. 33/132 kV compared to 400 kV), evidence has shown that at 1 m above ground level, EMFs produced by 400 kV cables approach background at approximately 10 m from the centreline. Field measurements have shown that maximum magnetic flux (measured in µT) reduces from approximately 96 to 3 (0 to 10 m away from centreline) and typical µT reduces from 24 to 0.9 at the same distances⁴. As the cables would be housed in a tunnel at least 10 m below the seabed the EMFs generated by cables beneath the Menai would therefore be expected to be approaching background levels within the water column and the Proposed Development would not result in any implications on the conservation objectives related to Disorientation of species from EMF. Refer to Table 7.15 of the HRA Report (**Document 5.23**).

(c) Four developments have been identified as having the potential to result in in-combination effects with the Proposed Development, Wylfa Newydd Power Station, Wylfa Nuclear Power Station Decommissioning, Holyhead Port Expansion and the Third Menai Crossing. For the reasons set out in Table 8.2 of the HRA Report (**Document 5.23**) there is no potential for any of the developments to result in an adverse effect on site integrity in-combination with the Proposed Development.



⁴ http://www.emfs.info/sources/overhead/specific/400-kv/

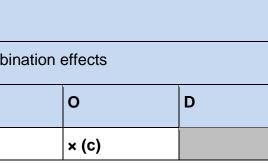
HRA INTEGRITY MATRIX 9: WEST WALES MARINE CSAC

Integrity Matrix 9: West Wales Marine cSAC							
EU Code: None (candidate site)							
Distance to NSIP: 36.7 km							
European site features	Adverse effect on integrity						
Effect	Disturbance/ inj	ury and/or displa	icement	EMFs			In combi
Stage of the Proposed Development	С	0	D	С	0	D	С
Harbour porpoise	× (a)				× (b)		× (c)

(a) Sound due to TBM will be primarily low frequency in content (<500 Hz). It is therefore evident from the hearing ranges presented in ES Appendix 9.18 (Document 5.9.2.18) that acoustic energy from TBM activities would fall outside the peak hearing sensitivity of mid frequency and high frequency cetaceans as well as pinnipeds. Even for low frequency cetaceans, a marine mammal would be exposed to SEL levels significantly lower than the onset threshold for TTS or PTS even if it spent 24 hours at the seabed immediately adjacent to the TBM. The baseline data indicate that there is only a very low utilisation of the Menai Strait by marine mammals, with only one record of bottlenose dolphin in the vicinity of the Order Limits within the ten-year period from 2004 to 2014. There would be a relatively short period that construction activities would occur beneath the wetted area of the Menai Strait (approximately three months). Furthermore, in terms of drill and blast, CEMP measures such as the frequency (i.e. a maximum of six separate blasts per 24 hours) and very short duration of blast events (i.e. seconds), the zone of potential noise effect (based on noise modelled (see **Document 5.9.2.18**)) and the very low utilisation of the area by marine mammals indicate there would be an extremely low likelihood of any marine mammals being present in the area defined as having noise levels that would have an effect during a blast. CEMP measures NV32 and NV33 (Document 7.4) would control the design of the blast to ensure will include the utilisation, as appropriate, of Marine Mammal Observers (MMOs) and Passive Acoustic Monitors (PAMs) as well as Acoustic Deterrent Devices (ADDs) at all times during blasting of the tunnel beneath the Menai Strait. Taking into account the reasons set out in Table 7.17 of the HRA Report (Document 5.23) and with the mitigation measures listed in section 7.10.4 the HRA Report (Document 5.23) the Proposed Development would not result in any implications on the conservation objectives related to wate

(b) Studies on the potential effects of EMFs generated by wind farm submarine cables on the marine environment have shown effects to be not-significant. In addition, mitigation listed in The NPS EN-3 (Ref 7.2) states that a cable buried greater than 1.5m or more below the seabed would provide sufficient mitigation from the effects of EMF. Although windfarm cables are lower kV than that required for the Project (i.e. 33/132 kV compared to 400 kV), evidence has shown that at 1 m above ground level, EMFs produced by 400 kV cables approach background at approximately 10 m from the centreline. Field measurements have shown that maximum magnetic flux (measured in µT) reduces from approximately 96 to 3 (0 to 10 m away from centreline) and typical µT reduces from 24 to 0.9 at the same distances⁵. As the cables would be housed in a tunnel at least 10 m below the seabed the EMFs generated by cables beneath the Menai would therefore be expected to be approaching background levels within the water column and the Proposed Development would not result in any implications on the conservation objectives related to Disorientation of species from EMF. Refer to Table 7.17 of the HRA Report (**Document 5.23**).

(c) One other development has been identified as having the potential to result in in-combination effects with the Proposed Development, the Third Menai Crossing. For the reasons set out in Table 8.2 of the HRA Report (**Document 5.23**) there is no potential for this development to result in an adverse effect on site integrity in-combination with the Proposed Development.



⁵ http://www.emfs.info/sources/overhead/specific/400-kv/

HRA INTEGRITY MATRIX 10: LIVERPOOL BAY/BAE LERPWL SPA

Integrity Matrix 10: Liverpool Bay/Bae Lerpwl SPA							
EU Code: UK9020294							
Distance to NSIP: 5 km							
uropean site features Adverse effect on integrity							
Effect	Collision Risk In combination effects						
Stage of the Proposed Development	С	0	D	С	0	D	
Internationally important waterbird assemblage of over 20,000 individu components. Other species that contribute to the assemblage in numb		,	7 • •	•	rant and red – breaste	d merganser as key	
Cormorant	× (a)	× (a)	× (a)	× (b)	× (b)	× (b)	
(a) Considering the distance of the Proposed Development from the SPA in relation to the mean foraging range, the very low risk of collision associated with the species, the likely habituation of cormorant to the existing OHL and the increased visibility due to the presence of two parallel OHLs, the Proposed Development would not result in any implications on the conservation objectives related to collision risk. Refer to Table 7.19 of the HRA Report (Document 5.23).							
(b) There are no other proposed developments that share receptors w adverse effect on site integrity either alone or in-combination. Refer to		•			posed Development v	would not result in an	

HRA INTEGRITY MATRIX 11: YNYS SEIRIOL/PUFFIN ISLAND SPA

Integrity Matrix 11: Ynys Seiriol/Puffin Island SPA						
EU Code: UK9020285						
Distance to NSIP: 15.7km						
European site features	European site features Adverse effect on integrity					
Effect	Collision Risk			In combination effect	S	
Stage of the Proposed Development	С	0	D	С	0	
Cormorant (North-western Europe) (Breeding)	× (a)	× (a)	× (a)	× (b)	× (I	

(a) Considering the distance of the Proposed Development from the SPA in relation to the mean foraging range of breeding cormorant, the very low risk of conservation of cormorant to the existing OHL and the increased visibility due to the presence of two parallel OHLs, the Proposed Development would not conservation objectives related to collision risk. Refer to Table 7.21 of the HRA Report (Document 5.23).

(b) There are no other proposed developments that share receptors with this site therefore there is no potential for an in-combination effect and the Proposed adverse effect on site integrity either alone or in-combination. Refer to section 8.2 and Table 8.1 for the HRA Report (**Document 5.23**).

	D					
(b)	× (b)					
ollision associated with the species, the ot result in any implications on the						
d Development would not result in an						

HRA INTEGRITY MATRIX 12: DYFI ESTUARY SPA

Integrity Matrix 12: Dyfi Estuary SPA						
EU Code: UK9020284						
Distance to NSIP: 69.5km						
European site features	Likely effects of NSIP					
Effect	Collision Risk In combination effects					
Stage of the Proposed Development	С	0	D	С	0	
Regularly supports Greenland White-fronted Goose (Greenland/Ireland/UK) 1% of the GB population 5 year peak mean for 1993/94 - 1997/98 (Over Winter)	× (a)	× (a)	× (a)	× (b)	× (b)	

(a) This species was recorded only once at Llyn Alaw over the course of two winters' survey and was never recorded in flight. Its known distribution is restrict half of Anglesey and especially at Malltraeth Marsh, with potential for some movement between Malltraeth Marsh and the Dyfi Estuary. The baseline data the risk of this species interacting with the Proposed Development and the Proposed Development would not result in any implications on the conservation object Table 7.23 of the HRA Report (Document 5.23).

(b) There are no other proposed developments that share receptors with this site therefore there is no potential for an in-combination effect and the Proposed adverse effect on site integrity either alone or in-combination. Refer to section 8.2 and Table 8.1 for the HRA Report (**Document 5.23**).

	D					
)	× (b)					
cted almost exclusively to the western nerefore suggest that there is very little ctives related to collision risk. Refer to						
ed Development would not result in an						