

London Borough of Havering

Air Quality Annual Status Report for 2024

Date of publication: 22 May 2025



Photo: a man walking through grass with trees in a park in Havering

This report provides a detailed overview of air quality in the London Borough of Havering during 2024. It has been produced to meet the requirements of the London Local Air Quality Management (LLAQM) statutory process¹.

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¹ LLAQM Policy and Technical Guidance 2019 (LLAQM.TG(19))

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Abbreviations

Abbreviation	Description
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQN	Air Quality Neutral
AQO	Air Quality Objective
AQP	Air Quality Positive
BEB	Buildings Emission Benchmark
CAB	Cleaner Air Borough
EV	Electric Vehicle
GLA	Greater London Authority
LAEI	London Atmospheric Emissions Inventory
LAQM	Local Air Quality Management
LLAQM	London Local Air Quality Management
NRMM	Non-Road Mobile Machinery
PM ₁₀	Particulate matter less than 10 micron in diameter
PM _{2.5}	Particulate matter less than 2.5 micron in diameter
TEB	Transport Emissions Benchmark
TfL	Transport for London

Table A. Summary of National Air Quality and International Standards, Objectives and Guidelines

Pollutant	Standard / Objective / Guideline	Averaging Period	Date ⁽¹⁾
Nitrogen dioxide (NO ₂)	200 µg m ⁻³ not to be exceeded more than 18 times a year	1-hour mean	31 Dec 2005
Nitrogen dioxide (NO ₂)	40 µg m ⁻³	Annual mean	31 Dec 2005
Nitrogen dioxide (NO ₂)	WHO AQG ⁽²⁾ : 10 µg m ⁻³	Annual mean	
Particles (PM ₁₀)	50 µg m ⁻³ not to be exceeded more than 35 times a year	24-hour mean	31 Dec 2004
Particles (PM ₁₀)	WHO AQG ⁽²⁾ : 45 µg m ⁻³ not to be exceeded more than 3-4 times a year	24-hour mean	
Particles (PM ₁₀)	40 µg m ⁻³	Annual mean	31 Dec 2004
Particles (PM ₁₀)	WHO AQG ⁽²⁾ : 15 µg m ⁻³	Annual mean	
Particles (PM _{2.5})	10 µg m ⁻³	Annual mean	2040
Particles (PM _{2.5})	London Mayoral Objective ⁽³⁾ : 10 µg m ⁻³	Annual mean	2030
Particles (PM _{2.5})	WHO AQG ⁽²⁾ : 5 µg m ⁻³	Annual mean	
Particles (PM _{2.5})	Target of 15% reduction in concentration at urban background locations	3-year mean	Between 2010 and 2021
Particles (PM _{2.5})	WHO AQG ⁽²⁾ : 15 µg m ⁻³	24-hour mean	
Sulphur dioxide (SO ₂)	266 µg m ⁻³ not to be exceeded more than 35 times a year	15-minute mean	31 Dec 2005
Sulphur dioxide (SO ₂)	350 µg m ⁻³ not to be exceeded more than 24 times a year	1-hour mean	31 Dec 2004
Sulphur dioxide (SO ₂)	125 µg m ⁻³ not to be exceeded more than 3 times a year	24-hour mean	31 Dec 2004
Sulphur dioxide (SO ₂)	WHO AQG ⁽²⁾ : 40 µg m ⁻³ not to be exceeded more than 3-4 times a year	24-hour mean	

Notes:

(1) Date by which to be achieved by and maintained thereafter

(2) 2021 World Health Organisation Air Quality Guidelines

(3) London Mayoral Objective

1. Air Quality Monitoring

1.1 Locations

Table B. Details of Automatic Monitoring Sites for 2024

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA?	Which AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Inlet Height (m)
HV1	Rainham	Roadside	553127	182506	NO ₂ , PM ₁₀ , PM _{2.5}	Yes	LB Havering	Chemiluminescent; TEOM, FDMS	3	10	3
HV3	Romford	Roadside	551108	188257	NO ₂ , PM ₁₀	Yes LB Havering	LB Havering	Chemiluminescent; FDMS	3	8	3

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

(2) N/A if not applicable

Table C. Details of Non-Automatic Monitoring Sites for 2024

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
HAV2, 5, 6	Mercury Gardens	Urban Centre	551488	188993	NO ₂	Y (LB Havering)	1.0	3.0	No	2.0
HAV1, 7, 8	Waterloo Road	Urban Centre	551108	188257	NO ₂	Y (LB Havering)	3.0	8.0	Yes	2.0
HAV3	Nelson Road	Urban Background	551726	183462	NO ₂	Y (LB Havering)	3.0	1.0	No	2.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
HAV4	Langtons	Urban Background	553724	187560	NO2	Y (LB Havering)	1.0	NA	No	2.0
HAV9, 10, 11	Alexandra Road	Urban Centre	551629	188296	NO2	Y (LB Havering)	3.0	1.0	No	2.0
HAV12	Main Road GPPS	Roadside	552096	189619	NO2	Y (LB Havering)	4.0	1.0	No	2.0
HAV13, 14, 15	A12 Junction with North Street	Roadside	550607	189685	NO2	Y (LB Havering)	5.0	5.0	No	2.0
HAV16, 17, 18	Rom Valley Way	Roadside	551414	187802	NO2	Y (LB Havering)	1.0	1.0	No	2.0
HAV19, 20, 21	Collier Row	Kerbside	549837	191109	NO2	Y (LB Havering)	3.0	0.5	No	2.0
HAV22, 23, 24	Ravensbourne School	Urban Background	553707	190817	NO2	Y (LB Havering)	1.0	1.0	No	2.0
HAV25	Wincanton Road	Urban Background	553727	193161	NO2	Y (LB Havering)	1.0	3.0	No	2.0
HAV26	Adj. 109 Cross Road	Urban Background	549532	189777	NO2	Y (LB Havering)	3.0	1.0	No	2.0
HAV27, 28, 29	Rush Green Road	Kerbside	550942	187420	NO2	Y (LB Havering)	5.0	0.5	No	2.0
HAV30	Marlborough Road	Urban Background	549318	189384	NO2	Y (LB Havering)	3.0	1.0	No	2.0
HAV31	Danes Road	Industrial	550197	187908	NO2	Y (LB Havering)	4.0	1.0	No	2.0
HAV32, 33, 34	Gallows Corner	Kerbside	553410	190558	NO2	Y (LB Havering)	4.0	0.5	No	2.0
HAV35	Church Road	Urban Background	554204	193795	NO2	Y (LB Havering)	3.0	1.0	No	2.0
HAV36	Bedford Park Entrance	Rural	551755	193022	NO2	Y (LB Havering)	1.0	NA	No	2.0
HAV37	Colchester Road	Kerbside	555723	191750	NO2	Y (LB Havering)	3.0	0.5	No	2.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
HAV38	Myrtle Road	Roadside	553434	191656	NO2	Y (LB Havering)	1.0	1.0	No	2.0
HAV39	Rise Park Boulevard	Roadside	551616	190622	NO2	Y (LB Havering)	3.0	1.0	No	2.0
HAV40	Main Road	Roadside	553174	190306	NO2	Y (LB Havering)	9.0	1.0	No	2.0
HAV41	Main Road	Roadside	552517	189826	NO2	Y (LB Havering)	8.0	1.0	No	2.0
HAV42	Mawney Road	Kerbside	550623	188890	NO2	Y (LB Havering)	2.0	1.0	No	2.0
HAV43	Upminster School	Roadside	556072	186539	NO2	Y (LB Havering)	2.0	2.0	No	2.0
HAV44	Ardleigh Green School	Kerbside	553952	189731	NO2	Y (LB Havering)	5.0	1.0	No	2.0
HAV45	St. Marys School RC	Kerbside	552327	187422	NO2	Y (LB Havering)	10.0	1.0	No	2.0
HAV46	Rainham Village School	Kerbside	552441	182337	NO2	Y (LB Havering)	1.0	1.0	No	2.0
HAV47	Campion School off A127	Roadside	554730	189487	NO2	Y (LB Havering)	7.0	2.0	No	2.0
HAV48	Parklands School	Urban Background	550602	189990	NO2	Y (LB Havering)	1.0	1.0	No	2.0
HAV49	Newton's Primary	Roadside	550722	183294	NO2	Y (LB Havering)	2.0	1.0	No	2.0
HAV50	Blewitts Cottages	Kerbside	551526	182672	NO2	Y (LB Havering)	12.0	0.5	No	2.0
HAV51	St. Edwards School	Urban Background	551180	189432	NO2	Y (LB Havering)	1.0	1.0	No	2.0
HAV52	Opp. Harold Wood Stn.	Roadside	554741	190626	NO2	Y (LB Havering)	0.0	2.0	No	2.0
HAV53	R.J. Mitchel School	Roadside	552841	184966	NO2	Y (LB Havering)	15.0	2.0	No	2.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
HAV54	Hilldene Infant School	Roadside	553135	191674	NO2	Y (LB Havering)	5.0	1.0	No	2.0
HAV55	Butts Green Road	Kerbside	553830	188314	NO2	Y (LB Havering)	1.0	0.5	No	2.0
HAV56	Rainham Broadway	Kerbside	552045	182222	NO2	Y (LB Havering)	1.0	0.5	No	2.0
HAV57	Romford Taxi Rank	Urban Centre	551420	188526	NO2	Y (LB Havering)	1.0	0.2	No	2.0
HAV58, 59, 60	Romford Battis	Urban Centre	551397	188509	NO2	Y (LB Havering)	1.0	0.2	No	2.0
HAV61	Wennington Road	Urban Background	553719	180987	NO2	Y (LB Havering)	1.0	1.0	No	2.0
HAV62	New Road Junction with South Street	Kerbside	550462	183013	NO2	Y (LB Havering)	10.0	0.5	No	2.0
HAV63	New Road Junction with Spencer Road	Kerbside	550888	182884	NO2	Y (LB Havering)	10.0	0.5	No	2.0
HAV64	New Road Junction with Betterton Road	Kerbside	551112	182811	NO2	Y (LB Havering)	10.0	0.5	No	2.0
HAV65	Front Lane/Jnct Brunswick Ave LP40	Urban Centre	557323	187932	NO2	Y (LB Havering)	1.0	0.2	No	2.0
HAV66	Station Lane LP6	Urban Centre	554013	187001	NO2	Y (LB Havering)	1.0	0.5	No	2.0

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

(2) N/A if not applicable.

1.2 Comparison of Monitoring Results with AQOs

Table D. Annual Mean NO₂ Monitoring Results: Automatic Monitoring (µg m⁻³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid data capture for monitoring period % ^(a)	Valid data capture 2024 % ^(b)	2018	2019	2020	2021	2022	2023	2024
HV3	551108	188257	Roadside	99.5	99.5	30	29.1	23	23	23	20.5	22.1
HV1	553127	182506	Roadside	99.7	99.7	38	35.8	29	28	30.4	24.6	19

Notes:

The annual mean concentrations are presented as µg m⁻³.

Exceedances of the NO₂ annual mean AQO of 40 µg m⁻³ are shown in **bold**.

NO₂ annual means in excess of 60 µg m⁻³, indicating a potential exceedance of the NO₂ hourly mean AQS objective are shown in **bold and underlined**.

Means for diffusion tubes have been corrected for bias.

All means have been “annualised” in accordance with LLAQM Technical Guidance if valid data capture for the calendar year is less than 75% and greater than 25%.

Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

(a) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(b) Data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

Since the 2020 pandemic the annual average NO₂ concentration has maintained at approximately half the legal limit value. The extension of the ULEZ has had a positive impact on concentrations.

Table E. Annual Mean NO₂ Monitoring Results: Non-Automatic Monitoring (µg m⁻³)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2024 (%) ⁽²⁾	2018	2019	2020	2021	2022	2023	2024
HAV6, HAV5, HAV2	551488	188993	Urban Centre	100	100	47.9	42	38.2	38.8	44.0	40.0	41.8
HAV7, HAV1, HAV8	551108	188257	Urban Centre	100	100	39.6	36.7	38.6	32.8	32.0	30.6	30.4
HAV3	551726	183462	Urban Background	100	100	26.5	26	25.1	19.8	21.4	19.2	16.9
HAV4	553724	187560	Urban Background	100	100	17.3	19.7	16.7	14.7	15.3	14.2	11.7
HAV9, HAV10, HAV11	551629	188296	Urban Centre	100	100	29	26.1	26.7	23	25.8	21.3	20.0
HAV12	552096	189619	Roadside	100	100	36.6	32.4	28.3	29.1	26.0	24.4	17.8
HAV13, HAV14, HAV15	550607	189685	Roadside	100	100	38.7	35.4	32.2	31.1	31.8	27.3	23.5
HAV16, HAV17, HAV18	551414	187802	Roadside	100	100	34.8	33.6	29.1	28.8	32.6	26.8	23.5
HAV19, HAV20, HAV21	549837	191109	Kerbside	100	100	40.4	37.2	35.7	33.7	38.6	39.3	34.5
HAV22, HAV23, HAV24	553707	190817	Urban Background	100	100	25.3	24.5	16.6	19.9	19.3	17.0	14.2

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2024 (%) ⁽²⁾	2018	2019	2020	2021	2022	2023	2024
HAV25	553727	193161	Urban Background	92.3	92.3	22.1	20.8	19.7	18.4	18.3	15.7	12.0
HAV26	549532	189777	Urban Background	100	100	21.4	21.3	19.5	17.1	16.7	15.1	14.6
HAV27, HAV28, HAV29	550942	187420	Kerbside	100	100	51.4	47.3	44.4	40.4	42.3	36.3	32.0
HAV30	549318	189384	Urban Background	75	75	21.6	21.9	21.3	18.6	15.7	13.5	11.4
HAV31	550197	187908	Industrial	100	100	26.4	25.2	22	20.3	20.6	17.6	15.0
HAV32, HAV33, HAV34	553410	190558	Kerbside	100	100	50.3	49.4	45.2	40.6	39.6	34.6	25.7
HAV35	554204	193795	Urban Background	100	100	26.2	23	19.8	20.1	18.4	15.9	14.1
HAV36	551979	192220	Rural	100	100	18.3	18.9	20.9	13.8	14.5	12.0	12.7
HAV37	555723	191750	Kerbside	100	100	48	41.6	34.5	36.1	36.8	32.3	26.1
HAV38	553434	191656	Roadside	100	100	22.2	21	20.5	16.4	19.2	14.9	13.5
HAV39	551616	190622	Roadside	100	100	29	28.9	30.9	23.5	22.0	20.0	18.0
HAV40	552517	189826	Roadside	100	100	49.2	44.4	36.8	31.7	33.8	29.7	25.7
HAV41	553174	190306	Roadside	100	100	40.9	39.3	32.2	32.4	32.2	26.1	21.4
HAV42	550623	188890	Kerbside	100	100	30.8	29.7	26.5	23.9	26.8	24.8	22.1
HAV43	556072	186539	Roadside	100	100	32.2	34.3	27.2	25.7	25.7	22.2	17.8
HAV44	553952	189731	Kerbside	100	100	34.4	31.6	30.1	28.5	30.1	26.1	25.1
HAV45	552327	187422	Kerbside	84.6	84.6	35.6	31.8	26.5	26.7	28.0	25.6	21.7
HAV46	552425	182334	Kerbside	100	100	32.2	30	27.8	24.4	25.3	23.7	22.3
HAV47	554730	189487	Roadside	100	100	36.8	41	35.6	36.5	35.8	32.9	25.4
HAV48	550602	189990	Urban Background	100	100	25	26.4	21.4	19.8	19.9	26.8	14.6

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2024 (%) ⁽²⁾	2018	2019	2020	2021	2022	2023	2024
HAV49	550722	183294	Roadside	100	100	34.3	26.6	23.6	22	22.9	24.6	22.5
HAV50	551526	182672	Kerbside	100	100	39.8	36.6	32.5	30.5	30.4	33.1	30.5
HAV51	551180	189432	Urban Background	100	100	23.4	21.6	20.7	17.9	18.2	17.3	13.7
HAV52	554741	190626	Roadside	100	100	41.1	32.2	26.1	29.5	30.9	30.1	27.9
HAV53	552835	184978	Roadside	100	100			29.1	24.6	26.4	24.9	22.3
HAV54	553141	191657	Roadside	90.4	90.4			21.4	22	21.9	20.8	25.1
HAV55	553839	188313	Kerbside	100	100			35.9	40.2	42.2	38.8	44.2
HAV56	552047	182357	Kerbside	100	100			35.7	32.7	30.8	28.5	32.4
HAV57	551420	188526	Urban Centre	100	100	64.7	53.1	52.9	53.4	65.5	58.4	65.3
HAV58, HAV59, HAV60	551397	188509	Urban Centre	100	100	71.4	71.3	66.9	71.3	82.7	76.0	70.7
HAV61	553719	180987	Urban Background	100	100	27.5	26.2	22.8	20.9	20.3	18.5	17.7
HAV62	550462	183013	Kerbside	100	100			34.1	28.8	31.2	29.3	24.2
HAV63	550888	182884	Kerbside	100	100			30.5	31	32.3	28.0	27.8
HAV64	551112	182811	Kerbside	100	100			30.9	29.3	30.3	26.8	22.9
HAV65	557323	187932	Urban Centre	92.3	92.3			28.8	26.4	27.6	22.9	18.7

☒ Annualisation has been conducted where data capture is <75% and >25% in line with LLAQM.TG19.

☒ Diffusion tube data has been bias adjusted.

☒ Reported concentrations are those at the location of the monitoring site (bias adjusted and annualised, as required), i.e. prior to any fall-off with distance correction.

Notes:

The annual mean concentrations are presented as $\mu\text{g m}^{-3}$.

Exceedances of the NO_2 annual mean objective of $40\mu\text{g m}^{-3}$ are shown in **bold**.

NO_2 annual means exceeding $60\mu\text{g m}^{-3}$, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined**.

Means for diffusion tubes have been corrected for bias. All means have been “annualised” in accordance with LLAQM Technical Guidance if valid data capture for the calendar year is less than 75% and greater than 25%.

Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

The general trend for diffusion tube annual average concentrations is downwards. Five locations have slight increases. Four locations exceed the limit value, three of which are located in Romford town centre and one location on Butts Green Road. One diffusion tube location had less than 75% data and was annualised.

Table F. NO₂ Automatic Monitoring Results: Comparison with 1-hour Mean Objective, Number of 1-Hour Means > 200 µg m⁻³

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid data capture for monitoring period % ^(a)	Valid data capture 2024 % ^(b)	2018	2019	2020	2021	2022	2023	2024
HV1	553127	182506	Roadside	99.5	99.5	0	0	0	0	0	0	0
HV3	551108	188257	Roadside	99.7	99.7	0	0	0	0	0	0	0

Notes

Results are presented as the number of 1-hour periods where concentrations greater than 200 µg m⁻³ have been recorded.

Exceedance of the NO₂ short term AQO of 200 µg m⁻³ over the permitted 18 hours per year are shown in **bold**.

If the period of valid data is less than 85%, the 99.8th percentile of 1-hour means is provided in brackets.

(a) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

(b) Data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

The Rainham and Romford locations continue to have zero exceedances of the 1-hour Mean Objective for NO₂.

Table G. Annual Mean PM₁₀ Automatic Monitoring Results (µg m⁻³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid data capture for monitoring period % ^(a)	Valid data capture 2024 % ^(b)	2018	2019	2020	2021	2022	2023	2024
HV1	553127	182506	Roadside	99.5	99.5	17	17.4	15	13.6	17	13.5	18.4
HV3	551108	188257	Roadside	99.5	99.5	20	20.5	21	18.9	17.8	17.5	18.4

Notes

The annual mean concentrations are presented as µg m⁻³.

Exceedances of the PM₁₀ annual mean AQO of 40 µg m⁻³ are shown in **bold**.

All means have been “annualised” in accordance with LLAQM Technical Guidance, if valid data capture is less than 75% and more than 25%.

(a) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(b) Data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

The AQMA was declared on PM₁₀ concentrations, which have clearly been met for the last seven years. The concentrations of PM₁₀ were declining at both monitoring sites until 2024 and have now increased. The 2024 annual mean concentrations are still less than half of the limit value.

Table H. PM₁₀ Automatic Monitoring Results: Comparison with 24-Hour Mean Objective, Number of PM₁₀ 24-Hour Means > 50 µg m⁻³

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid data capture for monitoring period % ^(a)	Valid data capture 2024 % ^(b)	2018	2019	2020	2021	2022	2023	2024
HV1	553127	182506	Roadside	99.5	99.5	1	4	1	0 (23.8)	4	0	0
HV3	551108	188257	Roadside	99.5	99.5	2	9	5	0 (29.6)	4	4	0

Notes

Exceedances of the PM₁₀ 24-hour mean objective (50 µg m⁻³ over the permitted 35 days per year) are shown in **bold**.

Where the period of valid data is less than 85% of a full year, the 90.4th percentile is provided in brackets.

(a) data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

(b) data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

Error! Reference source not found. shows that both monitoring sites have been substantially compliant with the 24 hour mean objective for at least the last seven years, although there is no clear trend in the data. It is unlikely that concentrations exceed the current objective value for PM₁₀.

Table I. Annual Mean PM_{2.5} Automatic Monitoring Results (µg m⁻³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid data capture for monitoring period % ^(a)	Valid data capture 2024 % ^(b)	2018	2019	2020	2021	2022	2023	2024
HV1	553127	182506	Roadside	N/A	N/A	11	11.1	9	8.8	10.2	7.4	-

Notes

The annual mean concentrations are presented as µg m⁻³.

Exceedances of the PM_{2.5} annual mean AQO of 10 µg m⁻³ are shown in **bold**.

All means have been “annualised” in accordance with LLAQM Technical Guidance, if valid data capture is less than 75% and more than 25%.

(a) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(b) Data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

The data for 2024 could not be ratified due to instrumentation problems. Since 2018 the concentration measured has been below the 2028 target value of 12 µg m⁻³, until 2023 not below the WHO guideline value of 10 µg m⁻³.

Table J. 2024 SO₂ Automatic Monitoring Results: Comparison with Objectives

Not measured.

Table K. Other Pollutants

Not measured.

2. Action to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMA) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 12 months. The AQAP should specify how air quality targets will be achieved and maintained, and provide dates by which measures will be carried out.

A summary of AQMA declared by the London Borough of Havering can be found in Table L. The table presents a description of the AQMA that is currently designated within Havering. Appendix C provides maps of AQMA and also the air quality monitoring locations in relation to the AQMA. The air quality objectives pertinent to the current AQMA designation are as follows:

- NO₂ annual mean;
- PM₁₀ annual mean

Table L. Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Number of Years Compliant with Air Quality Objective	Name and Date of AQAP Publication	Web Link to AQAP
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Havering AQMA	11 th September 2006	NO ₂ annual mean	Whole borough AQMA due to widespread exceedances	Yes	Not known	70.7 µg m ⁻³	Non-compliant in 3 locations	London Borough of Havering Air Quality Action Plan 2018-2023	Visit the AQAP
Havering AQMA	11 th September 2006	PM ₁₀ 24h limit	Whole borough AQMA due to widespread exceedances	Yes	No known	Compliant	Compliant >8 years 2009 HV3 2014 HV1	London Borough of Havering Air Quality Action Plan 2018-2023	Visit the AQAP

☒ Havering confirm the information on UK-Air regarding their AQMA(s) is up to date.

☒ Havering confirm that all current AQAPs have been submitted to GLA.

2.2 Air Quality Action Plan Progress

Havering's AQAP has been updated and is currently being consulted on. Due to be adopted in Autumn 2025. PM10 has not breached limit values for 8 years. NO₂ breaches 40 ug/m³ in Romford town centre and one location outside of the town centre.

Table M provides a brief summary of Havering's progress against the Air Quality Action Plan, showing progress made this year.

New projects which commenced in 2024 are shown at the bottom of the table.

Table M. Delivery of Air Quality Action Plan Measures

Note: the top three measures are listed first. A new AQAP has been written and is due to be adopted in 2025.

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress - Emissions/Concentration data - Benefits - Negative impacts / Complaints
1.1	Undertake PM2.5 monitoring of fires surrounding Arnold's Field, Launders Lane using air quality nodes.	Public Protection	2028	Local Authority Environmental Health	This is a new action and is high priority. Ongoing fires at an unlicensed landfill have been causing localised PM2.5 concentration spikes in the Rainham area. The burning will be dealt with under statutory nuisance. https://www.havering.gov.uk/public-health/multi-agency-response-fires-arnolds-field-launders-lane
3.7	Emissions from developments and buildings	Promote and enforce the Smoke Control Areas to reduce the amount of unlicensed burning.	Ongoing no completion date	Local Authority Environmental Health	Action ongoing. Havering provides information to residents about Smoke Control Areas on its website. Chimney smoke complaints are investigated to determine if authorised fuels are being used by the resident. If non-authorised fuels are being used, our enforcement officers educate the residents and for a first time complaint, provide details from the DEFRA website. If further complaints are made and substantiated, then

					enforcement action is taken. https://www.havering.gov.uk/airquality
2.4	Public health and awareness raising	Public Health input into delivery of AQAP.	Ongoing no completion date	Local Authority Public Health Department	<i>Action ongoing.</i> The Public Health Service supports the Council to achieve its aims to improve air quality. This has included (a) contributing to the evidence base for the local strategy; (b) actively participating in the Havering's JSNA includes a recommendation that using the Healthy Streets Scorecard as a starting point, LBH should continue to bring forward proposals to implement and expand recommended measures and other complementary activities to improve road safety, increase active travel/modal shift and improve air quality;.and (c) providing financial contributions to air quality monitoring.
1.1	Monitoring and other core statutory duties	Undertake detailed computer modelling of air quality in Havering.	Completed	Local Authority Environmental Health	<i>Action completed</i> , reported in 2021.
1.2	Monitoring and other core statutory duties	Use AQ Mesh Pods to provide real time air quality measurements for schools to use as part of air quality publicity campaigns and to encourage walking to school.	Completed	Local Authority Environmental Health	<i>Action completed 2024.</i> Meshpods have been superseded by AQ monitoring Nodes.
1.3	Monitoring and other core statutory duties	Undertake feasibility study into the location and start-up of a new permanent continuous monitoring location.	Completed	Local Authority Environmental Health	<i>Action completed</i> , reported in 2021.
1.4	Monitoring and other core statutory duties	Expand the current Diffusion Tube Network.	Ongoing Statutory Requirement	Local Authority Environmental Health	<i>Action ongoing</i> , the diffusion tube network was expanded. It is essential that the locations are maintained.
1.5	Monitoring and other core statutory duties	Model likely air quality impact of planned major strategic schemes.	Ongoing no completion date	Local Authority Environmental Health	<i>Action ongoing.</i> All major strategic developments required to do air quality modelling (part of a detailed Air Quality Assessment at the planning application stage).
2.1	Public health and awareness raising	Promote walking and cycling. Engage with over 50's forum to form	2024	Local Authority Transportation Dept.	<i>Action ongoing.</i> The over 50s programme is run by trained volunteers with support from the Council's Sports Development Service. In 2021, no face to face sessions and events were held. Once TfL funding is available to organise led rides, they

		a walking club and organised led rides			could be arranged again for the Over 50's Forum and other groups in the borough.
2.2	Public health and awareness raising	Continue to use Miles the Mole as an air quality champion and educational prop.	2030	Local Authority Environmental Health	<i>Action ongoing.</i> Miles the Mole continues visiting schools as part of the Council's Air Quality Campaign. Active travel and air quality themed Theatre in Education production is an interactive programme aimed at year 6 pupils. Miles the Mole is still burrowing his way around the borough. The campaign increases awareness and knowledge of children/staff/parents around air quality and promotes small changes people can make to reduce their contribution to air pollution and reduce their exposure to poor air quality.
2.3	Public health and awareness raising	Support Transport for London led initiative to commission a cross borough bus rapid transit study which would include looking at options for improving access to the London Riverside bid.	2030	Local Authority Transportation Department	<i>Action on hold.</i> No progress has made due to financial constraints. The continuation of the project will depend on the ability of TfL to support it.
2.4	Public health and awareness raising	Public Health input into delivery of AQAP.	Ongoing no completion date	Local Authority Public Health Department	<i>Action ongoing.</i> The Public Health Service supports the Council to achieve its aims to improve air quality. This has included (a) contributing to the evidence base for the local strategy; (b) actively participating in the Havering's JSNA includes a recommendation that using the Healthy Streets Scorecard as a starting point, LBH should continue to bring forward proposals to implement and expand recommended measures and other complementary activities to improve road safety, increase active travel/modal shift and improve air quality;.and (c) providing financial contributions to air quality monitoring.
2.5	Public health and awareness raising	Continue to promote the TfL STARS (Sustainable Travel: Active, Responsible, Safe) accredited travel planning programme with schools to reduce car use on school run.	Ongoing no completion date	Local Authority Transportation Department	<i>Action ongoing.</i> All schools in Havering are encouraged to maintain active School Travel Plans (STP) and report their activities annually via the Transport for London Travel for Life Accreditation Programme website. 55 schools out of 84 participated in the TfL Travel for Life Accreditation scheme. Of these, 35 were accredited at the highest Gold level, four at Silver and 13 at Bronze. Promotion of the TfL Travel for Life From 2022 to 2023, nearly £30k worth of Small and Cycle

					Grants were offered to 10 schools which included bikes, balanced bikes, scooters, safety equipment, EY road safety role play equipment and storage programme is ongoing facilities. From 2022 to 2023, over £100k was spent on cycle parking facilities at 13 schools providing over 148 cycle parking spaces and 314 scooter parking spaces.
2.6	Public health and awareness raising	Promote Smarter Travel initiatives with businesses and encourage local business to adopt workplace travel plans.			<i>Action partly on hold.</i> The lack of funding from TfL to support business engagement in recent years has put activities on hold. If funding is available then meaningful engagement can resume. Without funding it makes progress significantly harder to achieve. Contact with CEME and the NHS has resumed though progress is again hindered by a lack of funding. Talks with CEME about a site wide Travel Plan will resume in 2022.
2.7	Public health and awareness raising	Continue to promote airTEXT to make sure vulnerable residents are aware of the tool and how to use it.	As long as airTEXT is operating	Local Authority Environmental Health Team	<i>Action ongoing.</i> Havering has signed up to provide information via SMS on air pollution episodes through the AirTEXT software. We promote AirTEXT through the Council's social media platforms a few times per year, particularly in winter, as well as on Havering's website. Havering's Communication team puts out alerts on social media when we get notified of pollution episodes by Imperial College.
2.8	Public health and awareness raising	Investigate the feasibility of introducing Car Clubs and associated facilities in Havering.	Cancelled	Local Authority Transportation Team	<i>Action on hold.</i> Havering is not taking forward the plan for a Council run Car Club programme, as it has not been considered a priority right now. There are currently a few car clubs operating around new developments, sourced by the developers.
2.9	Public health and awareness raising	Support the LIP cycle training budget to promote "bike ability" in schools and also to adults and families.	2028	Local Authority Transportation Team	<i>Action ongoing.</i> Despite low levels of funding from TfL the borough was still able to deliver bikeability training to a large number of residents (pupils and adults). In total, bikeability training was carried out for 932 pupils and cycle skills training for 392 adults.
2.10	Public health and awareness raising	Encourage greater use of the Council's staff travelling to work sustainably through adequate provision of cycle infrastructure at Council buildings.	Completed	Local Authority Asset Management	<i>Action completed,</i> as reported in 2021.

2.11	Public health and awareness raising	Successful delivery of annual Local Implementation Plan (LIP) programme to deliver schemes that support the Healthy Streets agenda and provide options for people to travel sustainably.	Completed	Local Authority Transportation	<i>Action ongoing.</i> Two walking zone maps for two schools (Drapers Pyrgo and Harold Wood primary) were developed and successfully launched in 2021, encouraging pupils to travel to school actively. Cycle Parking has been delivered at Hall Mead school to support this secondary school working towards Bronze STARS Accreditation.
2.12	Public health and awareness raising	Offer workplace grants to businesses for infrastructure (e.g. cycle parking, lockers and showering facilities)	Action Cancelled?	Local Authority Transportation	<i>Action on hold.</i> Active travel grants were put on hold because of the limited LIP funding from TfL. The continuation of the scheme will depend on financial resources available.
3.1	Emissions from developments and buildings	Creation of an Air Quality Supplementary Planning Guidance (SPG).	2028	Local Authority Environmental Health	<i>Action partly on hold.</i> A Draft SPG has been created, but it will not be progressed until Havering's Local Plan is adopted.
3.2	Emissions from developments and buildings	Review current planning conditions, in relation to air quality, to ensure they are fit for purpose.	Completed	Local Authority Planning	<i>Action completed.</i> Planning conditions have been reviewed and are in line with the requirements set out in the New London Plan.
3.3	Emissions from developments and buildings	Adopt and implement planning controls on combined heat and power (CHP) or biomass systems	Ongoing no completion date	Local Authority Environmental Health	<i>Action ongoing.</i> Havering uses a condition requiring the emissions limits for CHP and Biomass set out in Appendix 7 of the GLA Sustainable Design and Construction SPG. For all new developments Havering requires ultra-low NOx boilers to be installed, if alternative heating strategies are not employed.
3.4	Emissions from developments and buildings	Adopt and implement planning controls on air quality neutral development.	Ongoing no completion date	Local Authority Environmental Health	<i>Action ongoing.</i> Havering requires all new developments to undertake an air quality neutral assessment, in line with the New London Plan and the Draft Air Quality Neutral London Plan Guidance.
3.5	Emissions from developments and buildings	To ensure that new Housing Estate Regeneration Programme for LBH housing developments obtain the commitment	Ongoing no completion date	Local Authority Planning	<i>Action ongoing.</i> Havering's regeneration team is committed to reduced carbon foot print and air quality neutral development. Public Protection, Regeneration Services and the appointed consultants and contractors collaborate and are aware that an air quality assessment is required on validation of any regeneration planning applications.

		from developers to a strategy of future reduction of reduced carbon foot print and minimal impact on air quality			
3.6	Emissions from developments and buildings	Adopt and implement planning controls for innovative and recognised green space and planting in new developments. Planning to work with grounds maintenance and parks at design stage for advice on greening and planting	Ongoing no completion date	Local Authority Planning	<i>Action ongoing</i> , through inter-departmental work with Havering's Strategic Development and Public Realm. Both the London Plan 2021 and Local Plan 2021 have policies relating to green infrastructure. London Plan policy now requires minimum achievement against the Urban Greening Factor (UGF). The Council tries to strike a balance between decent green infrastructure on sites and their associated maintenance costs.
3.7	Emissions from developments and buildings	Promote and enforce the Smoke Control Areas to reduce the amount of unlicensed burning.	Ongoing no completion date	Local Authority Environmental Health	Action ongoing. Havering provides information to residents about Smoke Control Areas on its website. Chimney smoke complaints are investigated to determine if authorised fuels are being used by the resident. If non-authorised fuels are being used, our enforcement officers educate the residents and for a first time complaint, provide details from the DEFRA website. If further complaints are made and substantiated, then enforcement action is taken. https://www.havering.gov.uk/airquality
3.8	Emissions from developments and buildings	Monitoring and implementation of Non Road Mobile Machinery (NRMM)	Ongoing no completion date	Local Authority Environmental Health	<i>Action ongoing</i> . A planning condition with the NRMM requirements is applied to all major developments in Havering. As part of the London-wide NRMM scheme, 17 audits were undertaken in 2023. 11 sites were compliant (36% self-compliant, 43% compliant following engagement with inspectors).
3.9	Emissions from developments and buildings	Promote public sector landlords (homes and public buildings) to take air quality and energy efficiency advice before refits, via the GLA	2030	Local Authority Asset Management	<i>Action ongoing</i> . The Council's Asset Management Strategy 2021-26, was adopted in November 2021. 2,620 homes have been found below the standard required by 2030 (based on a SAP - Standard Assessment Procedure - rating below 69). The solutions for these properties will vary based on different

		RE:NEW and RE:FIT Programmes.			property types. An Energy Management Plan is expected to be finalised in 2022.
3.1	Emissions from developments and buildings	Deliver infrastructure to ensure that Romford, Rainham and Beam Park Housing Zones are accessible by means other than the car and that residents are provided with options to travel sustainably (Including the Beam Parkway Major scheme and Beam Park station)	Completed	Local Authority Planning	<i>Action completed.</i> The design for the proposed A1306 has been completed. Beam Park Station is going ahead. Whilst some design work has been undertaken on Romford Ring Road, the pace of progress has lessened due to TfL not being able to provide further funding to support the scheme because of its wider financial situation.
3.11	Emissions from developments and buildings	Identify previously unknown and new premises that require permitting under PPC. Determine these properties that require permitting for Pollution Prevention Control (PPC).	Completed 2024	Local Authority Environmental Health	<i>Action completed.</i> The industrial area surrounding the A1306 towards Rainham was surveyed and no unpermitted premises were found here or across the borough. The whole borough has now been surveyed.
3.12	Emissions from developments and buildings	Signpost business contact and residents to the appropriate boiler scrappage schemes and energy efficiency grants; Promote businesses and residents to take air quality and energy efficiency advice; embed this practice as part of business as usual activity of the department	Completed 2024	Local Authority Sustainability	Action completed. The LB Havering website https://www.havering.gov.uk/info/20013/environment/137/energy currently signposts businesses and residents to the following schemes: Big London Energy Switch; Warm Home Discount; Solar Together; Green Homes Grant; There is no capacity at present within the Energy Management service to provide advice to businesses and residents on air quality and energy efficiency advice. The focus of the service is on the delivery of Havering's corporate energy contract.
4.1	Emissions from transport (covers	Include requirement for suppliers of large council	Completed	Local Authority Procurement	<i>Action completed,</i> in 2021.

	the Matrix themes: Delivery servicing and freight, borough fleet actions, localised solutions and cleaner transport)	contracts that they have attained silver or gold FORS accreditation for their organisation and vehicles			
4.2	Emissions from transport (covers the Matrix themes: Delivery servicing and freight, borough fleet actions, localised solutions and cleaner transport)	Investigate the feasibility of introducing dedicated drop off zones outside all schools for buses & coaches.	Cancelled	Local Authority Transportation	<i>Action cancelled</i> , in 2021.
4.3	Emissions from transport (covers the Matrix themes: Delivery servicing and freight, borough fleet actions, localised solutions and cleaner transport)	Renewal of Taxi Framework, with suppliers complying to the Ultra Low Emission Zone (ULEZ) & exploring ZEC (Zero Emission Capable) Standards	Completed	Local Authority Environmental Health	<i>Action completed</i> . The ULEZ has now been implemented and TfL was liaising with organisations such as taxi companies prior to the ULEZ being enforced to make sure vehicles are compliant.
4.4	Emissions from transport (covers the Matrix themes: Delivery servicing and freight, borough fleet actions, localised solutions and cleaner transport)	Provide Smarter Driver Training for all vocational drivers of the Council's fleet vehicles. Delivered by CPC training and FTA Van excellence accreditation	2030	Local Authority Asset Management	<i>Action ongoing</i> . The Council recommended driver Certificate of Professional Competence (CPC) and LoCity training in 2022-23. It is also intending to investigate investment in fleet vehicles which can use electric power. The Council's current fleet uses fuel Gas-to-liquid fuel (GTL) and this is not expected to change in the short-term, as (Green) Hydrogen and Hydrogen powered vehicles are not yet widely available for fleet use. The Mayoral Diesel Car has now been replaced with a full Battery Electric Vehicle (BEV).
4.5	Emissions from transport (covers the Matrix themes: Delivery servicing	Investigate the feasibility on the delivery of Electric Vehicle Charging Point (EVCP)	2024	Local Authority Transportation	<i>Action ongoing</i> . Since the survey went out Havering Council has received £346k of Government funding from the Office of Zero Emission Vehicles (OZEV) to deliver 68 Charge Points in Council operated car parks and up to 80 on street charging

	and freight, borough fleet actions, localised solutions and cleaner transport)	infrastructure across the borough.			points across the borough in 2023. The Council will soon begin a procurement exercise to appoint a Charge Point Operator and the intention is to begin delivery of the charging infrastructure in 2023.
4.6	Emissions from transport (covers the Matrix themes: Delivery servicing and freight, borough fleet actions, localised solutions and cleaner transport)	Review parking charges policy (controlled parking zones)	Cancelled	Local Authority Highways	<i>Action cancelled</i> , as reported in 2021.
4.7	Emissions from transport (covers the Matrix themes: Delivery servicing and freight, borough fleet actions, localised solutions and cleaner transport)	Engage with businesses in the borough through business forums to discuss the options for upgrading/retrofitting to accommodate ULEZ requirements.	Completed	Local Authority Economic Development	<i>Action completed</i> . The ULEZ has been implemented.
4.8	Emissions from transport (covers the Matrix themes: Delivery servicing and freight, borough fleet actions, localised solutions and cleaner transport)	Plant greenery and trees (e.g. hedgerows and trees such as ash, common alder, field maple, larch, Norway maple, scots pine and silver birch) along main roads and town centres, which can lead to an improvement in air quality based on available evidence.	Completed	Local Authority Waste & Contracts Department	<i>Action completed</i> , in 2020.
4.9	Emissions from transport (covers the Matrix themes:	Develop Local Implementation Plan to support improvements in	Completed	Local Authority Transportation	<i>Action completed</i> , as reported in 2021.

	Delivery servicing and freight, borough fleet actions, localised solutions and cleaner transport)	local air quality; together with working with TfL to ensure pollution sources outside of local control i.e. buses and commuter traffic are dealt with.			
4.1	Emissions from transport (covers the Matrix themes: Delivery servicing and freight, borough fleet actions, localised solutions and cleaner transport)	Undertake feasibility work to examine the air quality implications of re-routing of bus services away from Romford town centre and look options for improving sustainable travel access into Romford town centre.	Completed	Local Authority Transportation	<i>Action on hold.</i> This is an action that was tied to the Romford Masterplan. Since the ULEZ expansion all buses must be ULEZ compliant.
4.11	Emissions from transport (covers the Matrix themes: Delivery servicing and freight, borough fleet actions, localised solutions and cleaner transport)	Continue to routinely check the weighbridges used commercially by (usually large) vehicles	Ongoing	Local Authority Environmental Health	<i>Action ongoing.</i> This action aims to reduce the number of overloaded vehicles and is expected to lead to a reduction in emissions.

Table K.2 The London Borough of Havering Climate Change Action Plan (2024-27)

No.	Theme	Measure	Update
B7b	New developments achieve best practice standards to minimise their	Explore options and draft a Climate Change Checklist for developers to submit with major planning applications.	Draft checklist created

No.	Theme	Measure	Update
B7c	whole life carbon and air quality impact.	Embed zero carbon negotiations in the Pre-App process (applying Policy S1 2 of the London Plan) including sustainability focused meetings for referable schemes.	80% of new strategic applications to include sustainability focused pre-app meeting
B14		Review major planning applications with LBH Energy and Sustainability Consultant to ensure that zero carbon policies set out in the London Plan and LBH Local Plan are enforced and exceeded where feasible.	80% of major planning applications reviewed
B15		Develop, seek funding and evaluate the feasibility of introducing a local heat network within Havering.	East Havering Datacentre is expected to present if consent a good source of high-grade heat which is though could be used to supply local district heating network. Initial scoping works have been commissioned by the investor to the project but next steps are yet to be agreed.
B7f		Consider feasibility of including a Net Zero Carbon policy in the next Local Plan.	Work is ongoing on the local plan, its evidence base and policy development. Long term project. When completed, evidence is published here: https://www.havering.gov.uk/planning-3/local-plan-updates/2 Recent government changes to national planning policy are being considered and addressed with work on a local plan consultation document being started. Reflecting these changes and priorities for the Council. New designation of grey belt and assessment methodology now being considered.

No.	Theme	Measure	Update
B8c	The Council takes clear and ambitious action to reduce the carbon emissions associated with their buildings and activities.	Promote Green Infrastructure through Urban Green Factor (London Plan Policy G5), SUDS (London Plan Policy SI 13) and min 10% improvement to Biodiversity Net Gain applied to all major developments. Further Greening of the Borough to be promoted through relevant projects including tree planting to Romford Ring Road and greening of central Romford. Feasibilities to be developed for funding other schemes including Rom Valley Way.	Urban Greening Factor and Biodiversity Net Gain policy requirements are being enforced in all new major planning applications. Traffic Modelling and design for greening of Romford Ring Road (starting at North Street) is taking place and liaison is on-going with developers around the ring road. Rainham Gateway S106 contributions have been received and consultants will be procured to develop the design. A project to create additional greening to pedestrian areas of North Street is being progressed
B9a		Lobby to improve funding and resourcing for Local Planning Authorities to fully verify developer adherence to sustainability, energy efficiency, urban greening factor, SUDS and biodiversity net gain commitments in planning applications.	Lobbying efforts to begin
B16		Explore potential and review funding options for a River Strategy.	CIL funding for an initial study has been secured. Water engineering consultants Binny have been procured to lead the initial study. This builds on flooding review work undertaken by the Highways team.
B17		Develop a plan to record and monitor Energy Performance Certificate (EPC) ratings for licensable properties, such as Houses in Multiple Occupation (HMO).	Work to begin
B18		Implement actions in Surface Water Management Plan (SWMP).	New SWMP to be finalised before 31st December 2024
B19		Establish Sustainable Urban Drainage Systems (SUDS) approval body and carry out responsibilities.	Governance in place
B20		Formally extend the Thames Chase Trust Community Forest so that it includes urban areas.	Anticipated to be implemented by January 2025.
E1		Review contract with energy supplier.	The Renewal of Energy Award Contract 24-28 has been approved. The energy contracts are valued at

No.	Theme	Measure	Update
	Harness opportunities for the corporate estate to use energy from low and zero carbon sources.		an estimated £5.3 million per year for corporate, housing, streetlights, and schools/direct sites.
E3		Develop Energy Management Plan for Corporate Estate.	We are in the process of developing a comprehensive trees Plan for our corporate estate. This plan aims to identify strategies for improving energy efficiency, reducing costs, and minimising our environmental impact. The initial draft has been completed and will soon be shared with management for their review. We invite their feedback and suggestions to ensure the plan aligns with our overall corporate sustainability goals and effectively addresses our energy needs.
E4		Improve energy efficiency of corporate estate.	Energy Consumption Analysis. We have begun analysing the current energy consumption data across our facilities. This analysis will help us understand our baseline energy usage and identify areas for improvement. Identifying High Usage Area: We are in the process of pinpointing key areas where energy consumption is particularly high, specifically focusing on both gas and electric usage. This will allow us to prioritise our efforts. Research on Energy-Efficient Technologies: Our team is actively researching energy-efficient technologies and practices that can be integrated into our corporate estate operations. We aim to adopt solutions that align with our sustainability goals. Feasibility Assessment of Renewables: We're evaluating the feasibility of implementing renewable energy sources, such as solar, to diversify our energy supply and reduce our reliance on non-renewable sources.

No.	Theme	Measure	Update
			Exploring Financial Incentives: We are also investigating various incentives, grants, and funding options available for energy efficiency projects. This will help offset costs and enhance our investment in sustainable practices. Energy Efficiency Plan Development: Our goal is to develop a comprehensive energy efficiency plan with the target of achieving a 10% reduction in gas and electric consumption. This plan will outline our strategies and overall vision We are currently in the process of gathering electric and gas consumption data from our corporate sites with the aim of implementing a set of strategies to reduce overall consumption. The next step involves the installation of solar PV. We will proceed by obtaining quotations and seeking advice from relevant companies .
E5		Measure and report annual carbon emissions for the borough and for the corporate estate.	Borough emissions reported up to 2022 (published in June 2024). No later figures available. Corporate emissions published for gas, electricity and transport up to March 2024.
E8		Reduce energy use by IT.	We are on target to move all our physical servers to cloud based servers by Nov 2025. We are currently working out when we will be in the position to shut down our data centre at Havering Town Hall. To date we have successfully migrate 3 service into the public cloud. The previous update from Glyn mentioned that the figure of 90% would not be a true reflection of our carbon footprint reduction because they will still be consuming electricity in the Microsoft Data Centres. But on average their servers use approximately 33% of our own prem servers.

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E9		Install smart meters in corporate buildings managed by the Council to provide better monitoring of energy consumption.	Electric: 80% to 82% of the installation has been completed and the rest is currently being processed with the cooperation of Npower, who has taken charge of the AMR installation. Gas: 90% to 92% of the installation has been completed, and the remaining work is being carried out with the cooperation of Corona Energy. We will update you as soon as we finalize the plan for the remaining AMR installation with the suppliers. To fulfill the remaining target for installing the smart meters, we are collaborating with the supplier to arrange the installation schedule. Note: We have initiated the process and are currently in the process of scheduling the installation of AMR meters with the supplier's electric deployment team. Rest assured, we will provide you with timely updates as soon as new information becomes available.
E10		Conduct water, electric and gas meter audits and reviews with the aim of reducing water, gas and electricity usage and consolidating and reducing bills in the corporate estate.	Water Corporate Contract: We are actively collaborating with the procurement team to explore various options that align with our strategic goals. At this stage, we are reviewing different options and contract terms to ensure that we secure the best possible agreement. We aim to finalise our selection soon and will keep you informed of any significant developments. We are conducting audits to assess our current usage and identify areas for improvement. This process involves: Data Collection: We are gathering detailed consumption data from all our meter readings to establish baseline usage levels for gas, and electricity across our facilities.

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			Analysis: We are analysing the data to pinpoint inefficiencies and areas where we can reduce consumption. This includes comparing usage patterns and identifying peak consumption times. Meter Inspection: We are planning to inspect all meters to ensure accurate readings and proper functioning and any signs of damage, tampering, or inefficiencies. Meter Readings and Analysis; Take current meter readings and compare them with historical data to identify consumption trends and anomalies. Analyse usage patterns across different facilities and departments. Monitoring: We will establish a monitoring system to track progress and ensure that our initiatives lead to tangible reductions in our utilities bills. Our goal is not only to reduce overall consumption but also to consolidate our utilities services where possible to streamline costs further. We believe that these efforts will significantly impact our sustainability initiatives and operational efficiency.
E11		Review criteria for constructions standards applicable to Council developments to increase environmental standards beyond those required by Building Regulations.	Research on this matter is underway. There is a pilot scheme for a UK net zero building standard which is going to be reviewed for suitability and adaptability to LBH purposes for new developments.
E13		Install web portal to monitor energy consumption in the Corporate Estate.	We are currently in the process of developing a web portal, which will serve as a platform for our esteemed users to monitor their consumption. However, we have encountered some technical issues with our supplier, which have unfortunately

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			delayed our launch. We will keep you updated on our progress, and endeavour to share the portal with you as soon as it is fully ready.
E14		Promote energy efficiency within schools newsletter.	Since taking this action on, we have been able to include climate change to feature in all the School newsletter.
E17		Sustainability Action Plans to be adopted and maintained for all Corporate Landlord sites.	Template is under development.
E19		Publish a reduced IT carbon and ecological footprint, based on the services consumed, on the corporate estate and with suppliers, encompassing embodied / embedded carbon.	Action has been incorporated into E8.
E29		Dim street lights on main roads from midnight to 5am.	Work to start later in the year. Works programmed to start in 2025/26
E31		Introduce environmental savings through the use of Acrobat Sign across Council departments.	With 3,377 completed agreements using Adobe Sign from Jun 23 to Dec 24 we have saved: 572kg of wood (4 trees); 90kg of waste; 1,441kg of Co2; 13.6k litres of water and 4.3M BTU hours of energy. Looking to increase usage across the council e.g. Building Control, who have shown recent interest
E32		PV installation to roof of a new SEMH ARP Facility at Suttons Primary School.	Construction underway, building mostly water tight, PVs have been installed, Bores for GSHP complete. Fitout and internal decoratiosn underway, external landscaping is to be completed. Building due for completion May 2025 (delay due to roof cappings not available)
E33		School Energy Efficiency and Decarbonisation (SEED) project to develop an estate-wide heat decarbonisation plan for maintained schools estate. This is funded by an LCSF5 grant from SALIX. (Low Carbon Skills Fund)	Initial client briefing meeting with external architects, RAFT, took place on 22/10/24 to establish what the Council wants from the project.
E20		Develop a programme to upgrade communal lighting in Community Housing to LED lighting.	A programme will be developed. Asset details are being requested from the Asset Team. New Heating

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	Harness opportunities for Housing to use energy from low and zero carbon sources.		and Hot Water contract which commenced in August 24 includes replacement of all domestic light bulbs with LED bulbs during the annual gas safety checks. A new Electrical Services contract is being procured (report to September Cabinet) and this will be the delivery vehicle for new Communal LED lighting. Tenders for the new Electrical contract are now out and the contract will be live in late Summer 2025. Take up by individual residents has been very low but we will increase publicity and mail out to leaseholders as well.
E21		Apply for grant funding from Wave 3 of the Social Housing Decarbonisation Fund to deliver fabric retrofits to properties over the next two years, helping to cut fuel bills for social housing tenants, increase their EPC rating to a C or above and reduce carbon emissions. Funding and Application timelines to be confirmed.	All properties within proj Guidance on grants has now been released but applications are not yet invited. We are identifying a suitable property list and have appointed the necessary consultants working to PAS2035. The bid window is open with bids due in by 25th November. We will apply through a consortium with London Councils for works to approximately 400 homes. We are currently collating our data and providing case studies and evidence for the bid submission. Our bid to fund works to bring 400 properties up to EPC C, plus a further 40 properties to have low carbon heating, is now in through London Councils. The bid results are due February/March 2025ect to reach EPC C
E22		To continue with fabric led retrofit project work to bring properties up to an EPC C rating working on a self delivery approach with no government funding.	This programme is retrofit delivery without the benefit of grant funding and will continue on an annual basis as budgets allow. Current programme of fabric retrofit is almost complete and part of the strategy will now focus on measures necessary to achieve EPC C by 2030 with no detriment to future improvements

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E23		Install a heat pump as the primary source of heating and hot water in the new Family Welcome Centre in Harold Hill, plus in two new supported accommodation schemes for Social Services at Mawney Close and Mowbrays Close.	Bugler have been appointed and started works recently on the Family Welcome Centre. Marfleet and Blyth have been awarded the contracts for the schemes at Mawney Close and Mowbray Close and work is progressing on site. All contracts are on programme, with Mawney & Mowbray due to complete in February and April 2025, and Family Welcome Centre in May 2026
E24	Harness opportunities for residents to use energy from low and zero carbon sources.	Development of a zero carbon visitor centre at Raphaels Park Lodge. Engage with the Havering Volunteer Centre to develop the capacity to manage the facility.	Building works are nearly complete. The design of the exhibition is progressing internally. Recruitment issue to be resolved.
E30		Encourage green energy solutions with residents and businesses and point to any funding incentives available via the zero carbon visitor centre. Where we know of businesses who promote such generation reach out and encourage them to promote those initiatives in Havering.	Content for the exhibition space for the Low Energy Visitor Centre is in development.
E25		To publish the impacts of the Energy Doctors Programme on matters pertaining to climate change.	612 home visits. Energy saving measures included radiator foils, LED lightbulbs, draft excluders, timers.
E26		Use the HUG2 grant to tackle fuel poverty in 30 low-income households, improve the energy efficiency of these homes and cut energy costs.	The application window for HUG2 has now closed. Work continues on finishing those homes that were eligible.
E27	Harness opportunities for partners and local businesses to use energy from low and zero carbon sources.	Monitor Phase 2 (capital) of the Swimming Pool Support Fund. Reduce carbon emissions and make swimming pools more energy efficient.	Phase II funding award for part of our application to the swimming pool support fund. An award of £700k has been offered to install car ports with Photo voltaic (PV) panels on at Central Park Leisure Centre. Planning has been granted and a contractor appointed via a framework agreement. Fabrication has commenced and further ground tests carried out, with the construction of the car ports commencing at the end of February and the project completed by end of March 2025. Fabrication of the car ports is commissioned, with a start on site

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			date of 10 March for installation, slightly later than envisaged. The scheme is likely to run in to April, but should be completed before end of April. Contract being signed and sealed currently. A successful Carbon Offset Fund application was made to fund the installation of additional PV panels at Sapphire Ice and Leisure. SLM will be managing this project with installation, subject to planning permission, being installed in the 2nd or 3rd quarter of 2025. Planning permission submitted for CPLC PV panel scheme on 30/9/2024.
E28		Submit bid to Carbon Offset Fund to support community halls with implementing energy efficiency measures.	CIL money re energy efficiency & green maintenance within Community Associations - Cranham CA was been identified mid 2024. Currently no further action has taken place. Energy efficiency & Green external grants are emailed out to Community Association committees on a regular basis.
P4	Prepare businesses for skills needed in a net zero economy and borough.	Create a 'Business' page on the website – a "Trusted site"	Unable to deliver this action due to service capacity
P12		Identify high-tech environmental companies who might wish to establish a presence within Havering.	Expected to be delivered as a consequence of East Havering datacentre investment
P20		Use UK Shared Prosperity Fund (UKSPF) Skills Funding to provide training for local business in fundamentals of sustainability with the objective of the businesses adopting greener processes within their ways of working.	Business Support, Start Up training and Supply Chain training continues into February. 108 businesses engaged with so far. 13 entrepreneurs registered on the business start up programme.
P21		Establish a Best Sustainable Business Award.	The Havering Small Business Awards opened for nominations on 28/03/24. The Award Ceremony is in Sep 24.
P23		Create a Directory of Green Services - providing businesses with a resource from which they can identify services to support the business to implement tackling climate change activities.	Final version recieved from Eunomia. Directory added to website. Will be promoted as part of Greener Futures initiative

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P8	Prepare residents for skills needed in a net zero economy and borough.	Explore the feasibility of setting up a Local Housing Skills Centre to deliver practical green actions within the borough.	Potential to explore this action pending funding announcement from the GLA.
P11		Undertake sector focussed research on key sectors in Havering's economy to identify green skills gaps and support the development of solutions.	Potential to explore this action pending funding announcement from the GLA.
P13		Joint ventures with local colleges on research and development of green strategies.	LSIP Funding has equipped Colleges to deliver training on green tech installation, activity is at a sub-regional level in conversation with LAs through the economic growth and skills and employment meetings. LSEC is holding events across the 9 Local London Boroughs to engage businesses and learners and send out bulletins. Action at borough level is to promote engagement.
P14	Prepare workforce for skills needed in a climate active council and net zero economy.	Design and develop a culture change programme to include climate issues for officers and a review of all HR policies.	Think before you print will be added to policies as they are reviewed
P24		Work with London Councils to develop and integrate regional learning into the everyday practice of the Council and brief Members on the outcomes.	Work to start later in 2025.
P25		Hold a Member Workshop on climate change issues to establish consensus around the climate change agenda.	Introduced as part of 2024-25 appraisal cycle
P26		Incorporate climate change PDR actions into the top three tiers of Council management and analyse their effectiveness.	Introduced as part of 2024-25 appraisal cycle
P27		Incorporate an optional climate change PDR action for all staff and analyse take up and effectiveness. Consider making this mandatory for all staff in the new PDR cycle.	Optional PDR objective in PDR library
P28		Introduce a climate action toolkit to provide practical guidance on considerations for reducing the Council's carbon footprint across all decisions and projects.	Toolkit is available on intranet

No.	Theme	Measure	Update
P29		Secure, access and make available climate change training for all staff and categorise courses by awareness raising and/or professional skills development.	Climate change courses part of new LXP. Tackling climate change part of Corporate Welcome slide deck. Let's Talk session planned for 20/05/24
P30		Promote actions for tackling climate change to staff not on the computer network.	Climate change courses part of new LXP. Tackling climate change part of Corporate Welcome slide deck. Let's Talk session planned for 20/05/24
P31		Introduce a salary sacrifice electric car benefit scheme for staff.	Discussions taking place with Tusker to implement in 2025
PR2	Adopt sustainable purchasing practices and products.	Agree a vision statement for sustainable procurement that aligns with national and Havering targets.	To be drafted by end March 25
PR3		Establish a framework to identify current spending against associated carbon emissions and agree a target for reduction. Investigate opportunities for divesting from fossil fuel.	Scpoe 3 emissions will form part of the new procurement e-tool, this will be developed and will enable a view that can be turned into an informed strategic direction This has been pushed back to phase 2 in the impenetation of the e-procurement tool, Phase 1 is expected to commence by the end of April 2025
PR4		Include sections in revised Contract Standing Orders to ensure sustainability issues are incorporated into the procurement of goods, services and works.	The Councils CPR's will be redrafted wit a target of the end of February 25, and will be supported by a more detailed procurement handbook This has been delayed due to delays in resourcing backfill to release resource. This has now been recruited to and drafting has commenced.
PR6		Identify and prioritise local supply chains and work with them to ensure they understand, disclose and cut carbon emissions.	Scope 3 emissions will form part of the new procurement e-tool, this will be developed and will enable a view that can be turned into an informed strategic direction

No.	Theme	Measure	Update
			This has been pushed back to phase 2 in the implementation of the e-procurement tool, Phase 1 is expected.
PR7		Reduce pensions investment in environmentally unsustainable companies.	35% of the Pension Fund has already moved into more 'climate friendly' products
PR8		Evaluate funding strategy for tackling climate change, including green bonds and grant availability.	Unable to progress in current financial situation
PR9		Develop a bespoke framework for IT to evaluate the impact of IT developments and purchases on the environment and measure carbon emissions.	Environmental and climate change implications considered as part of Gateway Review Group and EDs Representation on Gateway Review has commenced and the staff actively contribute to the meeting and challenge
PR14		Only procure with IT suppliers who have committed to, or are in the process of, setting science-based targets that match the Council's sustainability aims.	Environmental and climate change implications considered as part of Gateway Review Group and EDs
PR15		Write a Procurement Plan / Strategy to include a climate change and procurement 'road map' that actively encourages suppliers to operate and provide goods and services that offer maximum social, environmental and health benefits to Havering residents and community (e.g. eliminate, substitute and reduce emissions, measuring and monitoring, reporting emissions).	The Procurement Act 23 requires all above threshold procurements to consider wider environmental and outcomes that impact our residents, this will be reflected in the new CPR's and Procurement handbook
PR16		Monitor the delivery of measures against grant schemes and record outcomes.	The Procurement Act 23 requires all above threshold procurements to consider wider environmental and outcomes that impact our residents, this will be reflected in the new CPR's and Procurement handbook
PR5	Prepare Havering Council workforce for skills needed in a climate active council and net zero economy.	Deliver staff training on sustainability procurement to ensure that Havering has a low carbon procurement framework, so that staff can advise and support companies with whom they do business.	Funding bid submissions are being recorded via Newly Published Decisions and the Climate Action Group

No.	Theme	Measure	Update
PR17		Contract managers are trained to evaluate and act on the environmental provisions made as part of the contract process.	A wider training package that supports the sustainability agenda will be developed
PR18		Share knowledge of sustainable suppliers and promote good practice case studies.	Sustainable Procurement page published on intranet with 1 case study
PP2	Residents live in comfortable, affordably heated and well-adapted homes that are cost-efficient with low or zero greenhouse gas emissions	Explore how the Private Sector Housing licensing process can help promote energy efficiency measures in rental properties by signposting advice and guidance to landlords	Upon renewal of the Selective Licensing Scheme a discount can be offered for those landlords who have higher EPC ratings, to encourage landlords to improve their properties. Energy Doctor scheme to be signposted to Landlords
PP5		Promote energy efficiency schemes to landlords.	Incorporated into PP2
PP7		Identify new premises for Pollution Prevention and Control Permitting.	Beam Park/New Road area surveyed and no unpermitted businesses were found. We have identified a further 2 sites (1 company, operating without a permit, and dry cleaner which has applied for a permit). This action is part of business as usual for Public Protection so has been completed on the action plan.
PP10		Promote ideas for tackling climate change to social housing tenants.	Climate change information is under Financial Help and Advice in the Private Sector Housing Tenants Handbook and available on the Council website.
PP3	Protect and improve the environmental health of the borough	Update Air Quality Action Plan.	There is a draft available of the new Air Quality Action Plan. This will go for a second round of internal consultation before briefing the Environment Lead Member, sharing with the GLA and a completed ED before going out for a 12 week public consultation April/May 202
PP11		Explore how food and trading standards inspections can help promote climate change activity in the business sector and leave advice and guidance for business owners.	This is still to begin. Due to significantly reduced capacity in Food Team, it has not be possible to progress this action further

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PP12		Investigate options to increase public access to drinking water to reduce single use plastic bottles.	Reducing the use of single use plastic bottles has been factored into the Healthy Weight Strategy and will be promoted on the Well Havering website.
SC8	Continue to develop initiatives to protect Havering's green heritage and natural environment.	Publish new Parks Strategy.	2nd draft being produced
SC12		Produce an updated Havering Nature Conservation and Biodiversity Plan following production of the GLA's Local Nature Recovery Plan.	On hold until GLA publish their Nature Recovery Strategy (likely to be in late 2025)
SC13		Management of nature conservation areas within Council owned land and encouragement of private land owners to manage biodiversity.	Conservation/ meadow areas in parks have been increased. Comms to promote No Mow May campaign to residents with private gardens
SC14		Re-design planting schemes to include drought tolerant species.	Removed all seasonal bedding including 5 Crowns & carpet bed from displays & replaced with permanent planting.
SC15		Adopt deer management plan to improve biodiversity in parks.	TB agreed to undertake census and then produce management plan which will be presented to TB in 25. Census completed and drafting management plan.
SC16		Review the use of herbicides across all Council services, including those containing glyphosate.	In the UK, the current expiry date is December 2025, following a three-year extension as the UK's post-Brexit pesticides regulatory regime is developed
SC17		Create a walking trail for ancient and veteran trees across the north of the borough.	Links to the tree map and feedback survey have been added to the Low Energy Visitor Centre webpage and Havering Council website.
SC35		Creation of a community garden as part of the Waterloo Estate regeneration.	Community garden has been set up and is in use. Community groups and schools visit to learn and garden
SC36		Take part in surveys by Natural England and RSPB to record data on vegetation, habitats, soils, landscape and butterflies and compare how these are changing over time.	Initial permissions being sought

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SC18	Foster effective partnerships with community groups and the voluntary sector to raise community awareness about the role everyone has to play in tackling climate change.	Develop programme for Climate Change Champions and continue to seek funding to maintain the scheme.	NL Climate Change grant is being researched. The programme continues in a reduced plan focused on litter picking & community clean ups by the voluntary sector. Kim promoting the scheme at the APSE (Southern Region) Renewables & Energy Efficiency Advisory Group on 03/10/24.
SC19		Meet and engage with the Faith sector to agree a set of actions to spread the message of climate action within their communities. This will include establishing measures of impact of the activities, new faith material communications and inter-faith activities.	Climate change will be part of the Community Engagement Strategy 2024-27 that is now agreed. Leader meeting Faith Leaders in January. Partnership with London Faith Forum. Partnership meetings with Faith Leaders taking place late January and Early February focussing on community resilience.
SC20		Explore possibility of establishing a community fridge/s.	No information available currently.
SC21		Identify, secure and promote grant funding opportunities.	Awaiting to hear if there will be a Warm Place budget for 25/26.
SC22	Increase engagement and communications about sustainability with residents, schools, businesses, visitors and other stakeholders.	Work with 2 schools to raise awareness of tackling climate change.	Site visits to Low Energy Visitor Centre to be organised. Potential schools are Squirrels Heath Infants and Juniors; St Edwards Primary; and Drapers Mayland Primary School.
SC11		Continue Healthy Schools programme as a mode of engaging with schools.	There are some proposed changes to the Healthy Schools and Healthy Early Years Programmes. We can use this as an opportunity to re-launch the new revised programmes- celebrating schools / settings who have gained awards, but also call on them to remain engaged by following the new awards pathway- whilst at the same time trying to encourage schools / settings who are not yet engaged to participate in the new programmes. Link with Healthy Weight Strategy
SC23		Develop and implement a 2 year programme of media activity in respect of climate change.	Plan shared with the Green Forum in October 24 and signed off.
SC24		Redesign webpages so that the climate offer is prominent and distinct on the Havering Council website.	Content has been developed for the new Live Well Havering website and will continue to be updated as the website grows.

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SC25		Utilise smart technology to provide help and advice on climate activities.	Work to start later in the year.
SC26		Create a knowledge hub on the website on transport, housing, circular economy for staff and public so that ideas can be shared.	This has been included in the climate change communications plan. Useful information will be shared via the new Live Well Havering website and the Council's social media pages.
SC27		Create an environmental dashboard to share headline information about environmental change and track progress towards sustainability goals.	Internal dashboard for reporting on HCCAP action progress is completed. Design for external dashboard being worked on.
SC29		Establish Green Information Hubs at each library in the borough.	Books have started to arrive at the libraries and the display stands are with us and are being set up, displays should be up by the end of this month. Chasing up local green organisations to respond to request for information for the leaflets and then will liaise with marketing of organisations with comms in Aug.
SC30		Establish a Green Reading Group in libraries.	Several meetings of the Green Reading Group have now taken place and membership continues to grow.
SC31		Promotion of water harvesting to residents and businesses where practical as part of our comms strategy. Investigate initiatives in other local authorities to identify best practice.	Added to comms plan
SC32		Provide residents with a choice of environmental activities to get involved in and information to be more engaged with green issues.	Monthly Clothes Swops have started at New City College hosted by the Big Smile Collective. Havering Changing programme have been undertaking various recycling, reuse, upcycle activities and workshops on a weekly basis for residents to engage with, within Harold Hill, Collier Row, Romford & Rainham areas. Where we Live Campaign supporting the Great British Spring Clean 21.3. - 6.4.25 with resident/group litter picks and community clean ups.

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SC33	Accelerate the transition to electric vehicles across the borough.	'Seeds of Change' programme of wellbeing activities, exploring healthy food ecologies, placing physical and environmental activism within the programme. Part of A Good Life Cultural Strategy.	A Good Life Culture Strategy has been drafted
SC34		Promote the adoption of balanced diets (and the associated reduced meat consumption), maintain freedom of choice, while still delivering health co-benefits, and increase consumption of local and seasonal food.	Added to comms plan and will be featured during January to coincide with Veganuary and new year health kicks. Waste & Recycling performing Love Food Hate Waste events which promotes vegetarian meals.
SC37		Communicate how the Council is meeting its actions through the dedicated climate emergency page on Well Havering, the climate pages on the Council's website and in Living, the Council's e-newsletter.	Initial content ideas have been submitted to the Programme Manager.
T2		Replacement of pool cars with electric vehicles and associated infrastructure.	Currently on hold.
T13		Deliver an Electric Vehicle Charging Strategy.	Draft strategy to be discussed at ELT on 6th August and Theme Board on 19th August, to seek approval to go out to public consultation.
T16		Delivery of 68 electric vehicle charging points in 9 Council owned car parks, and up to 80 on street charging points connected to lamp columns across the borough.	Connected Kerb Ltd have been formally appointed to deliver the EV Charging Points across Council car parks and on-street locations. Contract with Connected Kerb was signed and sealed in June. Target is for car park EV Charge Pointed to be installed by the end of the calendar year. Discussions currently taking place with Connected Kerb to agree on the on street locations. aiming to installed on street charging points by end of financial year.
T31		Trial of GTL (Gas to Liquid) / HVO (Hydrotreated Vegetable Oil) 50/50 mix to reduce CO ₂ across the fleet.	10month trial completed. Resulting in Key ED being prepared to switch to HVO fuel via framework. HVO will reduce ICE vehicles CO2 emissions by up to 90%

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T32		Replacement of 17 diesel Parks vehicles with Battery Electric Vehicles.	Vehicles are on order and are expected in November/December /January / Feb.. on going
T33		Switch from petrol to electric mowing equipment.	Grounds Maintenance teams are using commercial electric InfiniCut mowers, which are fully electric with an operating life of 10 years.
T6	Cut 'dirty' fuel vehicle trips and increase sustainable and active travel.	Work with schools in the borough to set travel plans which deliver modal shift away from single occupancy car use.	Data from 51 accredited schools showed that walking is at 41%, scooting at 11%, cycling at 5%, park and stride at 14%, public transport at 10%, school bus at 1%, car share at 2% and car use at 16% down from 19% the year before.
T8		Awareness campaign to promote sustainable travel to our staff and contractors.	To be factored into Climate Change Comms Plan.
T10		Deliver an Active Travel Strategy for Havering.	Draft strategy is now out to public consultation.
T14		Produce a feasibility assessment and produce a paper to Cabinet on a Last Mile Delivery proposal.	Briefing Note on last mile delivery has been prepared. Currently being reviewed by Officers.
T17		Review feasibility study and develop next steps for a new north / south public transport link providing a link between Rainham and Beam Park and the Romford housing zone with a further connection to Collier Row.	Jacobs have been commissioned to undertake a review of the work done to date and the assumptions made in the work that was done pre-covid. Jacobs will also be making recommendations to Havering on next steps for taking the project forward. A first draft of this review has been sent to Havering Officers for review. Once this review has been completed, a report will be going to Theme Board summarising the work done to date and recommending next steps should Members wish to take the study further forward.
T18		Delivery of Walking Zone maps in two schools (locations to be decided) across the borough. The model will be one which can be used as a template for other schools.	Since 2021 we have delivered this initiative across five schools in the Borough. Two of these are being relaunched – Clockhouse and Drapers Pyrgo Priory. For 2024 to 2025 a further eleven Breathe Clean Walking Maps will be delivered using DEFRA funding. These are in the process of delivering walking maps to the following schools Ardleigh Green Junior, Benhurst, Branfil, Concordia, Crownfield Infant, Engayne, Gidea Park, Harold

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			Court, Hilldene, Mawney, Newtons, Towers Junior. Additionally, four Walking maps have been already been delivered in Q1 of 2024/25 at four schools in Rainham as part of the GLA funded School Superzone project.
T19		Promote and lead an active travel conference for schools. Each school to develop an active travel plan.	We are organising the 2025 School Travel Plan Conference. An agenda is being prepared. The conference will be held at the Myplace Centre in Harold Hill. We are currently working with over 65 schools across the Borough to submit accredited travel plans for the TfL Travel for Life Programme.. In 2023 to 2024, 60 schools participated in the programme, 55 were accredited - 10 Bronze, 4 Silver and 41 Gold plus 5 Engaged. We also received three Top School Awards of Excellence.
T20		London Riverside Bid - public transport access as none currently/pedestrian crossings.	"A Travel Survey is currently being conducted in the London Riverside BID area to better understand travel behaviour and aspirations for employers and employees of the Riverside Bid. The emerging findings for the employer survey include: • 40-60% drive • 20-40% public transport • 10-20% active travel • Distance from nearest transport hub and lack of local bus routes affect ability to recruit/maintain staff • Believe a shuttle bus or new local bus connection would have a positive impact • Specifically mentioned that a new station at Beam Park would also help to alleviate transport issues Further enagement is being carried out in order to get a representative sample, after which time formal analysis of the survey responses will be undertaken.
T21		Integrate need to reduce car use in Local Plan through restrictive car parking, extensive walking and cycling routes etc.	This is covered in the Local Plan.

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T22		Work with and advise the local NHS partners on their Active Travel Plans and monitor and report effectiveness.	Quarterly meetings take place with the sustainable travel representative of the BHURT. A staff Travel Plan has been produced which Havering Officers have reviewed and commented on. This is now going through the internal approval process at the Trust. Walking and Cycling counts at Hospital entrances are being commissioned to better understand the entrance usages. This data will be analysed and used to inform a signage strategy for the site.
T34		Implementation of new cycle routes to improve connectivity between minor and district centres	The Active Travel Strategy (currently out to public consultation) sets out the long term plans for improving walking and cycling connectivity between minor and district centres. The strategic cycle routes accessing Romford, Queens Hospital and Rianham have been submitted as part of the TfL LIP 3-year programme, we will find out the result of the funding proposal in Feb 25. Feasibility is ongoing for Quietway routes connecting district centres across the borough, with delivery factored in within the LIP funding proposal. A scheme is being prepared looking at delivering a cycle track along Marsh Way to provide access into the London Riverside BID from the A1306. The Council is applying for up to £1m of Active Travel Funding from the Thames Freeport to deliver the scheme by March 2026. An OBC was approved by the Thames Freeport in summer 24 with a detailed design and FBC currently being prepared with the aim to submit early in 2025.
T23	Reduce vehicle emissions across the borough.	Continue to work with National Highways to secure mitigation measures for Havering and its residents to reduce the impact of the Lower Thames Crossing project.	The Lower Thames Crossing Examination finalised on 20th December 2023. Expecting a decision by the Secretary of State on the scheme, and the mitigation measures that were argued for in the summer 2024. This includes the need for a NMU Bridge over the A127 between Folkes Lane and

No.	Theme	Measure	Update
			Moor Lane and a new NMU routes from the A127 to Folkes Lane Woodland.
T25		Upcoming highways procurement, e.g. Highways to review carbon benefits such as recycling targets, sustainable materials etc. options through procurement process.	Contract has been awarded and environmental measures have been built into the contract
T27		Bring together the transport actions into a strategic high level action statement which shows what is being progressed, what is aspirational and what the Council would like to do when funding becomes available. The purpose is to coordinate actions, measure progress and publicly explain what is being achieved.	This is covered in the Local Plan.
T28		Monitor and manage carbon emissions from transport across the borough which will model the impacts of actions taken.	Further enagement is being carried out in order to get a representative sample, after which time formal analysis of the survey responses will be undertaken. "
T29		Prepare a regular report on car anti-idling activity to evidence action, improvement and enforcement of the Council Policy.	This is covered in the Local Plan.
T30	Adopt responsible and social values measures into large scale contracts.	Work with the highways contractors to explore how their social value offer can benefit the residents of Havering by addressing climate issues.	Quarterly meetings take place with the sustainable travel representative of the BHURT. A staff Travel Plan has been produced which Havering Officers have reviewed and commented on. This is now going through the internal approval process at the Trust. Walking and Cycling counts at Hospital entrances are being commissioned to better understand the entrance usages. This data will be analysed and used to inform a signage strategy for the site.

3. Planning Update and Other New Sources of Emissions

Table N. Planning requirements met by planning applications in Havering in 2024

The number of major planning applications has decreased significantly in 2024 and into 2025. This has been attributed to an increase in developments with less than 10 townhouses. There has been a significant increase in subdividing residential sites with gardens large enough to construct an additional house. Air quality neutral requirements are still applied to these developments.

Condition	Number
Number of planning applications where an air quality impact assessment was reviewed for air quality impacts	6
Number of planning applications required to undertake construction dust monitoring and reporting (Please specify how you get access to dust monitoring data i.e. online tool or CSV file)	0
Number of CHPs/Biomass boilers refused on air quality grounds	0
Number of CHPs/Biomass boilers subject to GLA emissions limits and/or other restrictions to reduce emissions as detailed in Air Quality Neutral LPG (london.gov.uk) point 3.1.5.	0
Number of developments required to install Ultra-Low NO _x boilers	45
Number of developments where an AQ Neutral building and/or transport assessments undertaken	6
Number of developments where the AQ Neutral building and/or transport assessments not meeting the benchmark and so required to include additional mitigation	0
Number of planning applications with S106 agreements including other requirements to improve air quality	0
Number of planning applications with CIL payments that include a contribution to improve air quality	0
NRMM: Central Activity Zone, Canary Wharf and Opportunity Areas Number of planning applications with conditions related to NRMM included. Number of developments registered at www.nrmm.london . Number of audits (based on the pan-London project report and / or inhouse auditing programme) % of sites unregistered prior to audit % of sites compliant with Stage IV of the Directive and/or exemptions to the policy.	
NRMM: Greater London (excluding Central Activity Zone, Canary Wharf and Opportunity Areas) Number of planning applications with conditions related to NRMM included. Number of developments registered at www.nrmm.london .	25 conditions included 18 registered

Condition	Number
Number of audits (based on the pan-London project report and / or inhouse auditing programme)% of sites unregistered prior to audit	25 audits
% of sites compliant with Stage IIIB of the Directive and/or exemptions to the policy.	28% sites unregistered prior to audit
	100% sites compliant after audit

3.1 New or significantly changed industrial or other sources

No new sources identified or significant changes to existing sources.

4. Additional Activities to Improve Air Quality

4.1 London Borough of Havering Fleet

The Havering fleet includes a total of 18 zero emission vehicles and 18 zero emission capable vehicles. This accounts for a total of just over 10% of the Borough's fleet. However, the rest of the fleet run on a green alternative fuel to Diesel.

4.2 Planning Enforcement

The wording provided in 4.3

The planning department consult public protection:

- AQN all major and minor applications which involve additional building emissions or transport emissions.
- AQA all major planning applications.
- Construction dust all major planning applications.
- Any planning application which proposes the use of a generator.

An officer manually reviews the consultation, submitted planning documents, PTAL mapping and advises the planning department if a condition is required. A service level agreement has been adopted between both departments. The planner contacts public protection if they have any concerns.

The condition is included in the decision notice, if the application is approved.

4.3 Pan-London NRMM Auditing Project

The London Borough of Havering will continue to support the NRMM scheme in 2025-2026.

The standard planning condition used by Havering to secure compliance with the Mayor's LEZ for NRMM reads as follows:

- a) *Prior to the commencement of the development hereby approved, the developer or contractor must be signed up to the Non Road Mobile Machinery (NRMM) register.*
- b) *The development site must be entered onto the register alongside all the NRMM equipment details.*
- c) *The register must be kept up-to-date for the duration of the construction of development.*
- d) *All NRMM used during the course of the development that is within the scope of the Greater London Authority 'Control of Dust and Emissions during Construction and Demolition' Supplementary Planning Guidance (SPG) dated July 2014, or any subsequent amendment or guidance, shall comply with the emission requirements therein.*
- e) *An inventory of all NRMM to be kept on-site stating the emission limits for all equipment.*

Reason: To reduce emissions from construction and demolition activities and comply with current NRMM emission standards, in accordance with the Greater London Authority 'Control of Dust and Emissions during Construction and Demolition' Supplementary Planning Guidance (SPG) and any subsequent amendment or guidance.

4.4 Air Quality Alerts

Havering is an active supporter of the AirTEXT air quality alert system. To prevent duplication of alerts and therefore confusion, we do not directly cascade the Mayor's air quality alerts.

4.5 Air Quality Positive

No innovative mitigation measures were proposed for planning applications which triggered Air Quality Positive in Havering in 2024.

Appendix A Details of Monitoring Site Quality QA/QC

A.1 Automatic Monitoring Sites

HV1 and HV3 are representative of roadside exposure within the Borough. All the sites are part of the London Air Quality Network and therefore the standards of QA/QC are similar to those of the government's AURN sites. Regular monthly calibrations are carried out, with subsequent data ratification undertaken by ERG at Imperial College London. The data for 2024 have been ratified.

Data capture from the NO_x analysers at HV1 and HV3 in 2024 were 99.7% and 99.5% respectively.

PM₁₀ Monitoring Adjustment

PM₁₀ at HV3, and PM₁₀ and PM_{2.5} at HV1 are measured by FDMS, consequently correction is not necessary.

An ongoing issue at HV1 has not been resolved and therefore ERG have not been able to ratify PM_{2.5} data for 2024.

A.2 Diffusion Tubes

Diffusion Tubes are supplied and analysed by Socotec, Didcot. For 2024 tubes were prepared by spiking acetone: triethanolamine (50:50) onto grids prior to the tubes being assembled. The tubes are desorbed with distilled water and the extract analysed using a segmented flow autoanalyser with ultraviolet detection. The tubes were analysed in accordance with Socotec's standard operating procedure ANU/SOP/1015. This method meets the guidelines set out in DEFRA's 'Diffusion Tubes for Ambient NO₂ Monitoring: Practical Guidance'. As set out in the practical guidance, the results were initially calculated assuming an ambient temperature of 11°C, the reported values have been adjusted to 20°C to allow for direct comparison with EU limits. As set out in the current Precision Summary Table, Socotec Didcot is listed in the table of laboratories with Good Precision.

The bias adjustment factor for Socotec, for the 50% TEA in Acetone preparation method in 2024, taken from the National Bias Adjustment Factor Spread sheet (v04_25) is **0.78**.

The London Borough of Havering has a triplicate diffusion tube co-location study at one of the roadside automatic monitoring sites, operational since 2015. Due to Waterloo Road being a high concentration site (roadside site) any bias adjustment factors derived should not be used for any low concentration monitoring sites.

Factor from Local Co-location Studies the 2 co-location sites are busy roadside locations and their use is not appropriate.

Discussion of Choice of Factor to Use

The national bias adjustment factor was used for bias adjustment of Havering's 2024 diffusion tube results to ensure consistency with previous years.

Table O. Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	03/25	0.78
2023	National	03/24	0.77
2022	National	03/24	0.76
2021	National	03/22	0.78
2020	National	06/21	0.77
2019	National	09/20	0.77
2018	National	06/19	0.76
2017	National	03/18	0.77

A.3 Adjustments to the Ratified Monitoring Data

Short-term to Long-term Data Adjustment

Both monitoring stations had sufficient monitoring data and the adjustment was not required.

Distance Adjustment

Distance adjustment for four locations was calculated using the Diffusion Tube Data Processing Tool v5.4 (Table T). After making the distance adjustment one location is within 10% of the limit value and two locations exceed the limit value:

Mercury Gardens distance adjusted concentration is $38.6 \mu\text{g m}^{-3}$ it is an urban centre location, near to commercial units.

Romford Taxi Rank distance adjusted concentration is $65.0 \mu\text{g m}^{-3}$ it is an urban centre location, next to commercial units

Romford Battis distance adjusted concentration is $53.8 \mu\text{g m}^{-3}$ it is an urban centre location outside Romford train station, next to commercial units.

Butts Green Road distance adjusted concentration is $34.9 \mu\text{g m}^{-3}$ it is a roadside location and 9.5m from the nearest residential building.

Table P. Non-Automatic Monitoring Data Adjustment

Site ID	Annualisation Factor HV1 Rainham	Annualisation Factor HV3 Romford	Annualisation Factor Thurrock AURN	Annualisation Factor CW3 LBTH Jubilee Park	Average Annualisation Factor	Raw Data Annual Mean ($\mu\text{g m}^{-3}$)	Annualised Annual Mean ($\mu\text{g m}^{-3}$)	Comments
HAVER/21 A/NA1S49	1.0016	1.0151	1.0283	1.0527	1.0244	28.1	28.8	

Annualisation was completed through the Diffusion Tube Data Processing Tool v5.4 was used for one location at Newton's School.

Table Q. Automatic NO₂ Monitoring Data Adjustment

HV1 and HV3 automatic monitoring stations did not require annualisation.

Table R. Automatic PM₁₀ Monitoring Data Adjustment

HV1 and HV3 automatic monitoring stations did not require annualisation.

Table S. Automatic PM_{2.5} Monitoring Data Adjustment

The PM_{2.5} parts are at end of life and data for 2024 could not be ratified. This monitoring station is commissioned by a third party and we are sourcing new parts for the monitoring station.

Table T. NO₂ Fall off With Distance Calculations

Site ID	Distance (m): Monitoring Site to Kerb	Distance (m): Receptor to Kerb	Monitored Concentration (Annualised and Bias Adjusted ($\mu\text{g m}^{-3}$))	Background Concentration ($\mu\text{g m}^{-3}$)	Concentration Predicted at Receptor ($\mu\text{g m}^{-3}$)	Comments
HAVER/21 A/NA1S1, HAVER/21 A/NA1S2, HAVER/21 A/NA1S3	2.0	4.0	41.8	22.2	38.6	<i>Predicted concentration at Receptor within 10% the AQS objective.</i>
HAVER/14 B/NB4S5	0.1	1.1	44.2	16.0	34.9	
HAVER/14 B/NB4S7	4.0	4.1	65.3	19.6	<u>65.0</u>	<i>Predicted concentration at Receptor above AQS objective.</i>
HAVER/14 B/NB4S8, HAVER/14 B/NB4S9, HAVER/14 B/NB4S10	0.1	1.1	70.7	19.6	53.8	<i>Predicted concentration at Receptor above AQS objective.</i>

Appendix B Full Monthly Diffusion Tube Results for 2024

Table U. NO₂ 2024 Diffusion Tube Results (µg m⁻³)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted 0.78	Annual Mean: Distance Corrected to Nearest Exposure	Comment
HAV6	551488	188993	58.9	58.7	60.1	45.9	54.3	47.2	52.4	38.5	59.1	52.5			-	-	-	Triplicate Site with HAV6, HAV5 and HAV2 - Annual data provided for HAV2 only
HAV5	551488	188993	57.2	63.9		37.5	59.1	51.5	49.4	45.5	55.4	57.5			-	-	-	Triplicate Site with HAV6, HAV5 and HAV2 - Annual data provided for HAV2 only
HAV2	551488	188993		57.1	60.4	46.5	57.4	47.8	52.5	43.8	61.7	57.7			53.6	41.8	38.6	Triplicate Site with HAV6, HAV5 and HAV2 - Annual data provided for HAV2 only
HAV7	551108	188257	49.1	52.0		34.4	36.3	32.8	37.5	33.3	32.1	46.7			-	-	-	Triplicate Site with HAV7, HAV1 and HAV8 - Annual data provided for HAV8 only
HAV1	551108	188257	41.3	50.5		31.0	37.5	33.5	38.1	34.6	33.6	47.4			-	-	-	Triplicate Site with HAV7, HAV1 and HAV8 - Annual data provided for HAV8 only
HAV8	551108	188257	40.6	55.0		32.8	37.3	32.9	38.2	36.9	30.3	47.2			39.0	30.4	-	Triplicate Site with HAV7, HAV1 and HAV8 - Annual data provided for HAV8 only
HAV3	551726	183462	33.7	30.4	23.1	17.6	18.4	18.1	17.6	18.2	17.4	22.0			21.7	16.9	-	
HAV4	553724	187560	25.7	17.6	18.1	11.4	12.4	11.6	11.6	11.2	12.0	18.9			15.1	11.7	-	
HAV9	551629	188296	44.6	39.4	36.7	22.8	20.1	24.7	21.2	18.9	23.9	27.4			-	-	-	Triplicate Site with HAV9, HAV10 and HAV11 - Annual data provided for HAV11 only
HAV10	551629	188296	7.4	42.7	34.1	19.0	19.9	23.7	21.4	18.3	22.8	30.9			-	-	-	Triplicate Site with HAV9, HAV10 and HAV11 - Annual data provided for HAV11 only
HAV11	551629	188296	7.9	49.5	31.7	22.1	21.5	24.2	22.3	20.5	21.6	29.7			25.7	20.0	-	Triplicate Site with HAV9, HAV10 and HAV11 - Annual data provided for HAV11 only
HAV12	552096	189619	7.6	26.0	29.9	21.1	26.3	24.9	19.9	18.5	27.0	26.4			22.8	17.8	-	

HAV13	550607	189685	8.1	27.7	38.8	30.9	36.8	33.2	30.8	25.7	33.3	37.2			-	-	-	Triplicate Site with HAV13, HAV14 and HAV15 - Annual data provided for HAV15 only
HAV14	550607	189685	8.6	42.2	37.1	28.0	34.6	28.2	29.0	24.3	33.6	34.0			-	-	-	Triplicate Site with HAV13, HAV14 and HAV15 - Annual data provided for HAV15 only
HAV15	550607	189685	9.1	41.2	35.9	26.1	36.5	30.1	29.0	22.3	32.6	40.1			30.2	23.5	-	Triplicate Site with HAV13, HAV14 and HAV15 - Annual data provided for HAV15 only
HAV16	551414	187802	9.1	37.5	37.4	25.9	33.4	28.6	29.3	28.8	33.1	39.8			-	-	-	Triplicate Site with HAV16, HAV17 and HAV19 - Annual data provided for HAV19 only
HAV17	551414	187802	8.9	36.9	35.5	26.1	30.7	29.1	28.3	28.7	32.7	41.1			-	-	-	Triplicate Site with HAV16, HAV17 and HAV19 - Annual data provided for HAV19 only
HAV19	551414	187802	8.7	39.1	37.1	26.2	32.4	27.1	31.2	26.6	32.0	42.0			30.1	23.5	-	Triplicate Site with HAV16, HAV17 and HAV19 - Annual data provided for HAV19 only
HAV19	551414	187802	8.7	39.1	37.1	26.2	32.4	27.1	31.2	26.6	32.0	42.0			30.1	23.5	-	Triplicate Site with HAV16, HAV17 and HAV19 - Annual data provided for HAV19 only
HAV20	549837	191109	3.8	40.5	64.6	43.0	46.6	31.4	54.0	54.4	40.5	54.0			-	-	-	Triplicate Site with HAV19, HAV20 and HAV21 - Annual data provided for HAV21 only
HAV21	549837	191109	11.3	90.0	62.1	44.2		49.7	48.5	55.1	42.9	54.3			44.2	34.5	-	Triplicate Site with HAV19, HAV20 and HAV21 - Annual data provided for HAV21 only
HAV22	553707	190817	22.9	15.2	23.1	13.8	13.5	14.8	15.9	12.3	16.0	25.0			-	-	-	Triplicate Site with HAV22, HAV23 and HAV24 - Annual data provided for HAV24 only
HAV23	553707	190817	26.2	26.8	20.9	10.5	16.0	13.7	14.8	14.8	17.9	23.2			-	-	-	Triplicate Site with HAV22, HAV23 and HAV24 - Annual data provided for HAV24 only
HAV24	553707	190817	24.8	25.1	22.1	15.2	14.5	13.8	16.5	13.5	15.8	26.1			18.2	14.2	-	Triplicate Site with HAV22, HAV23 and HAV24 - Annual data provided for HAV24 only
HAV25	553727	193161	13.0	22.6	20.0	10.3	14.0	14.4	11.5	13.0	14.9	20.5			15.4	12.0	-	
HAV26	549532	189777	23.7	23.9	22.4	34.9	14.0	11.8	12.8	12.8	13.3	18.2			18.8	14.6	-	
HAV27	550942	187420	51.3	44.2	48.4	41.1	47.7	43.5	40.7	43.1	42.6	41.7			-	-	-	Triplicate Site with HAV27, HAV28 and HAV29 - Annual data provided for HAV29 only
HAV28	550942	187420	12.6	54.6	42.7	41.4	46.3	44.1	39.0	39.0	47.1	43.8			-	-	-	Triplicate Site with HAV27, HAV28 and HAV29 - Annual data provided for HAV29 only

HAV29	550942	187420	3.8	21.9	46.6	37.8	46.0	42.8	42.7	39.6	45.1	50.1			41.0	32.0	-	Triplicate Site with HAV27, HAV28 and HAV29 - Annual data provided for HAV29 only
HAV30	549318	189384	11.3	20.8	21.0	11.9	14.1	12.0	12.7	10.5	12.1	19.8			14.6	11.4	-	
HAV31	550197	187908	22.9	27.9	23.7	15.2	17.9	14.4	16.3	15.0	16.6	22.0			19.2	15.0	-	
HAV32	553410	190558	26.2	27.8	50.4	34.8	29.1	29.3	34.8	33.2		38.4			-	-	-	Triplicate Site with HAV32, HAV33 and HAV34 - Annual data provided for HAV34 only
HAV33	553410	190558	24.8	37.3	50.0		37.2	37.9	35.7			28.8			-	-	-	Triplicate Site with HAV32, HAV33 and HAV34 - Annual data provided for HAV34 only
HAV34	553410	190558	13.0	40.9	52.2	31.9	36.3				16.7	41.3			33.0	25.7	-	Triplicate Site with HAV32, HAV33 and HAV34 - Annual data provided for HAV34 only
HAV35	554204	193795	23.7	23.8	20.0	14.2	16.8	15.1	15.6	13.5	18.3	19.6			18.1	14.1	-	
HAV36	551755	193022	51.3	18.2	15.6	9.8	12.5	9.1	11.7	9.3	12.3	13.0			16.3	12.7	-	
HAV37	555723	191750	39.7	38.3	34.1	30.0	31.5	33.0	32.6	33.1	28.5				33.4	26.1	-	
HAV38	553434	191656	27.6	20.9	20.8	12.8	14.7	11.2	15.1	13.0	16.0	21.5			17.4	13.5	-	
HAV39	551616	190622	32.2	32.8	27.8	18.7	18.0	17.9	20.2	20.7	17.8	25.0			23.1	18.0	-	
HAV40	553174	190306	35.2	44.7	37.7	29.6	32.7	33.0	25.5	25.6	28.6	36.7			32.9	25.7	-	
HAV41	552517	189826	10.9	36.1	34.8	22.5	31.9	25.9	23.7	23.6	28.0	36.7			27.4	21.4	-	
HAV42	550623	188890	36.1	36.1	32.3	21.6	24.8	25.2	21.5	25.2	25.5	34.6			28.3	22.1	-	
HAV43	556072	186539	15.1	30.6	23.5	21.8	22.2	22.5	20.6	19.9	24.8	27.8			22.9	17.8	-	
HAV44	553952	189731	39.0	37.8	28.3	26.7		27.0	28.7	29.8	33.8	39.0			32.2	25.1	-	
HAV45	552327	187422	35.2	30.0	26.6	23.8	27.9	24.7	23.4	22.3	32.6	31.6			27.8	21.7	-	
HAV46	552441	182337	36.8	34.9	31.1	23.5	26.6	22.2	23.5	28.1	20.0	39.5			28.6	22.3	-	
HAV47	554730	189487	37.9	40.1	36.7	23.9	31.3	26.8	31.0	20.7	40.5	36.1			32.5	25.4	-	
HAV48	550602	189990	21.5	20.5	25.3	12.7	16.5	15.9	18.2	16.0	13.6	26.5			18.7	14.6	-	
HAV49	550722	183294	23.8	26.1		44.2			20.9	20.0	33.2	28.7			28.1	22.5	-	
HAV50	551526	182672	47.4	46.1	39.3	35.4	39.1	36.8	35.9	40.5	24.2	46.9			39.2	30.5	-	
HAV51	551180	189432	25.2	24.1	19.9	13.0	14.7	14.1	16.7	13.6	15.6	18.9			17.6	13.7	-	
HAV52	554741	190626	24.1	42.7	44.8	28.6	34.8	30.9	37.3	33.2	46.2	35.7			35.8	27.9	-	
HAV53	552841	184966	37.7	34.4	32.1	25.7	22.2	26.3	25.3	24.2	27.8	30.3			28.6	22.3	-	
HAV54	553135	191674	24.2	31.0	26.4	17.5	22.9	18.0	18.4	15.6	116.4	31.2			32.2	25.1	-	
HAV55	553830	188314	57.7	34.9	52.1	41.5	52.4	47.2	47.1	46.2	111.8	75.8			56.7	44.2	34.9	
HAV56	552045	182222	40.5	40.1	37.9	26.7	32.8	32.1	30.2	27.8	104.0	43.6			41.6	32.4	-	
HAV57	551420	188526	83.9	20.5	68.7	73.5	83.8	106.7	111.6	116.4	106.3	66.4			83.8	65.3	65.0	
HAV58	551397	188509	92.5	26.1	83.0	94.3	111.2	118.3	114.2	111.8	17.0	106.7			-	-	-	Triplicate Site with HAV58, HAV59 and HAV60 - Annual data provided for HAV60 only

HAV59	551397	188509	109.3	46.1	88.2	94.9	119.5	117.8	110.6	104.0	31.0	125.5			-	-	-	Triplicate Site with HAV58, HAV59 and HAV60 - Annual data provided for HAV60 only
HAV60	551397	188509	77.7	24.1	92.1	99.6	112.3	117.8	119.3	106.3	30.8	116.8			90.6	<u>70.7</u>	53.8	Triplicate Site with HAV58, HAV59 and HAV60 - Annual data provided for HAV60 only
HAV61	553719	180987	24.4	42.7	22.0	17.0	17.7	15.7	17.2	17.0	28.8	24.9			22.7	17.7	-	
HAV62	550462	183013	38.6	34.4	31.8	31.3	32.9	32.8	16.6	31.0	21.3	39.3			31.0	24.2	-	
HAV63	550888	182884	43.4	31.0	33.0	33.9	36.5	34.3	33.4	30.8	34.5	46.0			35.7	27.8	-	
HAV64	551112	182811	51.5	16.9	35.6	30.7	35.5	31.3	32.8	28.8		0.9			29.3	22.9	-	
HAV65	557323	187932	24.8	21.5	28.5	23.1	21.3	24.5	23.7	21.3		27.6			24.0	18.7	-	
HAV66	554013	187001	44.8	48.1	37.3	29.2	35.8	43.0	35.6	34.5		46.2			39.4	30.7	-	

- ☒ All erroneous data has been removed from the NO₂ diffusion tube dataset presented in Table U.
- ☒ Annualisation has been conducted where data capture is <75% and >25% in line with LLAQM.TG19.
- ☐ Local bias adjustment factor used.
- ☒ National bias adjustment factor used.
- ☒ Where applicable, data has been distance corrected for relevant exposure in the final column.
- ☒ LB Havering confirm that all 2024 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.

Notes:

Exceedances of the NO₂ annual mean objective of 40µg m⁻³ are shown in **bold**.

NO₂ annual means exceeding 60µg m⁻³, indicating a potential exceedance of the NO₂ 1-hour mean objective are shown in **bold and underlined**.

See Appendix C for details on bias adjustment and annualisation.

Appendix C Map(s) of Monitoring Locations and AQMAs

Figure A. Map of Non-Automatic Monitoring Site(s)

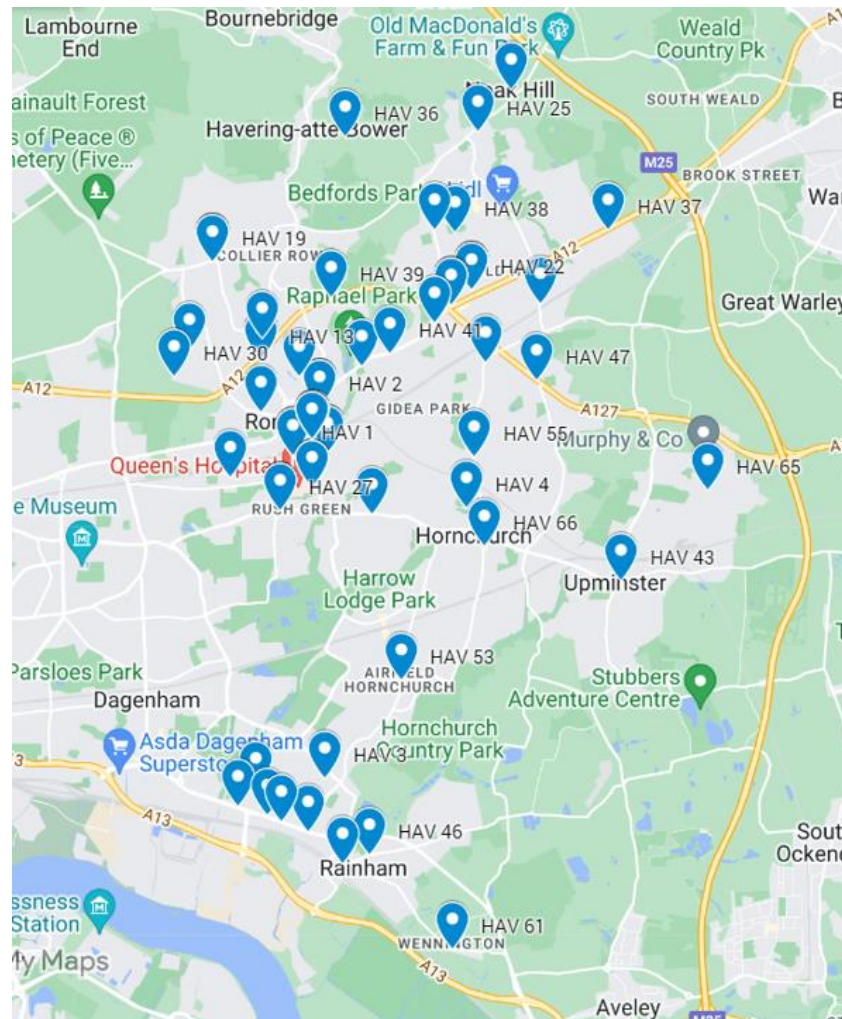


Figure A: is a map which shows 46 locations across Havering.

Figure B. Map of Automatic Monitoring Site(s)

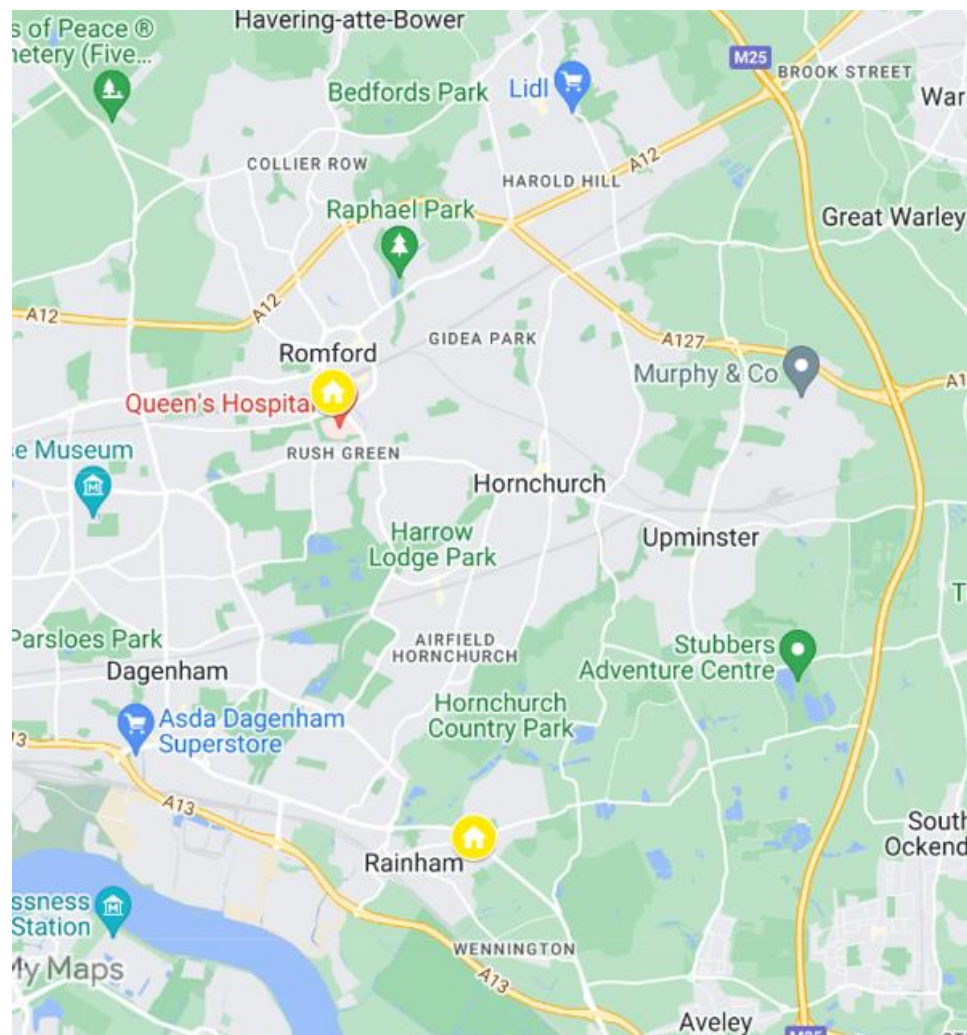


Figure B: is a map that shows 2 monitoring locations: Romford in the centre of the borough and Rainham towards the south.