

Air Quality Report

Produced by AQDM on behalf of Lancaster

LANCASTER CABLE STREET 2022

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

Site Environment and Description

ROADSIDE: Cable Street, Lancaster

[Map](#)

[Photo](#)

[Dashboard](#)

Statistical Summary Report

This 2022 report contains all the statistics required for the LAQM reporting.

Gravimetric PM_{2.5}

The Gravimetric PM_{2.5} is the FIDAS PM_{2.5} / 1.06

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	4 days	0	0
PM _{2.5} Particulate Matter	2 days	0	0

Gravimetric PM₁₀ was Moderate on 25th Jan, 23rd 24th 25th Mar with a daily mean reaching 60 µg m⁻³.

Gravimetric PM_{2.5} was Moderate on 25th Jan, 23rd Mar with a daily mean reaching 39 µg m⁻³.

Air Quality Exceedances of the AQS Objectives

NO₂ - annual data capture was 99.9 %

The annual mean was 27 µg m⁻³ which did not exceed the 40 µg m⁻³ Objective.

The maximum hourly mean was 122 µg m⁻³ so there were no exceedances of the NO₂ hourly limit of 200 µg m⁻³. There is an annual allowance of 18 hours so the Objective was not exceeded.

Gravimetric PM₁₀ - annual data capture was 94.4 %

The annual mean was 15 µg m⁻³ which did not exceed the 40 µg m⁻³ Objective.

The maximum daily mean was 60 µg m⁻³ so there were 4 exceedances of the PM₁₀ daily limit of 50 µg m⁻³. There is an annual allowance of 35 days so the Objective was not exceeded.

Gravimetric PM_{2.5} - annual data capture was 94.4 %

The annual mean was 8 µg m⁻³ which did not exceed the 25 µg m⁻³ Objective. Note that the PM_{2.5} standard is not set in the regulations.

There should be a 15% cut in urban background exposure (annual mean) for all Local Authorities from 2010 to 2020.

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Air Quality Statistics

Pollutant	NO ₂	NO	NO _x	Grav PM ₁₀ ⁺	Grav PM _{2.5} [~]	PM ₁ ^{\$}
Number Very High #	0	-	-	0	0	-
Number High #	0	-	-	0	0	-
Number Moderate #	0	-	-	4	2	-
Number Low #	8754	-	-	327	329	-
Maximum 15-min mean	132 µg m ⁻³	388 µg m ⁻³	677 µg m ⁻³	-	-	88 µg m ⁻³
Maximum hourly mean	122 µg m ⁻³	322 µg m ⁻³	579 µg m ⁻³	102 µg m ⁻³	69 µg m ⁻³	64 µg m ⁻³
Maximum running 8-hr mean	99 µg m ⁻³	215 µg m ⁻³	396 µg m ⁻³	76 µg m ⁻³	45 µg m ⁻³	44 µg m ⁻³
Maximum running 24-hr mean	65 µg m ⁻³	137 µg m ⁻³	260 µg m ⁻³	60 µg m ⁻³	39 µg m ⁻³	37 µg m ⁻³
Maximum daily mean	63 µg m ⁻³	130 µg m ⁻³	258 µg m ⁻³	60 µg m ⁻³	39 µg m ⁻³	36 µg m ⁻³
Average	27 µg m ⁻³	33 µg m ⁻³	78 µg m ⁻³	15 µg m ⁻³	8 µg m ⁻³	6 µg m ⁻³
Data capture	99.9 %	99.9 %	99.9 %	94.4 %	94.4 %	94.4 %

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

+ Gravimetric PM₁₀ as measured by a FIDAS instrument using 1 gravimetric factor

~ Gravimetric PM_{2.5} as measured by a FIDAS instrument using 0.94 gravimetric factor

