

Prosiect Maen Hir

Solar a Storio Ynni



Preliminary Environmental Information Report

Volume III

Appendix 15-6: Baseline Modelled Concentrations at Existing Receptor Locations

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Appendix 15-6 Baseline Modelled Concentrations at Existing Receptor Locations.

Concentrations of NO₂, PM₁₀ and PM_{2.5} were predicted at the identified existing receptor locations along the four potential construction routes for Scenario 3: 2024 Base Year to consider existing pollutant concentrations.

The predicted concentrations of NO₂, PM₁₀ and PM_{2.5} were well below the current relevant annual mean air quality objectives for Wales at all existing receptor locations considered along each of the four construction routes the current base year of 2024.

Furthermore, predicted annual mean NO₂ concentrations are well below 60µg.m⁻³ and therefore in accordance with LAQM.TG22, it may be assumed that exceedances of the 1-hour mean is unlikely. Similarly, no exceedances of the 24-hour PM₁₀ short term objective were predicted.

Tables 15-6.1 to 15-6.4 provide the predicted pollutant concentrations at receptor locations considered along each construction route.

Table 15-6.1: Baseline Annual Mean NO₂, PM₁₀ and PM_{2.5} Concentrations at Route 1 Receptor Locations

Receptor	Background Concentration (µg.m ⁻³)			Scenario 3: 2024 Base Year Predicted Annual Mean Concentrations (µg.m ⁻³)		
	NO ₂	PM ₁₀	PM _{2.5}	NO ₂	PM ₁₀	PM _{2.5}
R1	2.9	8.0	5.1	3.4	8.1	5.1
R2	2.9	8.0	5.1	3.2	8.1	5.1
R3	3.1	9.3	5.4	5.1	9.7	5.6
R4	3.1	9.3	5.4	5.5	9.7	5.7
R5	3.0	8.8	5.3	4.9	9.1	5.5
R6	3.1	8.5	5.2	3.9	8.6	5.3
R7	2.9	8.2	5.1	3.7	8.4	5.2
R8	3.0	8.1	5.1	3.5	8.2	5.2
R9	3.0	8.5	5.2	3.5	8.7	5.3
R10	3.0	8.6	5.2	3.7	8.7	5.3
R11	2.9	8.2	5.1	3.4	8.3	5.2
R12	2.9	8.8	5.2	3.2	8.9	5.2
R13	3.3	8.4	5.3	6.2	8.9	5.5
R14	3.3	8.4	5.3	5.4	8.8	5.5

R15	3.3	8.4	5.3	5.7	9.0	5.6
R16	3.3	8.4	5.3	6.4	9.2	5.7
R17	3.3	8.4	5.3	6.3	9.2	5.7
R18	3.2	8.4	5.3	7.6	9.6	5.9
R19	3.2	8.4	5.3	6.5	9.3	5.7
R20	3.3	8.5	5.3	5.5	8.8	5.5
R21	3.3	8.5	5.3	5.3	8.8	5.5
R22	3.1	8.5	5.2	4.6	8.7	5.4
R23	3.1	8.2	5.2	4.7	8.4	5.3
R24	3.1	8.2	5.2	5.4	8.5	5.4
R25	3.2	8.3	5.3	7.1	9.3	5.8
R26	3.2	8.3	5.3	5.8	9.0	5.7
R27	3.2	8.3	5.3	6.1	9.1	5.7
R28	3.2	8.3	5.3	7.1	9.3	5.9
R29	3.2	8.3	5.3	5.7	9.0	5.7
R30	2.9	8.8	5.2	3.0	8.8	5.2
R31	2.9	7.9	5.0	3.0	8.0	5.0
R32	2.9	7.9	5.0	3.0	8.0	5.0
R33	2.9	8.0	5.1	3.0	8.1	5.1
R34	2.9	8.1	5.1	3.0	8.1	5.1
R35	3.0	8.1	5.1	3.1	8.1	5.1
R36	3.0	8.1	5.1	3.0	8.1	5.1
R37	3.2	8.0	5.1	7.1	8.6	5.5
R38	3.2	8.0	5.1	6.1	8.5	5.4
R39	3.4	8.3	5.1	6.2	9.0	5.5
R40	3.4	8.3	5.1	5.9	9.0	5.5
R41	3.4	8.3	5.1	6.0	9.0	5.5
R42	3.4	8.3	5.1	8.1	8.9	5.5
R43	3.7	8.7	5.3	8.6	10.0	6.0

R44	3.7	8.7	5.3	9.3	10.3	6.1
R45	3.7	8.7	5.3	6.9	9.6	5.8
R46	3.7	8.7	5.3	7.1	9.6	5.8
R47	3.7	8.7	5.3	6.7	9.5	5.7
R48	3.5	8.1	5.1	6.9	8.6	5.4
R49	3.7	8.3	5.3	7.0	8.8	5.6
R50	3.7	8.3	5.3	8.1	9.3	5.8
R51	3.7	8.3	5.3	7.5	9.3	5.8
R52	3.7	8.3	5.3	7.3	9.2	5.7
R53	3.7	8.3	5.3	9.0	9.7	6.0
R54	3.7	8.3	5.3	10.1	10.0	6.2
R55	3.9	8.9	5.6	8.7	10.1	6.3
R56	3.9	8.9	5.6	10.2	10.5	6.5
R57	3.9	8.9	5.6	9.0	10.2	6.3
R58	3.9	8.9	5.6	6.7	9.6	6.0
R59	3.9	8.9	5.6	8.7	10.1	6.3
R60	3.9	8.9	5.6	8.7	10.1	6.3
R61	3.4	8.5	5.3	6.6	9.4	5.7
R62	3.4	8.2	5.2	6.2	8.9	5.6
R63	3.4	8.4	5.2	6.3	8.9	5.5
R64	3.4	8.4	5.2	8.1	9.2	5.7
R65	3.4	8.0	5.1	7.0	8.6	5.5
R66	3.4	8.2	5.2	7.9	9.3	5.8
R67	3.4	8.2	5.2	7.7	9.3	5.8
R68	3.7	8.3	5.3	7.9	9.3	5.9
R69	3.7	8.3	5.3	8.7	9.6	6.0
R70	3.7	8.3	5.3	13.6	10.9	6.7
R71	3.6	8.3	5.2	7.4	9.1	5.7
R72	3.6	8.3	5.2	9.8	9.6	6.0

R73	4.5	8.8	5.6	10.2	10.1	6.3
R74	5.6	9.4	6.0	19.5	12.0	7.5
R75	5.6	9.4	6.0	25.0	12.6	7.9

Table 15-6.2: Baseline Annual Mean NO₂, PM₁₀, PM_{2.5} Concentrations at Route 2 Receptor Locations

Receptor	Background Concentration (µg.m ⁻³)			Scenario 3: 2024 Base Year Predicted Annual Mean Concentrations (µg.m ⁻³)		
	NO ₂	PM ₁₀	PM _{2.5}	NO ₂	PM ₁₀	PM _{2.5}
R1	3.2	8.4	5.3	5.2	8.8	5.5
R2	3.2	8.4	5.3	4.0	8.5	5.3
R3	3.2	8.4	5.3	3.9	8.5	5.3
R4	3.0	8.2	5.1	3.8	8.3	5.2
R5	3.0	8.2	5.1	3.7	8.3	5.2
R6	3.1	8.8	5.3	3.8	8.9	5.4
R7	3.0	8.2	5.1	3.4	8.3	5.2
R8	3.1	8.4	5.2	3.5	8.5	5.2
R9	3.1	8.3	5.2	3.6	8.4	5.2
R10	3.1	8.3	5.2	3.8	8.4	5.2
R11	3.1	8.2	5.1	4.0	8.4	5.3
R12	3.1	8.1	5.1	4.0	8.4	5.2
R13	3.1	8.4	5.2	3.7	8.5	5.2
R14	3.1	8.4	5.2	3.9	8.5	5.3
R15	3.4	8.7	5.4	5.0	9.0	5.6
R16	3.2	8.3	5.2	4.6	8.5	5.3
R17	3.1	8.5	5.2	5.1	9.0	5.5
R18	3.1	8.5	5.2	4.7	8.9	5.4
R19	3.0	8.3	5.2	7.3	9.0	5.6
R20	3.4	8.5	5.3	5.1	8.7	5.4

R21	3.4	8.7	5.4	5.9	9.3	5.7
R22	3.4	8.7	5.4	5.6	9.3	5.7
R23	3.6	8.7	5.4	8.9	10.0	6.1
R24	3.6	8.7	5.4	7.2	9.6	5.9
R25	3.6	8.7	5.4	6.7	9.4	5.8
R26	3.6	8.7	5.4	7.6	9.7	6.0
R27	3.6	8.7	5.4	7.7	9.7	6.0
R28	4.0	8.7	5.5	8.6	9.7	6.0
R29	4.0	8.7	5.5	10.1	10.1	6.2
R30	4.1	8.9	5.6	10.2	10.2	6.3
R31	4.1	8.9	5.6	9.6	10.0	6.2
R32	4.1	8.9	5.6	11.5	10.1	6.3
R33	4.0	8.7	5.5	10.6	9.7	6.1
R34	3.8	8.7	5.4	14.3	10.0	6.3
R35	4.7	8.9	5.6	12.7	9.9	6.3
R36	4.7	8.9	5.6	14.2	10.1	6.4
R37	4.7	8.9	5.6	14.8	10.1	6.5
R38	4.7	8.9	5.6	14.3	10.1	6.4
R39	4.7	8.9	5.6	13.9	10.0	6.4
R40	5.6	9.4	6.0	14.3	10.5	6.7
R41	5.6	9.4	6.0	17.2	10.9	7.0

Table 15-5.3: Baseline Annual Mean NO₂ Concentrations at AIL Northern Route Receptor Locations

Receptor	Background Concentration (µg.m ⁻³)			Scenario 3: 2024 Base Year Predicted Annual Mean Concentrations (µg.m ⁻³)		
	NO ₂	PM ₁₀	PM _{2.5}	NO ₂	PM ₁₀	PM _{2.5}
R1	5.6	10.6	6.8	18.7	14.6	8.9
R2	5.6	10.6	6.8	16.0	13.7	8.5
R3	5.6	10.6	6.8	9.9	11.8	7.5
R4	4.5	9.3	6.0	9.4	10.4	6.6
R5	5.3	9.7	6.1	12.7	11.8	7.2
R6	5.3	9.7	6.1	12.8	11.9	7.2
R7	5.3	9.7	6.1	13.0	11.9	7.3
R8	5.3	9.7	6.1	8.7	10.6	6.6
R9	3.8	8.8	5.3	5.7	9.0	5.5
R10	3.8	8.5	5.3	8.9	9.7	6.0
R11	3.8	8.5	5.3	8.0	9.5	5.9
R12	3.7	8.7	5.4	7.6	9.7	6.0
R13	3.7	8.7	5.4	11.0	10.6	6.5
R14	3.7	8.7	5.4	9.4	10.3	6.3
R15	3.2	8.2	5.1	7.2	8.9	5.5
R16	3.1	7.9	5.0	7.7	8.8	5.5
R17	3.1	7.9	5.0	7.1	9.0	5.6
R18	3.1	8.2	5.1	6.3	9.0	5.5
R19	3.1	8.2	5.1	7.3	9.0	5.5
R20	3.2	8.1	5.2	10.1	9.9	6.1
R21	3.2	8.1	5.2	6.8	9.0	5.7
R22	3.2	8.1	5.2	9.6	9.8	6.1
R23	3.2	8.1	5.2	9.3	9.7	6.0
R24	3.1	7.9	5.0	6.7	8.8	5.5

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R25	3.1	7.9	5.0	8.0	9.0	5.6
R26	3.1	7.9	5.0	5.0	8.3	5.2
R27	3.1	7.9	5.0	5.6	8.3	5.2
R28	3.0	7.9	4.9	8.8	8.8	5.5
R29	3.2	8.4	5.2	6.9	9.0	5.5
R30	3.2	8.4	5.2	5.0	8.9	5.4
R31	3.2	8.4	5.2	5.9	9.1	5.5
R32	3.1	8.1	5.1	5.2	8.7	5.3
R33	3.1	8.1	5.1	6.9	9.1	5.6
R34	3.1	8.1	5.1	7.2	9.2	5.6
R35	3.1	7.9	5.0	7.7	8.7	5.5
R36	3.1	7.9	5.0	6.4	8.5	5.4
R37	3.1	7.9	5.0	6.7	8.8	5.5
R38	3.1	7.9	5.0	9.1	9.4	5.8
R39	3.0	7.8	5.0	5.9	8.5	5.3
R40	2.9	9.5	5.4	6.7	10.1	5.7
R41	3.1	8.1	5.0	6.0	8.6	5.3
R42	3.1	8.1	5.0	5.8	8.6	5.3
R43	3.1	8.3	5.1	6.3	8.8	5.4
R44	3.1	7.9	5.0	6.6	8.5	5.3
R45	3.3	8.3	5.1	5.4	8.8	5.4
R46	3.3	8.3	5.1	6.5	9.1	5.6
R47	3.3	8.3	5.1	8.5	9.7	5.9
R48	3.3	8.3	5.1	5.8	8.9	5.5
R49	3.4	8.1	5.1	7.8	9.2	5.8
R50	3.4	8.1	5.1	6.9	8.9	5.6
R51	3.4	8.1	5.1	9.6	9.7	6.0
R52	3.4	8.1	5.1	8.7	9.4	5.9
R53	3.3	8.6	5.3	7.4	9.6	5.9

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R54	3.0	7.8	4.9	4.3	8.0	5.0
R55	3.0	8.0	5.1	4.9	8.3	5.2
R56	3.0	7.9	5.0	3.5	8.0	5.1
R57	3.0	7.9	5.0	3.4	8.0	5.1
R58	2.9	8.0	5.1	3.5	8.1	5.1
R59	2.9	8.0	5.1	3.3	8.1	5.1
R60	2.9	8.3	5.1	3.3	8.4	5.1
R61	2.9	7.9	4.9	3.1	7.9	5.0
R62	2.9	7.9	4.9	3.1	7.9	5.0
R63	2.9	7.9	4.9	3.3	8.0	5.0
R64	2.9	7.9	4.9	3.3	8.0	5.0
R65	2.9	8.8	5.2	3.3	8.9	5.2
R66	2.9	8.2	5.1	3.4	8.3	5.2
R67	2.9	8.8	5.2	3.3	8.9	5.2
R68	3.0	8.1	5.1	3.6	8.2	5.2
R69	3.0	8.5	5.2	3.5	8.7	5.3
R70	3.0	8.6	5.2	3.6	8.7	5.3
R71	3.2	8.6	5.4	5.2	8.9	5.6
R72	3.1	9.3	5.4	5.0	9.7	5.6
R73	3.1	9.3	5.4	5.4	9.7	5.7
R74	3.0	8.8	5.3	4.5	9.1	5.4
R75	3.1	8.5	5.2	3.8	8.6	5.3
R76	2.9	8.2	5.1	3.7	8.4	5.2
R77	3.0	8.1	5.1	3.6	8.2	5.2
R78	3.0	8.5	5.2	3.5	8.7	5.3
R79	3.0	8.6	5.2	3.6	8.7	5.3
R80	2.9	8.8	5.2	3.0	8.8	5.2
R81	2.9	7.9	5.0	3.1	8.0	5.0
R82	2.9	7.9	5.0	3.1	8.0	5.0

R83	2.9	8.2	5.1	3.4	8.3	5.2
R84	2.9	8.8	5.2	3.3	8.9	5.2
R85	3.0	8.1	5.1	3.6	8.2	5.2
R86	3.0	8.5	5.2	3.5	8.7	5.3
R87	3.0	8.6	5.2	3.6	8.7	5.3
R88	3.0	8.1	5.1	3.1	8.1	5.1
R89	3.0	8.1	5.1	3.1	8.1	5.1
R90	3.0	8.6	5.2	3.6	8.7	5.3

Table 15-5.4: Baseline Annual Mean NO₂ Concentrations at AIL Southern Route Receptor Locations

Receptor	Background Concentration (µg.m ⁻³)			Scenario 3: 2024 Base Year Predicted Annual Mean Concentrations (µg.m ⁻³)		
	NO ₂	PM ₁₀	PM _{2.5}	NO ₂	PM ₁₀	PM _{2.5}
R1	5.6	10.6	6.8	18.7	14.6	8.9
R2	5.6	10.6	6.8	15.9	13.7	8.5
R3	5.6	10.6	6.8	9.9	11.8	7.5
R4	4.5	9.3	6.0	9.2	10.3	6.6
R5	5.3	9.7	6.1	9.3	10.6	6.6
R6	5.3	9.7	6.1	9.2	10.5	6.5
R7	5.3	9.7	6.1	9.0	10.5	6.5
R8	3.8	8.5	5.3	6.2	9.0	5.6
R9	3.2	8.4	5.2	5.8	8.9	5.5
R10	3.2	8.4	5.2	7.1	9.2	5.7
R11	3.7	8.3	5.2	7.4	9.1	5.7
R12	3.5	8.3	5.2	6.2	8.9	5.5
R13	3.2	8.3	5.1	5.2	8.7	5.4
R14	3.2	8.3	5.1	4.8	8.6	5.3
R15	3.0	8.1	5.0	3.6	8.2	5.1

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R16	3.0	8.1	5.0	4.3	8.4	5.2
R17	3.0	8.0	5.0	4.1	8.2	5.1
R18	3.0	8.0	5.0	5.1	8.3	5.2
R19	3.0	8.0	5.0	4.7	8.3	5.1
R20	3.1	8.9	5.2	5.3	9.3	5.4
R21	3.1	8.9	5.2	5.3	9.5	5.5
R22	3.1	8.9	5.2	5.3	9.5	5.5
R23	3.1	8.5	5.2	4.8	9.0	5.5
R24	3.1	8.5	5.2	5.3	9.1	5.5
R25	3.1	9.0	5.4	4.9	9.5	5.6
R26	3.1	9.0	5.4	5.1	9.4	5.6
R27	3.2	8.5	5.2	5.2	9.0	5.5
R28	3.4	8.7	5.4	6.6	9.5	5.9
R29	3.4	8.7	5.4	5.9	9.3	5.7
R30	3.4	8.7	5.4	4.8	9.0	5.6
R31	3.2	8.3	5.2	4.4	8.5	5.3
R32	3.1	8.5	5.2	4.9	9.0	5.5
R33	3.1	8.5	5.2	4.6	8.8	5.4
R34	3.0	8.3	5.2	6.8	8.9	5.5