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

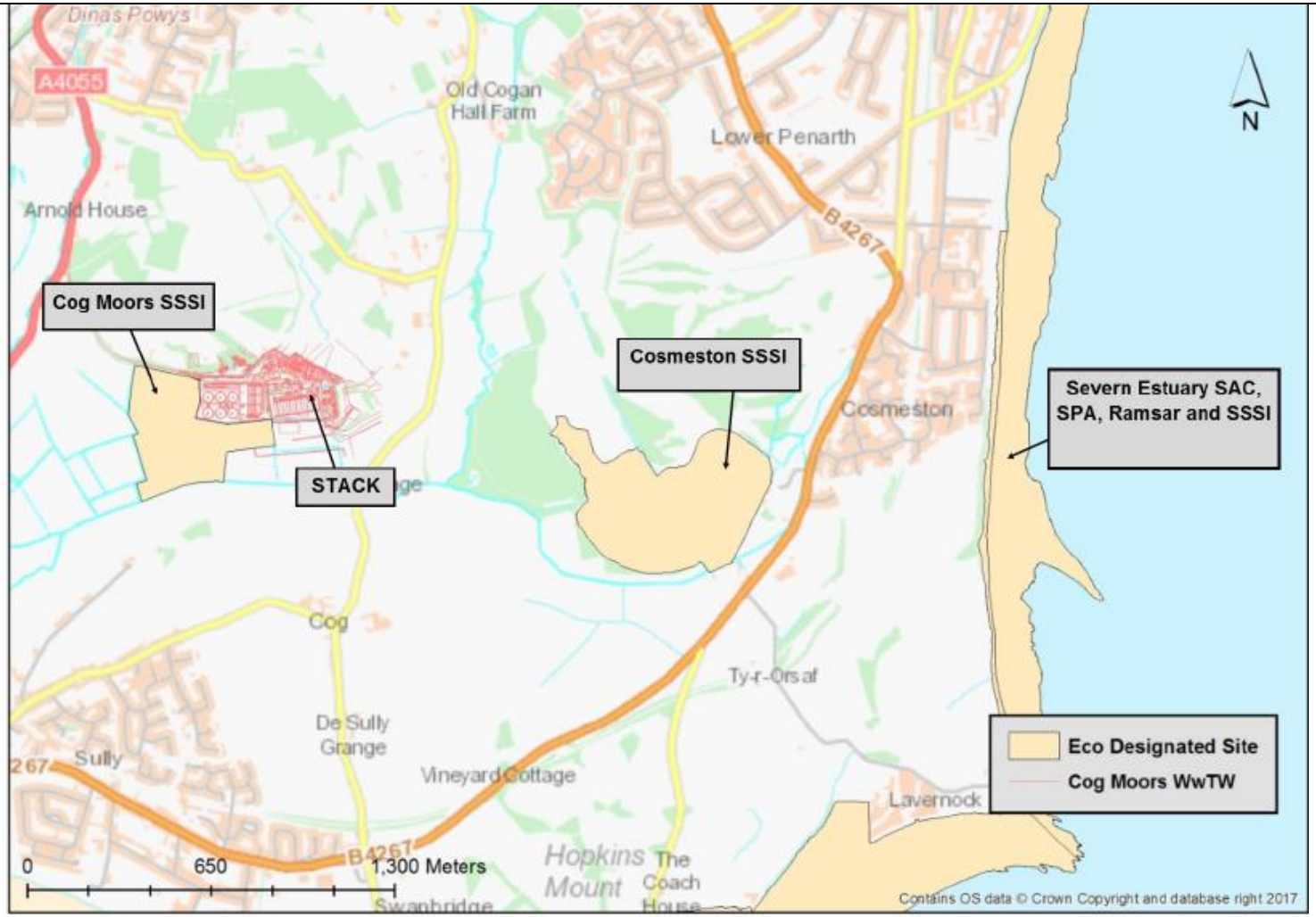
Next review date: April 2019

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-008163
Date application received	***04 December 2019***
Applicant details	***Dŵr Cymru Cyfyngedig***
Activity proposed	Dŵr Cymru Cyfyngedig propose to install an Advanced Anaerobic Digestion (AAD) plant with an associated Combined Heat and Power plant as an extension to their existing Wastewater Treatment Works Anaerobic Digestion plant. The AAD facility is a newly permitted installation as the existing Cog Moors WwTW AD plant had been operating under a waste exemption (T21). Cog Moors treats wastewater from a large geographic area and correspondingly generates a substantial volume of sewage sludge. The proposed AAD plant will supplement existing digesters and provide additional capacity. The proposed process overview is as follows; imported and indigenous sludges are combined in the Thermal Hydrolysis Plant which uses steam generated from two natural gas boilers to increase the temperature and control the pressure to pre-treat the sludge, the sludge is then cooled via water coolers and then undergoes Anaerobic Digestion. Biogas will be produced during Anaerobic Digestion which will be transferred to a gas holder and then via a siloxane removal plant to the two Combined Heat and Power engines to be used a fuel to produce electricity. Any unused biogas will be flared off in the emergency waste gas flare. The primary emissions from the installation are emissions to air from the combustion sources. There are two natural gas/biogas fuelled boilers (each boiler is 4.408 MWth input) and two biogas fuelled combined heat and power engines (each engine is 3.679 MWth input), which gives an aggregated total of 16.17 MWth input for the installation. Therefore, these combustion sources are all subject to the Medium Combustion Plant Directive, the CHP engines are subject to the Specified Generator regulations as they produce electricity. The two natural gas/biogas boilers primary pollutants are oxides of nitrogen (NOx) and carbon monoxide (CO) and sulphur dioxide SO_2 (when running on biogas) and the two biogas CHP engines primary pollutants are NOx, CO and SO_2. Detailed atmospheric dispersion modelling has been completed for both boilers and engines at full maximum operational hours (8760) hours this provides a

