# DOGGER BANK D WIND FARM

Preliminary Environmental Information Report

Volume 2 Appendix 20.4 Construction Road Vehicle Exhaust Emissions Assessment – Receptor Locations

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#### APPENDIX 20.4 - CONSTRUCTION ROAD VEHICLE EXHAUST EMISSIONS ASSESSMENT - RECEPTOR LOCATIONS

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# Glossary

Term	Definition
Birkhill Wood Substation	The onshore grid connection point for DBD identified through the Holistic Network Design process. Birkhill Wood Substation which is being developed by National Grid Electricity Transmission and does not form part of the Project.
Energy Storage and Balancing Infrastructure (ESBI)	A range of technologies such as battery banks to be co-located with the Onshore Converter Station, which provide valuable services to the electrical grid such as storing energy to meet periods of peak demand and improving overall reliability.
Landfall	The area on the coastline, south-east of Skipsea, at which the offshore export cables are brought ashore, connecting to the onshore export cables at the transition joint bay above Mean High Water Springs.
Onshore Converter Station (OCS)	A compound containing electrical equipment required to stabilise and convert electricity generated by the wind turbines and transmitted by the export cables into a more suitable voltage for grid connection into Birkhill Wood Substation.
Onshore Converter Station (OCS) Zone	The area within which the Onshore Converter Station and Energy Storage and Balancing Infrastructure will be located in vicinity of Birkhill Wood Substation.
Onshore Development Area	The area in which all onshore infrastructure associated with the Project will be located, including any temporary works area required during construction and permanent land required for mitigation and enhancement areas, which extends landward of Mean Low Water Springs. There is an overlap with the Offshore Development Area in the intertidal zone.
Onshore Export Cable Corridor (ECC)	The area within which the onshore export cables will be located, extending from the landfall to the Onshore Converter Station zone and onwards to Birkhill Wood Substation.
The Applicant	SSE Renewables and Equinor acting through 'Doggerbank Offshore Wind Farm Project 4 Projco Limited'.
The Project	Dogger Bank D (DBD) Offshore Wind Farm Project, also referred to as DBD in this PEIR.
Special Area of Conservation (SAC)	Area(s) of protected habitat(s) and species as defined in the European Union Habitat Directive (92/43/EEC).
Special Protection Area (SPA)	A designated area for birds under the European Union Directive on the Conservation of Wild Birds (2009/147/EC).
Site of Special Scientific Interest (SSSI)	A geological or biological conservation designation denoting a nationally protected area in the UK.

# 20.4 Construction Road Vehicle Exhaust Emissions Assessment – Receptor Locations

## 20.4.1 Introduction

- This appendix to the Dogger Bank D (DBD) Offshore Wind Farm (hereafter 'the Project') Preliminary Environmental Information Report (PEIR) supports Volume
  1, Chapter 20 Air Quality and Dust. This appendix forms part of the PEIR for the onshore elements of the Project.
- The purpose of this appendix is to provide the locations of human and ecological receptors considered in the assessment of construction road vehicle exhaust emissions assessment for the Project as provided in Section 20.7.1.3 of Volume 1, Chapter 20 Air Quality and Dust.

### 20.4.2 Human Receptors

The sensitive human receptors assessed for the 2023 base year, 2029 base year with background traffic growth and the Project in combination with background traffic growth are provided in Table 20.4-1 and shown on Figure 20-3 in Volume 1, Chapter 20 Air Quality and Dust.

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#### Table 20.4-1 Sensitive Human Receptor Locations

		Ordnance Survey (OS) Reference		
Receptor ID	Link	x	Υ	
Hull City Council				
R1	26	509767	428463	
R2	26	509502	428434	
R3	26	508673	428078	
R4	26	509238	428349	
R5	50	508915	427922	
R6	50	509227	428108	
R7	50	509409	428166	
R8	25	508400	427968	
R9	48, 49 and 50	508707	427840	
R10	49	508565	427800	
R11	25	507837	427281	
R30	26	510656	428709	
R31	29	513742	429353	
R32	51	513853	429392	
R33	30	513939	429345	
R34	30	514108	429328	
R36	31	511290	429440	
R37	31	511187	429477	
R38	38	510726	430089	
R39	38	510410	431208	
R40	38	510367	431400	
R41	38	510330	431765	

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		Ordnance Survey (OS) Reference		
Receptor ID	Link	x	Υ	
R42	39	510139	432685	
R43	40	509130	433044	
R44	40	509083	433637	
R45	51	512957	431257	
R46	33 and 51	512969	431331	
R47	35	514812	433190	
East Riding of Yorkshire Co	ouncil			
R12	24	503789	425894	
R13	24	502562	425512	
R14	23	500796	426131	
R15	23	498620	426527	
R16	21	500856	427772	
R17	20	500568	429044	
R18	19	501509	430740	
R19	18	502343	432442	
R20	14 and 15	502546	436495	
R21	46	502835	437347	
R22	45	503033	437582	
R23	8	504970	441461	
R24	8	506597	442095	
R25	7	508857	442651	
R26	42	505665	435204	
R27	12	502510	436991	
R28	12	501327	437810	

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		Ordnance Survey (OS) Reference		
Receptor ID	Link	x	Y	
R29	12	501148	437857	
R35	30	517075	428776	
R48	34	515660	435167	
R49	36	514129	439575	
R50	5	512023	447545	
R51	37	512155	442664	
R52	9	504215	440966	
R53	9	503301	441385	
R54	9	504087	441222	
R55	9	502255	441145	
R56	10	501970	441067	
R57	11 and 12	500157	439516	
R58	63	501416	443516	
R59	65	501233	443758	
R60	53	500930	436585	
R61	4	512519	450698	
R62	71	513277	454340	
R63	71 and 72	509661	453123	
R64	79	512335	451279	

## 20.4.3 Ecological Receptors

4. Sensitive ecological receptors assessed for the Project alone and the Project in combination with background traffic growth are provided in **Table 20.4-2** and shown on **Figure 20-4** in **Volume 1, Chapter 20 Air Quality and Dust**.

Receptor Transect ID + Starting Distance from Road	Designated Ecological Sites				Transect Starting Coordinate	
	Site Type	Name	Feature Name or Critical Load Class	Link	x	Y
HE_SM1_20m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Atlantic pioneer, low- mid, upper- mid salt marshes	24	505787	426435
HE_SM2_15m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Atlantic pioneer, low- mid, upper- mid salt marshes	24	505632	426392
HE_SM3_10m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Atlantic pioneer, low- mid, upper- mid salt marshes	24	505382	426312
HE_SM4_8m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Atlantic pioneer, low- mid, upper- mid salt marshes	24	505171	426240
HE_SM5_14m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Atlantic pioneer, low- mid, upper- mid salt marshes	24	504824	426129

#### Table 20.4-2 Sensitive Ecological Receptor Locations

Receptor	Designated Ecological Sites				Transect Starting Coordinate	
Transect ID + Starting Distance from Road	Site Type	Name	Feature Name or Critical Load Class	Link	x	Y
HE_SM6_35m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Atlantic pioneer, low- mid, upper- mid salt marshes	24	504545	426016
HE_SM7_0m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Atlantic pioneer, low- mid, upper- mid salt marshes	80	502475	423439
HE_SM8_0m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Atlantic pioneer, low- mid, upper- mid salt marshes	80	502503	423440
HE_MU1_10m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Mudflats and sandflats not covered by seawater at low tide	24	505785	426443
HE_MU2_5m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Mudflats and sandflats not covered by seawater at low tide	24	505629	426404
HE_MU3_70m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Mudflats and sandflats not covered by seawater at low tide	24	505401	426255
HE_MU4_60m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Mudflats and sandflats not covered by seawater at low tide	24	505186	426192

Receptor	Designated Ecological Sites				Transect Starting Coordinate	
Transect ID + Starting Distance from Road	Site Type	Name	Feature Name or Critical Load Class	Link	x	Y
HE_MU5_60m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Mudflats and sandflats not covered by seawater at low tide	24	504834	426090
HE_MU6_75m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Mudflats and sandflats not covered by seawater at low tide	24	504556	425978
HE_MU7_0m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Mudflats and sandflats not covered by seawater at low tide	80	502466	423592
HE_MU8_0m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Mudflats and sandflats not covered by seawater at low tide	80	502488	423593
HE_MU9_0m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Mudflats and sandflats not covered by seawater at low tide	80	502343	425296
HE_MU10_0m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Mudflats and sandflats not covered by seawater at low tide	80	502365	425298
HE_MU11_77m	SAC, SSSI, SPA, Ramsar*	Humber Estuary	Mudflats and sandflats not covered by seawater at low tide	26	510180	428355

Receptor Transect ID + Starting Distance from Road	Designated Ecological Sites				Transect Starting Coordinate	
	Site Type	Name	Feature Name or Critical Load Class	Link	x	Y
AW_01_165m	Ancient Woodland	Bentley Moor Ancient Woodland	Broadleaved Deciduous woodland	12	502164	436900
HB_LNR_01_35m	Local Nature Reserve (LNR)	Humber Bridge	-	80	502292	425563
HB_LNR_02_150m	LNR	Humber Bridge	-	22	501691	426130

\*Ramsar sites are designated wetland sites and are not included in the APIS database for being sensitive to air quality impacts. Impacts on Ramsar sites have therefore been considered under the associated Special Area of Conservation (SAC) or Special Protection Area (SPA) designations for the same area.

Note -The height of the Humber Bridge has been used as the distance between the roads edge and the Humber Estuary SAC, SPA, Site of Special Scientific Interest (SSSI) and Ramsar, given the bridge road deck is 30m above high water level to enable passage of ships beneath.

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# List of Acronyms

Term	Definition
DBD	Dogger Bank D Offshore Wind Farm Project
LNR	Local Nature Reserve
OS	Ordnance Survey
PEIR	Preliminary Environmental Information Report
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest