Cyfoeth Naturiol Cymru
Natural Resources Wales

Form

Record of a Habitats Regulations Assessment of a project

OGN 200 Form 1

Document owner: Protected Sites Team, EPP

Version History:

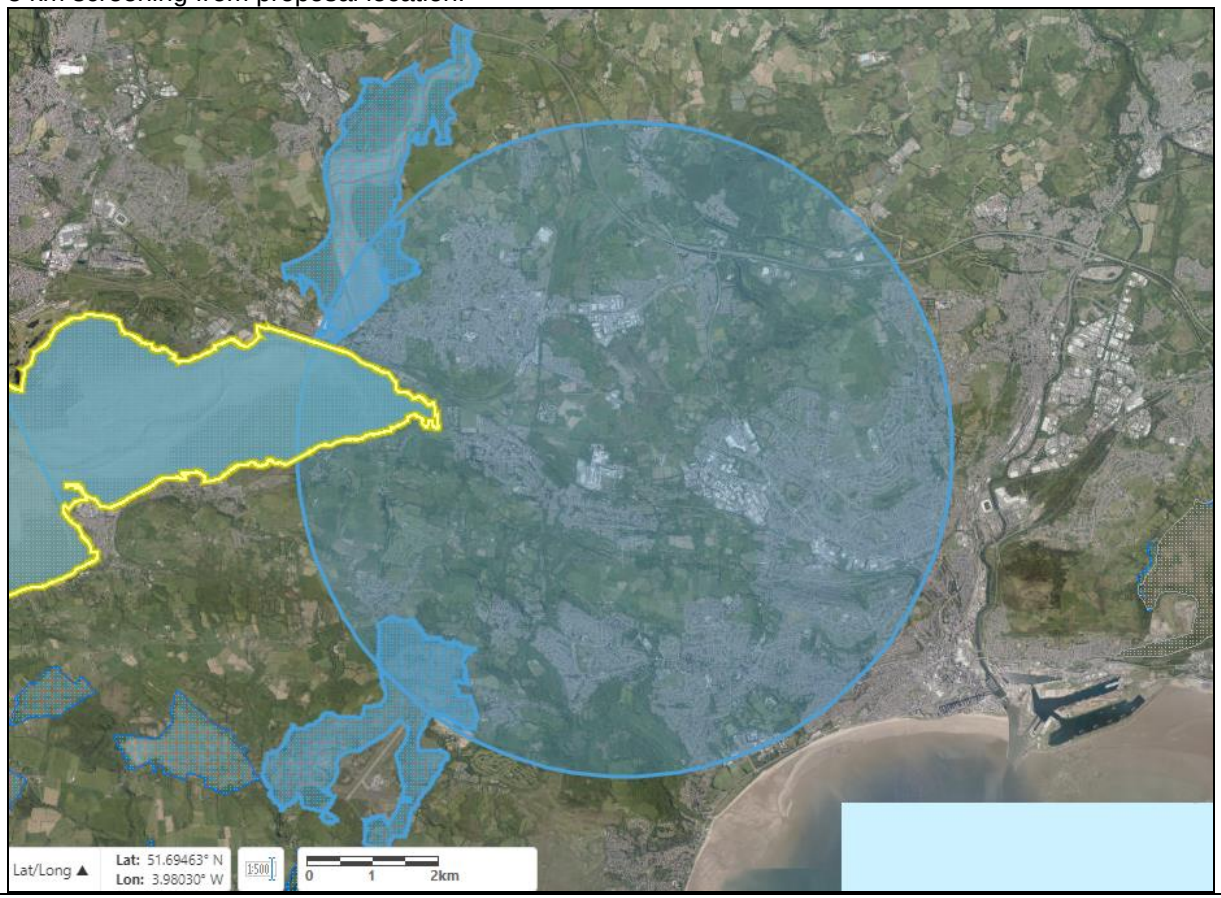
Document Version	Date Published	Summary of Changes
1.0	March 2016	Document created
1.1	30 November 2017	References to the 2010 Habitats Regulations updated to reflect new consolidated version of the regulations which entered into force on 30th November 2017; References to KSP and National Services Directorates updated to EPP
1.2	28 June 2018	With marked up changes in light of ruling in CJEU case c-323/17 'People over Wind'.
1.3	27 June 2019	With marked up changes in light of ruling in CJEU case c-323/17 'People over Wind'. See Guidance here

