

Air Quality Report

Produced by AQDM on behalf of Herefordshire
LEOMINSTER BARGATES ROAD 2024

Fully ratified by AQDM to the LAQM TG22 standards using the AURN methodology

Site Environment and Description

Leominster Bargates Road

ROADSIDE [Map](#) [Photo](#)

Statistical Summary Report

This 2024 report contains all the statistics required for the LAQM reporting.

Gravimetric PM₁₀

Smart Heated BAM instrument PM₁₀ / 1.035

Daily Air Quality Index (DAQI)

The table below shows the duration within the bands of the Daily Air Quality Index (DAQI).
The DAQI was introduced by Defra in January 2012 and revised April 2013.

DAQI Pollutant	Moderate	High	Very High
Nitrogen Dioxide	0 hours	0	0
PM ₁₀ Particulate Matter	1 day	0	0
PM _{2.5} Particulate Matter	0 days	0	0

Gravimetric PM₁₀ was Moderate on 6th Sept with a daily mean reaching 51.6 $\mu\text{g m}^{-3}$.

Air Quality Exceedances of the AQS Objectives

NO₂ - annual data capture was 97.8 %

The annual mean was 20.1 $\mu\text{g m}^{-3}$ which did not exceed the 40 $\mu\text{g m}^{-3}$ Objective.

The maximum hourly mean was 197.6 $\mu\text{g m}^{-3}$ so there were no exceedances of the NO₂ hourly limit of 200 $\mu\text{g m}^{-3}$. There is an annual allowance of 18 hours so the Objective was not exceeded.

Gravimetric PM₁₀ - annual data capture was 99.0 %

The annual mean was 11.3 $\mu\text{g m}^{-3}$ which did not exceed the 40 $\mu\text{g m}^{-3}$ Objective.

The maximum daily mean was 51.6 $\mu\text{g m}^{-3}$ so there was 1 exceedance of the PM₁₀ daily limit of 50 $\mu\text{g m}^{-3}$. There is an annual allowance of 35 days so the Objective was not exceeded.

Gravimetric PM_{2.5} - annual data capture was 83.2 %

The annual mean was 6.2 $\mu\text{g m}^{-3}$ which did not exceed the 20 $\mu\text{g m}^{-3}$ Objective.

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Air Quality Statistics

Pollutant	NO ₂	NO	NO _x	Grav PM ₁₀ ⁺	Grav PM _{2.5} [~]
Number Very High #	0	-	-	0	0
Number High #	0	-	-	0	0
Number Moderate #	0	-	-	1	0
Number Low #	8595	-	-	363	301
Maximum 15-min mean	372.7 µg m ⁻³	560.9 µg m ⁻³	1233.0 µg m ⁻³	- µg m ⁻³	- µg m ⁻³
Maximum hourly mean	197.6 µg m ⁻³	394.9 µg m ⁻³	803.3 µg m ⁻³	138.2 µg m ⁻³	82.0 µg m ⁻³
Maximum running 8-hr mean	62.8 µg m ⁻³	181.4 µg m ⁻³	334.0 µg m ⁻³	59.8 µg m ⁻³	36.0 µg m ⁻³
Maximum running 24-hr mean	47.2 µg m ⁻³	109.0 µg m ⁻³	214.1 µg m ⁻³	56.6 µg m ⁻³	26.0 µg m ⁻³
Maximum daily mean	45.9 µg m ⁻³	94.9 µg m ⁻³	191.5 µg m ⁻³	51.6 µg m ⁻³	24.1 µg m ⁻³
Average	20.1 µg m ⁻³	19.9 µg m ⁻³	50.6 µg m ⁻³	11.3 µg m ⁻³	6.2 µg m ⁻³
Data capture	97.8 %	97.8 %	97.8 %	99.0 %	83.2 %

Daily Air Quality Index (DAQI) as defined by COMEAP January 2012 and revised April 2013

+ Gravimetric PM₁₀ as measured by a Smart Heated BAM instrument using 0.96618 gravimetric factor

~ Gravimetric PM_{2.5} as measured by a Smart Heated BAM instrument using 1 gravimetric factor

