

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 30 th 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)	EPR-BX8289IW/V004 (PAN-012974)
Date application received	04/02/2021
Applicant details	Princes Limited
Activity proposed	Princes Limited operate an installation in the East Moors industrial area of Cardiff that produces a variety of fruit juices and fruit juice drinks from fruit juice concentrate and mains water which are packaged in cartons. This activity is currently permitted under EPR-BX8289IW falls under Schedule 1 of the Environmental Permitting (England & Wales) Regulations 2016 as a S6.8 A1(d)(ii) activity. The operator of the permit has applied for a substantial variation to the permit to: • Add a second natural gas-fired boiler plant with a 4.02 MWth input and associated point source emission to air (A2) • Add point source emissions to air of steam from the filler lines listed as emission points A3 to A9 • Add point source emissions to air for hydrogen peroxide from packaging sterilisation to be listed as points A10 to A16 • Relocate the point source emission to foul sewer (S1) and expansion of the Environmental Permit boundary to accommodate this. The site will also apply the relevant best available techniques (BAT) from the Food Drink and Milk BAT Reference (BRef) published on the 12th November 2019. As part of the substantial variation, the applicant has submitted a H1 tool assessment for the hydrogen peroxide point source emissions to air (from points A10 – A16) and releases to foul sewer for cadmium and mercury (from point S1)

	(please see H1 assessment: PAN-012974 ECL.046.01.01 H1-S1). These were both screened out as being insignificant. Hydrogen peroxide has no environmental standard to assess against and as such will not be considered in this assessment. Emissions from the filler lines (A3 to A9) will be condensation only and as such there are no anticipated impacts on ecological sites. The new natural gas fired boiler will emit nitrogen oxide expressed as nitrogen dioxide (NO_x) and carbon monoxide (CO). CO has no Environmental Standard to assess against and as such will not be considered in this assessment. Emissions of NO_x may lead to potential long term and short term nitrogen oxide airborne impacts, potential long term nutrient nitrogen deposition and potential long term acidity deposition impacts. As part of the variation application, the applicant has completed detailed air dispersion modelling which will be used to inform this assessment. The detailed air dispersion modelling includes existing and new point source emissions to air. The report presents emission rates based conservative assumptions such as: • Operating at 100% of the ELVs (Environmental Limit Values i.e. the maximum permitted rates) as required by Table 1 of Part 1 (existing boiler), and Table 1 of Part 2 (proposed) of Annex II of the Medium Combustion Plant Directive. • The plant running 24 hours a day, 7 days a week, 365 days per year. There are no changes to any other point source emissions to air, land or water proposed as part of the variation.
Relevant legislation	Industrial Emissions Directive Environmental Permitting (England & Wales) Regulations 2016: <i>Schedule 1, Part 2, Chapter 6, Section 6.8 A1(d)(ii) – Treatment and processing, other than exclusively packaging of the following raw materials, whether previously processed or unprocessed, intended for the production of food or feed (where the weight of the finished product excludes packaging) – only vegetable raw materials with a finished product production capacity greater than 300 tonnes per day.</i> Medium Combustion Plant Directive
Location	Address: Princes Soft Drinks Division, Unit 68, Portmanmoor Road, East Moors, Cardiff, CF24 5HB National Grid Reference (NGR): ST 20387 75704
Application documents	Please see DMS (internal NRW use) or public register (external use)
Environmental Statement	N/A

Pre-application correspondence	N/A
NRW team responsible for drafting this HRA report, and name of lead officer	Richard Fletcher, Permitting Officer Installations and RSR William Wallace, Permitting Officer Installations and RSR

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

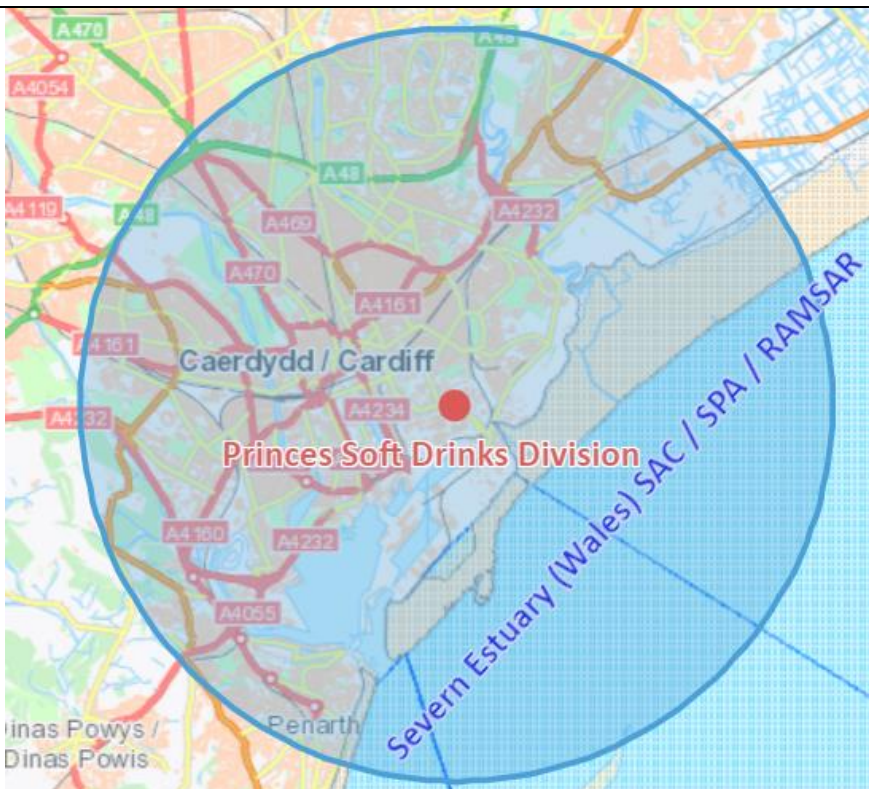
3. Considering the likelihood of a significant effect (LSE)

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
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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 (Wales) SAC (UK0013030) / SPA (UK9015022) / Ramsar (UK11081) – the closest point of the site boundary is located 0.45km away from the installation Please see below location map showing location of this site, location of the installation and 5 km search area:
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The potential for the project to affect the following Natura 2000 sites was also initially considered, but can be ruled out without further consideration:

- **Cardiff Beech Woods SAC (UK0030109)** – the applicant considered this site in their assessment but as the site is 9.9 km away from the installation, it falls outside of the 5 km screening distance required by existing guidance¹. Therefore, we will not be considering this site in this assessment.

¹ [https://www.gov.uk/guidance/medium-combustion-plant-apply-for-an-environmental-permit#:~:text=Air%20emissions%20risk%20assessment&text=This%20is%20to%20demonstrate%20the,interest%20\(%20SSSI%20\)%20for%20any%20fuel](https://www.gov.uk/guidance/medium-combustion-plant-apply-for-an-environmental-permit#:~:text=Air%20emissions%20risk%20assessment&text=This%20is%20to%20demonstrate%20the,interest%20(%20SSSI%20)%20for%20any%20fuel)

3.2.2 Screening assessment		
	Assessment of likelihood of significant effect	
	I Relevant conservation objectives	II Potential impact pathway
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 dated June 2009	Toxic Contamination: The proposal will increase emissions of oxides of nitrogen (NO_x) from the installation. The emissions of NO_x can lead to toxic contamination at the designated site which can cause damage to the designated features. Therefore, this is a relevant impact pathway and significant effects cannot be ruled out at this stage. Nutrient Enrichment Increased emissions of NO_x as a result of this proposal can lead to increase in nutrient enrichment through the deposition of the NO_x. Therefore, this is a relevant impact pathway and significant effects cannot be ruled out at this stage. Smothering Smothering from dust and particulate matter deposition from the site can lead to damage of vegetation and habitats. This is not anticipated to be a relevant impact pathway from this proposal as the only emissions of dust is from fugitive emissions from lorries at site. However, as discussed above (see 'Nutrient Enrichment', there is a risk of deposition of NO_x which can also cause smothering. Therefore, this is a relevant impact pathway and significant effects cannot be ruled out at this stage. Changes in Salinity Regime / Thermal Regime / Turbidity / Siltation No impact pathway as there are no changes to discharge to surface water as a result of this proposal. Habitat Loss / Physical Damage No impact pathway as SAC is approximately 0.5 km from the installation.
SAC interest feature 2: Subtidal Sandbanks 1.13: Submerged marine		Toxic Contamination, Nutrient Enrichment and Smothering See above

