

## **Lower Thames Crossing**

6.3 Environmental Statement
Appendices
Appendix 5.2 – Air Quality
Baseline Conditions

APFP Regulation 5(2)(a)

Infrastructure Planning (Applications: Prescribed Forms and Procedure)
Regulations 2009

Volume 6

**DATE: October 2022** 

Planning Inspectorate Scheme Ref: TR010032 Application Document Ref: TR010032/APP/6.3

VERSION: 1.0

# Lower Thames Crossing Appendix 5.2 – Air Quality Baseline Conditions

#### **List of contents**

		Page number
1	Air Quality Management Areas	1
2	Local authority air quality monitoring data	3
3	Long-term trend in monitored NO <sub>2</sub>	30
4	National Highways air quality monitoring data	32
5	Project-specific air quality monitoring data	41
6	Connect Plus air quality monitoring data	46
7	Nitrogen critical loads for ecological designated habitats	48

#### List of plates

Plate 3.1 Trend (2012–2019) in roadside annual mean NO <sub>2</sub> (µg/m³) for local authorities in study area	Page number
Page number Table 1.1 Air Quality Management Areas (AQMAs) within 200m of the operational and construction Affected Road Network	
Table 1.1 Air Quality Management Areas (AQMAs) within 200m of the operational and construction Affected Road Network	List of tables
Construction Affected Road Network	Page number
Road Network48	Construction Affected Road Network

### 1 Air Quality Management Areas

Table 1.1 Air Quality Management Areas (AQMAs) within 200m of the operational and construction Affected Road Network

Local authority	AQMA name	Pollutant and declaration
South of the River Thames		
Canterbury City Council	AQMA Canterbury No 3	Annual mean NO <sub>2</sub>
Dartford Borough Council	Dartford AQMA No.1	Annual mean NO <sub>2</sub> 24-hour mean PM <sub>10</sub>
	Dartford AQMA No.2	Annual mean NO <sub>2</sub>
	Dartford AQMA No.3	Annual mean NO <sub>2</sub>
	Dartford AQMA No.4	Annual mean NO <sub>2</sub>
Gravesham Borough Council	Gravesham A2 AQMA	Annual mean NO <sub>2</sub>
	Northfleet Industrial Area AQMA	Annual mean PM <sub>10</sub>
	Gravesham A227 Wrotham Road/ B261 Old Road West AQMA	Annual mean NO <sub>2</sub>
	Gravesham A226 One-way system AQMA	Annual mean NO <sub>2</sub>
London Borough of Bexley	Bexley AQMA	Annual mean NO <sub>2</sub> Annual and 24-hour mean PM <sub>10</sub>
Maidstone Borough Council	Maidstone Borough AQMA	Annual mean NO <sub>2</sub>
Medway Council	Central Medway AQMA	Annual mean NO <sub>2</sub>
Royal Borough of Greenwich	Greenwich AQMA	Annual mean NO <sub>2</sub> 24-hour mean PM <sub>10</sub>
Sevenoaks District Council	AQMA No.1 (M20)	Annual mean NO <sub>2</sub>
	AQMA No.2 (M25)	Annual mean NO <sub>2</sub>
	AQMA No.3 (M26)	Annual mean NO <sub>2</sub>
	AQMA No.6 (M25-PM <sub>10</sub> )	24-hour mean PM <sub>10</sub>
	AQMA No. 13 (A25)	Annual mean NO <sub>2</sub>
Swale Borough Council	AQMA No.7	Annual mean NO <sub>2</sub>
Tonbridge and Malling	Tonbridge and Malling - M20 AQMA	Annual mean NO <sub>2</sub>
Borough Council	Tonbridge and Malling - Aylesford AQMA	Annual mean NO <sub>2</sub>
	Tonbridge and Malling – Larkfield AQMA	Annual mean NO <sub>2</sub>

Local authority	AQMA name	Pollutant and declaration
North of the River Thames		
Brentwood Borough Council	Brentwood AQMA No.2	Annual mean NO <sub>2</sub>
Broxbourne Borough Council	Extension to AQMA 1	Annual mean NO <sub>2</sub>
London Borough of Barking & Dagenham	Barking & Dagenham AQMA	Annual and 1-hour mean NO <sub>2</sub> 24-hour mean PM <sub>10</sub>
London Borough of Enfield	Enfield AQMA	Annual mean NO <sub>2</sub> 24-hour mean PM <sub>10</sub>
London Borough of Havering	Havering AQMA	Annual mean NO <sub>2</sub> 24-hour mean PM <sub>10</sub>
London Borough of Newham	Newham AQMA	Annual mean NO <sub>2</sub> 24-hour mean PM <sub>10</sub>
Rochford District Council	Rayleigh AQMA	Annual mean NO <sub>2</sub>
Thurrock Council	AQMA No. 1	Annual mean NO <sub>2</sub>
	AQMA No. 2	Annual mean NO <sub>2</sub>
	AQMA No. 3	Annual mean NO <sub>2</sub>
	AQMA No. 4	Annual mean NO <sub>2</sub>
	AQMA No. 5	Annual mean NO <sub>2</sub> 24-hour mean PM <sub>10</sub>
	AQMA No. 7	Annual mean NO <sub>2</sub> 24-hour mean PM <sub>10</sub>
	AQMA No. 8	Annual mean NO <sub>2</sub> 24-hour mean PM <sub>10</sub>
	AQMA No. 9	Annual mean NO <sub>2</sub>
	AQMA No. 13	Annual mean NO <sub>2</sub>
	AQMA No. 15	Annual mean NO <sub>2</sub>
	AQMA No. 16	Annual mean NO <sub>2</sub>
	AQMA No. 24	Annual mean NO <sub>2</sub>

#### 2 Local authority air quality monitoring data

Table 2.1 Annual mean NO<sub>2</sub> concentrations from local authority diffusion tubes within 200m of construction and operational Affected Road Network

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (µg/m³)	2017 annual mean NO <sub>2</sub> (µg/m³)	2018 annual mean NO <sub>2</sub> (µg/m³)	2019 annual mean NO <sub>2</sub> (μg/m³)
BAS006	Basildon	The Meads	573194	187531	Roadside	29.6	30.6	27.2	26.1
BAS007	Basildon	52 Merricks Lane	572174	186914	Façade	29.8	29.6	26.4	26.2
BRW5	Brentwood	Telegraph pole at end of Brook Street	556887	192412	Urban Background	46.0	47.0	39.6	42.1
BRW7	Brentwood	13 Nags Head Lane - on fence trellis	557118	191978	Roadside	26.6	29.6	25.2	23.8
BRW26	Brentwood	289 Chelmsford Road - telegraph pole	562286	196647	Roadside	29.9	32.1	26.4	26.7
BRW32	Brentwood	The Poplars, Brook Street	556959	192286	Urban Background	33.1	35.8	29.7	28.5
BRW38	Brentwood	58 Roman Road	563660	198312	Roadside	21.2	20.6	18.5	19.1
BRW39	Brentwood	Thorndon Avenue/A127	562412	189153	Roadside	38.3	31.0	27.1	25.7
BRW6	Brentwood	Freeway Cottage, 63 Brook Street	557014	192493	Roadside	39.3	37.6	34.2	32.6

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (μg/m³)
BB05	Broxbourne	Arlington Crescent	536213	200020	Roadside	60.7	65.6*	58.9	57.0
BB10	Broxbourne	Teresa Gardens	535392	200128	Urban Background	34.1	33.7	30.1	28.5
BB11	Broxbourne	35 High Street	536051	200090	Kerbside	43.6	42.4	41.3	39.2
BB17	Broxbourne	Parkside	536194	200096	Urban Background	38.4	38.8	33.6*	NA
CP14	Castle Point	2 Sadlers Villas, Clare Rd	576379	188463	Roadside	31.0	33.0	28.4	29.6
CP28	Castle Point	2 Kingsley Lane	580088	189554	Urban Background	28.4	27.7	25.7	25.5
CP29	Castle Point	Cycle Sign	580120	189646	Kerbside	32.8	31.2	30.3	30.2*
CP30	Castle Point	35 Rayleigh Rd.	579696	189697	Roadside	30.7	31.3	29.8	27.9
CP31	Castle Point	No.17 Rivenhall	579641	189684	Urban Background	22.0	22.5	21.0	20.9
CP32	Castle Point	The Smithy	578347	190591	Roadside	24.3	23.8	22.2	21.1
CB27	Chelmsford	Howe Green Interchange	574080	203469	Roadside	35.0	36.4	32.4	31.8
DA10	Dartford	DA 10 London Road	559189	174872	Roadside	38.7	35.1	35.6	31.8
DA14	Dartford	DA 14 Bow Arrow Lane	555495	174437	Industrial	56.1	57.1*	NA	NA
DA20	Dartford	DA20 Elliot Road	555662	174865	Roadside	46.0	38.1	43.3	36.1

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (µg/m³)	2017 annual mean NO <sub>2</sub> (µg/m³)	2018 annual mean NO <sub>2</sub> (µg/m³)	2019 annual mean NO <sub>2</sub> (μg/m³)
DA22	Dartford	DA22 Brent Way	555605	174026	Roadside	53.0	51.0	47.7	44.0
DA24	Dartford	DA24 Wayville Rd	555632	173558	Roadside	38.6	33.5	36.3	32.3
DA25	Dartford	DA25 Queens Gardens	555801	173194	Background	37.1	33.7	35.1	30.8
DA36	Dartford	DA36 Burnham Road	553281	175290	Roadside	40.6	34.3	37.8	34.9
DA38	Dartford	DA38 London Road 3	558289	174582	Roadside	39.9	37.2	35.4	33.4
DA44	Dartford	DA44 Brent Close	555657	174053	Roadside	39.9	39.4	38.6	37.3
DA48	Dartford	DA48 Hawley Road	555297	171327	Roadside	38.7	33.9	34.7	30.8
DA50	Dartford	DA50 A2/Bridge	553783	172314	Roadside	47.6	42.0	41.3	37.9
DA62	Dartford	DA62 The Brent London Rd	555796	173902	Roadside	44.0	43.8	41.1	39.4
DA63	Dartford	DA63 Churchill Close	555612	173210	Background	34.4	30.0	32.6	30.9
DA67	Dartford	DA67 Hill Rise	556900	171294	Roadside	29.0	27.3	27.2	25.3
DA70	Dartford	DA70 Hope Cottages	558667	172649	Roadside	38.1	33.5	34.8	31.2
DA72	Dartford	DA72 (A,B,C) Little Dale	556451	172155	Roadside	41.8	36.1	38.4	35.2

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (µg/m³)	2019 annual mean NO <sub>2</sub> (μg/m³)
DA75	Dartford	DA75 Ightham Cottages (Telgraph) or Ightham Cottages (11)	558593	172815	Roadside	44.5	38.4*	NA	NA
DA81	Dartford	Green Street	556368	172344	Roadside	36.9	NA	NA	NA
DA83	Dartford	Byron Road	555617	175330	Background	33.4	30.1	33.5	30.2
DA84	Dartford	Brent Way 2	555574	174068	Roadside	51.2	49.0	45.2	43.7
DA86	Dartford	Brent Close 2	555781	174012	Roadside	35.8	34.7	33.3	32.7
DA87	Dartford	No2 Ightham Cottages or Ightham Cottages (House)	558617	172779	Roadside	40.2	33.9	35.8	32.1
DA89	Dartford	Garden Place	553798	172258	Roadside	32.2	28.8	28.7	26.3
DA90	Dartford	Gothic Close	553962	172278	Roadside	35.2	32.5	37.2	30.7
DA92	Dartford	Pilgrims Road/London Road	560534	174881	Roadside	44.3	41.6	42.5	35.2
DA93	Dartford	Snowden Hill/London Road	561201	174806	Roadside	42.9	40.3	41.0	38.2
DA94	Dartford	Green Street Green Road (Park New)	556359	172374	Roadside	36.6	36.2	35.3	33.0

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (µg/m³)
DA95	Dartford	13 Green Street Green Road	556497	171978	Roadside	43.8	37.9	36.7	33.8
DA96	Dartford	The Bridge (Marsh Street)	555117	175718	Roadside	46.9	42.2	41.8	41.8
DA97	Dartford	Bow Arrow Lane (M25) New	555495	174436	Roadside	49.6 <sup>†</sup>	35.3	46.4	44.3
6abc	Epping Forest	Canes Cottage	547838	206819	Urban Background triplicate	26.0	26.0	26.1	21.0
16abc	Epping Forest	13 The Elms	541308	200037	Urban Background triplicate	34.0	31.8	33.4	U
17abc	Epping Forest	15 The Elms	541320	200020	Urban Background triplicate	31.0	30.4	34.4	34.1
22abc	Epping Forest	Lodge Lane	538710	199860	Roadside triplicate	35.0	33.1	37.4	30.0
23abc	Epping Forest	RoundHills	538962	199967	Urban Background co-location	30.0	30.1	32.8	28.0
GR08	Gravesham	Painters Ash School Northfleet	562589	172076	Roadside	30.6	31.7	30.4	30.9
GR19	Gravesham	Lawn County Primary School, High Street,	562155	174360	Background	23.2	23.2	23.3	23.2

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (µg/m³)	2019 annual mean NO <sub>2</sub> (µg/m³)
		Northfleet, DA11 9HB							
GR52	Gravesham	The Hill Shelter, The Hill, Northfleet, DA11 9EX	562450	174191	Roadside	32.9	34.7*	36.4	32.6
GR56	Gravesham	Junies, Parrock Road, Gravesend, DA12 1QF	565210	172980	Roadside	30.8	33.6	27.5	30.3
GR67	Gravesham	Echo Public House, Old Road East, Gravesend, DA12 1NR	565214	172958	Roadside	34.0	36.5	34.9	36.3
GR68	Gravesham	Opp The Old Prince of Orange, Old Road West, Gravesend, DA12 1NG	564808	173086	Roadside	33.7	35.8	34.7	35.8
GR72	Gravesham	Northfleet Cemetery, Northfleet, DA11 8HW	562437	173175	Urban Background	24.1	25.2	23.9	24.4

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (μg/m³)
GR92	Gravesham	1 Hall Road, Northfleet, Kent, DA11 8AW	562324	172589	Roadside	38.0	37.8	36.9	38.6
GR94	Gravesham	Opp The George PH, Wrotham Road, Meopham, DA13 0AJ	564392	166012	Roadside	36.0	34.3	37.2	36.1
GR98	Gravesham	The Leather Bottle PH, Dover Road, Northfleet, DA11 9PH	562529	174049	Roadside	32.7	32.0	33.5	33.2
GR104	Gravesham	8 Roman Road (Downpipe), Northfleet	562465	172153	Roadside	34.4	36.7	33.4	34.2
GR109	Gravesham	30 Old Road East (Façade) DA11 8EP	565229	172955	Roadside	32.8	36.7*	33.9	34.3
GR110	Gravesham	Nells Café, Valley Drive, Gravesend	566150	170436	Roadside	34.5	40.4	35.3	38.7
GR107	Gravesham	46 Pepper Hill (Façade), Northfleet	562272	172281	Roadside	36.9	34.9	35.0	36.3
GR111	Gravesham	The George PH (Façade),	564382	166011	Roadside	33.9	32.5	NA	NA

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (µg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (μg/m³)
		Wrotham Road, Meopham							
GR112	Gravesham	50 Stonebridge Road (Façade), Northfleet	561502	174683	Roadside	33.2	34.3	34.8	35.7
GR113	Gravesham	7-16 Orchard Road (façade)	562281	173031	Roadside	27.7	26.6	NA	NA
GR116	Gravesham	Saxon Close, N'fleet, Lamp post opp No.38.	562480	172225	Roadside	34.7	35.9	32.2	32.3
GR117	Gravesham	Bembridge (façade), Watling Street	564638	171130	Roadside	23.3	23.5*	NA	NA
GR124	Gravesham	Stonebridge Road Telegraph Post Opposite No.67	561338	174925	Roadside	31.1	32.7	30.4	31.0
GR137	Gravesham	Lamp post Opposite 2 Peartree Place, Gravesend Road	570719	171143	Kerbside	32.8	29.2*	30.7	33.1
GR138	Gravesham	Telegraph Post, Foxbury Manor, Old Watling Street, Rochester	570584	169550	Other	30.8	29.2*	28.8	30.2