Mass units for the gases are at 20°C and 1013mb

NO_x mass units are NO_x as NO₂ µg m⁻³

Air Quality Exceedances

Pollutant	Air Quality (England) Regulations 2000 & (Amendment) Regulations 2002	Max Conc	Number	Days	Allowed	Exceeded
Nitrogen Dioxide	Annual mean > 40 µg m ⁻³	20.1 µg m ⁻³	0	-	-	No
Nitrogen Dioxide	Hourly mean > 200 µg m ⁻³	197.6 µg m ⁻³	0	0	18 hours	No
PM ₁₀ Particulate Matter (Gravimetric)	Annual mean > 40 µg m ⁻³	11.3 µg m ⁻³	0	-	-	No
PM ₁₀ Particulate Matter (Gravimetric)	Daily mean > 50 µg m ⁻³	51.6 µg m ⁻³	1	1	35 days	No
PM _{2.5} Particulate Matter (Gravimetric)	Annual mean > 20 µg m ⁻³	6.2 µg m ⁻³	0	-	-	No

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Monthly Data Captures %

Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nitrogen Dioxide	99.7	99.7	82.8	95.1	99.2	99.7	99.6	99.7	99.7	99.6	99.6	99.9
Grav PM ₁₀	99.1	98.6	97.8	98.3	98.5	99.9	98.8	99.3	99.7	99.5	99.4	98.8
Grav PM _{2.5}	99.5	98.7	97.6	99.4	70.0	91.7	53.4	37.2	58.1	99.2	98.8	96.2

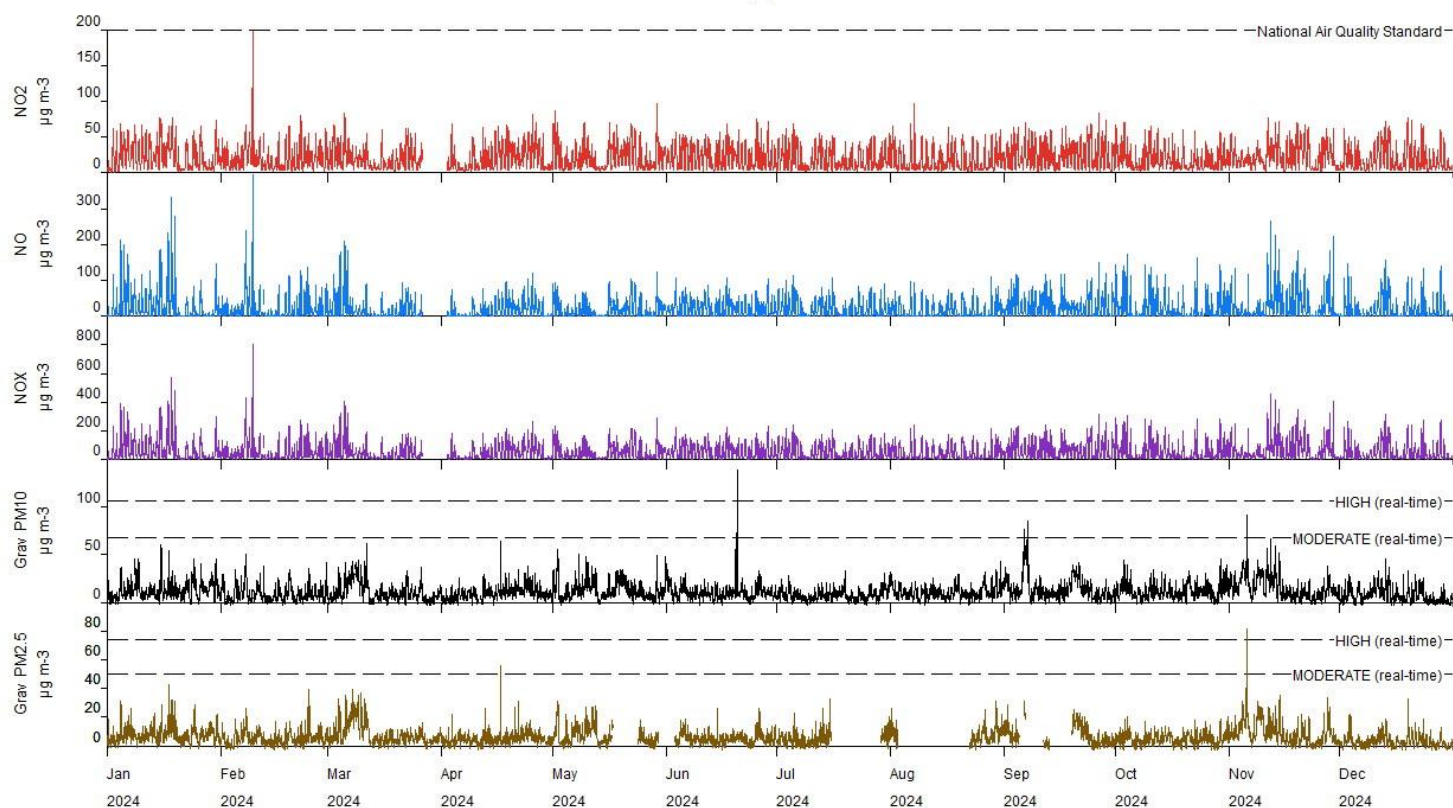
Monthly Means

Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nitrogen Dioxide $\mu\text{g m}^{-3}$	23.2	19.5	19.2	19.8	20.6	21.2	18.3	16.7	24.2	17.7	22.5	18.3
Grav PM ₁₀ $\mu\text{g m}^{-3}$	13.2	9.2	11.4	9.8	13.4	10.2	8.0	10.5	14.4	12.0	15.6	7.5
Grav PM _{2.5} $\mu\text{g m}^{-3}$	7.6	5.3	8.2	5.0	7.0	5.2	5.1	7.6	7.1	4.8	9.3	3.2

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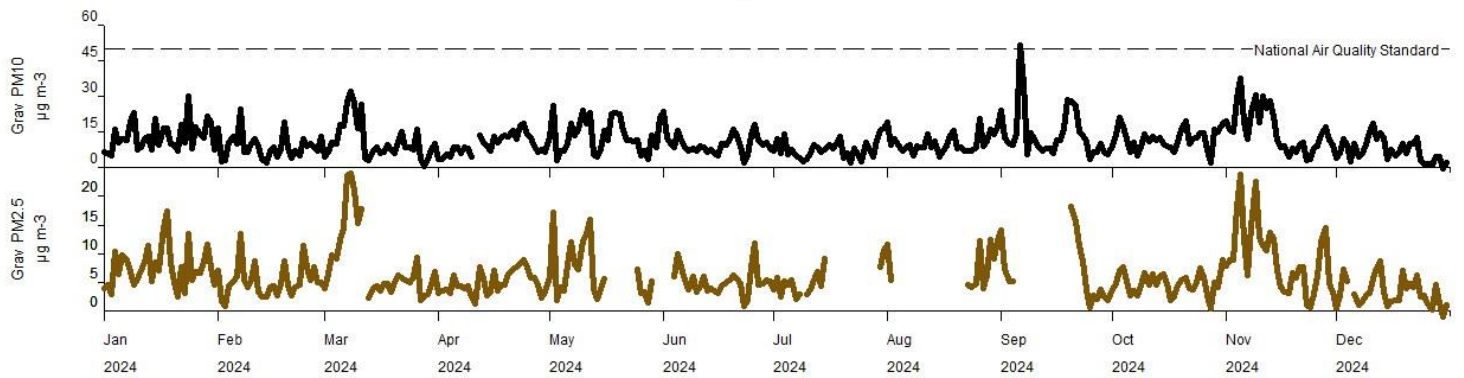
Hourly Means



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Daily Means



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Leominster Bargates Road during 2024

Nitrogen Dioxide threshold $40 \mu\text{g m}^{-3}$

January 2024							February 2024							March 2024							April 2024						
1	2	3	4	5	6	7				1	2	3	4					1	2	3	1	2	3	4	5	6	7
8	9	10	11	12	13	14	5	6	7	8	9	10	11	4	5	6	7	8	9	10	8	9	10	11	12	13	14
15	16	17	18	19	20	21	12	13	14	15	16	17	18	11	12	13	14	15	16	17	15	16	17	18	19	20	21
22	23	24	25	26	27	28	19	20	21	22	23	24	25	18	19	20	21	22	23	24	22	23	24	25	26	27	28
29	30	31					26	27	28	29				25	26	27	28	29	30	31	29	30					
M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S
May 2024							June 2024							July 2024							August 2024						
		1	2	3	4	5						1	2	1	2	3	4	5	6	7				1	2	3	4
6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	7	8	9	10	11
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21	12	13	14	15	16	17	18
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25
27	28	29	30	31			24	25	26	27	28	29	30	29	30	31					26	27	28	29	30	31	
M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S
September 2024							October 2024							November 2024							December 2024						
						1		1	2	3	4	5	6					1	2	3							1
2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10	2	3	4	5	6	7	8
9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15
16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22
23	24	25	26	27	28	29	28	29	30	31				25	26	27	28	29	30		23	24	25	26	27	28	29
30																					30	31					
M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S

60

40

0

Nitrogen Dioxide Daily Averages Maximum was $45.9 \mu\text{g m}^{-3}$ on 18th January 2024

PM₁₀ Particulate Matter threshold 50 µg m⁻³

PM₁₀ Particulate Matter Daily Averages Maximum was 51.6 µg m⁻³ on 6th September 2024

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Leominster Bargates Road during 2024

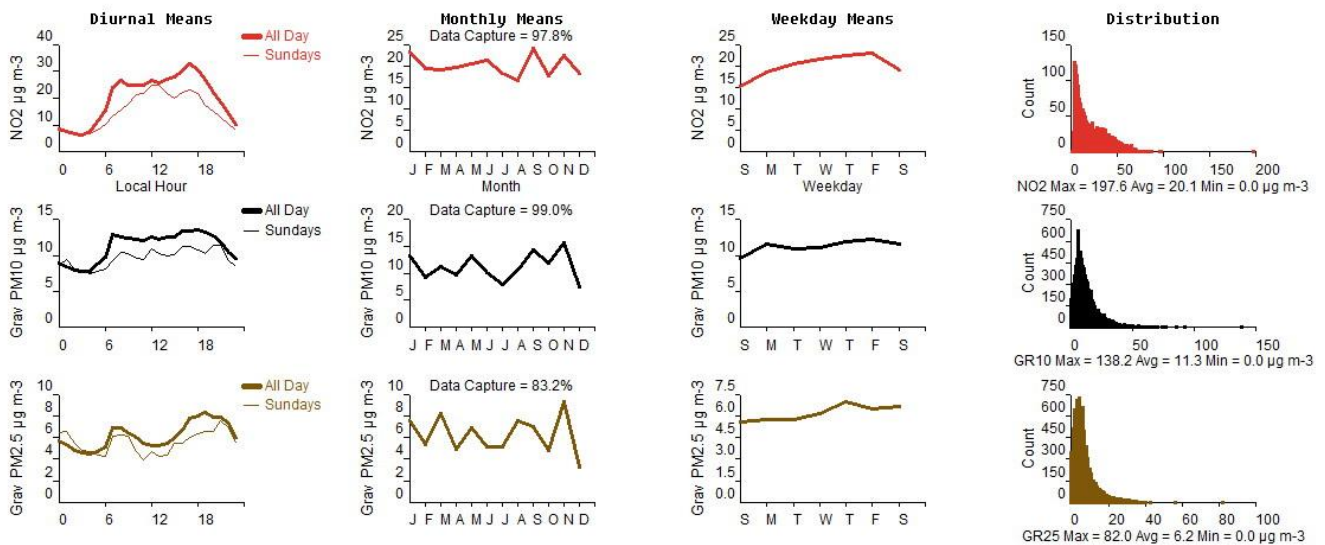
PM_{2.5} Particulate Matter threshold 10 µg m⁻³

January 2024							February 2024							March 2024							April 2024							31
1	2	3	4	5	6	7				1	2	3	4				1	2	3		1	2	3	4	5	6	7	
8	9	10	11	12	13	14	5	6	7	8	9	10	11	4	5	6	7	8	9	10	8	9	10	11	12	13	14	
15	16	17	18	19	20	21	12	13	14	15	16	17	18	11	12	13	14	15	16	17	15	16	17	18	19	20	21	
22	23	24	25	26	27	28	19	20	21	22	23	24	25	18	19	20	21	22	23	24	22	23	24	25	26	27	28	
29	30	31					26	27	28	29				25	26	27	28	29	30	31	29	30						
M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	
May 2024							June 2024							July 2024							August 2024							
		1	2	3	4	5						1	2	1	2	3	4	5	6	7				1	2	3	4	
6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	7	8	9	10	11	
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21	12	13	14	15	16	17	18	
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25	
27	28	29	30	31			24	25	26	27	28	29	30	29	30	31					26	27	28	29	30	31		
M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	10
September 2024							October 2024							November 2024							December 2024							
						1		1	2	3	4	5	6					1	2	3							1	
2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10	2	3	4	5	6	7	8	
9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15	
16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22	
23	24	25	26	27	28	29	28	29	30	31				25	26	27	28	29	30		23	24	25	26	27	28	29	
30																					30	31						
M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	0

PM_{2.5} Particulate Matter Daily Averages Maximum was 24.1 µg m⁻³ on 8th March 2024

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Leominster Bargates Road Air Quality Report produced by:

Geoff Broughton

Air Quality Data Management (AQDM)

Tel: 01235 559761

Geoff.Broughton@aqdm.co.uk

<http://www.aqdm.co.uk>

<http://uk.linkedin.com/pub/geoff-broughton/22/187/87/>

<http://www.UKAirQuality.net>