habitats		Changes in Salinity Regime Changes in Thermal Regime Habitat Loss Physical Damage Turbidity Siltation See above
SAC interest feature 3: Intertidal mudflats and Sandflats 1.12: Estuarine & intertidal habitats		Toxic Contamination Nutrient Enrichment Smothering See above
SAC interest feature 4: Atlantic salt meadow 1.12: Estuarine & intertidal habitats		Changes in Salinity Regime Changes in Thermal Regime Habitat Loss Physical Damage Turbidity Siltation See above
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		Toxic Contamination Nutrient Enrichment Smothering See above
SAC interest feature 7: Sea lamprey 2.5 Anadramous fish		Acidification
SAC interest feature 8: Twaite shad 2.5 Anadramous fish		There are no acid deposition critical load values for this feature. Due to the increased emissions of NO_x and the associated deposition of this pollutant, there is a risk to the sites protected features via changes in pH. Therefore, this is a relevant impact pathway and significant effects cannot be ruled out at this stage. Changes in Salinity Regime Changes in Thermal Regime Habitat Loss Physical Damage

		Turbidity Siltation See above Entrapment No impact pathway as the proposal does not involve any activity in surface waters.
Severn Estuary SPA (UK9015022)		
SPA interest feature 1: Bewick's Swan 3.4 Birds of lowland wet grasslands 3.6 Birds of lowland freshwaters and their margins 3.7 Birds of farmland 3.8 Birds of coastal habitats 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	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 <i>'Severn Estuary SAC, SPA and Ramsar site: Regulation 33 Advice from CCW and Natural England, June 2009'</i>	Toxic Contamination Nutrient Enrichment Smothering See above Acidification See above Changes in Salinity Regime Changes in Thermal Regime Habitat Loss Physical Damage Turbidity Siltation Entrapment See above Disturbance (Noise) No impact pathway as SPA is approximately 0.5 km away from the installation site and noise is not considered a significant issue for this installation.

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	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		See SPA interest feature 2

goose	'Severn Estuary SAC, SPA and Ramsar site: Regulation 33 Advice from CCW and Natural England, June 2009'	
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.