	conservative approach. The two boilers are capable of operating on both natural gas or biogas, but expected to operate almost always on natural gas, there is a higher NOx emission rate associated with natural gas therefore the modelling of NOx emissions has been completed using 100 % natural gas as the fuel for the boilers as a worst-case scenario approach. There are only emissions of SO_2 when the boilers operate with biogas as a fuel therefore modelling of SO_2 emissions has been completed using 100 % biogas as the fuel for the boilers as a worst-case scenario approach. There is one discharge to sewer, all process and any contaminated surface water will be returned to the head of the Cog Moors Wastewater Treatment Works. There are no emissions to ground or water of process effluent.
Relevant legislation	***Industrial Emissions Directive*** ***Environmental Permitting (England and Wales) Regulations 2016 (as amended):*** ***Section 5.4 Part A(1)(b)(i): Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving one or more of the following activities and excluding activities covered by Council Directive 91/271/EEC (i) biological treatment*** ***Schedule 25A – Medium Combustion Plant*** ***Schedule 25B – Specified Generator***
Location	Cog Moors Wastewater Treatment Works, Green Lane, Dinas Powys, CF64 2TR NGR: 316121, 169662


Dinas Powys
A4055
Old Cogan Hall Farm
Lower Penarth
Arnold House
B4267
Cog Moors SSSI
Cosmeston SSSI
Severn Estuary SAC, SPA, Ramsar and SSSI
STACK
Cosmeston
N
Cog
Ty-r-Orsaf
De Sully Grange
Sully
Vineyard Cottage
Lavernock
Eco Designated Site
Cog Moors WwTW
B4267
Hopkins Mount
The Coach House
Swanbridge
0
650
1,300 Meters
Contains OS data © Crown Copyright and database right 2017

	
Application documents	DMS
Environmental Statement	***N/A***
Pre-application correspondence	***Pre-application documents are within the DMS file***
NRW team responsible for drafting this HRA report, and name of lead officer	***Rebecca Williams*** ***Permitting Officer 2, Installations & RSR Permitting Team***

