

Appendix 6B

Air quality - Background concentrations and deposition rates

The background concentrations in air in 2024 at each of the specific receptors, as assumed in the modelling for this assessment, are given in **Table 6B.1**, taken from the Department for Environment, Food and Rural Affairs (Defra) data. The background deposition rates at each of the specific ecological receptors, as assumed in the modelling for this assessment, are given in Table 6B.2, derived from Air Pollution Information Service (APIS) data. Details of the receptor locations are given in **Appendix 6C** in **Volume 3: Figures and Appendices**. Air pollutants are:

- oxides of nitrogen (NO_x);
- nitrogen dioxide (NO₂);
- particulate matter (PM₁₀ and PM_{2.5});
- nitrogen (N); and
- sulphur (S).

Table 6B.1 Background 2024 air concentrations assumed for this assessment (µg m⁻³)

Receptor	NO _x	NO ₂	PM ₁₀	PM _{2.5}	Receptor	NO _x	NO ₂	PM ₁₀	PM _{2.5}
H01	11.4	12.2	15.3	9.6	S06	21.5	22.0	14.7	9.8
H02	17.0	15.8	15.1	9.9	S07	21.5	22.0	14.7	9.8
H03	17.0	15.8	15.1	9.9	S08	21.5	22.0	14.7	9.8
H04	17.0	15.8	15.1	9.9	S09	21.5	22.0	14.7	9.8
H05	18.0	16.4	15.5	10.4	S10	21.5	22.0	14.7	9.8
H06	18.0	16.4	15.5	10.4	S11	21.5	22.0	14.7	9.8
H07	21.5	22.0	14.7	9.8	S12	11.7	12.9	15.6	10.0
H08	21.5	22.0	14.7	9.8	S13	15.2	16.3	16.7	10.8
H09	21.5	22.0	14.7	9.8	E01	15.7	13.8	14.5	9.9
H10	21.5	22.0	14.7	9.8	E02	11.4	10.3	14.3	9.1
H11	21.5	22.0	14.7	9.8	E03	10.3	9.6	13.9	8.8
H12	21.5	22.0	14.7	9.8	E04	10.3	9.6	13.9	8.8
H13	21.5	22.0	14.7	9.8	E05	13.3	17.3	14.2	9.0
H14	21.5	22.0	14.7	9.8	E06	13.3	17.3	14.2	9.0
H15	21.5	22.0	14.7	9.8	E07	13.3	17.3	14.2	9.0

Receptor	NO _x	NO ₂	PM ₁₀	PM _{2.5}	Receptor	NO _x	NO ₂	PM ₁₀	PM _{2.5}
H16	21.5	22.0	14.7	9.8	E08	13.3	17.3	14.2	9.0
H17	21.5	22.0	14.7	9.8	E09	13.3	17.3	14.2	9.0
H18	21.5	22.0	14.7	9.8	E10	10.4	9.7	14.3	8.8
H19	21.5	22.0	14.7	9.8	E11	10.4	9.7	14.3	8.8
H20	21.5	22.0	14.7	9.8	E12	11.5	11.9	14.4	9.0
H21	21.5	22.0	14.7	9.8	E13	11.5	11.9	14.4	9.0
H22	21.5	22.0	14.7	9.8	E14	11.5	11.9	14.4	9.0
H23	21.5	22.0	14.7	9.8	E15	10.6	9.9	14.1	8.9
H24	21.5	22.0	14.7	9.8	E16	10.6	9.9	14.1	8.9
H25	21.5	22.0	14.7	9.8	E17	10.6	9.9	14.1	8.9
H26	21.5	22.0	14.7	9.8	E18	11.4	11.0	14.2	9.0
H27	21.5	22.0	14.7	9.8	E19	12.8	12.1	14.3	9.2
H28	21.5	22.0	14.7	9.8	E20	12.8	12.1	14.3	9.2
H29	15.7	13.8	14.5	9.9	E21	11.3	10.3	13.6	8.9
H30	15.7	13.8	14.5	9.9	E22	11.1	10.4	14.0	9.0
H31	15.7	13.8	14.5	9.9	E23	10.3	14.9	16.4	10.1
H32	15.7	13.8	14.5	9.9	E24	9.8	13.2	16.4	10.0
H33	15.7	13.8	14.5	9.9	E25	10.3	14.9	16.4	10.1
H34	15.7	13.8	14.5	9.9	E26	9.9	9.2	14.0	8.9
H35	15.7	13.8	14.5	9.9	E27	17.0	15.8	15.1	9.9
H36	15.7	13.8	14.5	9.9	E28	13.3	12.2	14.8	9.4
H37	15.7	13.8	14.5	9.9	E29	13.3	12.2	14.8	9.4
H38	15.0	14.0	14.0	9.5	E30	11.4	12.2	15.3	9.6
H39	15.0	14.0	14.0	9.5	E31	17.0	15.8	15.1	9.9
H40	15.0	14.0	14.0	9.5	E32	17.0	15.8	15.1	9.9
H41	15.0	14.0	14.0	9.5	E33	17.0	15.8	15.1	9.9
H42	15.0	14.0	14.0	9.5	E34	17.0	15.8	15.1	9.9
H43	15.0	14.0	14.0	9.5	E35	17.0	15.8	15.1	9.9
H44	15.0	14.0	14.0	9.5	E36	17.0	15.8	15.1	9.9
H45	15.0	14.0	14.0	9.5	E37	11.4	12.2	15.3	9.6

Receptor	NO _x	NO ₂	PM ₁₀	PM _{2.5}	Receptor	NO _x	NO ₂	PM ₁₀	PM _{2.5}
H46	15.0	14.0	14.0	9.5	E38	11.4	12.2	15.3	9.6
H47	15.0	14.0	14.0	9.5	E39	17.0	15.8	15.1	9.9
H48	15.0	14.0	14.0	9.5	E40	17.0	15.8	15.1	9.9
H49	15.0	14.0	14.0	9.5	E41	17.0	15.8	15.1	9.9
H50	15.0	14.0	14.0	9.5	E42	17.0	15.8	15.1	9.9
H51	15.0	14.0	14.0	9.5	E43	17.0	15.8	15.1	9.9
H52	15.0	14.0	14.0	9.5	E44	17.0	15.8	15.1	9.9
H53	15.0	14.0	14.0	9.5	E45	17.0	15.8	15.1	9.9
H54	15.0	14.0	14.0	9.5	E46	17.0	15.8	15.1	9.9
H55	15.0	14.0	14.0	9.5	M01	20.8	17.5	16.2	10.8
H56	15.0	14.0	14.0	9.5	M02	21.5	22.0	14.7	9.8
H57	15.0	14.0	14.0	9.5	M03	15.2	16.3	16.7	10.8
H58	15.0	14.0	14.0	9.5	M04	15.2	16.3	16.7	10.8
H59	15.0	14.0	14.0	9.5	M05	15.2	16.3	16.7	10.8
H60	15.0	14.0	14.0	9.5	M06	15.2	16.3	16.7	10.8
H61	12.4	12.5	14.5	9.1	M07	14.3	14.6	16.8	10.9
H62	12.4	12.5	14.5	9.1	M08	21.5	22.0	14.7	9.8
H63	11.1	11.0	14.5	9.0	M09	21.5	22.0	14.7	9.8
H64	11.1	11.0	14.5	9.0	M10	15.7	13.8	14.5	9.9
H65	11.1	11.0	14.5	9.0	M11	15.7	13.8	14.5	9.9
H66	10.9	11.1	14.6	9.0	M12	15.0	14.0	14.0	9.5
H67	10.9	11.1	14.6	9.0	M13	15.0	14.0	14.0	9.5
H68	13.3	17.3	14.2	9.0	M14	11.3	13.7	16.7	10.4
H69	13.3	17.3	14.2	9.0	M15	11.3	13.7	16.7	10.4
H70	10.4	9.7	14.3	8.8	M16	11.3	13.7	16.7	10.4
H71	10.4	9.7	14.3	8.8	M17	11.3	13.7	16.7	10.4
H72	10.4	9.7	14.3	8.8	M18	11.3	13.7	16.7	10.4
H73	10.1	9.1	14.6	8.9	M19	14.3	14.6	16.8	10.9
H74	10.1	9.1	14.6	8.9	M20	13.9	12.8	16.2	10.6
H75	10.6	9.9	14.1	8.9	M21	14.3	14.6	16.8	10.9

Receptor	NO _x	NO ₂	PM ₁₀	PM _{2.5}	Receptor	NO _x	NO ₂	PM ₁₀	PM _{2.5}
H76	11.5	11.9	14.4	9.0	M22	14.3	14.6	16.8	10.9
H77	11.5	11.9	14.4	9.0	M23	15.2	16.3	16.7	10.8
H78	13.8	17.5	13.8	8.9	M24	15.2	16.3	16.7	10.8
H79	11.4	11.0	14.2	9.0	M25	21.5	22.0	14.7	9.8
H80	15.5	18.7	14.5	9.4	M26	15.5	18.7	14.5	9.4
H81	15.5	18.7	14.5	9.4	M27	15.5	18.7	14.5	9.4
H82	13.9	12.8	16.2	10.6	M28	13.3	17.3	14.2	9.0
H83	14.3	14.6	16.8	10.9	M29	21.5	22.0	14.7	9.8
H84	14.3	14.6	16.8	10.9	M30	21.5	22.0	14.7	9.8
H85	14.3	14.6	16.8	10.9	M31	15.7	19.3	14.3	9.2
H86	15.2	16.3	16.7	10.8	M32	21.5	22.0	14.7	9.8
H87	15.2	16.3	16.7	10.8	M33	9.6	8.4	14.1	8.7
H88	12.6	15.7	16.5	10.5	M34	10.1	9.6	14.6	9.1
H89	12.6	15.7	16.5	10.5	M35	11.5	11.9	14.4	9.0
H90	12.4	15.2	16.7	10.5	M36	21.5	22.0	14.7	9.8
H91	11.1	17.4	16.7	10.3	M37	15.7	13.8	14.5	9.9
H92	10.3	14.9	16.4	10.1	M38	21.5	22.0	14.7	9.8
H93	9.8	14.0	16.6	10.0	M39	21.5	22.0	14.7	9.8
H94	18.0	16.4	15.5	10.4	M40	15.7	19.3	14.3	9.2
H95	18.0	16.4	15.5	10.4	M41	17.0	15.8	15.1	9.9
H96	18.0	16.4	15.5	10.4	M42	18.0	16.4	15.5	10.4
H97	18.0	16.4	15.5	10.4	M43	21.5	22.0	14.7	9.8
H98	14.3	14.6	16.8	10.9	M44	15.7	19.3	14.3	9.2
H99	17.9	15.0	15.4	10.4	M45	21.5	22.0	14.7	9.8
S01	18.0	16.4	15.5	10.4	M46	10.1	9.3	15.1	9.0
S02	18.0	16.4	15.5	10.4	M47	9.5	7.9	13.7	8.7
S03	15.5	18.7	14.5	9.4	M48	15.7	19.3	14.3	9.2
S04	15.5	18.7	14.5	9.4	M49	15.0	14.0	14.0	9.5
S05	15.5	18.7	14.5	9.4					

Table 6B.2 Background deposition rates assumed for this assessment

Receptor	N deposition (kg N ha ⁻¹ y ⁻¹)	N component of acid deposition (keq ha ⁻¹ y ⁻¹)	S component of acid deposition (keq ha ⁻¹ y ⁻¹)	Feature
E01	31.08	2.22	0.22	Broadleaved deciduous woodland
E02	31.08	2.22	0.22	Broadleaved deciduous woodland
E03	29.40	2.10	0.18	Broadleaved deciduous woodland
E04	29.40	2.10	0.18	Broadleaved deciduous woodland
E05	31.08	2.22	0.22	Broadleaved deciduous woodland
E06	31.08	2.22	0.22	Broadleaved deciduous woodland
E07	31.08	2.22	0.22	Broadleaved deciduous woodland
E08	31.08	2.22	0.22	Broadleaved deciduous woodland
E09	31.08	2.22	0.22	Broadleaved deciduous woodland
E10	31.08	2.22	0.22	Broadleaved deciduous woodland
E11	31.08	2.22	0.22	Broadleaved deciduous woodland
E12	31.08	2.22	0.22	Broadleaved deciduous woodland
E13	31.08	2.22	0.22	Broadleaved deciduous woodland
E14	31.08	2.22	0.22	Broadleaved deciduous woodland
E15	30.80	2.20	0.19	Broadleaved deciduous woodland
E16	30.80	2.20	0.19	Broadleaved deciduous woodland
E17	30.80	2.20	0.19	Broadleaved deciduous woodland
E18	30.80	2.20	0.19	Broadleaved deciduous woodland
E19	30.80	2.20	0.19	Broadleaved deciduous woodland
E20	30.80	2.20	0.19	Broadleaved deciduous woodland
E21	30.80	2.20	0.19	Broadleaved deciduous woodland
E22	30.80	2.20	0.19	Broadleaved deciduous woodland
E23	32.20	2.30	0.20	Broadleaved deciduous woodland
E24	32.20	2.30	0.20	Broadleaved deciduous woodland
E25	32.20	2.30	0.20	Broadleaved deciduous woodland
E26	32.20	2.30	0.20	Broadleaved deciduous woodland
E27	32.20	2.30	0.20	Broadleaved deciduous woodland
E28	30.80	2.20	0.19	Broadleaved deciduous woodland

Receptor	N deposition (kg N ha ⁻¹ y ⁻¹)	N component of acid deposition (keq ha ⁻¹ y ⁻¹)	S component of acid deposition (keq ha ⁻¹ y ⁻¹)	Feature
E29	30.80	2.20	0.19	Broadleaved deciduous woodland
E30	32.20	2.30	0.20	Broadleaved deciduous woodland
E31	32.20	2.30	0.20	Broadleaved deciduous woodland
E32	32.20	2.30	0.20	Broadleaved deciduous woodland
E33	32.20	2.30	0.20	Broadleaved deciduous woodland
E34	32.20	2.30	0.20	Broadleaved deciduous woodland
E35	32.20	2.30	0.20	Broadleaved deciduous woodland
E36	32.20	2.30	0.20	Broadleaved deciduous woodland
E37	32.20	2.30	0.20	Broadleaved deciduous woodland
E38	32.20	2.30	0.20	Broadleaved deciduous woodland
E39	32.20	2.30	0.20	Broadleaved deciduous woodland
E40	32.20	2.30	0.20	Broadleaved deciduous woodland
E41	32.20	2.30	0.20	Broadleaved deciduous woodland
E42	32.20	2.30	0.20	Broadleaved deciduous woodland
E43	32.20	2.30	0.20	Broadleaved deciduous woodland
E44	32.20	2.30	0.20	Broadleaved deciduous woodland
E45	32.20	2.30	0.20	Broadleaved deciduous woodland
E46	32.20	2.30	0.20	Broadleaved deciduous woodland