NORTH FALLS

Offshore Wind Farm

PRELIMINARY ENVIRONMENTAL INFORMATION REPORT

Appendix 20.3 Ecological Receptor Assessment Tables

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Project	North Falls Offshore Wind Farm
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Glossary of Acronyms

AADT	Annual Average Daily Traffic
DMT	Decision-making Threshold
HGV	Heavy Goods Vehicle
JNCC	Joint Nature Conservation Committee
N-dep	Nitrogen deposition
NOx	Nitrogen oxides
NH_3	Ammonia
SSSI	Site of Special Scientific Interest

Glossary of Terminology

The Applicant	North Falls Offshore Wind Farm Limited (NFOW)
The Project or 'North Falls'	North Falls Offshore Wind Farm, including all onshore and offshore infrastructure
Onshore project area	The boundary in which all onshore infrastructure required for the Project will be located (i.e. landfall; onshore cable route, accesses, construction compounds; onshore substation and National Grid substation extension), as considered within the PEIR

1 Introduction

1. As detailed in Section 20.4.3.3 of Chapter 20 Air Quality (Volume I), recently published reports by the Joint Nature Conservation Committee (JNCC) (Chapman & Kite, 2021a and 2021b) have been used to quantify the impact of traffic emissions on ecological receptors in the air quality study area.

2 Stage 1: Screen roads for a 0.15% increase in base (2019) AADT

2. The first stage of the ecological assessment was to screen road links affected by North Falls project-generated traffic for increases in Annual Average Daily Traffic (AADT) (inclusive of (a) project-generated traffic, and (b) in-combination 2019 to 2026 traffic growth) greater than the Decision-Making Threshold (DMT) of 0.15% of existing 2019 AADT flows. This resulted in the screening in of all road links considered in the assessment. Subsequently, a search of ecological receptors within 200m of these road links was then undertaken. Traffic data used in the assessment is provided in Appendix 20.2 (Volume III).

3 Stage 2: Screen for AADT flows in exceedance of 1% change in Critical Level or Load at distance from road edge

3. The next stage of the ecological assessment was to apply a road-relevant approach based on the distance between the affected road and the nearest boundary of a designated site. The thresholds required to trigger an exceedance of 1% of the Critical Level for nitrogen oxides (NOx) and ammonia (NH_3) and Critical Load for nitrogen deposition (N-dep) at different distances from a road edge are presented in Table 20.17 and Table 20.18 of Chapter 20 Air Quality (Volume I) and have been taken from the JNCC reports (Chapman & Kite, 2021b). This table does not allow for changes to the make-up of the vehicle fleet beyond 2019 for NOx and beyond 2015 for NH_3.

4. An increase in Critical Load of less than 1% is typically considered to be insignificant, as a change of this magnitude is likely to be within the natural range of fluctuations in deposition and is unlikely to be perceptible. The 1% threshold of insignificance is referenced in Natural England (2018), IAQM (2020) and Chapman & Kite (2021a, 2021b). The exceedance of a threshold is not decisive in and of itself, nor does it suggest that damage is likely to occur (in the case of Sites of Special Scientific Interest (SSSIs)) or that it will not be possible to avoid adverse effects to site integrity (in the case of European sites) (Chapman & Kite, 2021a).

5. The distance between ecological receptor boundaries and the affected road network was therefore taken into consideration in the next stage of ecological receptor screening. AADT flows (inclusive of (a) project-generated traffic and (b) in-combination of 2019 to 2026 traffic growth) were compared to those in Table 20.17 and Table 20.18 of Chapter 20 Air Quality (Volume I), and ecological receptors were brought forward into the next stage of the ecological assessment if they exceeded the AADT representative of a 1% increase in the Critical Level or Load for the relevant habitat present in designated site. If AADT

were lower than those in Table 20.17 and Table 20.18 of Chapter 20 Air Quality (Volume I), it was considered reasonable to assert that there is no credible evidence that the effects would ever be such to lead to a 1% increase in Critical Load or Level, despite the fact that the DMT (i.e. 0.15% of base (2019) AADT) is exceeded.

6. Table 1 details the road distance screening for North Falls, and also identifies which sites were brought forward for further consideration in the ecological assessment.

Table 1 Critical Level and Critical Load 1% screening of ecological receptors- red filled cells indicate an exceedance of the AADT flows presented in Table 20.17 and Table 20.18 of Chapter 20 Onshore Air Quality (Volume I), and required further assessment of feature/site

Link	Designated Ecological Site		Distance from affected road link (m)	Feature Name[1]	Woodland Present	Total AADT Change2	AADT required for 1% Critical Level or Load increase (See Table 20.17 and Table 20.18 of Chapter 20)						Further assessment required?
	Site Type	Name					NOx	NH3		N-dep			
							30 µg.m-3	1 µg.m-3	3 µg.m-3	10 kgN.ha-1.yr-1	15 kgN.ha-1.yr-1	20 kgN.ha-1.yr-1	
10	SPA	Stour and Orwell Estuaries	0	Numenius arquata (Europe - breeding)	No	1,636	120	91	274	-	-	236	Yes
	SSSI	Cattawade Marshes	0	Lowland damp grasslands	No	1,636	120	-	274	-	-	-	Yes
	SSSI	Stour Estuary	0	Numenius arquata	No	1,636	120	91	274	-	-	236	Yes
19	SPA	Stour and Orwell Estuaries	11	Numenius arquata (Europe - breeding)	No	1,598	278	405	1,214	-	-	858	Yes
	SSSI	Stour Estuary	0	Numenius arquata	No	1,598	120	91	274	-	-	236	Yes
26	SSSI	Holland Haven	0	Vascular plant assemblage	No	970	120	-	274	-	-	236	Yes
1	Ancient Woodland	Walls Wood	7	Broadleaved	Yes	5,788	225	332	995	211	317	423	Yes
	Ancient Woodland	Unnamed Woodland	150	Broadleaved	Yes	5,788	2,410	2,327	6,980	1,108	1,661	2,215	Yes
21	Ancient Woodland	High Barn Wood	0	Broadleaved	Yes	3,805	120	91	274	71	106	142	Yes
22	Ancient Woodland	Guttridgehall Wood	30	Broadleaved	Yes	2,581	732	938	2,814	511	766	1,021	Yes
	Ancient Woodland	Unnamed Woodland	25	Broadleaved	Yes	2,581	547	731	2,194	415	622	829	Yes
39	Ancient Woodland	Tendring Grove	95	Broadleaved	Yes	552	1,620	1,791	5,372	887	1,330	1,773	No
	Ancient Woodland	Simons Wood	14	Broadleaved	Yes	552	413	568	1,704	333	499	666	Yes

[1] The most sensitive feature within each designated site has been included in the table

[2]AADT change shown are inclusive of project-generated traffic and in-combination traffic growth (from 2019 to 2026)

7. As can be seen from Table 1, the AADT threshold representative of a 1% increase in Critical Level or Load differ (even at the same distance from the roads edge) for NOx, NH_3 and N-dep. Therefore, not every pollutant has been brought forward for further assessment for each feature.

4 References

Institute of Air Quality Management (2016). Guidance on the assessment of dust from demolition and construction. Version 1.1.