

Appendix 9.1: Baseline Conditions

Air Quality Monitoring

There are no monitoring locations representative of conditions at the Site. There are three background monitoring sites, 10 roadside sites, and one kerbside site within 3 km of the Site, all of which are diffusion tubes. The results from these diffusion tubes are provided in Table A9.1.1 and their locations are presented in Figure 9.1.

Table A9.1.1: Annual Mean NO₂ Concentrations Monitored by RMBC within the Study Area

Site ID	Location		Annual Mean NO ₂ Concentrations (µg/m ³)				
			2021	2022	2023	2024	2025
RO7A (urban background)	388603	411925	27.7	26.4	26.1	22.6	22.9
RO10A (urban background)	388800	413603	14.9	15.0	13.4	12.3	12.4
RO21ANO (roadside)	385820	410776	28.2	27.7	26.1	26.3	23.6
RO24 (urban background)	388089	410822	23.1	24.0	25.2	20.2	19.9
CAP_ROCH_001 (roadside)	388739	411799	36.4	38.8	-	-	-
CAP_ROCH_002 (roadside)	388857	411769	-	36.4	-	-	-
CAP_ROCH_003 (roadside)	388777	411974	33.4	33.5	32.9	29.1	25.8
CAP_ROCH_009 (roadside)	388943	412071	44.6	38.1	39.1	34.8	29.9
CAP_ROCH_010 (roadside)	388496	411790	32.3	31.5	-	-	-
CAP_ROCH_012 (roadside)	388723	411940	-	32.6	-	-	-
CAP_ROCH_013 (roadside)	388931	412090	-	41.5	39.4	36.2	31.1
CAP_ROCH_014 (roadside)	389008	412157	-	39.0	38.2	34.7	30.7
CAP_ROCH_015 (roadside)	388670	411846	-	27.5	-	-	-
Annual Mean NO ₂ air quality objective			40 µg/m ³				

The monitoring results in Table A9.1.1 indicate that annual mean concentrations of NO₂ were well below the NO₂ annual mean objective at all of the identified diffusion tubes during the period shown. The results indicate that the short-term objective for NO₂ is unlikely to be exceeded at any of the monitoring sites as annual mean concentrations are less than 60 µgm³^[3].

Defra Background Concentrations

Background concentrations of NO₂, PM₁₀ and PM_{2.5} were obtained from the background concentration maps provided by Defra for the grid squares covering the Proposed Scheme and receptor locations⁴. The Defra concentrations are presented in Table A9.1.2.

Table A9.1.2: Background Pollutant Concentrations Obtained for the 1km x 1km Grid Squares Covering the Site and Receptor Locations*

Grid Square	Pollutant	2025 (µg/m ³)
385500, 412500	NO ₂	10.06
	PM ₁₀	10.84
	PM _{2.5}	6.48
386500, 412500	NO ₂	9.82
	PM ₁₀	10.73
	PM _{2.5}	6.51
388500, 413500	NO ₂	11.36
	PM ₁₀	11.20
	PM _{2.5}	6.73

* Background concentrations obtained from the latest 2021-based background maps