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: **Severn Estuary** *SAC UK0013030* *SPA UK9015022* *Ramsar UK11081* 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

There is no impact pathway from the proposal to the designated feature
There is an impact pathway in principle, but significant effects from the proposal when considered alone can be ruled out
There is an impact pathway and significant effects cannot be ruled out

	Assessment of likelihood of significant effect		
	I	**II**	**III**

	Relevant conservation objectives	Potential impact pathway	~~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.*
Severn Estuary SAC UK0013030			
SAC interest feature 1: Estuaries *1.12: Estuarine & Intertidal habitats*	All conservation objectives are contained within the following document: The Severn Estuary European Marine Site comprising: The Severn Estuary SAC, The Severn Estuary SPA, The Severn Estuary Ramsar site Natural England & the Countryside Council for Wales' advice given under Regulation 33(2)(a) of the Conservation (Natural Habitats, &c.) Regulations 1994, as amended. June 2009 *'Severn Estuary SAC, SPA and Ramsar site: Regulation 33 Advice from CCW and Natural England, June 2009'*	**Toxic Contamination** **NOx:** A long-term critical level of 30 µg/m^3 NOx (annual) and short-term critical level of 75 µg/m^3 NOx (daily) have been assumed for SAC Severn Estuary. The maximum long-term process contribution (PC) is >1 % (1.1 %) and PEC is <70 % (34.8 %) of the long-term critical level therefore long-term impact from NOx emissions can be considered insignificant. The maximum short-term PC is <10 % (4.0 %) of the short-term critical level, therefore the short-term impact from NOx emissions can be considered insignificant. **SO_2:** A long-term critical level of 10 µg/m^3 SO_2 (annual) has been assumed for SAC Severn Estuary. The maximum long-term process contribution (PC) is >1 % (1.1 %) and PEC <70 % (31.3 %) of the long-term critical level therefore long-term impacts from SO_2 emissions can be considered insignificant. **Nutrient Enrichment** The minimum nutrient nitrogen critical load value of 20 kgN/ha/yr (Atlantic Salt	
SAC interest feature 2: Subtidal Sandbanks *1.13: Submerged marine habitats*			
SAC interest feature 3: Intertidal mudflats and sandflats *1.12: Estuarine & Intertidal habitats*			
SAC interest feature 4: Atlantic salt meadow *1.12: Estuarine & Intertidal habitats*			
SAC interest feature 5: Reefs *1.12: Estuarine & Intertidal habitats* *1.13 Submerged marine habitats*			
SAC interest feature 6: River lamprey *2.5 Anadramous fish*			
SAC interest feature 7: Sea lamprey			

2.5 Anadramous fish		Meadows) has been assumed for SAC Severn Estuary. The maximum nitrogen deposition process contribution is <1 % (0.2 %) of the lower critical load value, therefore the impacts from nutrient nitrogen deposition can be considered insignificant. **Acidification** The SAC Severn Estuary features are either not sensitive to acidification or there are no acid deposition critical loads present on APIS to allow for this assessment. **Smothering** See above for impacts from nutrient enrichment and acidification. Particulate matter emissions are not a concern for biogas or natural gas combustion. Changes in Salinity Regime Changes in Thermal Regime Siltation Turbidity No impact pathway as there are no emissions to surface water Habitat Loss Physical Damage No impact pathway as the installation site is over 2 km from the SAC Severn Estuary. Entrapment No impact pathway as there are no water abstraction activities	
SAC interest feature 8: Twaite shad *2.5 Anadramous fish*			
Severn Estuary SPA UK9015022			
SPA interest feature 1: Bewick's Swan *3.4 Birds of lowland wet grasslands*	All conservation objectives are contained within the following document:	Toxic Contamination Nutrient Enrichment Acidification Smothering	

3.6 Birds of lowland freshwaters and their margins *3.7 Birds of farmland* *3.8 Birds of coastal habitats*	The Severn Estuary European Marine Site comprising: The Severn Estuary SAC, The Severn Estuary SPA, The Severn Estuary Ramsar site Natural England & the Countryside Council for Wales' advice given under Regulation 33(2)(a) of the Conservation (Natural Habitats, &c.) Regulations 1994, as amended. June 2009 *'Severn Estuary SAC, SPA and Ramsar site: Regulation 33 Advice from CCW and Natural England, June 2009'*	Changes in Salinity Regime Changes in Thermal Regime Habitat Loss Physical Damage Turbidity Siltation Entrapment See above for all impacts Disturbance (Noise) No impact pathway as installation is approximately 2.4 km away from the SAC. Noise is not considered a significant issue for this installation and is likely to have a low impact following a noise and vibration assessment.	
SPA interest feature 2: European white-fronted goose *3.6 Birds of lowland freshwaters and their margins* *3.7 Birds of farmland* *3.8 Birds of coastal habitats* *3.9 Birds of estuarine habitats*			
SPA interest feature 3: Dunlin *3.4 Birds of lowland wet grasslands* *3.7 Birds of farmland* *3.8 Birds of coastal habitats* *3.9 Birds of estuarine habitats*			
SPA interest feature 4: Redshank *3.4 Birds of lowland wet grasslands* *3.7 Birds of farmland* *3.8 Birds of coastal habitats* *3.9 Birds of estuarine habitats*			
SPA interest feature 5: Shelduck *3.6 Birds of lowland freshwaters and their margins* *3.8 Birds of coastal habitats* *3.9 Birds of estuarine habitats*			
SPA interest feature 6: Gadwall			

3.6 Birds of lowland freshwaters and their margins			
SPA interest feature 7: Internationally important assemblage >20,000 waterfowl *3.6 Birds of lowland freshwaters and their margins* *3.8 Birds of coastal habitats* *3.9 Birds of estuarine habitats*			
Severn Estuary RAMSAR UK11081			
Ramsar interest feature 1: Estuaries *1.12 Estuarine & intertidal habitats*	All conservation objectives are contained within the following document: The Severn Estuary European Marine Site comprising: The Severn Estuary SAC, The Severn Estuary SPA, The Severn Estuary Ramsar site Natural England & the Countryside Council for Wales' advice given under Regulation 33(2)(a) of the Conservation (Natural Habitats, &c.) Regulations 1994, as amended. June 2009 *'Severn Estuary SAC, SPA and Ramsar site: Regulation 33 Advice from CCW and Natural England, June 2009'*	See SAC interest feature 1	
Ramsar interest feature 2: Assemblage of migratory fish species *2.5 Anadramous fish*		See SAC interest features 6,7 & 8	
Ramsar interest feature 3: Bewick's Swan		See SPA interest feature 1	
Ramsar interest feature 4: European white-fronted goose		See SPA interest feature 2	
Ramsar interest feature 5: Dunlin		See SPA interest feature 3	
Ramsar interest feature 6: Redshank		See SPA interest feature 4	
Ramsar interest feature 7: Shelduck		See SPA interest feature 5	
Ramsar interest feature 8: Gadwall		See SPA interest feature 6	
Ramsar interest feature 9: Internationally important populations of waterfowl		See SPA interest feature 7	

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.~~

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	SAC/SPA/Ramsar Severn Estuary	A 10 km radius centred on the closest point of the Natura 2000 site to the installation was completed using MyMap for permitting. A total of 111 permit application points were found. Only permit applications after 2017 have been assessed as those prior to 2017 can be expected to be present in the background used within the air dispersion modelling. Post-2017 permit application points total is 77, of which 3 are applications relating to installations. 1 is an active IPCC installation therefore not relevant to this in-combination assessment. 2 are permit application points for administrative variations to existing active IPCC installation permits therefore not relevant either. There are 21 active IPCC installation sites within the 10 km radius. As they are all active sites they are not required to be	N/A	NO

		assessed as part of this in-combination assessment.		
(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, and 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)	**X**
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)	
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: Permitting Officer 2, Installations & RSR** **Date: 17/04/2020**	

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: