

Appendix 8.11: Proposed Development (Operational Phase) Impacts at Human Receptors (In Isolation)

APPENDIX 8.11 – PROPOSED DEVELOPMENT (OPERATIONAL PHASE) IMPACTS AT HUMAN RECEPTORS

Table 8.11.1: Predicted 2030 Annual Mean NO₂ Concentration Change

Receptor	NO ₂ Annual Mean Concentration		% Change of Objective	Impact Descriptor
	Without Development	With Development		
Residential Receptors				
AB.R1	6.4	6.4	0%	Negligible
AB.R2a	13.5	16.9	6-10%	Slight
AB.R2b	13.5	17.0	6-10%	Slight
AB.R3	10.7	11.4	2-5%	Negligible
AB.R4	6.7	6.9	1%	Negligible
AB.R5	6.0	6.0	0%	Negligible
AB.R6	6.9	7.0	0%	Negligible
AB.R7	7.0	7.0	0%	Negligible
AB.R8	5.9	6.0	0%	Negligible
AB.R9	6.0	6.1	0%	Negligible
AB.R10	6.5	6.6	0%	Negligible
AB.R11	7.9	8.0	0%	Negligible
AB.R12	9.0	9.2	1%	Negligible
AB.R13	8.3	8.4	0%	Negligible
AB.R14	7.1	7.1	0%	Negligible
AB.R15	10.5	10.7	0%	Negligible
AB.R16	9.6	9.8	0%	Negligible
CD.R1	9.7	10.1	1%	Negligible
CD.R2	11.4	11.7	1%	Negligible
CD.R3	12.1	12.6	1%	Negligible
CD.R4	11.4	11.6	0%	Negligible
CD.R5	11.1	11.3	0%	Negligible
CD.R6	12.9	13.2	1%	Negligible
CD.R7	16.4	17.2	2-5%	Negligible
CD.R8a	16.3	17.1	2-5%	Negligible
CD.R8b	13.7	14.3	1%	Negligible
CD.R9	9.9	10.1	1%	Negligible
CD.R10	10.2	10.4	1%	Negligible

Receptor	NO ₂ Annual Mean Concentration		% Change of Objective	Impact Descriptor
	Without Development	With Development		
Residential Receptors				
CD.R11	10.7	10.9	1%	Negligible
CD.R12	10.5	10.6	0%	Negligible
CD.R13	12.0	12.1	0%	Negligible
CD.R14	13.1	13.2	0%	Negligible
CD.R15	10.8	10.8	0%	Negligible
EF.R1	14.1	14.2	0%	Negligible
EF.R2	11.1	11.2	0%	Negligible
EF.R3	13.6	13.9	1%	Negligible
EF.R4	10.6	11.2	1%	Negligible
EF.R5	13.3	13.6	1%	Negligible
EF.R6	14.7	15.6	2-5%	Negligible
EF.R7	12.9	13.5	2-5%	Negligible
EF.R8	14.7	15.6	2-5%	Negligible
EF.R9	9.1	9.3	0%	Negligible
EF.R10	10.6	10.8	0%	Negligible
GH.R1	9.1	9.2	0%	Negligible
GH.R2	10.0	10.0	0%	Negligible
GH.R3	9.6	9.6	0%	Negligible
GH.R4	8.9	8.9	0%	Negligible
KL.R1a	12.1	12.1	0%	Negligible
KL.R1b	12.0	12.0	0%	Negligible
KL.R2	16.7	16.8	0%	Negligible
KL.R3	18.2	18.2	0%	Negligible
KL.R4	17.8	17.9	0%	Negligible
KL.R5a	16.0	16.0	0%	Negligible
KL.R5b	16.1	16.2	0%	Negligible
KL.R6	18.1	18.2	0%	Negligible
KL.R7	18.9	19.0	0%	Negligible
KL.R8	11.6	11.6	0%	Negligible
KL.R9	13.4	13.5	0%	Negligible
KL.R10	13.2	13.2	0%	Negligible
KL.R11a	13.7	13.7	0%	Negligible
KL.R11b	13.6	13.7	0%	Negligible
KL.R12	13.0	13.1	0%	Negligible
KL.R13	13.5	13.5	0%	Negligible
MN.R1	11.7	11.7	0%	Negligible
MN.R2a	14.9	14.9	0%	Negligible

Receptor	NO ₂ Annual Mean Concentration		% Change of Objective	Impact Descriptor
	Without Development	With Development		
Residential Receptors				
MN.R2b	15.9	16.0	0%	Negligible
X.R1a	15.7	15.7	0%	Negligible
X.R1b	13.0	13.0	0%	Negligible
X.R2	13.6	13.6	0%	Negligible
X.R3	12.3	12.3	0%	Negligible

Table 8.11.2: Predicted 2030 Annual Mean PM₁₀ Concentration Change

Receptor	PM ₁₀ Annual Mean Concentration		% Change of Objective	Impact Descriptor
	Without Development	With Development		
Residential Receptors				
AB.R1	12.5	12.6	0%	Negligible
AB.R2a	15.6	16.8	2-5%	Negligible
AB.R2b	15.6	16.8	2-5%	Negligible
AB.R3	14.4	15.0	1%	Negligible
AB.R4	12.8	13.0	0%	Negligible
AB.R5	12.1	12.1	0%	Negligible
AB.R6	12.2	12.3	0%	Negligible
AB.R7	12.5	12.6	0%	Negligible
AB.R8	11.8	11.8	0%	Negligible
AB.R9	12.5	12.5	0%	Negligible
AB.R10	12.8	12.8	0%	Negligible
AB.R11	13.2	13.2	0%	Negligible
AB.R12	14.4	14.5	0%	Negligible
AB.R13	13.8	13.9	0%	Negligible
AB.R14	13.0	13.1	0%	Negligible
AB.R15	15.2	15.4	0%	Negligible
AB.R16	14.6	14.7	0%	Negligible
CD.R1	13.5	13.7	1%	Negligible
CD.R2	14.2	14.4	0%	Negligible
CD.R3	14.8	15.1	1%	Negligible
CD.R4	14.4	14.5	0%	Negligible
CD.R5	14.2	14.3	0%	Negligible
CD.R6	14.8	14.9	0%	Negligible
CD.R7	17.5	17.7	1%	Negligible
CD.R8a	17.8	18.0	1%	Negligible
CD.R8b	16.7	16.9	0%	Negligible
CD.R9	15.4	15.5	0%	Negligible

Receptor	PM ₁₀ Annual Mean Concentration		% Change of Objective	Impact Descriptor
	Without Development	With Development		
Residential Receptors				
CD.R10	15.6	15.8	0%	Negligible
CD.R11	15.9	16.0	0%	Negligible
CD.R12	15.2	15.3	0%	Negligible
CD.R13	14.5	14.6	0%	Negligible
CD.R14	16.0	16.0	0%	Negligible
CD.R15	15.1	15.1	0%	Negligible
EF.R1	16.9	17.1	1%	Negligible
EF.R2	14.9	15.0	0%	Negligible
EF.R3	17.5	17.8	1%	Negligible
EF.R4	14.4	14.6	1%	Negligible
EF.R5	15.8	15.9	0%	Negligible
EF.R6	16.4	16.7	1%	Negligible
EF.R7	15.7	15.9	0%	Negligible
EF.R8	16.5	16.8	1%	Negligible
EF.R9	14.0	14.2	0%	Negligible
EF.R10	16.1	16.3	0%	Negligible
GH.R1	15.1	15.2	0%	Negligible
GH.R2	15.6	15.6	0%	Negligible
GH.R3	15.4	15.4	0%	Negligible
GH.R4	15.1	15.1	0%	Negligible
KL.R1a	14.9	14.9	0%	Negligible
KL.R1b	14.9	14.9	0%	Negligible
KL.R2	17.8	17.8	0%	Negligible
KL.R3	18.2	18.3	0%	Negligible
KL.R4	18.1	18.2	0%	Negligible
KL.R5a	17.7	17.7	0%	Negligible
KL.R5b	17.9	17.9	0%	Negligible
KL.R6	18.3	18.4	0%	Negligible
KL.R7	18.5	18.6	0%	Negligible
KL.R8	15.7	15.8	0%	Negligible
KL.R9	16.5	16.5	0%	Negligible
KL.R10	16.4	16.4	0%	Negligible
KL.R11a	16.8	16.9	0%	Negligible
KL.R11b	16.9	16.9	0%	Negligible
KL.R12	16.0	16.0	0%	Negligible
KL.R13	16.0	16.0	0%	Negligible
MN.R1	16.5	16.6	0%	Negligible

Receptor	PM ₁₀ Annual Mean Concentration		% Change of Objective	Impact Descriptor
	Without Development	With Development		
Residential Receptors				
MN.R2a	17.7	17.7	0%	Negligible
MN.R2b	18.0	18.0	0%	Negligible
X.R1a	15.5	15.5	0%	Negligible
X.R1b	14.5	14.5	0%	Negligible
X.R2	15.0	15.0	0%	Negligible
X.R3	16.1	16.1	0%	Negligible

Table 8.11.3: Predicted 2030 Annual Mean PM_{2.5} Concentration Change

Receptor	PM _{2.5} Annual Mean Concentration		% Change of Limit	Impact Descriptor
	Without Development	With Development		
Residential Receptors				
AB.R1	6.6	6.6	0%	Negligible
AB.R2a	7.9	8.5	2-5%	Negligible
AB.R2b	7.9	8.5	2-5%	Negligible
AB.R3	7.3	7.6	1%	Negligible
AB.R4	6.9	7.0	1%	Negligible
AB.R5	6.5	6.6	0%	Negligible
AB.R6	7.2	7.2	0%	Negligible
AB.R7	7.1	7.2	0%	Negligible
AB.R8	6.5	6.6	0%	Negligible
AB.R9	6.6	6.6	0%	Negligible
AB.R10	6.9	7.0	0%	Negligible
AB.R11	7.0	7.1	0%	Negligible
AB.R12	7.6	7.7	0%	Negligible
AB.R13	7.3	7.4	0%	Negligible
AB.R14	6.9	6.9	0%	Negligible
AB.R15	8.7	8.7	0%	Negligible
AB.R16	8.3	8.4	0%	Negligible
CD.R1	7.6	7.9	2-5%	Negligible
CD.R2	8.6	8.8	1%	Negligible
CD.R3	9.3	9.6	2-5%	Negligible
CD.R4	8.6	8.7	1%	Negligible
CD.R5	8.4	8.5	1%	Negligible
CD.R6	9.2	9.4	1%	Negligible
CD.R7	11.7	12.0	2-5%	Negligible
CD.R8a	12.0	12.4	2-5%	Negligible
CD.R8b	8.6	8.7	1%	Negligible

Receptor	PM _{2.5} Annual Mean Concentration		% Change of Limit	Impact Descriptor
	Without Development	With Development		
Residential Receptors				
CD.R9	7.9	7.9	0%	Negligible
CD.R10	8.0	8.1	0%	Negligible
CD.R11	8.1	8.2	0%	Negligible
CD.R12	7.8	7.8	0%	Negligible
CD.R13	7.8	7.9	0%	Negligible
CD.R14	8.3	8.3	0%	Negligible
CD.R15	7.7	7.8	0%	Negligible
EF.R1	7.8	7.9	0%	Negligible
EF.R2	7.4	7.4	0%	Negligible
EF.R3	8.6	8.6	0%	Negligible
EF.R4	7.7	7.7	0%	Negligible
EF.R5	8.0	8.0	0%	Negligible
EF.R6	8.1	8.1	0%	Negligible
EF.R7	8.1	8.1	0%	Negligible
EF.R8	8.2	8.3	0%	Negligible
EF.R9	8.1	8.2	0%	Negligible
EF.R10	8.0	8.2	1%	Negligible
GH.R1	8.8	8.8	0%	Negligible
GH.R2	9.6	9.6	0%	Negligible
GH.R3	9.3	9.3	0%	Negligible
GH.R4	8.6	8.7	0%	Negligible
KL.R1a	8.4	8.4	0%	Negligible
KL.R1b	8.4	8.4	0%	Negligible
KL.R2	11.5	11.6	0%	Negligible
KL.R3	12.2	12.2	0%	Negligible
KL.R4	8.9	8.9	0%	Negligible
KL.R5a	8.7	8.7	0%	Negligible
KL.R5b	8.8	8.8	0%	Negligible
KL.R6	9.0	9.0	0%	Negligible
KL.R7	9.7	9.7	0%	Negligible
KL.R8	8.2	8.3	0%	Negligible
KL.R9	8.7	8.7	0%	Negligible
KL.R10	8.6	8.6	0%	Negligible
KL.R11a	8.8	8.9	0%	Negligible
KL.R11b	8.9	8.9	0%	Negligible
KL.R12	8.1	8.1	0%	Negligible
KL.R13	8.1	8.1	0%	Negligible

Receptor	PM _{2.5} Annual Mean Concentration		% Change of Limit	Impact Descriptor
	Without Development	With Development		
Residential Receptors				
MN.R1	7.8	7.8	0%	Negligible
MN.R2a	8.4	8.5	0%	Negligible
MN.R2b	8.7	8.7	0%	Negligible
X.R1a	8.6	8.6	0%	Negligible
X.R1b	8.0	8.0	0%	Negligible
X.R2	8.2	8.2	0%	Negligible
X.R3	8.2	8.3	0%	Negligible