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?
Severn Estuary SAC UK0013030				
SAC interest feature 1: Estuaries 1.12: Estuarine & intertidal habitats	Toxic Contamination	The proposal will increase emissions of oxides of nitrogen (NO_x) from the installation. The applicant's detailed air dispersion modelling assessed the impact of these emissions against the relevant Environmental Standards. Please see below for discussion of results which have been considered alongside relevant Air Emissions Guidance at time of writing¹. A long-term critical level of 30 µg/m³ NO_x (annual) and short-term critical level of 75 µg/m³ NO_x (daily) has been assumed for the SAC Severn Estuary (as detailed on APIS²). The maximum long term process contribution (PC)(0.861 µg/m³) is >1% (2.87%) of the long-term critical level. As this does not screen out as insignificant, the applicant carried out further assessment to determine the impact of the PC plus the background concentrations of NO_x, i.e., the impact Predicted Environmental Concentration (PEC). The estimated long term PEC (32.03 µg/m³) is >100% (107%) of the long term critical level as so the applicant carried out further	SAC Feature 1: 'Estuaries: <i>ix. Airborne nutrient and contaminant loads are below levels which would pose a risk to the ecological objectives described above</i> Based on the applicants modelling, we do not consider the proposal to increase airborne levels of NO_x ("toxic contamination") to a level which would pose a risk to the sites integrity. Neither is it anticipated that impacts of nitrogen deposition to an exceed a level unacceptable for contaminant loads ("nutrient enrichment", "acidification" and "smothering").	YES
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		assessment.		
SAC interest feature 6: River lamprey 2.5 Anadramous fish		The applicant had noted that the background NO_x concentration is already exceeding the long term critical level (at 31.17 µg/m³) and only in the small area of the SAC closet to the emission point. In comparison the PC from this proposal is small (0.861 µg/m³). They also noted that the modelling has been based on highly conservative assumptions such as NO_x being emitted at 100% of the ELV, 24 hours a day, 365 days of the year. In reality, an Emissions Monitoring Survey (taken in July 2021) has shown that actual emissions will be much lower. When using this data, long term PC (0.117µg/m³) was shown to be <1% (0.59%) of the long term critical level. This highlights how conservative the applicants original modelling is. Therefore, we do not consider emissions from this proposal to be significant.		
SAC interest feature 7: Sea lamprey 2.5 Anadramous fish				
SAC interest feature 8: Twaite shad 2.5 Anadramous fish	Nutrient Enrichment	The short term maximum PC (5.19µg/m³) is <10% (6.92%) of the short-term critical level, therefore the short-term impact from NO_x emissions is considered insignificant and no further assessment was required. The modelling assessed the predicted deposition from nitrogen against a minimum critical load of 20 kgN/ha/yr. This represents the lower end of the critical load range for the sites most sensitive feature (Atlantic salt meadows / estuaries) as detailed on APIS. The maximum nitrogen deposition PC (0.0620 kgN/ha/yr) and is <1% (0.60%) of the lower critical load value and is therefore considered insignificant.		

	Acidification The applicant has provided detailed modelling showing that there is a pathway to acidification through the deposition of NO_x. The features of the SAC sensitive to acidification are Lamprey, but there is no a critical load value provided. However previous assessments (See HRA Form 1 for PAN-008611) have used a critical acid load of 1.06 kg/ha/yr for the features of this site, so we have used this figure to assess the acidity. The maximum process contribution of N-acid deposition is 0.00859 kg/ha/yr which is 0.81% of the critical load. As this is <1% of the critical acid deposition screens out as insignificant. Smothering Please see above for impacts regarding nutrient enrichment and acidification. Assessment of these impact pathways also mean there is no anticipated impact from smothering. As discussed in section 3, impacts from particulate matter/dust are not anticipated. ¹https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit ²Air Pollution Information System: http://www.apis.ac.uk/			
Severn Estuary SPA UK9015022				
SPA interest feature 1: Bewick's Swan	Toxic Contamination NO_x (oxides of nitrogen) emissions	There are emissions of oxides of nitrogen (NO _x) from the installation. The Applicant has completed detailed air dispersion	SPA features 1-7 V) the extent of vegetation with a sward height of <10cm throughout the saltmarsh (Appendix	Yes