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (µg/m³)	2019 annual mean NO <sub>2</sub> (µg/m³)
GR141	Gravesham	Park Pale, Telegraph Post	569588	169603	Roadside	31.4	36.7	29.3	27.1
GR142	Gravesham	Inn on the Lake, Watling Street, Shorne DA12 3HB (Light post)	567499	169832	Roadside	58.9	65.6	55.0	59.8
GR144	Gravesham	43 Singlewell Road (Downpipe)	564728	172826	Roadside	35.7	41.4	33.4	34.9
GR24	Gravesham	28- 29 Milton Road (Lamp post),, Gravesend, Kent, DA12 2RF	565129	174051	Roadside	41.3	42.9	45.4	42.7
GR31	Gravesham	32 Harmer Street GF, Gravesend, DA12 2AX	565052	174149	Roadside	43.0	43.2	42.9	43.7
GR39	Gravesham	Stone Street (post), Gravesend, DA12 1AP	564730	174030	Roadside	36.7	34.1	35.8	35.0
GR47	Gravesham	29- 31 Harmer Street, Gravesend, DA12 2AP	565043	174173	Roadside	40.1	41.9	45.4	42.9

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (µg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (μg/m³)
GR57	Gravesham	61 Old Road West (Antique Shop, Gravesend, Kent, DA11 0LW	564472	173158	Roadside	38.2	38.5	38.4	40.2
GR58	Gravesham	The Venue, Milton Road, Gravesend, DA12 2rf	565166	174036	Roadside	38.3	39.5	37.6	38.0
GR59	Gravesham	44 Old Road West (Pharmacy), Gravesend, Kent, DA11 0LJ	564531	173172	Roadside	37.7	39.2	39.5	37.7
GR105	Gravesham	9 Chaucer Road (façade), Northfleet, GRAVESEND, DA11 8EP	562671	172202	Roadside	22.9	23.0	NA	NA
GR118	Gravesham	40 Windmill Street, Gravesend DA12 1BA (Façade)	564755	173862	Roadside	31.4	32.5	34.8	34.9
GR119	Gravesham	Woodville Place (lamp post)	564729	173824	Roadside	39.5	49.2	53.4	49.5

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (µg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (µg/m³)
GR122	Gravesham	King & Taylor 10-12 Wrotham Road (façade) DA11	564667	173891	Roadside	31.1	35.9	36.1	37.0
GR123	Gravesham	City Praise Centre Lower Higham Road, Gravesend, Kent, DA12 2LY	566538	173110	Roadside	25.1	26.1	24.0	26.3
GR125	Gravesham	Café Taj (Façade), 170 Parrock Street, Gravesend	564877	173937	Roadside	32.7	32.7	32.1	33.2
GR128	Gravesham	1a Railway Place (façade)	564727	174002	Roadside	34.5	29.6	30.9	31.8
GR129	Gravesham	20 Stone Street (façade)	564694	173969	Roadside	27.9	29.0	27.8	28.4
GR130	Gravesham	6 Wrotham Road, The Hair Shop (Façade)	564689	173935	Roadside	28.8	29.1	30.6	31.3
GR131	Gravesham	7 Wrotham Road, Martin Tolhurst Solicitors (façade)	564661	173940	Roadside	25.9	25.6	24.9	26.4
GR133	Gravesham	23 Wrotham Road (façade)	564658	173800	Roadside	32.8	36.9	36.3	36.2

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO₂ (µg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (μg/m³)
GR134	Gravesham	17 Wrotham Road (façade)	564659	173831	Roadside	33.1	31.4	32.8	33.7
GR135	Gravesham	25 Wrotham Road (lamp post adjacent to building)	564657	173764	Roadside	41.1	46.8	44.8	43.9
GR136	Gravesham	Woodville Place, Lamp Post opp 17 Wrotham Road	564686	173828	Roadside	34.3	35.8	39.3	37.4
GR143	Gravesham	29 Wrotham Road (Façade)	564646	173745	Roadside	39.2†	47.5	36.6	37.0
GW23 (1)	Greenwich	Siebert Rd	540420	177706	Roadside	41.4	36.6	31.1*	34.6
GW32 (7)	Greenwich	Banchory Rd	540664	177235	Roadside	47.4	36.7*	39.3*	39.5
GW36 (11)	Greenwich	Boord St	539320	179234	Roadside	58.1	56.4	46.9*	49.3
GW50 (25,26,27)	Greenwich	Woolwich Flyover (Triplicate co- located site)	540203	178367	Roadside	67.1	69.5	54.3*	53.2
GW51 (28)	Greenwich	Bugsbys Way	539638	179024	Roadside	45.8	43.6	37*	39.0
GW104 (55)	Greenwich	Sun Lane	540742	177070	Roadside	49.0	49.8	43.7	44.9
HAR16	Harlow	Chalk Lane	549466	211599	Rural	20.4	18.9	18.7	17.3

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (µg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (µg/m³)
HAV22,23 ,24	Havering	Raevensbourne Shool	553707	190817	Urban Background	28.3	30.4*	25.3	24.5
HAV32,33 ,34	Havering	Gallows Corner	553410	190558	Kerbside	53.2	52.9*	50.3	49.4
HAV39	Havering	Rise Park Boulevard	551616	190622	Roadside	31.3	38.8*	29.0	28.9
HAV47	Havering	Campion School	554691	189516	Roadside	46.5	42.3*	36.8	41.0
Maid 03	Maidstone	Bridge Gyratory	575758	155639	Roadside	44.3	NA	NA	NA
Maid 10	Maidstone	Grange Lane South	575714	158504	Other	31.0	30.3	26.7	23.9
Maid 11	Maidstone	Boarley Lane	575718	158653	Other	24.7	25.1	21.7	20.7
Maid 26	Maidstone	Drakes PH	575784	155678	Roadside	31.0	33.5	29.3	30.8
Maid 36	Maidstone	37 High Street	575865	155640	Roadside	40.7	36.8	29.9	NA
Maid 71	Maidstone	Flowerpot PH, Sandling Road	575738	156711	Roadside	30.1	NA	NA	NA
Maid 90	Maidstone	Pudding Lane, Medway Street, Maidstone	575918	155753	Kerbside	32.8	34.2	29.3*	32.1
Maid 94	Maidstone	53, High Street, Maidstone, Maidstone, Kent, ME14 1SY	575822	155579	Roadside	35.5	35.4	35.0	33.1
Maid 99	Maidstone	On metal post on left- hand	579258	162300	Roadside	41.7	NA	NA	NA

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (µg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (µg/m³)
		side of road bridge which crosses M2 approached from south (Bredhurst).Tripli cate site.							
Maid 100	Maidstone	On wooden fence post adjacent to left hand side of M2 bridge by Bellvue residence at Westfield Sole	577266	161515	Roadside	48.4	NA	NA	NA
Maid 102	Maidstone	On fence near public toilets as you enter EDF substation carpark	575753	155615	Other	30.1	28.8	26.9	NA
Maid 105	Maidstone	On wooden fence post down the slope towards Harp Farm Rd on right hand side of M2 bridge at Westfield Sole	577289	161502	Other	24.7	24.1	21.5	19.6

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO₂ (µg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (μg/m³)
Maid 110	Maidstone	Tonbridge Road (on lamp post near No 3)	575540	155435	Roadside	29.0	33.8	29.7	33.0
Maid 117	Maidstone	On 17amppost adjacent to drive though area of McDonalds	575698	155448	Roadside	36.9†	31.8	34.5	32.0
DT02	Medway	High Street, Strood (Training Centre)	573482	169282	Roadside	47.0	43.0	NA	30.8
DT07	Medway	92 Cuxton Road, Strood	573078	168908	Roadside	39.4	38.8	35.9	34.6
DT19	Medway	5 London Road, Strood (Dentist)	573328	169293	Roadside	47.4	48.0	43.7	42.1
DT20	Medway	Lamp post adjacent 33 London Road, Strood	573168	169305	Roadside	48.5	51.0	47.2	43.3
DT21	Medway	88 Spire Way, Wainscott	574999	170882	Roadside	23.4	22.4	21.4	19.9
DT23	Medway	1 Omaha Place, Wainscott	575044	171351	Roadside	27.0	25.3	29.0	24.4
DT41	Medway	3 Formby Terrace	570281	164949	Roadside	26.6 <sup>‡</sup>	NA	NA	23.1

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (µg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (µg/m³)
DT42	Medway	Lamp post ASP3 adjacent Aspdin Close	570276	165016	Roadside	21.6 <sup>‡</sup>	NA	NA	18.8
DT43	Medway	13 Squires Close, Strood	570713	169417	Roadside	33.8 <sup>‡</sup>	NA	NA	29.4
RO011	Rochford	Rayleigh Weir	580233	189766	Roadside	36.5	NA	NA	NA
RO012/01 3/014	Rochford	Eastwood Rd/High St	580549	190629	Urban Centre	43.8	NA	NA	NA
RO015	Rochford	Crown Hill	580533	190748	Kerbside	43.6	NA	NA	NA
RO016	Rochford	Eastwood Rd	580613	190551	Kerbside	47.3	NA	NA	NA
RDC-CRH	Rochford	Crown Heights, Crown Hill – CRH	580554	190726	Roadside	30.0	28.9	27.6	26.1
RDC-KGC	Rochford	King Georges Court, Eastwood Road - KGC	580776	190462	Roadside	26.4	26.4	23.4	23.0
DT12	Sevenoaks	Station Road (M25) Brasted	546815	155850	Roadside	43.1	40.0	39.8	33.6
DT13	Sevenoaks	Wested Lane, Swanley	552504	167700	Roadside	36.5	30.5	32.9	28.1
DT14	Sevenoaks	Wadard Terrace, Button St Swanley	553107	167868	Roadside	32.6	30.1	27.6	25.6

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (µg/m³)	2018 annual mean NO <sub>2</sub> (µg/m³)	2019 annual mean NO <sub>2</sub> (μg/m³)
DT81	Sevenoaks	Farningham Hill Road, Swanley	553416	167615	Urban	32.9	30.9	28.6	26.1
DT26	Sevenoaks	Farningham Hill (A20)	554217	167252	Roadside	45.8	41.8	42.7	35.3
SOU28	Southend- on-Sea	Prince Avenue 2	584932	188250	Roadside	31.9	34.1	30.5	27.6
SOU29	Southend- on-Sea	Abbotts Close	584141	188238	Roadside	23.0	25.2	21.8	21.0
KE1	Southend- on-Sea	Library, 1 Rayleigh Road, Leigh	584843	188299	Roadside	27.7	27.7	26.0	24.7
KE2	Southend- on-Sea	Health Centre, 1 Rayleigh Road, Leigh	584834	188272	Roadside	31.0	30.2	28.4	29.3
KE3	Southend- on-Sea	55 Broomfield Ave, Leigh	584786	188183	Roadside	23.6	31.2*	19.9	20.5
KE4	Southend- on-Sea	332 Bridgewater Drive	584864	188230	Roadside	33.4	33.1*	29.1	27.4
KE5	Southend- on-Sea	326-328 Bridgewater Dr	584876	188203	Roadside	27.4	31.8*	24.9	22.6
KE6	Southend- on-Sea	327 Bridgewater	584903	188232	Roadside	30.4	37.8*	26.9	25.9
KE7	Southend- on-Sea	685 Prince Ave, Westcliff	584952	188294	Roadside	41.5	38.8	35.2	34.1

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (μg/m³)
KE8	Southend- on-Sea	Esses Auto Group Kent Elms Corner	584892	188301	Roadside	29.8	28.5	27.3	26.7
SW62	Swale	Key Street, Sittingbourne	588178	164236	Roadside	27.0	40.6	33.7	33.7
SW104	Swale	The Street 1, Boughton	605486	159536	Roadside	27.3*	28.4	26.0*	NA
SW105	Swale	The Street 2, Boughton	605522	159491	Roadside	24.1*	21.3	19.8*	NA
SW110	Swale	2 Cherryfields, Sittingbourne	588467	164123	Roadside	23.0†	NA	21.5	18.7
SW113	Swale	Squirrel Cottage, Keycol Hill	587929	164277	Roadside	74.2†	NA	69.3	74.5
SW114	Swale	2 Florence Cottages, Chestnut Street	587669	163976	Roadside	24.2†	NA	22.6	20.9
SW115	Swale	Cherry Tree Cottage, Chestnut Street	587548	163901	Roadside	25.9†	NA	24.2	21.6
SW116	Swale	Bankside, Chestnut Street	587283	163755	Roadside	25.1†	NA	23.5*	21.5
TD30	Tandridge	Water Lane, Limpsfield	540258	153783	Urban Background	22.4	21.8	22.8	23.2
LRAR	Thurrock	London Road Arterial Road	555301	179438	Roadside	62.5	59.5	51.2	50.1

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (µg/m³)
IBIS	Thurrock	Ibis Hotel	557570	177789	UB	49.1	47.5	45.3	47.0
GDSO	Thurrock	Gatehope Drive	557606	181061	UB	28.9	28.1	25.3	25.7
LT	Thurrock	Lakeside Tesco Roundabout	558007	178704	Roadside	53.7	57.3	54.7	52.0
KCNO	Thurrock	Kemps Cottage	558153	183531	UB	32.8	34.3	29.4	29.3
HR	Thurrock	Howard Road	559118	179462	Roadside	31.5	32.8	30.3	27.7
NAS2	Thurrock	A1306	559720	179630	Roadside	56.0	54.0	51.3	49.9
LRSS	Thurrock	London Road South Stifford	559785	177910	Roadside	39.6	42.8	39.2	39.0
ER	Thurrock	Elizabeth Road	560954	179535	Roadside	51.8	50.8	49.8	48.8
PS	Thurrock	Poison Store AURN Site	561066	177894	Urban Background	25.7	26.7	25.4	24.9
NAS1	Thurrock	Queensgate Centre Grays	561468	178064	Roadside	33.5	33.7	32.9	31.0
CR	Thurrock	Cromwell Road Grays	561572	178154	Intermediate	32.6	32.6	30.9	33.0
NAS3	Thurrock	Chestnut Avenue Grays	561819	179883	Urban Background	22.0	23.7	23.9	24.8
WES	Thurrock	William Edwards School	561958	180967	Roadside	31.8	30.7	29.5	26.6
TL	Thurrock	Calcutta Road Tilbury	563867	176293	Roadside	35.7	35.8	32.9	34.8
PKSL	Thurrock	Park Road	567781	182399	Roadside	29.0	28.5	29.4	26.0

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (µg/m³)	2017 annual mean NO <sub>2</sub> (µg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (μg/m³)
FRC	Thurrock	Francisco Close (Chafford Hundred)	559136	179084	Intermediate	33.2	32.5	30.6	31.0
TILE	Thurrock	Calcutta Road North (Tilbury)	563870	176305	Roadside	34.9	36.2	33.4	35.2
TK4 (A&B)	Thurrock	Thurrock 4 (colocated duplicated site)	563900	176282	Roadside	31.5	30.1	31.7	NA
LYD	Thurrock	Lydden	560045	179869	Urban Background	30.8	32.2	29.9	26.7
DR	Thurrock	Devonshire Road	560279	178944	Roadside	30.1	28.7	26.5	27.9
LRARN	Thurrock	London Road Art Road (North)	555280	179498	Roadside	32.0	34.0	31.4	33.0
LRARMN	Thurrock	London Road Art Road (Mid- North)	555299	179453	Roadside	45.6	41.8	39.6	36.7
LRARMS	Thurrock	London Road Art Road (Mid- South)	555332	179400	Roadside	43.6	40.1	37.5	34.3
СС	Thurrock	Catherine Close	560770	179866	Intermediate	27.4†	23.5	25.6	26.0
ERFA	Thurrock	Elizabeth Road, (Façade A)	560962	179527	Roadside	34.7†	34.9	32.5	32.5*
ERFB	Thurrock	Elizabeth Road (Façade B)	560963	179558	Roadside	33.6†	35.6	31.4	32.2

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (µg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (µg/m³)
ERTM	Thurrock	Elizabeth Road, Treaclemine Roundabout	560965	179796	Roadside	40.2†	36.7	37.5	37.1
NC	Thurrock	Nutberry Close	561077	179912	Intermediate	36.2†	37.8	33.8	34.5
HD	Thurrock	Hawkins Drive (A1306)	560003	179694	Roadside	35.0†	36.1	29.9	31.5
GRPL	Thurrock	Grifon Road, Pilgrims Lane Roundabout	559551	179547	Intermediate	34.8†	34.1	32.5	31.0
PIH	Thurrock	Premier Inn Hotel, WT	557299	178802	Intermediate	37.6†	33.1	35.1	30.7
THA	Thurrock	Thurrock Hotel (A)	557386	179065	Urban Background	36.7 <sup>†</sup>	31.8	34.3	29.7
THB	Thurrock	Thurrock Hotel (B)	557437	179099	Urban Background	38.2 <sup>†</sup>	31.1	35.7	31.8
SCR LTC	Thurrock	Stifford Clays Road (Lower Thames Crossing site)	562380	181156	Urban Background	34.6 <sup>†</sup>	NA	32.4	30.1
BSA LTC	Thurrock	Baker Street (A) (Lower Thames Crossing site)	563483	181069	Roadside	25.6 <sup>†</sup>	NA	24.0	25.9
BSB LTC	Thurrock	Baker Street (B) (Lower Thames Crossing site)	563572	180770	Roadside	32.3 <sup>†</sup>	NA	30.2	28.3

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (µg/m³)
HR LTC	Thurrock	Heath Road (Lower Thames Crossing site)	563782	180155	Roadside	29.2 <sup>†</sup>	NA	27.3	29.0
TTS LTC	Thurrock	Treetops School (Lower Thames Crossing site)	563825	179595	Urban Background	25.4 <sup>†</sup>	NA	23.7	21.5
TILA	Thurrock	Dock Road (Tilbury)	563498	176483	Roadside	40.8	41.9	38.0	39.8
TILB	Thurrock	Broadway Intersection (Tilbury)	563645	176348	Roadside	39.7	38.5	42.4	41.2
TILC	Thurrock	St Andrews Road (Tilbury)	563600	176321	Roadside	39.0	41.1	37.8*	33.3
TILD	Thurrock	Calcutta Road East (Tilbury)	563995	176291	Roadside	36.9	37.2	35.0	35.1
TSR	Thurrock	Tilbury Sydney Road	564122	176152	Urban Background	28.1	29.0	26.8	28.5
TN5a	Tonbridge and Malling	131 Hall Road, Aylesford	572611	158545	Roadside	35.5	34.1	30.1	28.5
TN7a	Tonbridge and Malling	202 New Hythe Lane	570392	159032	Roadside	38.0	36.7	31.5	30.7
TN12a	Tonbridge and Malling	Hall Rd (24 lamppost)	572628	158566	Roadside	38.1	38.8	34.9	U
TN29	Tonbridge and Malling	108A Station Road	571734	158694	Roadside	28.0	25.2	24.1	21.3

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (μg/m³)	2018 annual mean NO <sub>2</sub> (μg/m³)	2019 annual mean NO <sub>2</sub> (μg/m³)
TN30	Tonbridge and Malling	99 Teapot Lane, Aylesford	572016	158571	Roadside	29.7	65.6*	25.5	21.3
TN56	Tonbridge and Malling	8c Pump Close, Leybourne	568714	158301	Roadside	20.1	19.8	18.8	NA
TN68	Tonbridge and Malling	7 Hall Road, Aylesford	572430	157975	Roadside	30.8	31.4	28.3	28.3
TN80a	Tonbridge and Malling	218 Station Rd, Aylesford	572124	158627	Roadside	34.9	35.4	30.2	26.6
TN92	Tonbridge and Malling	794 London Rd, Larkfield	570189	158328	Roadside	43.8	43.2	42.0	41.5
TN101	Tonbridge and Malling	158 London Rd (E of mouth of Hermitage Lane)	572978	157727	Roadside	37.2	32.8	35.5	34.8
TN102	Tonbridge and Malling	39 Whitepost Wood Lane	572768	157186	Roadside	20.0	23.0	19.0	18.8
TN103	Tonbridge and Malling	22 Hermitage Lane	572739	157532	Roadside	23.9	21.5	21.7	19.1
TN57, 58, 59	Tonbridge and Malling	London Road, Larkfield (no 743)	570466	158329	Roadside	33.7	31.4	32.2	30.7
TN60, 62, 63	Tonbridge and Malling	London Road, Aylesford (no 290)	572423	157932	Roadside	44.8	44.8	41.7	42.1
DF1, 2, 3	Tonbridge and Malling	Aylesford (Hall Road) junction	572459	157904	Roadside	44.3	44.1	40.1	41.1

Site ID	Local authority	Site name	X OS grid ref (m)	Y OS grid ref (m)	Туре	2016 annual mean NO <sub>2</sub> (μg/m³)	2017 annual mean NO <sub>2</sub> (µg/m³)	2018 annual mean NO <sub>2</sub> (µg/m³)	2019 annual mean NO <sub>2</sub> (µg/m³)
		Bus stop (E- bound)							
DF7, 8, 9	Tonbridge and Malling	London Road (by Wealden Hall), Larkfield Bus stop (W bound)	570386	158311	Roadside	41.8	35.0	32.8	30.4
UT008	Uttlesford	Hallingbury	551189	217438	Roadside	29.9	22.8	NA	NA

**Bold** = Exceedance of the annual mean  $NO_2$  AQS objective ( $40\mu g/m^3$ )

<sup>\*=</sup> Data capture less than 75%

<sup>† = 2016</sup> concentration trended from 2018 using an adjustment factor of 1.07 (see Appendix 5.1)

<sup>‡ = 2016</sup> concentration trended from 2019 using an adjustment factor of 1.15 (see Appendix 5.1)

U = Data unavailable

NA = Not applicable as monitoring was not undertaken from this site in this particular year

Table 2.2 NO<sub>2</sub> monitored from local authority automatic stations within 200m of construction and operational Affected Road Network

Site ID	Local authority	Site name	Туре	OS grid re	ef (m)	2015		2016		2017		2018		2019	
				Х	Y										
						Annual mean NO <sub>2</sub> (µg/m³)	1-hour NO <sub>2</sub> above 200µg/m³	Annual mean NO <sub>2</sub> (µg/m³)	1-hour NO <sub>2</sub> above 200µg/m³	Annual mean NO <sub>2</sub> (μg/m³)	1-hour NO <sub>2</sub> above 200µg/m³	Annual mean NO <sub>2</sub> (µg/m³)	1-hour NO₂above 200µg/m³	Annual mean NO <sub>2</sub> (µg/m³)	1-hour NO₂above 200µg/m³
Dartford 3	Dartford	Bean Interchange	Roadside	558622	172752	61.0	24	57.0	26	55.0	10	49.0	2	46.0	0
Dartford 1	Dartford	St Clements	Roadside	558493	174668	50.0	8	47.0	19	43.0	14	NA	NA	37.0	0
ZG2	Gravesham	Gravesham A2 Roadside	Roadside	562589	172076	30.0	0	29.6	0	32.0	0	29.9	0	29.1	0
ZG3	Gravesham	Gravesham Industrial Background	Industrial background	562155	174360	23.4	0	24.1	0	24.0	0	23.5	0	24.5	0
CM1	Maidstone	Maidstone A229	Roadside	575740	155615	40.1	0	38.0	0	NA	NA	NA	NA	NA	NA
Thurrock 1 (TK1)	Thurrock	Thurrock, Grays AURN	Urban background	561066	177894	25.6	0	27.9	0	28.2	0	24.8	0	23.4	0
HV1	Havering	Rainham	Roadside	553114	182508	32.0	0	34.0	0	34.3	0	30.0	0	29.1	0
GR8	Greenwich	Woolwich Flyover	Roadside	540200	178367	66.0	6	64.0	24	65.0	7	56.8	0	52.0	0
Thurrock 4 (TK4)	Thurrock	Tilbury, Calcutta Road	Roadside	563900	176282	31.1	0	33.5	0	33.4	0	29.3	0	NA	NA
RD1	Rochford	Eastwood Rd / High Street	Roadside	580549	190629	47.6*	0	55.2*	2	NA	NA	NA	NA	NA	NA

**Bold** = Exceedance of the annual mean NO<sub>2</sub> AQS objective (40μg/m³) and/or the 1-hour NO<sub>2</sub> AQS objective (200μg/m³ not to be exceeded more than 18 times per year) NA = Not applicable as no monitoring undertaken in this year

\*= Data capture less than 75%

Table 2.3 PM<sub>10</sub> monitored from local authority automatic stations within 200m of construction and operational Affected Road Network

Site ID	Local authority	Site name	Туре	OS grid ref (m)		2015		2016		2017		2018		2019	
				X	Y	Annual mean PM <sub>10</sub> (μg/m³)	24-hour PM₁₀ above 50µg/m³	Annual mean PM₁₀ (μg/m³)	24-hour PM₁₀ above 50µg/m³	Annual mean PM <sub>10</sub> (µg/m³)	24-hour PM <sub>10</sub> above 50µg/m³	Annual mean PM <sub>10</sub> (µg/m³)	24-hour PM₁₀above 50µg/m³	Annual mean PM <sub>10</sub> (µg/m³)	24-hour PM₁₀ above 50µg/m³
Dartford 3	Dartford	Bean Interchange	Roadside	558622	172752	26.0	7	27.0	10	28.0	10	32.0	22	28.0	17
Dartford 1	Dartford	St Clements	Roadside	558493	174668	20.0	3	24.0	5	21.0	14	NA	NA	24.0	18
ZG2	Gravesham	Gravesham A2 Roadside, Painters Ash	Roadside	562589	172076	18.0	2	19.0	1	17.0	5	15.0	1	15.0	1
ZG3	Gravesham	Gravesham Industrial Background, Northfleet	Industrial	562155	174360	20.0	7	18.0	2	19.0	4	22.0	3	22.0	10
HV1	Havering	Rainham	Roadside	553114	182508	18.0	3	19.0	6	18.0	4	17.0	1	17.0	4
CM1	Maidstone	Maidstone A229	Roadside	575740	155615	22.0	3	24.0*	5	NA	NA	NA	NA	NA	NA
Thurrock 1 (TK1)	Thurrock	Thurrock, Grays AURN	Urban background	561066	177894	17.0	2	17.0	4	18.0	5	19.0	4	20.5	14
GR8	Greenwich	Woolwich Flyover	Roadside	540200	178367	29.0	18	30.0	22	7.0	9	25.0	6	23.0	10

Annual mean PM<sub>10</sub> AQS objective =  $40\mu g/m^3$ 

24-hour PM<sub>10</sub> AQS objective = 50µg/m<sup>3</sup> not to be exceeded more than 35 times per year

NA = Not applicable as no monitoring undertaken in this year

<sup>\*=</sup> Data capture less than 75%

Table 2.4 PM<sub>2.5</sub> monitored from local authority automatic stations within 200m of construction and operational Affected Road Network

Site ID	Local authority	Site name	Туре	OS grid ref (m)		2015	2016	2017	2018	2019
				X	Y	Annual mean PM <sub>2.5</sub> (µg/m³)				
HV1	Havering	Rainham	Roadside	553114	182508	11	12	12	11	11
GR8	Greenwich	Woolwich Flyover	Roadside	540200	178367	12	13	13	12	11

Annual mean  $PM_{2.5}$  AQS objective =  $25\mu g/m^3$ 

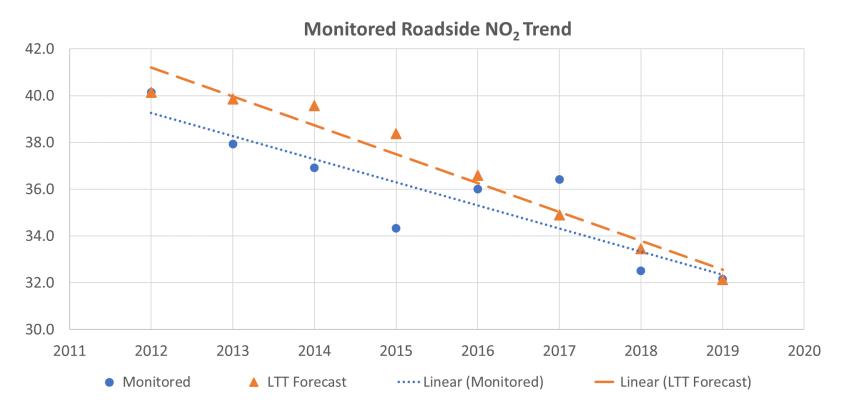
NA = Not applicable as no monitoring undertaken in this year

<sup>\*=</sup> Data capture less than 75%

#### 3 Long-term trend in monitored NO<sub>2</sub>

- 3.1.1 Plate 3.1 shows the year-on-year trend in roadside annual mean NO2 concentrations monitored from roadside automatic stations. The concentrations represent annual mean NO2 data averaged across roadside automatic stations which have annual mean data capture above 75% in all years. Stations were selected from local authorities that fall within the operational assessment study area, including stations in Castle Point (x1), Canterbury (x1), Gravesham (x1), Thurrock (x3), Medway (x1), Swale (x1) and Greenwich (x1). The plate also shows the equivalent year-on-year long-term trend (LTT) forecast NO2 concentrations derived by applying the gap analysis adjustment factors used in the assessment to 2012 average monitored NO2. For further details on the gap analysis adjustment methodology see paragraphs 5.3.80 to 5.3.84 of Environmental Statement Chapter 5: Air Quality (Application Document 6.1).
- 3.1.2 The data shows a downward trend in monitored annual mean NO2 concentrations over the period 2012 to 2019, and demonstrates that the application of the National Highways LTT gap analysis tool are appropriate for use in the air quality assessment.

Plate 3.1 Trend (2012–2019) in roadside annual mean NO<sub>2</sub> (µg/m³) for local authorities in study area



#### 4 National Highways air quality monitoring data

Table 4.1 National Highways 2016 annual mean NO<sub>2</sub> from diffusion tube monitoring within 200m of construction and operational Affected Road Network

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Site description	Site classification	Scheme/project	2016 bias adjusted and annualised NO <sub>2</sub> (µg/m³)
A2BN_001_0913	555592	173376	M25 J18/Oakwood Close	Roadside	A2BN	52.4
A2BN_002_0913	555824	173363	M25/A296/J18	Roadside	A2BN	46.4
A2BN_003_0913	556462	172137	Littledale (Off B260)	Roadside	A2BN	41.0
A2BN_004_0913	556819	173369	Gore Rd	Roadside	A2BN	33.7
A2BN_005_0913	556750	173445	Watling St	Roadside	A2BN	44.0
A2BN_006_0913	558670	172652	B255/Bean Ln	Roadside	A2BN	44.1
A2BN_008_0913	558425	174632	London Rd	Roadside	A2BN	42.4
A2BN_009_0913	558468	174671	A206 Roundabout/London Rd	Roadside	A2BN	50.4
A2BN_010_0913	556832	171333	Green Street Green Rd	Roadside	A2BN	28.1
A2BN_012_0913	562219	172312	Pepper Hill	Roadside	A2BN	40.1
A2BN_013_0913	562501	172126	Roman Rd / Painters Ash Lane	Background	A2BN	35.7
A2BN_014_0913	562340	172686	Springhead Rd	Roadside	A2BN	42.2
A2BN_017_0913	564633	170962	4m	Roadside	A2BN	40.0
A2BN_018_0913	564633	170962	10m	Roadside	A2BN	38.5
M20J3J5_004_0813	575692	158506	Grange Lane	Roadside	M20J3J5	30.1
M20J3J5_005_0813	575706	158608	Boarley Lane	Roadside	M20J3J5	26.4

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Site description	Site classification	Scheme/project	2016 bias adjusted and annualised NO <sub>2</sub> (µg/m³)
M20J3J5_006_0813	575394	158793	Chatham Road	Roadside	M20J3J5	33.9
M20J3J5_007_0813	575261	159440	Tolgate Road	Background	M20J3J5	26.2
M20J3J5_008_0813	575489	157943	Castle Dene	Roadside	M20J3J5	27.4
M20J3J5_010_0813	573173	158003	East Park Road	Background	M20J3J5	24.4
M20J3J5_012_0813	572627	158548	Hall Road North	Roadside	M20J3J5	40.9
M20J3J5_013_0813	572590	158455	Hall Road South	Roadside	M20J3J5	38.5
M20J3J5_014_0813	571802	158656	Trewin Close	Roadside	M20J3J5	26.6
M20J3J5_015_0813	571659	158689	Station Road	Roadside	M20J3J5	33.0
M20J3J5_016_0813	572164	158647	Station Road	Roadside	M20J3J5	39.5
M20J3J5_017_0813	570824	158811	Bell Lane	Background	M20J3J5	26.3
M20J3J5_018_0813	570368	159030	New Hythe Lane East	Roadside	M20J3J5	41.5
M20J3J5_019_0813	570345	158965	New Hythe Lane West	Roadside	M20J3J5	37.8
M20J3J5_020_0813	569957	159162	Thackeray Road	Roadside	M20J3J5	40.6
M20J3J5_021_0813	569601	159124	Willow Road	Background	M20J3J5	22.0
M20J3J5_022_0813	568949	159224	Park Road	Background	M20J3J5	20.3
M20J3J5_023_0813	568850	158768	Castle Way	Roadside	M20J3J5	24.9
M20J3J5_024_0813	569784	160569	Malling Road	Roadside	M20J3J5	33.2
M20J3J5_025_0813	566751	159298	Roughetts Road South	Background	M20J3J5	25.4
M20J3J5_026_0813	566593	159445	Roughetts Road North	Background	M20J3J5	31.0
M20J3J5_027_0813	563560	158670	Ford Lane	Roadside	M20J3J5	27.1

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Site description	Site classification	Scheme/project	2016 bias adjusted and annualised NO <sub>2</sub> (μg/m³)
M20J3J5_028_0813	562774	158608	South of M20 London Road East	Roadside	M20J3J5	39.3
M20J3J5_029_0813	562098	159049	South of M20 London Road West	Roadside	M20J3J5	39.2
M20J3J5_030_0813	561316	159550	North of M20 London Road East	Roadside	M20J3J5	35.8
M20J3J5_031_0813	560768	159699	Old Road	Roadside	M20J3J5	21.6
M20J3J5_032_0813	560357	159945	Old Coach Road	Roadside	M20J3J5	25.7
M20J3J5_033_0813	568642	158384	Pump Close	Roadside	M20J3J5	21.3
M20J3J5_036_0813	575755	155645	Continuous Analyser Fairmeadow	Collocation	M20J3J5	39.6
M20J3J5_037_0813	576193	158358	M20 Junction 7	Roadside	M20J3J5	49.4
M25J30_002_0913	557611	181061	Gatehope Drive	Background	M25J30	33.2
M25J30_005_0913	560046	179881	Clockhouse Ln	Kerbside	M25J30	37.9
M25J30_006_0913	560604	180391	High Rd Jnc with Cukoo Ln	Background	M25J30	40.6
M25J30_007_0913	561036	180530	Stiffords Clays Rd	Roadside	M25J30	34.0
M25J30_008_0913	559554	179546	Grifon Rd	Roadside	M25J30	35.4
M25J30_009_0913	560347	179782	Arterial Rd	Roadside	M25J30	51.6
M25J30_010_0913	561642	179407	Lodge Ln	Roadside	M25J30	36.7
M25J30_011_0913	555383	179910	Purfleet Rd	Roadside	M25J30	35.1
M25J30_014_0913	559011	178966	Fleming Rd	Roadside	M25J30	47.9
M25J30_015_0913	555643	174871	Masefield Rd	Roadside	M25J30	41.3

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Site description	Site classification	Scheme/project	2016 bias adjusted and annualised NO <sub>2</sub> (µg/m³)
M25J30_016_0913	555493	174441	Bow Arrow Ln (E)	Roadside	M25J30	59.4
M25J30_017_0913	555432	174454	Bow Arrow Ln (W)	Roadside	M25J30	44.9
A2EBB_002_0913	564235	171457	Wrotham Rd	Background	A2EBB	37.1
A2EBB_003_0913	564009	170312	Wrotham Rd (A227)	Roadside	A2EBB	29.5
A2EBB_004_0913	564233	171600	Wrotham Rd (nr Chalky Bank)	Roadside	A2EBB	36.4
A2EBB_005_0913	564413	172432	Wrotham Rd	Roadside	A2EBB	35.0
A2EBB_009_0913	564454	172767	New House Ln junction with Wrotham Rd	Roadside	A2EBB	34.6
A2EBB_010_0913	564788	171048	Watling St	Roadside	A2EBB	27.3
A2EBB_011_0913	565347	170778	Church Rd/Hever Court Rd	Roadside	A2EBB	30.7
A2EBB_013_0913	566125	170465	A2 Footpath nr Franklin Rd	Roadside	A2EBB	41.0
A2EBB_014_0913	566150	170290	Henhurts Rd	Roadside	A2EBB	24.6
A2EBB_015_0913	570584	169550	Old Watling St	Roadside	A2EBB	31.2
A2EBB_016_0913	570726	169411	Squires CI	Roadside	A2EBB	33.4
A12Chel_009_0116	574081	203468	Southend Rd	Roadside	A12 M25 to Chelmsford	39.6
A12Chel_010_0116	573232	202621	W Hanningfield Rd	Background	A12 M25 to Chelmsford	22.6
A12Chel_012_0116	570480	201746	Stock Rd	Roadside	A12 M25 to Chelmsford	28.6

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Site description	Site classification	Scheme/project	2016 bias adjusted and annualised NO <sub>2</sub> (µg/m³)
A12Chel_020_0116	563756	198338	Corner of Burnthouse Lane	Roadside	A12 M25 to Chelmsford	35.6
A12Chel_021_0116	563260	197561	Church Rd, Mountnessing	Roadside	A12 M25 to Chelmsford	31.7
A12Chel_022_0116	562596	196918	Close off Roman Rd, Mountnessing	Roadside	A12 M25 to Chelmsford	25.3
M25J28I_003_0116	557043	191854	Nags Head Lane	Roadside	M25 Junction 28 Improvement	29.7
M25J28I_004_0116	557162	191987	Nags Head Lane	Roadside	M25 Junction 28 Improvement	30.0
M25J28I_008_0116	555057	194239	Wrightsbridge Road	Roadside	M25 Junction 28 Improvement	19.9
M25J28I_017_0116	557313	190348	Warley Rd	Roadside	M25 Junction 28 Improvement	38.0
M25J28I_019_0116	557744	190009	Beredens Lane	Background	M25 Junction 28 Improvement	26.4
M25J28I_022_0116	556933	192382	Brook Street	Roadside	M25 Junction 28 Improvement	48.3
M25J25lm_001_0116	534905	199938	Great Cambridge Road	Roadside	M25 Junction 25 Improvement	52.5
M25J25lm_003_0116	535116	199938	Bullsmoor Way	Background	M25 Junction 25 Improvement	37.4
M25J25lm_005_0116	535361	199968	Holmesdale	Background	M25 Junction 25 Improvement	35.2

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Site description	Site classification	Scheme/project	2016 bias adjusted and annualised NO <sub>2</sub> (µg/m³)
M25J25Im_006_0116	535642	200004	Holmesdale	Roadside	M25 Junction 25 Improvement	27.3
M25J25Im_007_0116	536049	199941	High Street	Roadside	M25 Junction 25 Improvement	38.5
M25J25Im_009_0116	535488	199863	Bullsmoor Lane	Roadside	M25 Junction 25 Improvement	44.9
M25J25Im_013_0116	536204	200037	Arlington Crescent	Roadside	M25 Junction 25 Improvement	46.6
M25J25Im_014_0116	535431	200090	Teresa Gardens	Roadside	M25 Junction 25 Improvement	30.8
M25J25Im_015_0116	535652	200176	Hurst Drive	Background	M25 Junction 25 Improvement	27.8
M25J25Im_023_0116	534883	199859	Great Cambridge Road	Roadside	M25 Junction 25 Improvement	74.1
M2J5_003_1215	581274	163419	Burnham Walk, ME8 8SH, LP SAQ12	Background	M2 Junction 5 Improvements	22.2
M2J5_004_1215	586086	162142	Oad Street ME9 8JX/at fencepost immediately after fly over	Background	M2 Junction 5 Improvements	27.1
M2J5_005_1215	587469	161377	Vigo Lane ME9 8BE/On footpath sign on north side of fly over	Roadside	M2 Junction 5 Improvements	18.7
M2J5_006_1215	588137	164233	12 Key Street ME10 1YS	Roadside	M2 Junction 5 Improvements	28.8
M2J5_007_1215	587967	164216	End of Old Maidstone Road ME9 8BS	Roadside	M2 Junction 5 Improvements	25.9

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Site description	Site classification	Scheme/project	2016 bias adjusted and annualised NO <sub>2</sub> (μg/m³)
M2J5_009_1215	587266	163738	2 Chestnut Street ME9 8DG/on TP across from 30mph sign	Background	M2 Junction 5 Improvements	24.2
M2J5_012_1215	588313	160896	End of Rookery Close ME9 8ED/on fencepost at end of Close southside	Roadside	M2 Junction 5 Improvements	20.3
M2J5_013_1215	583119	163599	Windmill Farm, Yaugher Lane (on bridge over M2) ME9 7XE, TP 138, opposite Oak Born Farm	Roadside	M2 Junction 5 Improvements	23.4
M2J5_014_1215	579733	163371	End of Houghton Avenue ME7 3RY, On fence down alley to the left	Roadside	M2 Junction 5 Improvements	26.6
M2J5_015_1215	580522	163095	Deanwood Drive at the back of 17 Sedley Close ME8 9QY, LP DAJ23	Background	M2 Junction 5 Improvements	29.9
M2J5_016_1215	580022	163054	Wigmore Road, near roundabout with Maidstone Road ME8 OLU/On Metal pole opposite wigmore road (by fir tree)	Roadside	M2 Junction 5 Improvements	35.5
J23-27_002_0117	535297	199994	Bullsmoor Way, Waltham Cross	Roadside	M25 J23-27	39.6
J23-27_003_0117	535431	200090	Theresa Gardens, Waltham Cross	Roadside	M25 J23-27	34.7

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Site description	Site classification	Scheme/project	2016 bias adjusted and annualised NO <sub>2</sub> (μg/m³)
J23-27_004_0117	535640	200000	Holmesdale, Waltham Cross	Roadside	M25 J23-27	31.8
J23-27_005_0117	536204	200038	Arlington Crescent, Waltham Cross	Roadside	M25 J23-27	49.7
J23-27_006_0117	538709	199859	Lodge Lane, Waltham Abbey	Roadside	M25 J23-27	35.0
J23-27_007_0117	538923	199797	Lodge Lane, Waltham Abbey	Roadside	M25 J23-27	34.7
J23-27_008_0117	538890	199737	Beechfield Walk, Waltham Abbey	Background	M25 J23-27	32.2
J23-27_010_0117	545267	200963	Ivy Chimneys Rd, Epping	Roadside	M25 J23-27	39.3
J23-27_011_0117	545028	200951	Theydon Rd, Epping	Roadside	M25 J23-27	39.2
Dartford_001_0117	555664	174865	Eliot Road, Dartford	Roadside	Dartford	40.1
Dartford_002_0117	555503	174707	Attlee Dr, Dartford	Background	Dartford	40.2
Dartford_003_0117	555432	174454	Bow Arrow Ln, Dartford	Roadside	Dartford	39.8
Dartford_004_0117	555464	174128	Finchley CI, Dartford	Roadside	Dartford	35.8
Dartford_005_0117	555632	173523	Wayville Rd, Dartford	Roadside	Dartford	38.1
Dartford_006_0117	555600	173234	Churchill Cl, Dartford	Roadside	Dartford	32.7
Dartford_007_0117	556027	172634	Trolling Down Hill, Dartford	Roadside	Dartford	55.9
Dartford_008_0117	555802	173131	Queens Gardens, Dartford	Background	Dartford	37.2
Dartford_009_0117	555864	173365	Princes Rd, Dartford	Roadside	Dartford	46.3

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Site description	Site classification	Scheme/project	2016 bias adjusted and annualised NO <sub>2</sub> (µg/m³)
Dartford_010_0117	555740	173678	Watling St, Dartford	Roadside	Dartford	50.4
Dartford_012_0117	555519	174208	Osbourne Rd, Dartford	Roadside	Dartford	49.3
Dartford_013_0117	555490	174439	Bow Arrow Ln, Dartford	Roadside	Dartford	55.6
Dartford_015_0117	555648	175239	Cavell Crescent, Dartford	Background	Dartford	30.4
Dartford_016/17/18_01 17	558465	174671	Station Rd, Greenhithe	Roadside (Co- location)	Dartford	48.3

**Bold** = Exceedance of the annual mean NO<sub>2</sub> AQS objective (40µg/m<sup>3</sup>)

All sites have greater than 75% data capture for the monitoring period.

## 5 Project-specific air quality monitoring data

Table 5.1 Annual mean NO<sub>2</sub> from Project diffusion tube monitoring within 200m of construction and operational Affected Road Network

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Location	Site type	2016 bias adjusted and annualised NO2 (µg/m3)
LTC_ECO_03	567820	173214	Castle lane, DA12 4TA,	Roadside	23.1
LTC_ECO_05	567357	169801	Thong lane, DA12 3HB,	Roadside	33.0
LTC_ECO_06B	570966	168938	Next to M2 Underpass, Razorbill Close	Roadside	55.8
LTC_ECO_07	570651	166134	Speed Camera Sign A228, ME2 1EQ	Roadside	61.8
LTC_ECO_08	574377	162148	Park at Bluebell Hill Picnic Site, ME5 9RG	Roadside	24.2
LTC_ECO_09	574861	160601	Old Chatham Road, opposite The Lower Bell Pub Car Park, ME20 7EF	Roadside	33.6
LTC_ECO_10	543670	154643	Croydon Road TN16 2DY	Roadside	31.5
LTC_ECO_11	568293	169699	Brewers Road, DA12 3HD	Roadside	38.2
LTC_ECO_12	574892	161644	125 Warren Road, ME5	Rural	20.9
LTC_ECO_13	551671	181415	Footbridge off Ferry Lane Roundabout	Roadside	42.3
LTC_ECO_15	562992	179383	Stanford Road, RM16 2XE	Roadside	35.2
LTC_ECO_1b	556414	172363	Darneth Wood_Gore Road Roundabout (Darenth Country Park)	Rural	33.6
LTC_ECO_2b	558090	173100	Entrance to Wood Lane	Roadside	30.7
LTC04	557605	181062	Gatehope Drive, RM15 5JR	Rural	33.8
LTC06	561035	180529	Stifford Clays Road, RM16 2DU	Roadside	39.0
LTC07	563595	180196	Gammonfields Way	Roadside	31.8
LTC08	563928	179673	Farm Road past Longley Mews, RM16 3AG	Urban Background	28.7

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Location	Site type	2016 bias adjusted and annualised NO2 (µg/m3)
LTC10	564000	178996	Templer Ave, RM16 4ES	Roadside	29.4
LTC13	565602	181268	Stanford Road	Roadside	38.2
LTC14	565363	182248	Brentwood Road/Orsett Road Junction	Roadside	35.3
LTC15	562893	188439	Cadogan Ave, CM13 3TX	Rural	20.0
LTC16	562408	189151	Thorndon Ave, CM13 3TT	Roadside	54.3
LTC18	555245	189075	Surrey Dr, RM11 3EX	Roadside	29.4
LTC20	560391	188790	Little Warley Hall Lane, CM13 3ES	Roadside	42.5
LTC22	572273	186967	Merrick's Lane, SS16 4RT	Intermediate	36.4
LTC23	574048	188044	Brackendale Avenue, SS13 3JR	Roadside	35.2
LTC25	576773	189583	Rushbottom Lane, SS7 4LY	Roadside	27.9
LTC26	578405	190585	Lychgate Farm, SS6 7TY	Roadside	37.9
LTC28	555862	173363	Harvester Car Park, DA2 6NQ	Roadside	46.2
LTC29	555588	173351	A225, opposite BP Garage/Subway	Roadside	53.0
LTC30	555660	174865	Elliot Road, DA1 5DP	Roadside	47.4
LTC31	555431	174453	Bow Arrow Lane, DA1 5DD	Roadside	47.0
LTC32	555507	174445	As above	Roadside	48.0
LTC33	555264	171394	Hawley Road, DA2 7RL	Roadside	41.8
LTC34	558622	172752	Bean Lane	Roadside - Co- location	52.6
LTC35	558622	172752	Bean Lane	Roadside - Co- location	54.8
LTC36	558622	172752	Bean Lane	Roadside - Co- location	54.0

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Location	Site type	2016 bias adjusted and annualised NO2 (µg/m3)
LTC37	558665	172650	Bean Lane, DA2 8AZ	Roadside	58.7
LTC38	562218	172312	Pepper Hill, DA11 8EZ	Roadside	43.6
LTC39	562431	172158	Roman Road, DA11 8HA	Roadside	45.0
LTC40	566108	170251	Henhurst Rd, DA12 5UD	Roadside	28.8
LTC41	567254	170959	Thong Lane,DA12 4AA	Roadside	20.2
LTC42	567151	171231	Thong Lane, DA12 4LH	Roadside	21.1
LTC44	567081	172837	Rochester Road/Vicarage Lane Junction, DA12 4TJ	Roadside	33.5
LTC45C	567574	172770	Rochester Road, DA12 4TB	Roadside	27.8
LTC46	567800	173205	Lower Higham Road, DA12 2NR	Roadside	22.3
LTC47	568787	172044	Meopham Shorne, Gravesend Road DA12 3JH	Roadside	30.7
LTC48	569392	171739	Forge Lane, DA12 3JN	Roadside	22.4
LTC49	570746	171119	Gravesend Road, ME3 7DS	Roadside	35.7
LTC50	571202	170765	Charles Dickens Avenue, ME3 7NY	Roadside	35.1
LTC51	570515	169558	2 Old Watling Street, ME2 3UG	Roadside	32.0
LTC52	570726	169412	5 Squires Close ME2 2TZ	Roadside	40.6
LTC53	571778	168082	91 Rushdean Road, ME2 2PD	Roadside	35.2
LTC54	572672	166727	45 Warwick Cres, ME1 3LE	Urban Background	29.3
LTC55	572798	166596	33 Wouldham Road, ME1 3JY	Roadside	34.0
LTC56	574694	163008	473 Maidstone Road, ME5 9RX	Roadside	39.3
LTC57	574549	162467	45 Keefe Close, ME5 9AG	Roadside	29.6
LTC58	574971	162355	296 Robin Hood Lane, ME	Roadside	29.8

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Location	Site type	2016 bias adjusted and annualised NO2 (µg/m3)
LTC59	572052	158657	174 Station Road, ME20 7JL	Roadside	42.5
LTC60	571806	158643	7 Trewin Close, ME20 7JS	Roadside	28.2
LTC61	570373	159030	202 New Hythe Lane, ME20 6PT	Roadside	38.1
LTC62	569622	159142	32 Willow Road, ME20 6QZ	Urban Background	27.1
LTC63	569967	159184	16 Thackeray Road, ME20 6TH	Urban Background	34.4
LTC64	570620	161881	By Snod Land Station_Cantium Place	Urban Background	26.6
LTC65	570487	165811	A228 Rochester Road	Roadside	58.0
LTC66	560921	159598	Howlands Road, ME2 1AE	Rural	22.9
LTC67	561061	158272	1 Borough Green Road, TN15 7RD	Roadside	30.2
LTC68	550964	157662	190 London Road, TN13 2TE (Dunton Green)	Roadside	39.5
LTC72	563554	180882	14 Baker Street, Orsett, Grays, RM16 3LJ	Roadside	35.6
LTC73	563571	180771	19 Baker Street	Roadside	36.2
LTC75	565080	179651	5 Courntey Road, Grays, RM16 4TZ	Roadside	34.7
LTC76	558454	185123	12 Ockendon Road, Upminster, RM14 3QR	Roadside	39.8
LTC77	558321	185101	Ockendon Road, Upminster, RM14 3QR	Roadside	35.9
LTC78	560930	179856	Treacle Mine Rdbt W, RM16 6QX	Roadside	53.6
LTC79	561058	179859	Treacle Mine Rdbt W, RM16 2PN	Roadside	54.0
LTC80	571243	166976	A228, corner of Pilgrims Way, ME2 1LQ	Roadside	59.6
LTC81	571173	166647	A228, ME2 1AA	Roadside	62.8
LTC82	555041	172050	A225 north of A2, DA1 1PX	Roadside	38.7*
LTC84ABC	571257	166993	Pilgrims Way, ME2 1LQ	Roadside	52.0
LTC86	571193	166702	Station Rd, ME2 1AA	Roadside	28.5

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Location	Site type	2016 bias adjusted and annualised NO2 (µg/m3)
LTC87	571130	166649	The Glebe, ME2 1LW	Roadside	21.1
LTC88ABC	570637	166093	A228 North Halling, ME2 1EQ	Roadside	35.2
LTC89	570615	166064	A228 opp Pilgrims Rd, ME2 1EQ	Roadside	50.8
LTC90	570310	165175	Germander Ave, ME2 1GA	Roadside	24.2
LTC91	570288	164967	A228 Formby Rd, ME2 1GD	Roadside	35.1
LTC93	570444	162872	A228 Nursery, ME6 5PJ	Roadside	55.3
LTC96	570533	161465	A228, Parallel to Brook Street ME6 5BB	Roadside	55.9
LTC74	563405	181345	4 Baker Street, Orsett, Grays, RM16 3LJ	Roadside	31.8
LTC_ECO_04B	568197	173332	DA12 2NY	Rural	17.9
LTC11	564470	177410	204 Feenan Hwy, RM18 8HD	Roadside	32.5
LTC12	566744	177639	Church Lane, RM18 8QX	Rural	24.9
LTC17	559448	188467	Warley Street/Church Lane Junction	Roadside	40.0
LTC43	566451	173158	Rochester Road, DA12 2JF	Roadside	37.7
LTC71	564900	176083	London Road, (past Elizabeth Close) Tilbury	Roadside	27.4

**Bold** = Exceedance of the annual mean NO<sub>2</sub> AQS objective (40µg/m³)

<sup>\* =</sup> Data capture <75% for monitoring period.

## 6 Connect Plus air quality monitoring data

Table 6.1 Annual mean NO₂ from Connect Plus diffusion tube monitoring within 200m of construction and operational Affected Road Network

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Location	Site type	2016 bias adjusted and annualised NO <sub>2</sub> (µg/m³)
1.1CP	557514.9	177723.7	North of Dartford Tunnel between the tunnel and junction 31		63.3
1.2CP	557517	177723.1	North of Dartford Tunnel between the tunnel and junction 31		63.1
1.3CP	557518.8	177722.7	North of Dartford Tunnel between the tunnel and junction 31	Roadside	60.3
13CP	538997.6	199792.4	M25 junction 25-26	Roadside	31.1
14CP	545220.1	200941.5	M25 junction 26-27	Roadside	41.9
17CP	561050.9	158412	M26 junction 1-2a	Roadside	34.1
18CP	560937.9	159627.4	M20 junction 2-1	Roadside	27.9
19CP	550528.7	197714.3	M25 junction 27-28	Roadside	33.5
2.1CP/2.2CP/ 2.3CP	549597.2	156716.7	M25 junction 5	Roadside	35.5*
20CP	553534.8	195458.8	M25 junction 27-28	Roadside	34.5
21CP	558177.3	184121.7	M25 junction 29-30	Roadside	30.9
22CP	557505.3	181068	M25 junction 29-30	Roadside	45.7
3CP	538441.3	154000	M25 junction 5-6	Roadside	29.2
31CP	550321.6	161976.1	M25 junction 4-5	Roadside	21.7
32.1CP	555717	167041.2	M20 junction 1-2	Roadside	23.6
32.2CP	555724.2	167056.3	M20 junction 1-2	Roadside	24.2

Site ID	X OS grid ref (m)	Y OS grid ref (m)	Location	Site type	2016 bias adjusted and annualised NO <sub>2</sub> (µg/m³)
32.3CP	555734.2	167071.7	M20 junction 1-2	Roadside	21.9
33CP	554499.3	158173.8	M26 junction 1-2a	Roadside	30.0
36CP	557351	178826.2	M25 junction 31	Roadside	57.7
38.1CP	555762.7	173151.3	A282 junction 1b-2	Roadside	37.0
39CP	555287.6	171389.1	M25 junction 2-3	Roadside	35.1
41CP	534927.3	199961.3	M25 junction 25	Roadside	72.0
43CP	544587.1	201042.6	M25 junction 26-27	Roadside	44.6
44CP	544540.8	201009.2	M25 junction 26-27	Roadside	49.4
45CP	544554	201102	M25 junction 26-27	Roadside	32.2
47CP	550922.7	157723.2	M26 junction 1-2a	Roadside	30.7
48CP	547281.8	156090.8	M25 junction 5-6	Roadside	34.4
49CP	553374.1	167590.1	M20 junction 1-2	Roadside	39.3
50CP	545024.7	200988.8	M25 junction 26-27	Roadside	33.4
7CP	556913.2	192380.4	M25 junction 28	Roadside	51.0

**Bold** = Exceedance of the annual mean NO<sub>2</sub> AQS objective (40µg/m³)

<sup>\* =</sup> Data capture <75% for monitoring period

## 7 Nitrogen critical loads for ecological designated habitats

Table 7.1 Baseline conditions for ecological designated habitats in operational Affected Road Network

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
A2 Rochester Way East Embankment	LWS	Broadleaved deciduous woodland	10-20	30.5
A20 London Road RNR	LWS_RNR	Sub-atlantic semi-dry calcareous grassland	15-25	17.4
A20 London Road RNR (TM11)	RNR	Sub-atlantic semi-dry calcareous grassland	15-25	15.7
A226 Gravesend	LWS	Sub-atlantic semi-dry calcareous grassland	15-25	15.3
A226 Gravesend Road, Chalk RNR	RNR	Sub-atlantic semi-dry calcareous grassland	15-25	15.3
A227/A20 London Road RNR	RNR	Sub-atlantic semi-dry calcareous grassland	15-25	16.8
A227/A20 London Road RNR (TM10)	RNR	Sub-atlantic semi-dry calcareous grassland	15-25	15.7
Addington Meadow	LWS	Non-mediterranean dry acid and neutral closed grassland	10-15	24.9
Alkerden Lane Pit, Swanscombe	LWS	Sub-atlantic semi-dry calcareous grassland	15-25	16.5
All Saints Churchyard and Keepers Cottage Meadow	LWS	Low and medium altitude hay meadows	20-30	16.2
All Saints Grassland	LWS	Sub-atlantic semi-dry calcareous grassland	15-25	27.4

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
ANDREWS WOOD(AW_Theme_ID 1499246)	AW_LWS	Broadleaved deciduous woodland	10-20	30.0
Arena Essex, West Thurrock	LWS	low and medium altitude hay meadows	20 -30	14.4
Arisdale Avenue	LWS	Low and medium altitude hay meadows	20 - 30	16.5
Armitage Wood And Hamfield Shaw	LWS	Broadleaved deciduous woodland	10-20	28.1
Ashenbank Woodland	LWS	Broadleaved deciduous woodland	10-20	26.7
AW_Theme_ID _1420000 (Hangmans Wood)	AW	Broadleaved deciduous woodland	10-20	28.7
AW_Theme_ID_1486679 (Object ID 9096)	AW	Broadleaved deciduous woodland	10-20	29.4
AW_Theme_ID_1486820 (A2/M2 ROUNDABOUT)	AW	Broadleaved deciduous woodland	10-20	29.4
AW_Theme_ID_1486860 (Shorne Woods)	SSSI_LWS_ AW	Broadleaved deciduous woodland	10-20	26.7
AW_Theme_ID_1486867 (Head Barn Wood)	AW	Broadleaved deciduous woodland	10-20	29.4
AW_Theme_ID_1486883 (Object ID 9151)	AW	Broadleaved deciduous woodland	10-20	29.4
AW_Theme_ID_1486891 (Between M2 carriageways)	AW	Broadleaved deciduous woodland	10-20	29.4
AW_Theme_ID_1486937 (Longhoes)	AW	Broadleaved deciduous woodland	10-20	29.4
AW_Theme_ID_1495778 (Churchfield Wood)	AW	Broadleaved deciduous woodland	10-20	29.8
AW_Theme_ID_1498304	AW	Broadleaved deciduous woodland	10-20	29.3

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
AW_Theme_ID_1498695 (Object ID 11735)	AW	Broadleaved deciduous woodland	10-20	31.1
AW_Theme_ID_1498717 (OBJECT ID 11749)	AW	Broadleaved deciduous woodland	10-20	31.1
AW_Theme_ID_1498718	AW	Broadleaved deciduous woodland	10-20	29.5
AW_Theme_ID_1501634 (OBJECT ID 12881)	AW	Broadleaved deciduous woodland	10-20	31.1
AW_Theme_ID1420004	AW	Broadleaved deciduous woodland	10-20	50.3
AW_Theme_ID1420006	AW	Broadleaved deciduous woodland	10-20	28.3
AW_Theme_ID1420007	AW	Broadleaved deciduous woodland	10-20	28.3
AW_Theme_ID1420008	LWS_AW	Broadleaved deciduous woodland	10-20	29.4
AW_Theme_ID1420009	LWS_AW	Broadleaved deciduous woodland	10-20	29.4
AW_Theme_ID1420010	LWS_AW	Broadleaved deciduous woodland	10-20	29.4
AW_Theme_ID1420011	AW	Broadleaved deciduous woodland	10-20	29.4
AW_Theme_ID1420012	AW_LWS	Broadleaved deciduous woodland	10-20	30.2
AW_Theme_ID1420049	AW_LWS	Broadleaved deciduous woodland	10-20	31.2
AW_Theme_ID1486628	AW	Broadleaved deciduous woodland	10-20	29.1
AW_Theme_ID1486701	AW	Broadleaved deciduous woodland	10-20	29.1
AW_Theme_ID1486763	AW	Broadleaved deciduous woodland	10-20	29.1
AW_Theme_ID1486835	AW	Broadleaved deciduous woodland	10-20	26.7
AW_Theme_ID1486951	AW	Broadleaved deciduous woodland	10-20	26.7
AW_Theme_ID1487009	AW	Broadleaved deciduous woodland	10-20	27.6
AW_Theme_ID1487077	AW	Broadleaved deciduous woodland	10-20	45.2

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
AW_Theme_ID1487079	AW	Broadleaved deciduous woodland	10-20	45.2
AW_Theme_ID1487085	AW	Broadleaved deciduous woodland	10-20	27.6
AW_Theme_ID1487086	AW	Broadleaved deciduous woodland	10-20	45.2
AW_Theme_ID1487106	AW	Broadleaved deciduous woodland	10-20	45.2
AW_Theme_ID1487109	AW	Broadleaved deciduous woodland	10-20	45.2
AW_Theme_ID1493109	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1493452	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1493593	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1493594	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1493595	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1493596	AW	Broadleaved deciduous woodland	10-20	27.7
AW_Theme_ID1493597	AW	Broadleaved deciduous woodland	10-20	27.7
AW_Theme_ID1493649	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1493650	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1493651	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1493652	AW	Broadleaved deciduous woodland	10-20	27.7
AW_Theme_ID1493828	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1493829	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1493830	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1493831	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494010	AW	Broadleaved deciduous woodland	10-20	28.1

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
AW_Theme_ID1494105	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494106	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494110	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494111	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494112	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494133	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494134	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494135	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494217	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494437	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494445	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494500	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494543	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494626	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1494717	AW	Broadleaved deciduous woodland	10-20	28.1
AW_Theme_ID1495743	AW_LWS	Broadleaved deciduous woodland	10-20	28.7
AW_Theme_ID1498349	SSSI_AW	Broadleaved deciduous woodland	10-20	29.1
AW_Theme_ID1498352	AW	Broadleaved deciduous woodland	10-20	30.2
AW_Theme_ID1498361	SSSI_AW	Broadleaved deciduous woodland	10-20	29.1
AW_Theme_ID1498387	AW	Broadleaved deciduous woodland	10-20	30.9
AW_Theme_ID1498400	AW	Broadleaved deciduous woodland	10-20	26.5

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
AW_Theme_ID1498421	AW	Broadleaved deciduous woodland	10-20	28.7
AW_Theme_ID1498448	SSSI_AW	Broadleaved deciduous woodland	10-20	29.1
AW_Theme_ID1498472	AW	Broadleaved deciduous woodland	10-20	28.7
AW_Theme_ID1498483	AW	Broadleaved deciduous woodland	10-20	29.3
AW_Theme_ID1498492	AW	Broadleaved deciduous woodland	10-20	28.7
AW_Theme_ID1498665	AW	Broadleaved deciduous woodland	10-20	27.6
AW_Theme_ID1498666	AW	Broadleaved deciduous woodland	10-20	27.6
AW_Theme_ID1498669	AW	Broadleaved deciduous woodland	10-20	27.6
AW_Theme_ID1498670	AW_LWS	Broadleaved deciduous woodland	10-20	27.9
AW_Theme_ID1498682	AW	Broadleaved deciduous woodland	10-20	30.7
AW_Theme_ID1498694	AW	Broadleaved deciduous woodland	10-20	30.1
AW_Theme_ID1498703	AW	Broadleaved deciduous woodland	10-20	30.1
AW_Theme_ID1498708	AW	Broadleaved deciduous woodland	10-20	30.1
AW_Theme_ID1498743	AW	Broadleaved deciduous woodland	10-20	29.5
AW_Theme_ID1498745	AW_LWS	Broadleaved deciduous woodland	10-20	30.2
AW_Theme_ID1498746	AW_LWS	Broadleaved deciduous woodland	10-20	30.2
AW_Theme_ID1498778	AW_LWS	Broadleaved deciduous woodland	10-20	30.2
AW_Theme_ID1498779	AW_LWS	Broadleaved deciduous woodland	10-20	30.2
AW_Theme_ID1498857	AW	Broadleaved deciduous woodland	10-20	27.7
AW_Theme_ID1498877	AW	Broadleaved deciduous woodland	10-20	27.7
AW_Theme_ID1498878	AW	Broadleaved deciduous woodland	10-20	27.7

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
AW_Theme_ID1498881	AW	Broadleaved deciduous woodland	10-20	27.7
AW_Theme_ID1498882	AW	Broadleaved deciduous woodland	10-20	27.7
AW_Theme_ID1498930	AW	Broadleaved deciduous woodland	10-20	27.7
AW_Theme_ID1499144	AW	Broadleaved deciduous woodland	10-20	30.0
AW_Theme_ID1499145	AW	Broadleaved deciduous woodland	10-20	30.0
AW_Theme_ID1499146	AW	Broadleaved deciduous woodland	10-20	30.0
AW_Theme_ID1499147	AW	Broadleaved deciduous woodland	10-20	30.0
AW_Theme_ID1499149	AW	Broadleaved deciduous woodland	10-20	32.1
AW_Theme_ID1499167	SSSI_AW	Broadleaved deciduous woodland	10-20	30.0
AW_Theme_ID1499247	AW	Broadleaved deciduous woodland	10-20	30.0
AW_Theme_ID1499248	AW	Broadleaved deciduous woodland	10-20	30.0
AW_Theme_ID1499250	AW	Broadleaved deciduous woodland	10-20	30.0
AW_Theme_ID1499384	AW_LWS	Broadleaved deciduous woodland	10-20	27.9
AW_Theme_ID1499403	AW	Broadleaved deciduous woodland	10-20	30.0
AW_Theme_ID1499439	AW	Broadleaved deciduous woodland	10-20	30.0
AW_Theme_ID1499454	AW	Broadleaved deciduous woodland	10-20	30.2
AW_Theme_ID1499825	AW	Broadleaved deciduous woodland	10-20	44.7
AW_Theme_ID1499826	AW	Broadleaved deciduous woodland	10-20	44.7
AW_Theme_ID1499827	AW	Broadleaved deciduous woodland	10-20	44.7
AW_Theme_ID1499830	AW	Broadleaved deciduous woodland	10-20	44.7
AW_Theme_ID1499833	AW	Broadleaved deciduous woodland	10-20	44.7

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
AW_Theme_ID1499842	AW	Broadleaved deciduous woodland	10-20	32.1
AW_Theme_ID1499844	AW	Broadleaved deciduous woodland	10-20	44.7
AW_Theme_ID1499845	AW	Broadleaved deciduous woodland	10-20	32.1
AW_Theme_ID1499847	AW	Broadleaved deciduous woodland	10-20	27.9
AW_Theme_ID1499848	AW	Broadleaved deciduous woodland	10-20	27.9
AW_Theme_ID1499849	AW	Broadleaved deciduous woodland	10-20	27.9
AW_Theme_ID1499850	AW	Broadleaved deciduous woodland	10-20	27.9
AW_Theme_ID1499851	AW	Broadleaved deciduous woodland	10-20	27.9
AW_Theme_ID1499854	AW	Broadleaved deciduous woodland	10-20	32.1
AW_Theme_ID1499889	AW	Broadleaved deciduous woodland	10-20	30.2
AW_Theme_ID1500061	AW	Broadleaved deciduous woodland	10-20	30.0
AW_Theme_ID1500062	AW	Broadleaved deciduous woodland	10-20	30.0
AW_Theme_ID1500115	AW	Broadleaved deciduous woodland	10-20	31.8
AW_Theme_ID1500137	AW	Broadleaved deciduous woodland	10-20	30.0
AW_Theme_ID1500200	AW	Broadleaved deciduous woodland	10-20	44.7
AW_Theme_ID1500214	AW	Broadleaved deciduous woodland	10-20	31.8
AW_Theme_ID1500571	AW	Broadleaved deciduous woodland	10-20	31.1
AW_Theme_ID1501052	AW	Broadleaved deciduous woodland	10-20	30.9
AW_Theme_ID1501199	AW	Broadleaved deciduous woodland	10-20	30.9
AW_Theme_ID1501402	AW	Broadleaved deciduous woodland	10-20	30.0
AW_Theme_ID1501442	AW	Broadleaved deciduous woodland	10-20	30.2

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
AW_Theme_ID1501597	AW	Broadleaved deciduous woodland	10-20	27.7
AW_Theme_ID1501598	AW	Broadleaved deciduous woodland	10-20	27.7
AW_Theme_ID1501599	AW	Broadleaved deciduous woodland	10-20	27.7
AW_Theme_ID1501642	AW	Broadleaved deciduous woodland	10-20	29.1
AW_Theme_ID1501643	AW	Broadleaved deciduous woodland	10-20	29.1
AW_Theme_ID1501675	AW	Broadleaved deciduous woodland	10-20	31.1
AW_Theme_ID1501686	AW	Broadleaved deciduous woodland	10-20	30.1
AWPolders Wood/Howfield Wood	LWS_AW	Broadleaved deciduous woodland	10-20	29.4
Aylesford Old Pit / Yoakley Land	LWS	Low and medium altitude hay meadows	20-30	16.9
B2015 Branbridges Road RNR	RNR	Sub-atlantic semi-dry calcareous grassland	15-25	16.8
Barber's Wood	AW_LWS	Broadleaved deciduous woodland	10-20	31.1
Barber's Wood And Lane	AW_LWS	Broadleaved deciduous woodland	10-20	31.1
BARRETT'S SHAW	LWS	Broadleaved deciduous woodland	10-20	29.4
Beckton Sewage Treatment Works Northern Settling Lagoon	LWS	Broadleaved deciduous woodland	10-20	38.1
Belhus Lakes, Belhus Wood Country Park, Aveley	LWS	Broadleaved deciduous woodland	10-20	30.0
Belhus Park East	LWS	Low and medium altitude hay meadows	20-30	16.5
Belhus Woods And Lakes	LWS	Broadleaved deciduous woodland	10-20	30.0

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Bell Common/Ivy Chimneys Complex	LWS	Non-mediterranean dry acid and neutral closed grassland	10-15	17.5
Bells Hill Meadow	LWS	Sub-atlantic semi-dry calcareous grassland	15-25	27.4
BIRCH WOOD(AW_Theme_ID 1498312)	AW	Broadleaved deciduous woodland	10-20	30.2
Birching Coppice Complex	AW_LWS	Broadleaved deciduous woodland	10-20	31.2
Blackshots Nature Area, Grays	LWS	Low and medium altitude hay meadows	20-30	16.7
Blean Woods NNR	SSSI_AW_N NR	Broadleaved deciduous woodland	10-20	26.5
Blean Woods South	LWS_AW	Broadleaved deciduous woodland	10-20	29.4
Blean Woods, Harbledown To Dunkirk (Extra To SSSI)	LWS	Broadleaved deciduous woodland	10-20	26.5
Blue Bell Hill Banks And Verges	LWS_RNR	Broadleaved deciduous woodland	5 - 15	29.5
Blunts Farm Brownfield	LWS	Broadleaved deciduous woodland	10 -20	31.1
Bob's Lane And Ash Lane	LWS	Broadleaved deciduous woodland	10 - 20	30.7
Botany Marshes	LWS	Non-mediterranean dry acid and neutral closed grassland	10 - 15	16.2
Bowers Gifford Grasslands	LWS	Low and medium altitude hay meadows	20-30	27.4
Boxley Warren	LNR	Broadleaved deciduous woodland	10-20	31.1
Braeburn Park	LWS	Non-mediterranean dry acid and neutral closed grassland	10-15	17.1
Brett Havering Aggregates West	LWS	Broadleaved deciduous woodland	10-20	33.2

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Brickbarn Wood and Coombe Wood, South Ockendon	LWS	Meso- and eutrophic Quercus woodland	15-20	25.8
BRICKBARN WOOD(AW_Theme_ID 1119436)	AW	Broadleaved deciduous woodland	10-20	25.8
Bridge Woods	AW	Broadleaved deciduous woodland	10-20	29.5
Bridge Woods, Burham	AW	Broadleaved deciduous woodland	10-20	29.5
BRIMP/FOWLES/ROUND WOOD(AW_Theme_ID 1498785)	AW	Broadleaved deciduous woodland	10-20	30.7
Bush Grove	LWS	Meso- and eutrophic Quercus woodland	15-20	31.1
BUTTS HILL WOOD(AW_Theme_ID 1498550)	AW	Broadleaved deciduous woodland	10-20	27.6
Canal And Grazing Marsh, Higham	LWS	Pioneer, low-mid, mid-upper saltmarshes	20-30	15.3
Cat's Mede	LWS	Broadleaved deciduous woodland	10 - 20	30.2
CHADWELL WOOD(AW_Theme_ID 1119923)	AW	Broadleaved deciduous woodland	10-20	28.7
Chalk Bank, Longfield	LWS	Broadleaved deciduous woodland	10-20	29.7
Chalk Lane Embankment	LWS	Sub-atlantic semi-dry calcareous grassland	15-25	18.5
Chalkpit Wood	LWS	Broadleaved deciduous woodland	10 - 20	28.1
Chattenden Woods And Lodge Hill	AW	Meso- and eutrophic Quercus woodland	15-20	26.2
Chequers Road Wood	LWS	Broadleaved deciduous woodland	10 - 20	30.7

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Chevening Estate	LWS	Broadleaved deciduous woodland	10 - 20	44.7
Church Wood	AW	Broadleaved deciduous woodland	10-20	33.5
Church Woods, Blean	SSSI_AW_N NR	Broadleaved deciduous woodland	10 - 20	26.5
Church/Bossenden Woods	SSSI_AW_N NR	Broadleaved deciduous woodland	10-20	26.5
Churchfield Wood, Meadows And St Mary's Church	LWS	Broadleaved deciduous woodland	10 - 20	29.8
Clay Tye Wood	AW	Broadleaved deciduous woodland	10 - 20	28.7
CLAY TYE WOOD(AW_Theme_ID 1495781)	AW	Broadleaved deciduous woodland	10-20	28.7
Claylane Wood	AW	Broadleaved deciduous woodland	10-20	26.7
Clifftop walk behind Clockhouse Lane/Merlin Close*	LWS	Sub-atlantic semi-dry calcareous grassland	15-25	16.2
Cobham Woods	SSSI_AW	Broadleaved deciduous woodland	10 - 20	29.4
Cockneys Wood (AW_Theme_ID1499384 AW)	AW_LWS	Broadleaved deciduous woodland	10-20	27.9
Codham Hall Wood	LWS_AW	Broadleaved deciduous woodland	10-20	28.7
Codham Hall Wood West	AW_LWS	Broadleaved deciduous woodland	10 - 20	28.7
Codham Hall Woods	LWS_AW	Broadleaved deciduous woodland	10 - 20	28.7
College Wood	AW	Broadleaved deciduous woodland	10-20	28.8
COMBE WOOD NORTH(AW_Theme_ID 1499370)	AW_LWS	Broadleaved deciduous woodland	10-20	44.7

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Combe Wood, Brasted	AW_LWS	Broadleaved deciduous woodland	10 - 20	44.7
Common Watercourse And Williams Fishing Lake	LWS	Broadleaved deciduous woodland	10 - 20	33.2
CONEYEARTH/PASCALLS/HOLLOWS WOODS(AW_Theme_ID 1499437)	AW	Broadleaved deciduous woodland	10-20	30.0
Conybury Wood	LWS	Broadleaved deciduous woodland	10 - 20	30.1
Coombe Wood	LWS	Broadleaved deciduous woodland	10-20	28.0
Coombe Wood Extension	LWS	Broadleaved deciduous woodland	10 - 20	28.0
COOMBEGREEN WOOD(AW_Theme_ID 1119482)	LWS_AW	Broadleaved deciduous woodland	10-20	30.2
Cooper's Wood(AW_Theme_ID 1498551)	AW_LWS	Broadleaved deciduous woodland	10-20	30.2
COOPERS WOOD(AW_Theme_ID 1498777)	AW	Broadleaved deciduous woodland	10-20	30.2
Copped Hall Green	LWS	Meso- and eutrophic Quercus woodland	15-20	30.1
Corner Of Junction At East End Of London Road RNR	RNR	Sub-atlantic semi-dry calcareous grassland	15-25	17.4
Corringham/Fobbing Marsh	LWS	Pioneer, low-mid, mid-upper saltmarshes	20-30	14.3
Court Wood, Shorne	LWS_AW	Broadleaved deciduous woodland	10-20	28.3
COXETT WOOD(AW_Theme_ID 1486928)	AW	Broadleaved deciduous woodland	10-20	28.8
Cranham Hall Shaws And Pasture	LWS	Broadleaved deciduous woodland	10-20	28.7
Cuckold'S Haven Nature Reserve	LWS	Low and medium altitude hay meadows	20-30	20.7

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Cuckoo Wood, Sandling	LWS	Broadleaved deciduous woodland	10 - 20	29.1
Cupids Coppice And Clacket Green	LWS	Broadleaved deciduous woodland	10 - 20	27.7
Curtis Plantation	LWS	Broadleaved deciduous woodland	10 - 20	30.7
Curtismill Green	SSSI	Low and medium altitude hay meadows	20 - 30	18.2
Cuxton Pir No. 3, Strood	LWS	Broadleaved deciduous woodland	10 - 20	29.4
Dagenham Breach And The Lower Beam River In Dagenham	LWS	Low and medium altitude hay meadows	20-30	20.7
DANE SHAW(AW_Theme_ID 1498350)	AW	Broadleaved deciduous woodland	10-20	28.7
Darenth Wood	SSSI_AW	Meso- and eutrophic Quercus woodland	15-20	29.1
DARENTH/LADIES WOODS(AW_Theme_ID 1498413)	SSSI_AW	Broadleaved deciduous woodland	10-20	29.1
Dartford Heath	LWS	Non-mediterranean dry acid and neutral closed grassland	10-15	17.1
Dartford Marshes	LWS	Valley mires, poor fens and transition mires	10-15	15.7
DENSTEAD WOODS(AW_Theme_ID 1501760)	AW_LWS	Broadleaved deciduous woodland	10-20	26.5
Disused Hospital Grounds, Mabledon	LWS	Sub-atlantic semi-dry calcareous grassland	15-25	16.5
Disused Railway Cutting, Longfield	LWS	Broadleaved deciduous woodland	10-20	29.7
Dog Kennel Wood(AW_Theme_ID 1498710)	AW	Broadleaved deciduous woodland	10-20	30.1

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Dunkirk Cemetery	LWS	Non-mediterranean dry acid and neutral closed grassland	10-15	15.4
Eastlands Spring	AW	Broadleaved deciduous woodland	10-20	29.4
Ebbsfleet Marshes, Northfleet	LWS	Valley mires, poor fens and transition mires	10-15	16.2
Eighteenacre/Wrens' Springs	LWS	Meso- and eutrophic Quercus woodland	15-20	31.4
Epping Forest	SSSI_AW	Fagus Woodland	10 -20	31.2
Epping Forest SAC and	SAC	Fagus Woodland	10 - 20	30.1
Epping-Ambresbury Banks	AW	Broadleaved deciduous woodland	10-20	30.1
Epping-Wintry Wood	SSSI_AW	Broadleaved deciduous woodland	10-20	31.2
ERRIOT WOOD(AW_Theme_ID 1498355)	AW	Broadleaved deciduous woodland	10-20	30.2
Extensions to Grays chalk pit, Grays	LWS	Sub-atlantic semi-dry calcareous grassland	15-25	16.2
Fane Road Meadows	LWS	Low and medium altitude hay meadows	20-30	17.1
Fawkham Road RNR	RNR	Sub-atlantic semi-dry calcareous grassland	15-25	17.5
Fields south of Cranham Marsh	LWS	Broadleaved deciduous woodland	10 - 20	28.7
Fish Pool Wood	AW	Broadleaved deciduous woodland	10-20	30.9
Five Acre Shaw And Lodge Wood	LWS	Broadleaved deciduous woodland	10 - 20	28.1
Flitch Way	LWS	Broadleaved deciduous woodland	10-20	30.4
Folkes Lane Woodland	LWS	Broadleaved deciduous woodland	10-20	28.7

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Ford Wood(AW_Theme_ID 1498664)	AW	Broadleaved deciduous woodland	10-20	27.6
Foxburrow Wood	LWS_AW	Broadleaved deciduous woodland	10-20	30.2
Foxburrow Wood, Upminster	AW_LWS	Broadleaved deciduous woodland	10 - 20	30.2
Foxlands Farm	LWS	Low and medium altitude hay meadows	20-30	15.8
Franks Wood And Cranham Brickfields	LWS	Broadleaved deciduous woodland	10 - 20	28.7
FRID WOOD(AW_Theme_ID 1498274)	AW	Broadleaved deciduous woodland	10-20	33.5
Friern Manor Wood	AW	Broadleaved deciduous woodland	10-20	29.4
Frith Woods Etc., Kits Coty	LWS	Broadleaved deciduous woodland	10-20	31.1
Frith/Impton Woods	AW	Broadleaved deciduous woodland	10-20	31.1
Gabrels Spring(AW_Theme_ID 1499926)	AW	Broadleaved deciduous woodland	10-20	29.7
GABRIELSPRING WOOD(AW_Theme_ID 1499117)	AW	Broadleaved deciduous woodland	10-20	29.7
Galleywood Common	LNR_LWS	Low and medium altitude hay meadows	20-30	18.3
Galleywood Common	NR_LWS	Low and medium altitude hay meadows	20-30	18.3
Garrold'S Meadow	SSSI	Low and medium altitude hay meadows	20-30	15.8
Gascoigne Road Pumping Station Rough	LWS	Broadleaved deciduous woodland	10-20	38.1
Golden Grove/Broadhams/Russets/Broadham Fir Plantation/Anis(AW_Theme_ID 1500063)	AW	Broadleaved deciduous woodland	10-20	32.1

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Goldsmiths Meadow, Langdon Hills	LWS	Low and medium altitude hay meadows	20-30	15.7
Goose Wood	AW	Broadleaved deciduous woodland	10-20	30.7
Goresbrook And The Ship & Shovel Sewer	LWS	Valley mires, poor fens and transition mires	10-15	20.7
Goshems Farm	LWS	Non-mediterranean dry acid and neutral closed grassland	10 - 15	16.1
Grassland Adjacent Farningham Wood	LWS	Non-mediterranean dry acid and neutral closed grassland	10-15	18.5
Grassland And Scrub, Istead Rise	LWS	Sub-atlantic semi-dry calcareous grassland	15-25	16.7
Gravelpit Wood	LWS	Broadleaved deciduous woodland	10-20	31.2
Grays Thurrock Chalk Pit	SSSI	Broadleaved, Mixed and Yew Woodland / Broadleaved deciduous woodland	10 -20	28.7
Great Crabbles Wood	SSSI_AW	Meso- and eutrophic Quercus woodland	15 - 20	29.4
Great Crabbles Wood	SSSI_AW	Meso- and eutrophic Quercus woodland	15 - 20	29.4
Great Stour, Ashford To Fordwich	LWS	Low and medium altitude hay meadows	20-30	16.8
Great Wood	SSSI_AW	Meso- and eutrophic Quercus woodland	15-20	29.4
GREATER THAMES MARSHES	NIA	Pioneer, low-mid, mid-upper saltmarshes	20-30	27.4

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
GREEN HILL WOOD(AW_Theme_ID 1498747)	AW	Broadleaved deciduous woodland	10-20	27.6
Green Lane/Brambly Shaw	LWS	Broadleaved deciduous woodland	10-20	30.1
Green Street Green Common	LWS	Non-mediterranean dry acid and neutral closed grassland	10-15	16.5
Hall Farm moat, paddock and St Mary Magdalene Churchyard, North Ockenden	LWS	Low and medium altitude hay meadows	20 - 30	16.5
Hall Lane verge and Montrose pastures	LWS	Low and medium altitude hay meadows	20 - 30	16.9
Hall Place (North) and Shenstone Park	LWS	Broadleaved deciduous woodland	10-20	29.8
Hall Wood	SSSI_AW	Broadleaved deciduous woodland	10 - 20	28.0
Hall/Gravehill Woods	LWS	Meso- and eutrophic Quercus woodland	15-20	28.0
Halling To Trottiscliffe Escarpment	SSSI	Coniferous woodland	5 - 15	29.4
Hangman's Wood & Deneholes	SSSI	Broadleaved, Mixed and Yew Woodland / Meso- and eutrophic Quercus woodland	15 - 20	28.7
Hangmans Wood Grays	LWS_AW	Broadleaved deciduous woodland	10-20	30.0
HANGMANS WOOD(AW_Theme_ID 1119444)	AW	Broadleaved deciduous woodland	10-20	30.0
Harlow Common	LWS	Low and medium altitude hay meadows	20-30	18.9
Harlow Park	AW_LWS	Broadleaved deciduous woodland	10-20	32.9

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
HARLOW PARK(AW_Theme_ID 1116318)	AW_LWS	Broadleaved deciduous woodland	10-20	32.9
Hartley Wood	LWS	Broadleaved deciduous woodland	10-20	29.3
Hawkesbury Grasslands	LWS	Low and medium altitude hay meadows	20-30	27.4
HAWSHILL/REDYN`S WOODS(AW_Theme_ID 1116320)	AW_LWS	Broadleaved deciduous woodland	10-20	31.2
HEVER/WESTFIELD WOODS(AW_Theme_ID 1499449)	AW	Broadleaved deciduous woodland	10-20	30.2
HILLS/COCKNEYS WOOD(AW_Theme_ID 1499141)	AW_LWS	Broadleaved deciduous woodland	10-20	27.9
Hillview	LWS	Low and medium altitude hay meadows	20-30	15.8
Hilly Spring	AW_LWS	Broadleaved deciduous woodland	10-20	31.1
HILLY SPRING(AW_Theme_ID 1119028)	AW_LWS	Broadleaved deciduous woodland	10-20	31.1
Hobbs Hole	AW	Broadleaved deciduous woodland	10-20	28.7
Hobbs Hole	LWS	Broadleaved deciduous woodland	10-20	28.7
Holborough To Burham Marshes	SSSI	Rich fens	15 - 30	16.8
Home Field Shaw(AW_Theme_ID 1499129)	AW	Broadleaved deciduous woodland	10-20	30.2
Home Field Wood(AW_Theme_ID 1499878)	AW	Broadleaved deciduous woodland	10-20	30.2
Homefield/Rectory Woods	AW	Broadleaved deciduous woodland	10-20	28.8
HOOK/RUMLEY'S WOOD(AW_Theme_ID 1498547)	AW	Broadleaved deciduous woodland	10-20	27.9

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Hope Wood	AW	Broadleaved deciduous woodland	10-20	30.9
Horndon Meadow	LWS	Low and medium altitude hay meadows	20-30	15.7
HORTON WOOD(AW_Theme_ID 1499115)	AW_LWS	Broadleaved deciduous woodland	10-20	29.7
Horton Wood, Horton Kirby	AW_LWS	Broadleaved deciduous woodland	10-20	29.7
HURST WOOD(AW_Theme_ID 1498339)	AW_LWS	Broadleaved deciduous woodland	10-20	26.5
Impton/Podkin Wood	AW	Broadleaved deciduous woodland	10-20	31.1
Ingrebourne Marshes	SSSI	Rich fens	15 - 30	18.2
Ingrebourne Valley	LWS	Valley mires, poor fens and transition mires	10 - 15	16.9
Ingrebourne Valley	LNR	Broadleaved deciduous woodland	10-20	33.2
Inner Thames Marshes	SSSI_LNR	Pioneer, low-mid, mid-upper saltmarshes	20-30	18.2
Jacksons Wood	LWS_AW	Broadleaved deciduous woodland	10-20	30.2
JACKSONS WOOD(AW_Theme_ID 1119481)	AW_LWS	Broadleaved deciduous woodland	10-20	30.2
Jermains Wood	LWS	Broadleaved deciduous woodland	10 - 20	30.2
Jills Field, Aveley	LWS	Non-mediterranean dry acid and neutral closed grassland	10-15	14.4
Judd's Wood	AW	Broadleaved deciduous woodland	10-20	27.9
Kingley Wood	LWS_AW	Broadleaved deciduous woodland	10-20	30.8
Kingley Wood	LWS_AW	Broadleaved deciduous woodland	10-20	30.8
Lady Grove	AW_LWS	Broadleaved deciduous woodland	10-20	32.8

Planning Inspectorate Scheme Ref: TR010032 Application Document Ref: TR010032/APP/6.3 DATE: October 2022

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
LADY GROVE(AW_Theme_ID 1116653)	AW_LWS	Broadleaved deciduous woodland	10-20	32.8
Langdon Complex	LWS	Broadleaved deciduous woodland	10-20	28.0
Langdon Lake And Meadows	LWS	Broadleaved deciduous woodland	10-20	28.0
Langdon Ridge	SSSI	Broadleaved deciduous woodland	10-20	50.3
Lea Valley	LWS	Broadleaved deciduous woodland	10-20	32.5
Leybourne Lakes Etc., Snodland	LWS	Low and medium altitude hay meadows	20-30	24.9
Leybourne Wood	LWS	Broadleaved deciduous woodland	10-20	45.2
Leybourne Wood	AW	Broadleaved deciduous woodland	10-20	45.2
Linford Pit	LWS	Broadleaved deciduous woodland	10-20	28.6
Lion Gorge Chafford Hundred	LWS	Broadleaved deciduous woodland	10-20	25.8
Lion Pit	SSSI	GEOLOGICAL SSSI	none	
Little Chef Pasture	LWS	Non-mediterranean dry acid and neutral closed grassland	10-15	15.8
Little Haven/Tile Wood Complex	LWS	Non-mediterranean dry acid and neutral closed grassland	10-15	15.8
LITTLE RYARSH WOOD(AW_Theme_ID 1487103)	AW	Broadleaved deciduous woodland	10-20	45.2
Little Thurrock reedbeds	LWS	Valley mires, poor fens and transition mires	10-15	16.2
Low Street Pit	LWS	Non-mediterranean dry acid and neutral closed grassland	10-15	16.1
Low Well Wood(AW_Theme_ID 1505468)	LWS	Broadleaved deciduous woodland	10-20	30.0

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Low Well Wood, South Ockendon	LWS	Broadleaved deciduous woodland	10-20	25.8
Lower River Beam And Ford Works Ditches	LWS	Broadleaved deciduous woodland	10-20	33.2
Lullingstone Park	SSSI_AW	Fagus woodland	10 - 20	30.0
Lytag Brownfield	LWS	Low and medium altitude hay meadows	20 - 30	16.1
M26/A20 London Road Roundabout RNR	RNR	Sub-atlantic semi-dry calcareous grassland	15-25	16.8
M26/A20 London Road Roundabout RNR (TM08)	RNR	Sub-atlantic semi-dry calcareous grassland	15-25	15.7
Mar Dyke	LWS	Non-mediterranean dry acid and neutral closed grassland	10-15	14.4
Martinhole Wood Complex	LWS	Meso- and eutrophic Quercus woodland	15-20	50.3
Mayes Brook And Associated Watercourses	LWS	Valley mires, poor fens and transition mires	10-15	20.7
Meadows And Woods, Noah's Ark, Kemsing	AW_LWS	Broadleaved deciduous woodland	10-20	27.9
Merrals Shaw (AW_Theme_ID 1486881)	AW	Broadleaved deciduous woodland	10-20	29.4
Middlefield Shaw AW (AW_Theme_ID_1501447,1500825,150082 1)	AW	Broadleaved deciduous woodland	10-20	31.1
Mill Street Green	LWS	Low and medium altitude hay meadows	20-30	18.9
Mill Wood & Cliff, Chafford Hundred	LWS	Acidophilous Quercus-dominated woodland	10-15	25.8

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
MILL WOOD(AW_Theme_ID 1119931)	LWS_AW	Broadleaved deciduous woodland	10-20	29.4
MILSTEAD/BASSILNE WOOD(AW_Theme_ID 1498502)	AW	Broadleaved deciduous woodland	10-20	30.2
Mintching/Kingsdown Wood	AW	Broadleaved deciduous woodland	10-20	30.2
Moorhall Wood	LWS	Meso- and eutrophic Quercus woodland	15-20	32.3
Mounts Road, Greenhithe RNR	RNR	Sub-atlantic semi-dry calcareous grassland	15-25	16.5
Mucking Heath	LWS	Non-mediterranean dry acid and neutral closed grassland	10-15	17.5
Mudlands	LWS	Broadleaved deciduous woodland	10-20	33.2
Nashenden	LWS	Broadleaved deciduous woodland	10-20	29.4
Nether Mayne Verges	LWS	Low and medium altitude hay meadows	20-30	27.4
New River	LWS	Low and medium altitude hay meadows	20-30	19.2
Noahs Rough(AW_Theme_ID 1499894)	AW	Broadleaved deciduous woodland	10-20	30.2
North Benfleet Hall Wood	LWS	Meso- and eutrophic Quercus woodland	15-20	30.8
North Downs Woodlands	SAC	Coniferous Woodland	5 -10	31.1
North Ockendon Pit	LWS	Low and medium altitude hay meadows	20 - 30	16.5
Nurstead And Cozendon Woods, Nash Street	LWS	Broadleaved deciduous woodland	10-20	29.3

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Oak Park Wood	AW	Broadleaved deciduous woodland	10 - 20	28.3
Oak Wood Park	LWS	Broadleaved deciduous woodland	10 - 20	28.3
OAK WOOD(AW_Theme_ID 1119445)	AW_LWS	Broadleaved deciduous woodland	10-20	30.0
Oak Wood, South Ockendon	AW_LWS	Broadleaved deciduous woodland	10 - 20	30.0
OBJECT ID 9143	AW	Broadleaved deciduous woodland	10-20	26.7
Ockendon Railsides	LWS	Broadleaved deciduous woodland	10 - 20	30.0
Ospringe Valley	LWS	Broadleaved deciduous woodland	10 - 20	28.8
Oxleys Wood Complex	AW_LWS	Broadleaved deciduous woodland	10 - 20	30.1
OXLEYS WOOD(AW_Theme_ID 1116303)	AW_LWS	Broadleaved deciduous woodland	10-20	30.1
Park Wood (AW Theme ID 1486989)	AW	Broadleaved deciduous woodland	10-20	27.6
Park Wood (AW Theme ID 1500211)	AW_LWS	Broadleaved deciduous woodland	10-20	44.7
Parker's Shaw	LWS	Broadleaved deciduous woodland	10 - 20	28.7
Parkhill Wood (AW_Theme_ID 1486875)	AW	Broadleaved deciduous woodland	10-20	29.1
Passingford Bridge Wood	LWS	Broadleaved deciduous woodland	10 - 20	31.9
Passingford Carr	LWS	Broadleaved deciduous woodland	10 - 20	31.9
Peartree Wood	AW	Broadleaved deciduous woodland	10-20	28.3
Peckham Wood (AW_Theme_ID 1500219)	AW	Broadleaved deciduous woodland	10-20	30.2
Pippins Plain Shaw	AW	Broadleaved deciduous woodland	10-20	30.2
Pitsea Mount	LWS	Low and medium altitude hay meadows	20-30	27.4
Pot Kiln Wood And Sickle Wood	LWS	Broadleaved deciduous woodland	10 - 20	28.7

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Pound Wood	LWS	Broadleaved deciduous woodland	10 - 20	28.3
POUND WOOD(AW_Theme_ID 1120637)	AW	Broadleaved deciduous woodland	10-20	28.3
Puddle Dock Angling Centre	LWS	Low and medium altitude hay meadows	20-30	15.8
Purfleet Chalk Pits	SSSI	GEOLOGICAL SSSI	none	25.8
Purfleet Pit	LWS	Broadleaved deciduous woodland	10 -20	25.8
Purfleet Road, Aveley	SSSI	GEOLOGICAL SSSI	none	25.8
Putt Wood	AW	Broadleaved deciduous woodland	10-20	28.8
Queendown Warren	SSSI_LNR	Meso- and eutrophic Quercus woodland	15 - 20	28.7
Queendown Warren	SSSI_LNR	Meso- and eutrophic Quercus woodland	15 - 20	28.7
Queendown Warren East	LWS	Sub-atlantic semi-dry calcareous grassland	15-25	16.2
Rainbow Shaw	LWS	Meso- and eutrophic Quercus woodland	15 - 20	28.6
Rainham Marshes	LNR	Valley mires, poor fens and transition mires	10-15	18.2
Rainham Railsides	LWS	Broadleaved deciduous woodland	10 - 20	33.2
RAKEFIELD WOOD(AW_Theme_ID 1499376)	AW	Broadleaved deciduous woodland	10-20	32.1
Rams Wod(AW_Theme_ID 1501506)	AW	Broadleaved deciduous woodland	10-20	31.8
RAMS WOOD(AW_Theme_ID 1501507)	AW	Broadleaved deciduous woodland	10-20	31.8

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Ranscombe Farm Country Park	LWS	Broadleaved deciduous woodland	10-20	26.7
Raphael Park	LWS	Broadleaved deciduous woodland	10-20	30.7
Rede Common	LNR	non-Mediterranean dry acid and neutral closed grassland	10-15	17.1
Redyn's Wood	AW_LWS	Broadleaved deciduous woodland	10-20	31.2
REED'S SHAW(AW_Theme_ID 1498441)	AW_LWS	Broadleaved deciduous woodland	10-20	28.7
Reeds Shaw(AW_Theme_ID 1499846)	AW_LWS	Broadleaved deciduous woodland	10-20	27.9
Reservoir, Woods And Pasture Trottiscliffe	LWS	Broadleaved deciduous woodland	10-20	27.6
River Cray	LWS	Broadleaved deciduous woodland	10-20	29.8
River Medway And Marshes, Wouldham	LWS	Pioneer, low-mid, mid-upper saltmarshes	20-30	17.1
River Medway Between Cuxton And Temple Marsh	LWS	Pioneer, low-mid, mid-upper saltmarshes	20-30	17.1
River Shuttle	LWS	Broadleaved deciduous woodland	10-20	30.5
River Thames And Tidal Tributaries	LWS	Broadleaved deciduous woodland	10-20	33.2
Riverside Sewage Treatment Works	LWS	Broadleaved deciduous woodland	10-20	33.2
Robins Grove Wood & Rye Wood	LWS	Broadleaved deciduous woodland	10 - 20	28.1
Romford Golf Course	LWS	Broadleaved deciduous woodland	10-20	30.7
Romford To Harold Wood Railsides	LWS	Broadleaved deciduous woodland	10-20	30.7
Roughtalley's Wood	AW_LWS	Broadleaved deciduous woodland	10-20	31.2
ROUGHTALLEYS WOOD(AW_Theme_ID 1116322)	AW_LWS	Broadleaved deciduous woodland	10-20	31.2

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
ROUND SHAW(AW_Theme_ID 1119930)	LWS_AW	Broadleaved deciduous woodland	10-20	29.4
Round Spring	LWS	Meso- and eutrophic Quercus woodland	15-20	31.4
ROUND WOOD(AW_Theme_ID 1498393)	AW	Broadleaved deciduous woodland	10-20	30.7
Rushbottom Lane Flood Pound	LWS	Low and medium altitude hay meadows	20-30	17.1
Sandbank Wood	AW	Broadleaved deciduous woodland	10-20	27.9
SANDLING WOOD(AW_Theme_ID 1500777)	AW	Broadleaved deciduous woodland	10-20	29.1
Sandmartin Cliff, Chafford Hundred	LWS	Sub-atlantic semi-dry calcareous grassland	15-25	16.2
Sandy Wood	AW	Broadleaved deciduous woodland	10-20	27.6
Saxten's Wood, Fawkham Green	AW_LWS	Broadleaved deciduous woodland	10-20	30.2
SAXTENS/ROGERS WOODS(AW_Theme_ID 1499463)	AW_LWS	Broadleaved deciduous woodland	10-20	30.2
Scrattons Ecopark Amd Extension	LNR	Broadleaved deciduous woodland	10-20	37.8
Scratton's Farm Ecopark	LWS	Broadleaved deciduous woodland	10-20	37.8
Shales More	AW_LWS	Broadleaved deciduous woodland	10-20	31.9
Shales More	AW_LWS	Broadleaved deciduous woodland	10-20	31.9
Shorne And Ashenbank Woods	SSSI	Meso- and eutrophic Quercus woodland	15 - 20	26.7
Shorne/Brewers Woods	AW	Meso- and eutrophic Quercus woodland	15 - 20	26.7

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Sidcup Line Railsides	LWS	Broadleaved deciduous woodland	10-20	29.8
Sir Hughes' Woods	LWS	Meso- and eutrophic Quercus woodland	15-20	32.8
South Ockendon Church	LWS	Low and medium altitude hay meadows	20 - 30	16.5
South Thames Estuary And Marshes	SSSI	Low and medium altitude hay meadows	20 to 30	15.3
St Michael And All Angels Church	LWS	Low and medium altitude hay meadows	20-30	17.1
Straight Path Shaw	LWS_AW	Broadleaved deciduous woodland	10 - 20	29.4
Strawberry Farm Wood	LWS	Broadleaved deciduous woodland	10 - 20	28.7
Sutton At Hone Lakes	LWS	Low and medium altitude hay meadows	20-30	16.5
Swanscombe Peninsula	SSSI	Non-mediterranean dry acid and neutral closed grassland	10 - 15	16.2
TASSELL'S WOOD(AW_Theme_ID 1486634)	AW	Broadleaved deciduous woodland	10-20	28.8
Tear Croft Shaw(AW_Theme_ID 1499930)	AW	Broadleaved deciduous woodland	10-20	31.8
TEMPLE MARSH	LWS	Broadleaved deciduous woodland	10-20	29.4
Terrels Heath Grays	LWS	Acidophilous Quercus-dominated woodland	10-15	28.7
Thames Chase Forest Centre	LWS	Broadleaved deciduous woodland	10 - 20	28.7
The Oaks	LWS	Acidophilous Quercus-dominated woodland	10-15	30.2

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
The Osiers	AW	Broadleaved deciduous woodland	10-20	30.2
The Park/Coombe Wood	SSSI_LWS	Broadleaved deciduous woodland	10 - 20	28.0
The Selvage	LWS	Meso- and eutrophic Quercus woodland	15-20	30.1
THE THRIFT(AW_Theme_ID 1498351)	AW	Broadleaved deciduous woodland	10-20	29.1
Thick/Hollow Bottom Shaws	LWS_AW	Broadleaved deciduous woodland	10-20	29.4
Thordon Country Park South	LWS	Low and medium altitude hay meadows	20-30	16.2
Thorndon Park	SSSI_AW_L WS	Meso- and eutrophic Quercus woodland	15 - 20	29.4
Thundersley Great Common	SSSI	Inland dune siliceous grasslands	8-15	17.1
Thundersley Great Common Wood	LWS	Broadleaved deciduous woodland	10-20	30.8
Tilbury Centre	LWS	Low and medium altitude hay meadows	20 - 30	16.1
Tilbury Marshes	LWS	Low and medium altitude hay meadows	20 - 30	16.2
Titsey Woods	SSSI	Meso- and eutrophic Quercus woodland	10 - 20	27.7
Tompkins Farm Meadow	LWS	Sub-atlantic semi-dry calcareous grassland	15-25	27.4
Tr22 - Grenville Road Grasslands, Chafford Hundred	LWS	Sub-atlantic semi-dry calcareous grassland	15-25	14.4

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Trottiscliffe Meadows	SSSI	Moist and wet oligotrophic grasslands: Molinia caerulea meadows	15-25	15.7
TWENTY ACRE SHAW(AW_Theme_ID 1498548)	AW	Broadleaved deciduous woodland	10-20	27.6
Tylers Common	LWS	Low and medium altitude hay meadows	20 - 30	16.9
Tylers Wood	LWS	Broadleaved deciduous woodland	10-20	30.2
Upminster Lodge Farm Horse Field	LWS	Low and medium altitude hay meadows	20-30	15.8
Upper Brooms Wood AW ((AW_Theme_ID_1498405 (Object ID 11581))	AW	Broadleaved deciduous woodland	10-20	28.7
Upper Down Woodl/Lower Down Wood(AW_Theme_ID 1500114)	AW	Broadleaved deciduous woodland	10-20	30.7
Valley Wood	AW	Broadleaved deciduous woodland	10-20	27.6
Valley Wood and Wrotham Golf Course	LWS	Broadleaved deciduous woodland	10-20	27.6
Vange & Fobbing Marshes	SSSI	Coastal and Floodplain Grazing Marsh / Pioneer, low-mid, mid-upper saltmarshes	20 - 30	27.4
Vange Creek Marshes	LWS	Pioneer, low-mid, mid-upper saltmarshes	20-30	27.4
Vange Depot	LWS	Sub-atlantic semi-dry calcareous grassland	15-25	27.4
Vange Hill	LNR	Broadleaved deciduous woodland	10-20	50.3

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
Vange Hill And Golf Course	LWS	Low and medium altitude hay meadows	20-30	27.4
Veteran Tree	VT	Broadleaved deciduous woodland	10 - 20	29.4
Walderslade Woods	LWS	Broadleaved deciduous woodland	10-20	31.1
Warley Hall Wood	LWS_AW	Broadleaved deciduous woodland	10-20	29.4
WARLEY HALL WOOD(AW_Theme_ID 1496192)	LWS_AW	Broadleaved deciduous woodland	10-20	29.4
Warren Gorge Chafford Hundred	LWS	Broadleaved deciduous woodland	10-20	25.8
WARREN HOUSE WOOD(AW_Theme_ID 1498504)	SSSI_LNR	Broadleaved deciduous woodland	10-20	28.7
Warren Lane grasslands Chafford Hundred	LWS	Non-mediterranean dry acid and neutral closed grassland	10-15	14.4
Warren Road RNR	RNR	Sub-atlantic semi-dry calcareous grassland	15-25	17.4
Warren Road RNR (TM01e)	RNR	Sub-atlantic semi-dry calcareous grassland	15-25	16.8
Wennington, Aveley And Rainham Marshes	LNR	Pioneer, low-mid, mid-upper saltmarshes	20-30	18.2
West Thurrock Lagoon & Marshes	SSSI	Coastal and Floodplain Grazing Marsh / Pioneer, low-mid, mid-upper saltmarshes	20 - 30	14.4
Westcombe Park Railsides	LWS	Broadleaved deciduous woodland	10-20	32.5
Westerham Wood	SSSI_AW	Meso- and eutrophic Quercus woodland	10 - 20	27.7

Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
WESTERHAM WOOD(AW_Theme_ID 1499087)	AW	Broadleaved deciduous woodland	10-20	27.7
Westfield Wood (AW_Theme_ID_150470)	AW	Broadleaved deciduous woodland	10-20	31.1
Westfield/Hall Wood	AW	Broadleaved deciduous woodland	10-20	30.7
Westley Heights	LWS	Broadleaved deciduous woodland	10-20	28.0
Wet Wood	LWS	Broadleaved deciduous woodland	10 - 20	27.7
Whitehall Wood	AW	Broadleaved deciduous woodland	10-20	30.0
Whitepost Wood	AW	Broadleaved deciduous woodland	10-20	30.0
WINTERBOURNE WOOD(AW_Theme_ID 1498466)	AW_LWS	Broadleaved deciduous woodland	10-20	26.5
Woldingham & Oxted Downs	SSSI	Meso- and eutrophic Quercus woodland	10 - 20	28.1
Woodlands West Of Shoreham	LWS_AW	Broadleaved deciduous woodland	10-20	30.0
Wotham Hill	LWS	Broadleaved deciduous woodland	10-20	27.6
Wouldham To Detling Escarpment	SSSI	Coniferous woodland	5 - 15	29.5
Wrotham Downs	AW_LWS	Broadleaved deciduous woodland	10-20	30.2
Yaugher Wood (AW_Theme_ID 1498451)	LWS	Broadleaved deciduous woodland	10-20	28.7
Yaugher Woods	LWS	Broadleaved deciduous woodland	10-20	28.7

Site Designations

AW = Ancient Woodland

LNR = Local Nature Reserve

LWS = Local Wildlife Site

NIA = Nature Improvement Area

	Ecological Site Name	Site Designation	Most Sensitive Feature	Nitrogen Lower Critical Load Range (kg N ha <sup>-1</sup> yr <sup>-1</sup> )	Bgd N Dep (Kg N ha <sup>-1</sup> yr <sup>-1</sup> )
--	----------------------	---------------------	------------------------	--	--

NNR = National Nature Reserve

RNR = Roadside Nature Reserve

SAC = Special Area of Conservation

SSSI = Site of Special Scientific Interest

VT = Veteran Tree

Lower Critical Load Range = Is a quantative estimate range of exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur. This has been obtained from The Air Pollution Information System (APIS)

Bgd N Dep = Background Nitrogen Deposition rate which have been obtained from APIS (2017 to 2019, 3 year average)

If you need help accessing this or any other National Highways information, please call **0300 123 5000** and we will help you.

## © Crown copyright 2022

You may re-use this information (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence:

visit www.nationalarchives.gov.uk/doc/open-government-licence/

write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email psi@nationalarchives.gsi.gov.uk.

Mapping (where present): © Crown copyright and database rights 2022 OS 100030649. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.

If you have any enquiries about this publication email info@nationalhighways.co.uk or call 0300 123 5000\*.

\*Calls to 03 numbers cost no more than a national rate call to an 01 or 02 number and must count towards any inclusive minutes in the same way as 01 and 02 calls.

These rules apply to calls from any type of line including mobile, BT, other fixed line or payphone. Calls may be recorded or monitored.

Printed on paper from well-managed forests and other controlled sources when issued directly by National Highways.

Registered office Bridge House, 1 Walnut Tree Close, Buildford GU1 4L7

National Highways Company Limited registered in England and Wales number 09346363