



**DOGGER BANK  
TEESSIDE A & B**

**March  
2014**

# **Environmental Statement Chapter 30 Appendix B Air Quality Modelling**

**Application Reference: 6.30.2**

Cover photograph: Indicative image showing installation of meteorological mast within the Dogger Bank Zone

# 1 Air Quality Modelling

## 1.1 Air quality modelling process

- 1.1.1 The procedures involved in undertaking the Design Manual for Roads and Bridges (DMRB) screening assessment were as follows:
- Collation of input data – traffic data (flows, speeds, percentage Heavy Goods Vehicles (HGVs), road network mapping, background pollutant concentrations and meteorological data;
  - Input of data in to the DMRB model for the scenarios to be modelled (2013 baseline, 2015 ‘without’ and ‘with’ construction traffic);
  - Comparison of predicted NO<sub>2</sub> and PM<sub>10</sub> concentrations with the relevant air quality Objectives; and
  - Comparison of changes in pollutant concentrations between ‘without’ and ‘with’ construction scenarios to relevant significance criteria to determine the impact of the proposed development on air quality at existing receptor locations.

## 1.2 Traffic flow data

- 1.2.1 Traffic flow data comprising annual average daily traffic (AADT) flows, traffic composition (percentage HGVs) and average link speeds (kph), were used in the modelling as provided for the surrounding road network.
- 1.2.2 Traffic data were provided by Royal HaskoningDHV (refer to **Chapter 29 Traffic and Access** for details of expected traffic volumes). The data were considered to be representative of local traffic movements for the scenarios assessed. The data were provided as 24 hour Annual Average Daily Traffic (AADT) flows for the following roads:
- Tees Dock Road;
  - A66;
  - B1380;
  - A174;
  - B1269;
  - Redcar Road; and
  - A1085.
- 1.2.3 24 hour AADT flows for the routes used in the air quality assessment are detailed in **Table B1** and **Table B2**.

Table B1 Annual Average Daily Traffic (AADT) Flows within the study area – Single Project

Link No.	2013		2015 without construction		2015 with construction		2015 Difference	
	HGVs	AADT	HGVs	AADT	HGVs	AADT	HGVs	AADT
DD: B1380 (High Street)	402	9189	408	9327	441	9450	33	123
EE: A174	1404	24917	1479	26245	1600	26450	121	206
FF: A174 (south of Wilton)	1329	38490	1400	40540	1641	40929	241	389
HH: A174 (south of Redcar)	1463	26748	1541	28173	1585	28312	44	138
II: B1269 (Fishponds Road)	209	5594	212	5678	232	5710	32	20
JJ: Grewgrass Lane	13	4281	14	4345	18	4352	4	7
KK: Redcar Road	139	8743	141	8874	144	8880	3	6
LL: A1085 (Coast Road)	111	11030	117	11617	124	11664	6	47
NN: A174 (south of Redcar)	1463	26748	1541	28173	1557	28272	16	98
AN1: A66	2142	28065	2256	29560	2410	29787	154	227
AN2: Tees Dock Road	1590	4542	1675	4784	1829	5011	154	227

Table B2 Annual Average Daily Traffic (AADT) Flows within the study area – Two Projects

Link No.	2013		2015 without construction		2015 with construction		2015 Difference	
	HGVs	AADT	HGVs	AADT	HGVs	AADT	HGVs	AADT
DD: B1380 (High Street)	402	9189	408	9327	445	9455	37	129
EE: A174	1404	24917	1479	26245	1708	26616	229	372
FF: A174 (south of Wilton)	1329	38490	1400	40540	1883	41279	482	739
HH: A174 (south of Redcar)	1463	26748	1541	28173	1628	28426	87	253
II: B1269 (Fishponds Road)	209	5594	212	5678	252	5742	40	64
JJ: Grewgrass Lane	13	4281	14	4345	22	4359	9	14
KK: Redcar Road	139	8743	141	8874	148	8885	7	11
LL: A1085 (Coast Road)	111	11030	117	11617	130	11700	13	82
NN: A174 (south of Redcar)	1463	26748	1541	28173	1573	28346	32	173
AN1: A66	2142	28065	2256	29560	2547	29975	291	415
AN2: Tees Dock Road	1590	4542	1675	4784	1966	5199	291	415