Next review date: April 2019

Record of a Habitats Regulations Assessment of a project

1. Project Details

1(a): Project details where an external party has applied to NRW for any form of authorisation	
Application reference number (if applicable)	PAN-018186
Date application received	31 May 2022
Applicant details	**GFI73 LTD**
Activity proposed	GFI73 LTD "the Operator" and "the Applicant" has applied for a bespoke Specified Generator permit. Under the permit they propose to operate: • 48x 1.0 MW thermal input compression ignition engines fuelled on low-sulphur diesel The combustion plant will discharge combustion products to air via individual stacks on each engine. Pollutants of concern for habitats assessment from these type of combustion plant are oxides of nitrogen (NOx) and sulphur dioxide. The Applicant has assessed the impacts on habitats sites within 5 km (the relevant screening distance for this type of plant) using detailed air dispersion modelling from all 48 engines. There are two operational scenarios associated with this permit application: • Current operational scenario – operating for up to 880 hours per year with no abatement fitted • Future operational scenario – operating for up to 1500 hours per year with selective catalytic reduction (SCR) abatement fitted. SCR abatement will reduce NOx emissions in order to comply with the required legislation, although ammonia slip can occur, therefore assessment of ammonia is required for this operational scenario and is included herein. Both scenarios are requested for permitting due to the timing of this permit application so are included in this assessment. The abatement will be fitted when the Operator signs a new market capacity agreement with National Grid, this is currently expected to be February 2023. They have assessed long-term and short-term airborne NOx impacts; long-term airborne sulphur dioxide and long-term nutrient nitrogen deposition and acid deposition impacts. They have assessed long-term airborne ammonia impacts and included ammonia in the deposition impacts assessment within the future operational scenario only due to use of SCR abatement and opportunity for 'ammonia slip'. There are no other emissions to land or water from the regulated facility. As per the legislation these types of permit (standalone

	MCP/SG) only contain conditions for emissions to air and no other conditions apply (emissions to water, land, noise or odour, BAT).
Relevant legislation	**Environmental Permitting (England and Wales) Regulations 2016:** Schedule 25A – Medium Combustion Plant Directive Schedule 25B – Specified Generator Regulations
Location	Address: Waunarlwydd Generation, Titanium Road, Waunarlwydd, SA5 4SF NGR: SS 60715 96412 5 km screening from proposal location: 
Application documents	PAN-018186 (sharepoint.com)
Environmental Statement	N/A
Pre-application	N/A

correspondence	
NRW team responsible for drafting this HRA report, and name of lead officer	Rebecca Williams Lead Specialist Permitting Officer, Installations & RSR permitting

2. Determining the need for a Habitats Regulations Assessment

2.1 Is the whole of the project directly connected with or necessary to the management of one or more Natura 2000 sites, for the purposes of conserving the habitats or species for which the Natura 2000 site(s) is/are designated?	**NO**
2.2 Is there a possibility that the project could affect a different Natura 2000 site to the one(s) the project is intended to conserve?	**N/A**
2.3 Is it necessary to carry out an HRA?	**YES**

3. Considering the likelihood of a significant effect (LSE)

3.1 Renewal of a permission on the same or more restrictive terms as the extant permission

Is this project a renewal of a current permission which complies with NRW approved criteria for ruling out significant effects of renewals (see section 6.2A of OGN 200) without conducting a project-specific LSE test?	**NO**

3.2 Likelihood of significant effects (LSE) test

3.2.1 Which Natura 2000 sites might be affected by the proposal?	Based on the project specification or information provided in the application, it is considered that the following Natura 2000 sites have features which could be affected by the project: • **Gower Commons SAC (UK0012685)** • **Carmarthen Bay and Estuaries SAC (UK0020020) – 2 areas** • **Burry Inlet SPA (UK9015011) & Ramsar (UK14001)** The potential for the project to affect the following Natura 2000 sites was also initially considered, but can be ruled out without further consideration: **N/A**
3.2.2 Screening assessment	
	Assessment of likelihood of significant effect

	I **Relevant conservation objectives**	II **Potential impact pathway**	~~III~~ ~~**Avoidance measure**~~ *~~Briefly describe any measures **included within the project at this point** that will ensure that the potential effects are avoided, are not significant or are not likely to occur. If none, put 'N/A'~~* *In light of the ruling of the CJEU in case C-323/17 'People over Wind', avoidance measures should not be considered at this stage of HRA, so this column is left blank.*
Gower Commons SAC UK0012685			
Northern Atlantic wet heaths with Erica tetralix (code 4010)	Conservation objectives taken from 'Core Management Plan including Conservation Objectives for Gower Commons SAC)' version:15, Date 20 April 2011	Toxic contamination Due to emissions of NOx and SO_2 significant effects cannot be ruled out. Nutrient enrichment Due to emissions of NOx significant effects cannot be ruled out. Acidification Due to emissions of NOx and SO_2 significant effects cannot be ruled out. Changes in salinity regime Changes in thermal regime Habitat loss Physical damage Smothering See above for acidification and nutrient enrichment. Turbidity Siltation Entrapment Disturbance (noise)	
European dry heaths (code: 4030)			
Molinia meadows on calcareous, peaty or clayey-silt-laden soils (code 6410)			
Southern damesfly (code 1044)			
Marsh fritillary butterfly (code 1065)			
Carmarthen Bay and Estuaries SAC UK0020020			
Large shallow inlets and	Conservation objectives taken from	Toxic contamination	

bays	'Carmarthen Bay and Estuaries/Bae Caerfyrddin ac Aberoedd European Marine Site' March 2018	Due to emissions of NOx and SO_2 significant effects cannot be ruled out. Nutrient enrichment Due to emissions of NOx and SO_2 significant effects cannot be ruled out. Acidification Due to emissions of NOx and SO_2 significant effects cannot be ruled out. APIS suggests Carmarthen Bay and Estuaries SAC is not sensitive to acidification however Burry Inlet SPA does have features sensitive to acidification. Changes in salinity regime Changes in thermal regime Habitat loss Physical damage Smothering See above for acidification and nutrient enrichment. Turbidity Siltation Entrapment Disturbance (noise)	
Sandbanks which are slightly covered by seawater all the time			
Estuaries			
Mudflats and sandflats not covered by seawater at low tide			
Atlantic salt meadows			
Salicornia and other annuals colonising mud and sand			
Otter Lutra lutra			
Allis shad Alosa alosa			
Twaite shad Alosa fallax			
River lamprey Lampetra fluviatillis			
Sea lamprey Petromyzon marinus			
Burry Inlet SPA (UK14001) and Ramsar (UK9015011)			
Curlew Numenius arquata	Conservation objectives taken from 'Carmarthen Bay and Estuaries/Bae Caerfyrddin ac Aberoedd European Marine Site' March 2018	See assessment above, assessment of Carmarthen Bay and Estuaries SAC is considered representative assessment of Burry Inlet Spa and Ramsar, given there are parts of the Carmarthen Bay and Estuaries SAC that are located closer to the facility than the Burry Inlet Spa and Ramsar and the designated areas overlap.	
Dunlin Calidris alpina			
Grey plover Pluvialis squatarola			
Knot Calidris canutus			
Oystercatcher Haematopus ostralegus			
Pintail Anas acuta			
Redshank Tringa tetanus			
Shelduck Tadorna tadorna			

Shoveler Anas clypeata			
Teal Anas crecca			
Turnstone Arenaria interpres			
Wigeon Anas penelope			

3.2.3 Screening decision of the project 'alone'	
~~(a) If ALL rows in column II of Table 3.2.2 are GREEN~~	~~The project is not likely to have a significant effect on any Natura 2000 site, because there is no impact pathway from the project to any Natura 2000 features, and no further consideration under the Habitats Directive/Regulations is required in order to determine the application.~~
~~(b) If there are NO rows coloured RED in column II of Table 3.2.2, and there are ANY rows which are BLUE~~	~~The project is not likely to have a significant effect on any Natura 2000 sites when considered alone, but the possibility of significant effects in combination with other plans and projects needs to be considered.~~
(c) If ANY rows in Column II of Table 3.2.2 are RED	The project is likely have a significant effect on one or more Natura 2000 sites and therefore an appropriate assessment is required.

4. Appropriate assessment of the project when considered alone

4.1 Assessment of project as currently defined

Natura 2000 site feature (from Table 3.2.2 – RED rows only)	Impact pathway(s) (from Table 3.2.2)	Description of impacts	Assessment in view of conservation objectives	Can adverse effect on site integrity be ruled out?
Gower Commons SAC UK0012685				
Northern Atlantic wet heaths with Erica tetralix (code 4010) ***European dry heaths (code: 4030)*** ***Molinia meadows on calcareous, peaty or clayey-silt-laden soils (code 6410)*** ***Southern damesfly (code 1044)*** ***Marsh fritillary butterfly (code 1065)***	Toxic contamination Nutrient enrichment Acidification Smothering	Two operational scenarios are presented as explained above: **1. Current operational scenario** *Operating up to 880 hours per year with no abatement fitted* Toxic contamination There are emissions to air of NOx and SO_2, each pollutant will be considered in turn below. **Oxides of nitrogen (NOx)** A long-term critical level of 30 µg/m^3 NOx (annual) has been applied. The maximum long-term process contribution (PC) is 0.05 µg/m^3 and <1 % (0.16 %) of the long term critical level. In line with current guidance long-term airborne NOx emissions are considered insignificant. A short-term critical level of 200 µg/m^3 NOx (daily mean) has been applied in line with current guidance here where ozone and sulphur dioxide is low: Air emissions risk assessment for your environmental permit - GOV.UK (www.gov.uk). The maximum short-term PC is 8.69 µg/m^3 and <10 % (4.4 %) of the short-term critical level. In line with current guidance short-term airborne NOx emissions are considered insignificant. **Sulphur dioxide** A long-term critical level of 10 µg/m^3 SO_2 (annual) has been applied. The maximum long-term process contribution (PC) is <0.0001 µg/m^3 and <1 % (<0.001 %) of the long term critical level. In line with current guidance long-term airborne SO_2 emissions are considered insignificant. Nutrient enrichment	Toxic contamination Impacts screened out as insignificant for both scenarios. Nutrient enrichment Impacts screened out as insignificant for both scenarios. Acidification Impacts screened out as insignificant for both scenarios. Smothering Impacts screened out as insignificant for both scenarios.	YES

		A minimum nutrient nitrogen critical load value of 10 kgN/ha/yr has been applied as per APIS. The maximum nitrogen deposition process contribution is 0.01 kgN/ha/yr and is <1 % (0.1 %) of the minimum critical load value. In line with current guidance nitrogen deposition impacts are considered insignificant. Acidification The following acid deposition critical load values have been applied as per APIS: 0.581 keq/ha/yr MinN; 4.283 keq/ha/yr MaxN; 4.06 keq/ha/yr MaxS. The maximum PC (from N and S) is 0.000405 keq/ha/yr and <1 % (0.1 %) of the critical load function therefore the impacts from acid deposition can be considered insignificant. Smothering See above for acidification and nitrogen deposition impacts. **2. Future operational scenario** *Operating up to 1500 hours per year with SCR abatement fitted* Toxic contamination There are emissions to air of NOx and SO_2, there is also potential for 'ammonia slip' to occur from use of SCR abatement, therefore ammonia assessment is included below, each pollutant will be considered in turn below. **Oxides of nitrogen (NOx)** A long-term critical level of 30 µg/m^3 NOx (annual) has been applied. The maximum long-term process contribution (PC) is 0.06 µg/m^3 and <1 % (0.2 %) of the long term critical level. In line with current guidance long-term airborne NOx emissions are considered insignificant. A short-term critical level of 200 µg/m^3 NOx (daily mean) has been applied in line with current guidance here where ozone and sulphur dioxide is low: Air emissions risk assessment for your environmental permit - GOV.UK (www.gov.uk). The maximum short-term PC is 8.09 µg/m^3 and <10 % (4.045 %) of the short-term critical level. In line with current guidance short-term airborne NOx emissions are considered insignificant. **Sulphur dioxide**		

		A long-term critical level of 10 µg/m^3 SO_2 (annual) has been applied. The maximum long-term process contribution (PC) is <0.001 µg/m^3 and <1 % (<0.01 %) of the long term critical level. In line with current guidance long-term airborne SO_2 emissions are considered insignificant. **Ammonia** A long-term critical level of 1 µg/m^3 NH_3 (annual) has been applied. The maximum long-term process contribution (PC) is <0.01 µg/m^3 and <1 % (<1 %) of the long term critical level. In line with current guidance long-term airborne NH_3 emissions are considered insignificant. Nutrient enrichment A minimum nutrient nitrogen critical load value of 10 kgN/ha/yr has been applied as per APIS. The maximum nitrogen deposition process contribution is 0.01 kgN/ha/yr and is <1 % (0.1 %) of the minimum critical load value. In line with current guidance nitrogen deposition impacts are considered insignificant. Acidification The following acid deposition critical load values have been applied as per APIS: 0.581 keq/ha/yr MinN; 4.283 keq/ha/yr MaxN; 4.06 keq/ha/yr MaxS. The maximum PC (from N and S) is 0.0048 keq/ha/yr and <1 % (0.1 %) of the critical load function therefore the impacts from acid deposition can be considered insignificant. Smothering See above for acidification and nitrogen deposition impacts.		
Carmarthen Bay and Estuaries SAC UK0012685				
Large shallow inlets and bays ***Sandbanks which are slightly covered by seawater all the time*** ***Estuaries*** ***Mudflats and sandflats not covered by seawater at low***	Toxic contamination Nutrient enrichment Smothering	Two operational scenarios are presented as explained above: **1. Current operational scenario** *Operating up to 880 hours per year with no abatement fitted* Toxic contamination There are emissions to air of NOx and SO_2, each pollutant will be considered in turn below. **Oxides of nitrogen (NOx)** A long-term critical level of 30 µg/m^3 NOx (annual) has been applied. The	Toxic contamination Impacts screened out as not significant for both scenarios. Nutrient enrichment Impacts screened out as insignificant for both scenarios. Acidifcation Impacts screened	YES

tide ***Atlantic salt meadows*** ***Salicornia and other annuals colonising mud and sand*** ***Otter Lutra lutra*** ***Allis shad Alosa alosa*** ***Twaite shad Alosa fallax*** ***River lamprey Lampetra fluviatillis*** ***Sea lamprey Petromyzon marinus***		maximum long-term process contribution (PC) is 0.13 µg/m^3 and <1 % (0.43 %) of the long term critical level. In line with current guidance long-term airborne NOx emissions are considered insignificant. A short-term critical level of 200 µg/m^3 NOx (daily mean) has been applied in line with current guidance here where ozone and sulphur dioxide is low: Air emissions risk assessment for your environmental permit - GOV.UK (www.gov.uk). The maximum short-term PC is 30.80 µg/m^3 and >10 % (15.4 %) of the short-term critical level. The maximum short-term predicted environmental concentration (PEC) is 42.66 µg/m^3 and 21.3 %) of the short-term critical level. In line with current guidance short-term airborne NOx emissions are unlikely to lead to a breach of the environmental standard and are considered not significant. **Sulphur dioxide** A long-term critical level of 10 µg/m^3 SO_2 (annual) has been applied. The maximum long-term process contribution (PC) is 0.001 µg/m^3 and <1 % (0.001 %) of the long term critical level. In line with current guidance long-term airborne SO_2 emissions are considered insignificant. Nutrient enrichment A minimum nutrient nitrogen critical load value of 20 kgN/ha/yr has been applied as per APIS. The maximum nitrogen deposition process contribution is 0.01 kgN/ha/yr and is <1 % (0.05 %) of the minimum critical load value. In line with current guidance nitrogen deposition impacts are considered insignificant. Acidification The following acid deposition critical load values have been applied as per APIS (for Burry Inlet SPA): 0.438 keq/ha/yr MinN; 4.283 keq/ha/yr MaxN; 4.06 keq/ha/yr MaxS. The maximum PC (from N and S) is 0.000405 keq/ha/yr and <1 % (0.1 %) of the critical load function therefore the impacts from acid deposition can be considered insignificant. Smothering See above for nitrogen deposition impacts. **2. Future operational scenario** *Operating up to 1500 hours per year with SCR abatement fitted*	out as insignificant for both scenarios. Smothering Impacts screened out as insignificant for both scenarios.	

		Toxic contamination There are emissions to air of NOx and SO_2, each pollutant will be considered in turn below. **Oxides of nitrogen (NOx)** A long-term critical level of 30 µg/m^3 NOx (annual) has been applied. The maximum long-term process contribution (PC) is 0.10 µg/m^3 and <1 % (0.3 %) of the long term critical level. In line with current guidance long-term airborne NOx emissions are considered insignificant. A short-term critical level of 200 µg/m^3 NOx (daily mean) has been applied in line with current guidance here where ozone and sulphur dioxide is low: Air emissions risk assessment for your environmental permit - GOV.UK (www.gov.uk). The maximum short-term PC is 11.43 µg/m^3 and <10 % (5.7 %) of the short-term critical level. In line with current guidance short-term airborne NOx emissions are considered insignificant. **Sulphur dioxide** A long-term critical level of 10 µg/m^3 SO_2 (annual) has been applied. The maximum long-term process contribution (PC) is <0.001 µg/m^3 and <1 % (<0.01 %) of the long term critical level. In line with current guidance long-term airborne SO_2 emissions are considered insignificant. **Ammonia** A long-term critical level of 1 µg/m^3 NH_3 (annual) has been applied. The maximum long-term process contribution (PC) is <0.01 µg/m^3 and <1 % (<1 %) of the long term critical level. In line with current guidance long-term airborne NH_3 emissions are considered insignificant. Nutrient enrichment A minimum nutrient nitrogen critical load value of 20 kgN/ha/yr has been applied as per APIS. The maximum nitrogen deposition process contribution is 0.012 kgN/ha/yr and is <1 % (0.06 %) of the minimum critical load value. In line with current guidance nitrogen deposition impacts are considered insignificant. Acidification The following acid deposition critical load values have been applied as per APIS (for Burry Inlet SPA): 0.438 keq/ha/yr MinN; 4.283 keq/ha/yr MaxN; 4.06 keq/ha/yr MaxS. The maximum PC (from N and S) is 0.00032 keq/ha/yr		

		and <1 % (0.1 %) of the critical load function therefore the impacts from acid deposition can be considered insignificant. Smothering See above for nitrogen deposition impacts.		
Burry Inlet SPA (UK14001) and Ramsar (UK9015011)				
Curlew Numenius arquata	See assessment above, assessment of Carmarthen Bay and Estuaries SAC is considered representative assessment of Burry Inlet Spa and Ramsar, given there are parts of the Carmarthen Bay and Estuaries SAC that are located closer to the facility than the Burry Inlet Spa and Ramsar and the designated areas overlap.	See assessment above, assessment of Carmarthen Bay and Estuaries SAC is considered representative assessment of Burry Inlet Spa and Ramsar, given there are parts of the Carmarthen Bay and Estuaries SAC that are located closer to the facility than the Burry Inlet Spa and Ramsar and the designated areas overlap. APIS has been checked for both designations to ensure all relevant and strictest critical loads / levels have been used in the above assessment.	See assessment above, assessment of Carmarthen Bay and Estuaries SAC is considered representative assessment of Burry Inlet Spa and Ramsar, given there are parts of the Carmarthen Bay and Estuaries SAC that are located closer to the facility than the Burry Inlet Spa and Ramsar and the designated areas overlap.	YES
Dunlin Calidris alpina				
Grey plover Pluvialis squatarola				
Knot Calidris canutus				
Oystercatcher Haematopus ostralegus				
Pintail Anas acuta				
Redshank Tringa tetanus				
Shelduck Tadorna tadorna				
Shoveler Anas clypeata				
Teal Anas crecca				
Turnstone Arenaria interpres				
Wigeon Anas penelope				

4.3 Concluding the appropriate assessment of the project alone

(a) If the right hand column of Table 4.1 and Table 4.2 (if applicable) is 'YES' for all	It has been ascertained that the proposal, when considered alone, will not adversely affect the integrity of any Natura 2000 sites.

features	
~~**(b) If there are any 'NO's in the right hand column of Table 4.1 that have not been resolved to 'YES' through mitigation measures identified in Table 4.2**~~	~~It has not been ascertained that the proposal, when considered alone, will not adversely affect the integrity of one or more Natura 2000 sites.~~
(c) Are there any residual effects of the project (net of any mitigation measures identified) which, though insignificant on their own, could be significant if considered in combination with the effects of other plans or projects?	***YES***

5 In combination assessment

5.1 Identifying possible in combination effects

BLUE impact pathway from Table 3.2 **and/or** **Residual effect (from appropriate assessment in section 4)**	**Natura 2000 site feature(s) concerned**	**Other plans/projects with effects that might interact with the effects of the project to render its effects significant (if any)**	**Nature of the in-combination effect (if any)**	**Is there likely to be any significant in-combination effect, in view of the site's conservation objectives?**
Toxic contamination Nutrient enrichment Acidification Smothering	Gower Commons SAC	5 km screening completed from closest point of habitat site to proposal including current applications and those issued since background date (01.01.2019). No relevant permitting proposals have been found.	None	NO
Toxic contamination Nutrient enrichment Acidification Smothering	Carmarthen Bay & Estuaries SAC Burry Inlet SPA and Ramsar	5 km screening completed from closest point of habitat site to proposal including current applications and those issued since background date	None	NO

		(01.01.2019). No relevant permitting proposals have been found.		
(a) If the right hand column is 'NO' for all rows		The project, when considered in combination with other plans and projects, is either not likely to have a significant effect on, or will not adversely affect the integrity of any Natura 2000 site.		
~~**(b) If any rows in the right hand column are 'YES' or 'DON'T KNOW'**~~		~~The project is likely to have a significant effect in combination with other plans or projects.~~		

6. Conclusion

HRA is not required because the whole of the project is directly connected with or necessary to the management of one or more Natura 2000/Ramsar sites, for the purposes of conserving the habitats or species for which the site(s) is/are designated, <u>and</u> the project is not likely to have a significant effect on any other Natura 2000/Ramsar sites. (As documented in section 2.1 and 2.2 of this form)	
HRA is not required because there is no conceivable impact pathway to any Natura 2000/Ramsar site (As documented in section 2.3 of this form)	
This project is a renewal of a current permission which complies with NRW agreed criteria for ruling out significant effects of a renewal without conducting a project-specific LSE test. Therefore it is considered not likely to have a significant effect on any Natura 2000/Ramsar sites, either alone or in-combination with other plans and projects. (As documented in section 3.1 of this form)	
The project has been screened for likelihood of significant effects and, taking account of the advice received from protected sites advisors, is considered not likely to have a significant effect on any Natura 2000/Ramsar site (As documented in section 3.2 of this form, or section 5 if applicable)	
In light of the conclusions of an appropriate assessment, and taking account of the advice received from protected sites advisors, it has been established that the project will not adversely affect the integrity of any Natura 2000/Ramsar site, taking into account any conditions or restrictions as applicable, either alone or in-combination with other plans and projects. (As documented in section 4 of this form, and section 5 if applicable)	**X**

In light of the conclusions of the appropriate assessment, it has <u>not</u> been ascertained that the project will not adversely affect the integrity of any Natura 2000/Ramsar site, as documented in section 4 of this form, and section 5 is applicable. **Approval for the project <u>cannot</u> be given unless either:** • **the project specification, and/or the terms under which it might be approved, are modified so as to remove the risk of adverse effects, and a revised HRA report is prepared, or** • **the project satisfies the requirements of Article 6(4) of the Habitats Directive, an Article 6(4) Statement of Case is prepared (OGN 200 Form 3) and submitted for consideration by the appropriate authority, normally Welsh Ministers**	
Signed: Rebecca Williams **Name: Rebecca Williams** **Position: Lead Specialist Permitting Officer** **Date: 08/10/2022**	

7. Consultation with protected sites advisor(s) and how sections 2, 3, 4 and 5 of this HRA report (as applicable) take into account that advice.

NONE

8. Conservation Technical Specialist's comments

I have reviewed the HRA documented in this form and confirm that I agree/do not agree* with its findings.
(*strike out as applicable)

Additional comments (if any):

Signed:

Name:

Position:

Date: