

APPENDIX 7.11

**ROAD TRAFFIC PREDICTED
CONCENTRATIONS**

APPENDIX 7.11 ROAD TRAFFIC PREDICTED CONCENTRATIONS

Table 7.11.1: Baseline Predicted Concentrations

Receptor	Annual Mean ($\mu\text{g}/\text{m}^3$)					
	2015 Baseline			2024 Without Development		
	NO ₂	PM ₁₀	PM _{2.5}	NO ₂	PM ₁₀	PM _{2.5}
R1	51.1	31.6	21.6	35.3	30.3	19.7
R2	43.4	28.2	19.4	32.3	28.5	18.6
R3	43.7	28.6	19.6	32.5	28.9	18.8
R4	38.1	23.0	16.2	28.7	22.2	15.1
R5	42.6	27.9	19.2	32.4	28.1	18.4
R6	38.5	25.7	17.9	29.9	26.1	17.4
R7	34.2	21.2	15.2	26.9	20.1	14.1
R8	34.1	21.1	15.2	26.9	20.1	14.0
R9	40.1	25.3	17.8	31.2	25.7	17.2
R10	39.1	24.1	17.1	30.1	23.9	16.2
R11	39.3	23.7	16.7	29.4	22.6	15.4
R12	41.5	26.0	18.4	30.8	24.1	16.3
R13	46.2	29.3	21.0	33.8	26.4	17.9
R14	44.5	27.9	20.0	32.7	25.2	17.2
CR1 GF	-	-	-	31.4	23.4	16.1
CR1 1 st	-	-	-	30.5	22.3	15.4
CR1 2 nd	-	-	-	29.5	20.9	14.7
CR2 GF	-	-	-	32.2	24.2	16.6
CR2 1 st	-	-	-	31.2	22.9	15.8
CR2 2 nd	-	-	-	30.0	21.2	14.9
CR3 GF	-	-	-	40.9	22.3	16.4
CR3 1 st	-	-	-	38.4	21.7	15.8
CR3 2 nd	-	-	-	35.0	20.8	15.1
Objectives	40	40	25	40	40	25

Exceedances highlighted in bold

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Table 7.11.2: Predicted Concentrations Without and With the Development in Place

Receptor	Annual Mean ($\mu\text{g}/\text{m}^3$)					
	2024 Without Development			2024 With Development		
	NO ₂	PM ₁₀	PM _{2.5}	NO ₂	PM ₁₀	PM _{2.5}
R1	35.3	30.3	19.7	35.5	30.7	19.9
R2	32.3	28.5	18.6	32.8	29.4	19.1
R3	32.5	28.9	18.8	33.1	29.9	19.4
R4	28.7	22.2	15.1	29.4	23.2	15.7
R5	32.4	28.1	18.4	32.8	28.8	18.8
R6	29.9	26.1	17.4	30.3	26.7	17.7
R7	26.9	20.1	14.1	27.3	20.7	14.4
R8	26.9	20.1	14.0	27.3	20.7	14.3
R9	31.2	25.7	17.2	31.3	26.0	17.4
R10	30.1	23.9	16.2	30.3	24.1	16.3
R11	29.4	22.6	15.4	29.5	22.8	15.5
R12	30.8	24.1	16.3	30.9	24.2	16.4
R13	33.8	26.4	17.9	33.9	26.5	17.9
R14	32.7	25.2	17.2	32.8	25.3	17.2
CR1 GF	31.4	23.4	16.1	31.6	23.7	16.3
CR1 1 st	30.5	22.3	15.4	30.7	22.5	15.6
CR1 2 nd	29.5	20.9	14.7	29.6	21.1	14.7
CR2 GF	32.2	24.2	16.6	32.3	24.5	16.7
CR2 1 st	31.2	22.9	15.8	31.3	23.1	15.9
CR2 2 nd	30.0	21.2	14.9	30.1	21.4	14.9
CR3 GF	40.9	22.3	16.4	40.9	22.4	16.4
CR3 1 st	38.4	21.7	15.8	38.5	21.8	15.9
CR3 2 nd	35.0	20.8	15.1	35.0	20.9	15.1
Objectives	40	40	25	40	40	25

Exceedances highlighted in bold

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Table 7.11.3 Change in Predicted Concentrations and Impact Magnitude brought about by the Development

Receptor	Change in Predicted Concentrations			Impact Magnitude		
	NO ₂	PM ₁₀	PM _{2.5}	NO ₂	PM ₁₀	PM _{2.5}
R1	0.28	0.44	0.25	Small	Small	Small
R2	0.58	0.95	0.55	Small	Medium	Medium
R3	0.63	0.99	0.57	Medium	Medium	Medium
R4	0.67	1.06	0.60	Medium	Medium	Medium
R5	0.45	0.73	0.42	Small	Medium	Medium
R6	0.38	0.60	0.34	Small	Small	Small
R7	0.42	0.60	0.35	Small	Medium	Small
R8	0.38	0.55	0.31	Small	Small	Small
R9	0.18	0.29	0.16	Imperceptible	Small	Small
R10	0.16	0.24	0.14	Imperceptible	Small	Small
R11	0.12	0.17	0.10	Imperceptible	Imperceptible	Imperceptible
R12	0.10	0.13	0.08	Imperceptible	Imperceptible	Imperceptible
R13	0.10	0.11	0.07	Imperceptible	Imperceptible	Imperceptible
R14	0.08	0.09	0.06	Imperceptible	Imperceptible	Imperceptible
CR1 GF	0.24	0.38	0.22	Small	Small	Small
CR1 1 st	0.16	0.25	0.15	Imperceptible	Small	Small
CR1 2 nd	0.08	0.13	0.08	Imperceptible	Imperceptible	Imperceptible
CR2 GF	0.14	0.22	0.13	Imperceptible	Small	Small
CR2 1 st	0.11	0.18	0.10	Imperceptible	Imperceptible	Imperceptible
CR2 2 nd	0.08	0.13	0.07	Imperceptible	Imperceptible	Imperceptible
CR3 GF	0.03	0.05	0.03	Imperceptible	Imperceptible	Imperceptible
CR3 1 st	0.03	0.05	0.03	Imperceptible	Imperceptible	Imperceptible
CR3 2 nd	0.02	0.05	0.03	Imperceptible	Imperceptible	Imperceptible

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Table 7.11.4 Impact Descriptor for Changes in Concentrations brought about by the Development

Receptor	Impact Descriptor		
	NO ₂	PM ₁₀	PM _{2.5}
R1	Negligible	Negligible	Negligible
R2	Negligible	Negligible	Mino
R3	Minor	Negligible	Mino
R4	Negligible	Negligible	Negligible
R5	Negligible	Negligible	Negligible
R6	Negligible	Negligible	Negligible
R7	Negligible	Negligible	Negligible
R8	Negligible	Negligible	Negligible
R9	Negligible	Negligible	Negligible
R10	Negligible	Negligible	Negligible
R11	Negligible	Negligible	Negligible
R12	Negligible	Negligible	Negligible
R13	Negligible	Negligible	Negligible
R14	Negligible	Negligible	Negligible
CR1 GF	Negligible	Negligible	Negligible
CR1 1 st	Negligible	Negligible	Negligible
CR1 2 nd	Negligible	Negligible	Negligible
CR2 GF	Negligible	Negligible	Negligible
CR2 1 st	Negligible	Negligible	Negligible
CR2 2 nd	Negligible	Negligible	Negligible
CR3 GF	Negligible	Negligible	Negligible
CR3 1 st	Negligible	Negligible	Negligible
CR3 2 nd	Negligible	Negligible	Negligible

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Table 7.11.5 Predicted Concentrations within the Development Site

Receptor	Annual Mean ($\mu\text{g}/\text{m}^3$)		
	NO ₂	PM ₁₀	PM _{2.5}
B9 GF	36.4	18.5	13.1
B9 1 st	35.3	18.6	13.2
B9 2 nd	33.6	18.8	13.4
B9 3 rd	31.7	18.6	13.2
C6 GF	26.8	18.1	12.9
C6 1 st	26.6	18.1	12.9
C6 2 nd	26.3	20.0	14.7
D3 GF	27.1	19.8	14.5
D3 1 st	26.9	19.4	14.1
D3 2 nd	26.7	19.0	13.8
E1 GF	35.9	18.4	13.1
E1 1 st	34.7	18.2	12.9
E1 2 nd	32.8	18.2	12.9
E1 3 rd	30.9	18.4	13.1
Objectives	40	40	25

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