3.4 Birds of lowland wet grasslands 3.6 Birds of lowland freshwaters and their margins 3.7 Birds of farmland 3.8 Birds of coastal habitats		modelling for these emissions. A long-term critical level of 30 µg/m³ NO_x (annual) and short-term critical level of 75 µg/m³ NO_x (hourly) has been assumed for the SAC Severn Estuary. The maximum process contribution (PC) is >1% (2.87%) of the long-term critical level and therefore potentially significant. However, the PEC is <100% of the long term critical level and therefore the long-term impact from NO_x emissions is considered to be not significant. The maximum PC is <10% of the short-term critical level, therefore the short-term impact from NO_x emissions is considered insignificant.	8) is maintained; - potential pathway through toxic contamination, nutrient nitrogen deposition, acidification, and smothering: Based on the applicants modelling, we do not consider the proposal to increase airborne levels of NO_x ("toxic contamination") to a level which would pose a risk to the sites integrity. Neither is it anticipated that impacts of nitrogen deposition to an exceed a level unacceptable for contaminant loads ("nutrient enrichment", "acidification" and "smothering").	
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	Acidification	The applicant has provided detailed modelling showing that there is a pathway to acidification through the deposition of NO_x. Birds of lowland freshwaters and their margins can be impacted through increase in the acid deposition on the site. The maximum process contribution of N-acid deposition is 0.00859 kg/ha/yr which is 0.81% of the critical load (using the 1.06 kgN/ha/yr. As this is <1% of the critical acid deposition screens out as insignificant.		
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	Nutrient Enrichment and smothering	The applicant has completed detailed air dispersion modelling. The minimum nutrient nitrogen critical load value of 20 kgN/ha/yr (Atlantic salt meadows / estuaries) has been assumed for SAC Severn Estuary. The maximum nitrogen deposition process		

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		contribution is 0.0620 kgN/ha/yr and is <1% of the lower critical load value and is therefore considered insignificant. The SAC Severn Estuary is not sensitive to acidification and therefore has not been assessed.		
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	Toxic Contamination NOx (oxides of nitrogen) emissions	The proposal will increase emissions of oxides of nitrogen (NOx) from the installation. The applicant's detailed air dispersion modelling assessed the impact of these emissions against the relevant Environmental Standards. Please see below for discussion of results which have been considered alongside relevant Air Emissions Guidance at time of writing ¹ .	Ramsar Features 1-2 (3-9 see same as SPA) iv. Toxic contaminants in the water column and sediment are below levels which would pose a risk to the ecological objectives described above	Yes
Ramsar interest feature 2: Assemblage of migratory fish species 2.5 Anadromous fish		A long-term critical level of 30 µg/m ³ NOx (annual) and short-term critical level of 75 µg/m ³ NOx (daily) has been assumed for the SAC Severn Estuary (as detailed on APIS ²)	Toxic contamination Based on the applicants modelling, we do not consider the proposal to increase airborne levels of NOx ("toxic contamination") to a level which would pose a risk to the sites integrity.	
Ramsar interest feature 3: Bewick's Swan				
Ramsar interest feature 4: European white-fronted goose				
Ramsar interest feature 5: Dunlin				
Ramsar interest feature 6: Redshank				
Ramsar interest feature 7: Shelduck				
Ramsar interest feature 8:				
		The maximum long term process contribution (PC)(0.861 µg/m ³) is >1% (2.87%) of the long-term critical level. As this does not screen out as insignificant, the applicant carried out further assessment to determine the impact of the PC plus the background concentrations of NOx, i.e. the impact Predicted Environmental Concentration (PEC). The estimated long term PEC (32.03 µg/m ³) is >100% (107%) of the long term critical level as so the applicant carried out further	Smothering, acidity, and changes in nutrient loading. It is not anticipated that impacts of nitrogen deposition to an exceed a level unacceptable for contaminant loads ("nutrient enrichment", "acidification" and "smothering"), given the insignificant process contribution.	

Gadwall Ramsar interest feature 9: Internationally important populations of waterfowl	Nutrient Enrichment and smothering	assessment. The applicant had noted that the background NO_x concentration is already exceeding the long term critical level (at 31.17 µg/m³) and only in the small area of the SAC closet to the emission point. In comparison the PC from this proposal is small (0.861 µg/m³). They also noted that the modelling has been based on highly conservative assumptions such as NO_x being emitted at 100% of the ELV, 24 hours a day, 365 days of the year. In reality, an Emissions Monitoring Survey (taken in July 2021) has shown that actual emissions will be much lower. When using this data, long term PC (0.117µg/m³) was shown to be <1% (0.59%) of the long term critical level. This highlights how conservative the applicants original modelling is. Therefore, we do not consider emissions from this proposal to be significant. The short term maximum PC (5.19µg/m³) is <10% (6.92%) of the short-term critical level, therefore the short-term impact from NO_x emissions is considered insignificant and no further assessment was required. The modelling assessed the predicted deposition from nitrogen against a minimum critical load of 20 kgN/ha/yr. This represents the lower end of the critical load range for the sites most sensitive feature (Atlantic salt meadows / estuaries) as detailed on APIS. The maximum nitrogen deposition PC (0.0620 kgN/ha/yr) and is <1% (0.60%) of the lower critical load value and is therefore considered insignificant. As discussed in		
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	Acidification	section 3, impacts from particulate matter/dust are not anticipate The applicant has provided detailed modelling showing that there is a pathway to acidification through the deposition of NOx. The features of the SAC sensitive to acidification are Lamprey, but there is no a critical load value provided. However previous habitat regulation assessments (See HRA form 1 for PAN-008611) have used a critical acid load of 1.06 kg/ha/yr for the features of this site, so we have used this figure to assess the acidity. The maximum process contribution of N-acid deposition is 0.00859 kg/ha/yr which is 0.81% of the critical load. As this is <1% of the critical acid deposition screens out as insignificant. ¹https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit ²Air Pollution Information System: http://www.apis.ac.uk/		
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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 features	It has been ascertained that the proposal, when considered alone, will not adversely affect the integrity of any Natura 2000 sites.
(b) If there are any 'NO's in the right hand	It has not been ascertained that the proposal, when considered alone, will not adversely affect the

column of Table 4.1 that have not been resolved to 'YES' through mitigation measures identified in Table 4.2	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	Severn Estuary SAC/SPA/Ramsar	A search for relevant plans or projects which might interact with the effects of this projects to render its effects significant has been completed on 'MyMap' This search has focused on plans/projects within 5 km (risk screening distance for MCP) of the closest point of the SAC, operational after 2019 (as it is considered anything before then would already been considered in background). Registers of recently submitted EPR applications and EPR applications currently under determination have also been screened for any relevant plans/projects within 5 km of the SAC. The only site that may act in combination is the variation for	PAN-008611 (EPR/TP3639BH) Toxic contamination: Celsa variation to their permit issued in 2020 (and not considered background) had emissions of NO_x assessed as part of the variation due to new equipment at the site. The modelling for this screened the emissions out as insignificant with long term process contribution being 0.8% of the critical level at the closet point to that installation and the designated site, which is more than 800 meters from the closet of Princes to the designated site. The isopleths of Celas and Princes application show the dispersion of NO₂ from both Celsa's stack varied in PAN-008611 (all others were existing and therefore in background) and Princes shows distribution of NO₂ of each proposal. The isopleths (shown below) shows that there is no overlap in the dispersion of NO₂ emissions from either site. Therefore, the two emissions are unlikely to act in combination with each other as they do not overlap in their dispersion. I addition the area of NO₂ dispersion for Celsa is not in the same area (with exceeding background) as the closet point between the SAC/Ramsar and Princes.	No

Celsa (Permit number EPR/TP3639BH) varied in 2020 and therefore not captured in the background.



Figure: Isopleth of the NO₂ from Prince's Proposed MCP and the Isopleth of NO₂ from the Celsa variation PAN-008611 (superimposed).

Nutrient Enrichment Acidification and Smothering:

As with the toxic contamination, the nutrient enrichment and acidification as a result of the deposition from airborne NO_x is unlikely to act in combination as the deposition are not likely to occur in the same area and have no overlap.

Smothering:

The only emissions of dust and particulate matter would be through fugitive emissions. Given the distances between this site and others and the infrequent of fugitive emissions this is unlikely to act in combination with the other sites to lead to damage of the designated site.

(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: William Wallace Name: William Wallace Position: Permitting Officer, Installations & RSR Date: 16/05/2022	

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.

Relevant section of the HRA report	Date(s) of correspondence* and any meeting(s) with protected sites advisor(s)	Description of how the comments from protected sites advisors have been taken into account
2		
3		
4		
5		

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: