



Appendix 8.4: Sensitivity Analysis

Existing Sensitive Receptors

8.4.1 Pollutant concentrations have been modelled for proposed receptors for the 2024 Opening Year scenario, as part of the sensitivity analysis, as detailed in Table 8.21.

Table 8.21: Predicted Adjusted NO₂ Concentrations at Existing Sensitive Receptors for Scenarios 2 and 3 – Sensitivity Analysis					
Receptor	Calculated Annual Mean NO ₂ Concentrations (µg/m ³) ^a				
	Without Development	With Development		Concentration Change as Percentage of AQAL	Impact
		Concentration	Percentage in Relation to AQAL		
ESR 1	27.78	27.80	<75%	<0.5%	Negligible
ESR 2	24.17	24.17	<75%	<0.5%	Negligible
ESR 3	22.43	22.43	<75%	<0.5%	Negligible
ESR 4	23.77	23.76	<75%	<0.5%	Negligible
ESR 5	23.08	23.08	<75%	<0.5%	Negligible
ESR 6	30.36	30.44	<75%	<0.5%	Negligible
ESR 7	20.79	20.79	<75%	<0.5%	Negligible
ESR 8	27.46	27.47	<75%	<0.5%	Negligible
ESR 9	34.69	26.48	<75%	>10%	Moderate*
ESR 10	26.70	22.05	<75%	>10%	Moderate*
ESR 11	20.33	17.98	<75%	6-10%	Slight*
ESR 12	26.31	22.12	<75%	>10%	Moderate*
ESR 13	23.73	20.53	<75%	6-10%	Slight*
ESR 14	22.29	22.28	<75%	<0.5%	Negligible*
ESR 15	20.68	21.27	<75%	1%	Negligible
ESR 16	21.14	22.59	<75%	2-5%	Negligible
ESR 17	30.14	30.14	<75%	<0.5%	Negligible
ESR 18	22.36	22.36	<75%	<0.5%	Negligible
FSR 1	27.97	27.98	<75%	<0.5%	Negligible

a. NO₂ concentrations obtained by inputting predicted NO_x concentrations into the NO_x to NO₂ calculator, in accordance with LAQM.TG(16)

8.4.2 Pollutant concentrations have been modelled for proposed receptors for the 2029 Future Year scenario, as part of the sensitivity analysis, as detailed in Table 8.22.



Table 8.22: Predicted Adjusted NO₂ Concentrations at Existing Sensitive Receptors for Scenarios 4 and 5– Sensitivity Analysis

Receptor	Calculated Annual Mean NO ₂ Concentrations (µg/m ³) ^a				
	Without Development	With Development		Concentration Change as Percentage of AQAL	Impact
		Concentration	Percentage in Relation to AQAL		
ESR 1	28.45	28.61	<75%	<0.5%	Negligible
ESR 2	24.86	24.87	<75%	<0.5%	Negligible
ESR 3	22.63	22.65	<75%	<0.5%	Negligible
ESR 4	23.94	23.94	<75%	<0.5%	Negligible
ESR 5	23.64	23.67	<75%	<0.5%	Negligible
ESR 6	31.65	31.94	<75%	<0.5%	Negligible
ESR 7	21.21	21.22	<75%	<0.5%	Negligible
ESR 8	28.25	28.26	<75%	<0.5%	Negligible
ESR 9	34.53	26.71	<75%	>10%	Moderate*
ESR 10	26.64	22.27	<75%	>10%	Moderate*
ESR 11	20.31	18.23	<75%	6-10%	Slight*
ESR 12	26.25	22.26	<75%	>10%	Moderate*
ESR 13	23.69	20.65	<75%	6-10%	Slight*
ESR 14	22.36	22.36	<75%	<0.5%	Negligible*
ESR 15	20.93	21.70	<75%	1%	Negligible
ESR 16	22.08	23.83	<75%	2-5%	Negligible
ESR 17	30.19	29.99	<75%	<0.5%	Negligible
ESR 18	22.38	22.39	<75%	<0.5%	Negligible
FSR 1	28.03	28.04	<75%	<0.5%	Negligible

a. NO₂ concentrations obtained by inputting predicted NO_x concentrations into the NO_x to NO₂ calculator, in accordance with LAQM.TG(16)

8.4.3 Pollutant concentrations have been modelled for proposed receptors for the 2024 Opening Year scenario including the logistics hub, as part of the sensitivity analysis, as detailed in Table 8.23.

Table 8.23: Predicted Adjusted NO₂ Concentrations at Existing Sensitive Receptors for Scenarios 2 and 6– Sensitivity Analysis

Receptor	Calculated Annual Mean NO ₂ Concentrations (µg/m ³) ^a				
	Without Development	With Development		Concentration Change as Percentage of AQAL	Impact
		Concentration	Percentage in Relation to AQAL		
ESR 1	27.78	27.87	<75%	<0.5%	Negligible
ESR 2	24.17	24.26	<75%	<0.5%	Negligible
ESR 3	22.43	22.51	<75%	<0.5%	Negligible
ESR 4	23.77	23.81	<75%	<0.5%	Negligible
ESR 5	23.08	23.17	<75%	<0.5%	Negligible



Table 8.23: Predicted Adjusted NO₂ Concentrations at Existing Sensitive Receptors for Scenarios 2 and 6 – Sensitivity Analysis

Receptor	Calculated Annual Mean NO ₂ Concentrations (µg/m ³) ^a				
	Without Development	With Development		Concentration Change as Percentage of AQAL	Impact
		Concentration	Percentage in Relation to AQAL		
ESR 6	30.36	30.56	<75%	<0.5%	Negligible
ESR 7	20.79	20.85	<75%	<0.5%	Negligible
ESR 8	27.46	27.60	<75%	<0.5%	Negligible
ESR 9	34.69	26.48	<75%	>10%	Moderate*
ESR 10	26.70	22.06	<75%	>10%	Moderate*
ESR 11	20.33	17.99	<75%	6-10%	Slight*
ESR 12	26.31	22.13	<75%	>10%	Moderate*
ESR 13	23.73	20.53	<75%	6-10%	Slight*
ESR 14	22.29	22.29	<75%	<0.5%	Negligible*
ESR 15	20.68	21.29	<75%	1%	Negligible
ESR 16	21.14	22.60	<75%	2-5%	Negligible
ESR 17	30.14	30.15	<75%	<0.5%	Negligible
ESR 18	22.36	22.45	<75%	<0.5%	Negligible
FSR 1	27.97	27.99	<75%	<0.5%	Negligible

a. NO₂ concentrations obtained by inputting predicted NO_x concentrations into the NO_x to NO₂ calculator, in accordance with LAQM.TG(16)

8.4.4 Pollutant concentrations have been modelled for proposed receptors for the 2029 Future Year scenario, including the logistics hub, as part of the sensitivity analysis, as detailed in Table 8.24.

Table 8.24: Predicted Adjusted NO₂ Concentrations at Existing Sensitive Receptors for Scenarios 4 and 7 – Sensitivity Analysis

Receptor	Calculated Annual Mean NO ₂ Concentrations (µg/m ³) ^a				
	Without Development	With Development		Concentration Change as Percentage of AQAL	Impact
		Concentration	Percentage in Relation to AQAL		
ESR 1	28.45	28.69	<75%	<0.5%	Negligible
ESR 2	24.86	24.96	<75%	<0.5%	Negligible
ESR 3	22.63	22.73	<75%	<0.5%	Negligible
ESR 4	23.94	23.99	<75%	<0.5%	Negligible
ESR 5	23.64	23.74	<75%	<0.5%	Negligible
ESR 6	31.65	32.09	<75%	<0.5%	Negligible
ESR 7	21.21	21.29	<75%	<0.5%	Negligible
ESR 8	28.25	28.39	<75%	<0.5%	Negligible
ESR 9	34.53	26.76	<75%	>10%	Moderate*
ESR 10	26.64	22.65	<75%	>10%	Moderate*



Table 8.24: Predicted Adjusted NO₂ Concentrations at Existing Sensitive Receptors for Scenarios 4 and 7 – Sensitivity Analysis

Receptor	Calculated Annual Mean NO ₂ Concentrations (µg/m ³) ^a				
	Without Development	With Development		Concentration Change as Percentage of AQAL	Impact
		Concentration	Percentage in Relation to AQAL		
ESR 11	20.31	20.23	<75%	6-10%	Slight*
ESR 12	26.25	22.28	<75%	>10%	Moderate*
ESR 13	23.69	20.70	<75%	6-10%	Slight*
ESR 14	22.36	22.37	<75%	<0.5%	Negligible*
ESR 15	20.93	21.70	<75%	1%	Negligible
ESR 16	22.08	23.90	<75%	2-5%	Negligible
ESR 17	30.19	30.20	<75%	<0.5%	Negligible
ESR 18	22.38	22.47	<75%	<0.5%	Negligible
FSR 1	28.03	28.05	<75%	<0.5%	Negligible

a. NO₂ concentrations obtained by inputting predicted NO_x concentrations into the NO_x to NO₂ calculator, in accordance with LAQM.TG(16)