

Appendix 6.3: Background Pollutant Concentrations

The assessment needs to take into account background concentrations upon which the local, traffic derived pollution is superimposed. The data may be derived through long term ambient measurements at background sites, remote from immediate sources of air pollution, or alternatively from the default concentration maps which have been provided for use by Defra with the revised LAQM.TG(22) guidance.

In the absence of representative background pollutant monitoring data being available for the local area, background concentrations have been obtained from the 2021-based default concentration maps provided by Defra on their LAQM webpages. The appropriate backgrounds for each receptor have been used based on the grid squares in which they are located.

The background pollutant concentrations used in this assessment are detailed in Table 6.1.

Table 6.1: Background Pollutant Concentrations Used in the Air Quality Assessment				
Pollutant	Annual Mean Concentrations ($\mu\text{g}/\text{m}^3$)			
	NO _x	NO ₂	PM ₁₀	PM _{2.5}
2023 Base Year				
ESR 1 & 17-18 (472500, 102500)	11.74	9.05	11.25	6.64
ESR 2 (472500, 100500)	11.82	9.11	10.67	6.64
ESR 3 – 6 & PSR 1 (472500, 099500)	12.08	9.29	10.15	6.44
ESR 7-10 & 19-20 (471500, 099500)	12.14	9.33	10.16	6.50
ESR 11 (471500, 103500)	12.65	9.70	10.33	6.61
ESR 12 (471500, 104500)	13.81	10.51	10.58	6.77
ESR 13 - 16 (471500, 105500)	20.93	15.28	12.80	7.61
2035 Opening/Future Year				
ESR 1 & 17-18 (472500, 102500)	8.50	6.68	10.39	5.87
ESR 2 (472500, 100500)	8.61	6.77	9.81	5.86
ESR 3 – 6 & PSR 1	8.92	6.99	9.27	5.65

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Pollutant	Annual Mean Concentrations (µg/m ³)			
	NO _x	NO ₂	PM ₁₀	PM _{2.5}
(472500, 099500)				
ESR 7-10 & 19-20 (471500, 099500)	8.87	6.96	9.28	5.70
ESR 11 (471500, 103500)	8.93	7.00	9.48	5.84
ESR 12 (471500, 104500)	9.65	7.53	9.73	6.00
ESR 13 - 16 (471500, 105500)	13.97	10.60	11.99	6.84