\$ PM₁ as measured by a FIDAS instrument

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	27 µg m ⁻³	0	-	-	No
Nitrogen Dioxide	Hourly mean > 200 µg m ⁻³	122 µg m ⁻³	0	0	18 hours	No
PM ₁₀ Particulate Matter (Gravimetric)	Annual mean > 40 µg m ⁻³	15 µg m ⁻³	0	-	-	No
PM ₁₀ Particulate Matter (Gravimetric)	Daily mean > 50 µg m ⁻³	60 µg m ⁻³	4	4	35 days	No
PM _{2.5} Particulate Matter (Gravimetric) *	Annual mean > 25 µg m ⁻³	8 µg m ⁻³	0	-	-	No

* Not set in regulations

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Monthly Data Captures %

Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nitrogen Dioxide	100.0	99.9	100.0	100.0	100.0	100.0	99.9	99.9	99.9	100.0	99.7	100.0
Grav PM ₁₀	85.9	94.6	98.0	99.9	99.5	90.8	85.6	93.4	91.3	94.1	100.0	100.0
Grav PM _{2.5}	85.9	94.6	97.8	99.9	99.5	90.8	85.6	93.4	91.3	94.1	100.0	100.0
PM ₁	85.9	94.6	97.8	99.9	99.5	90.8	85.6	93.4	91.3	94.1	100.0	100.0

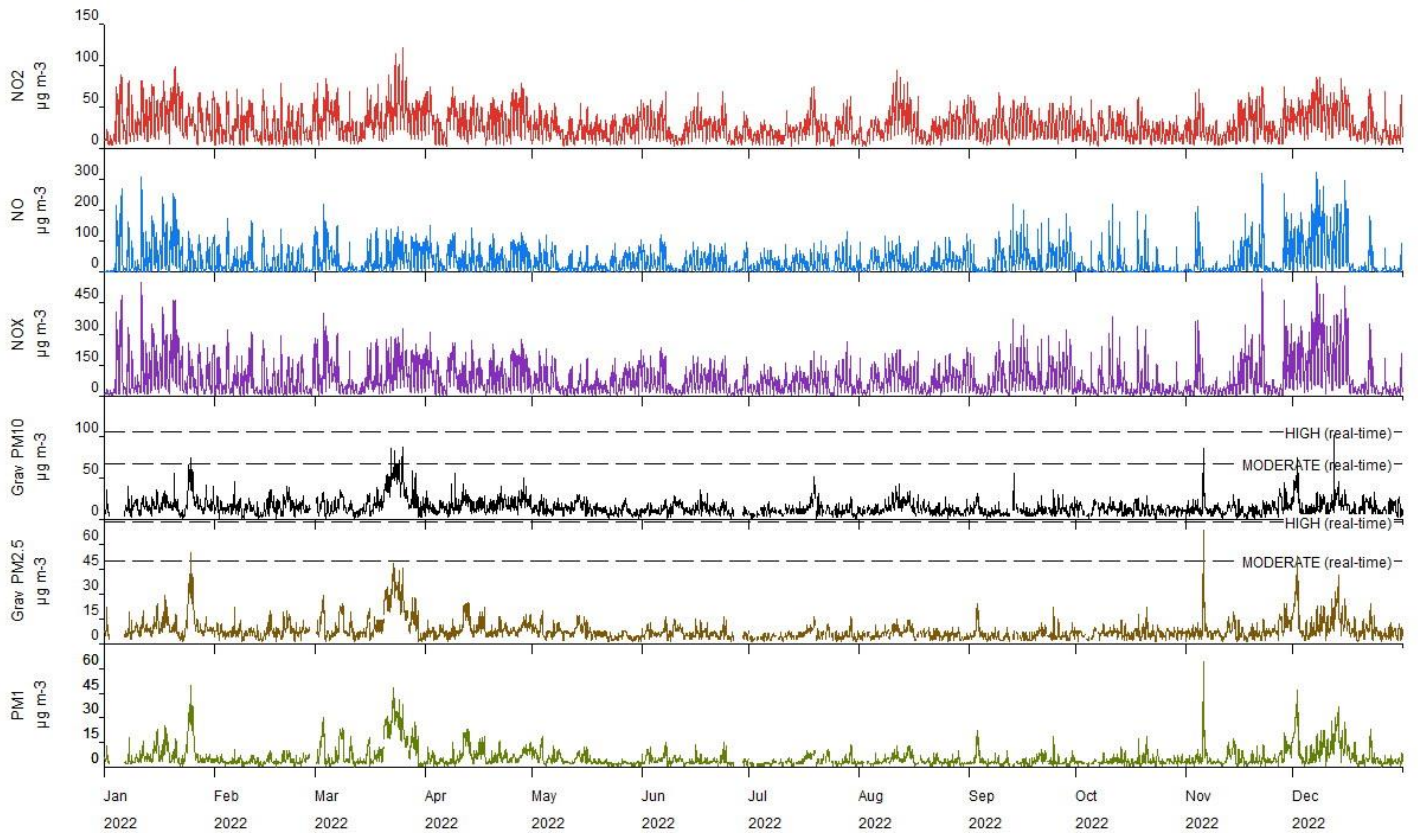
Monthly Means

Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nitrogen Dioxide $\mu\text{g m}^{-3}$	35	23	36	33	21	23	21	27	29	22	25	33
Grav PM ₁₀ $\mu\text{g m}^{-3}$	19	15	23	17	12	12	11	13	11	12	13	16
Grav PM _{2.5} $\mu\text{g m}^{-3}$	11	7	14	9	6	6	5	6	5	6	8	10
PM ₁ $\mu\text{g m}^{-3}$	8	4	12	7	4	4	4	4	4	4	6	9

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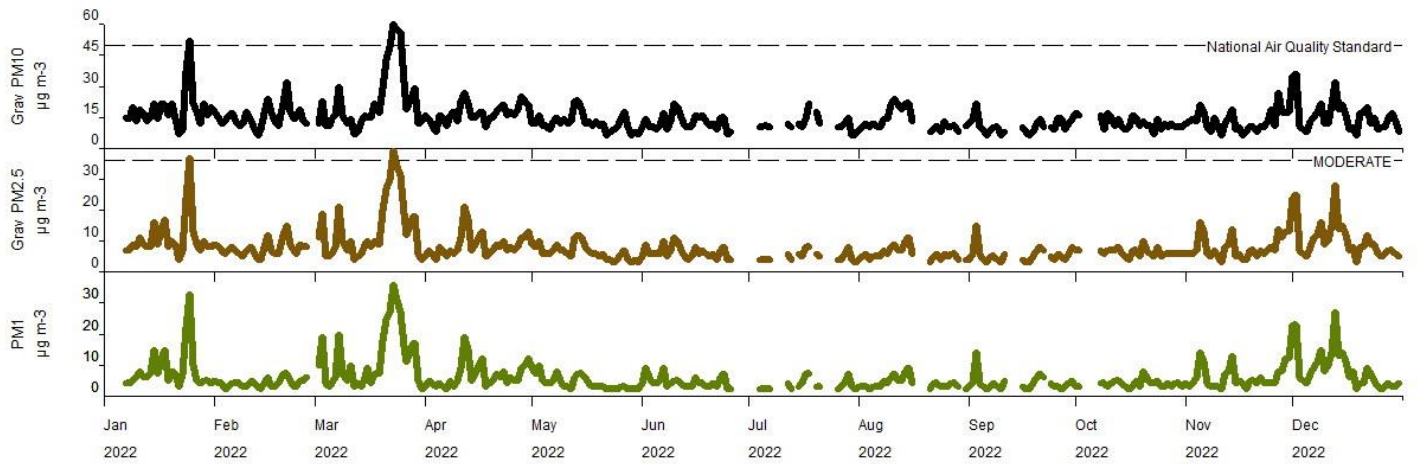
Hourly Means



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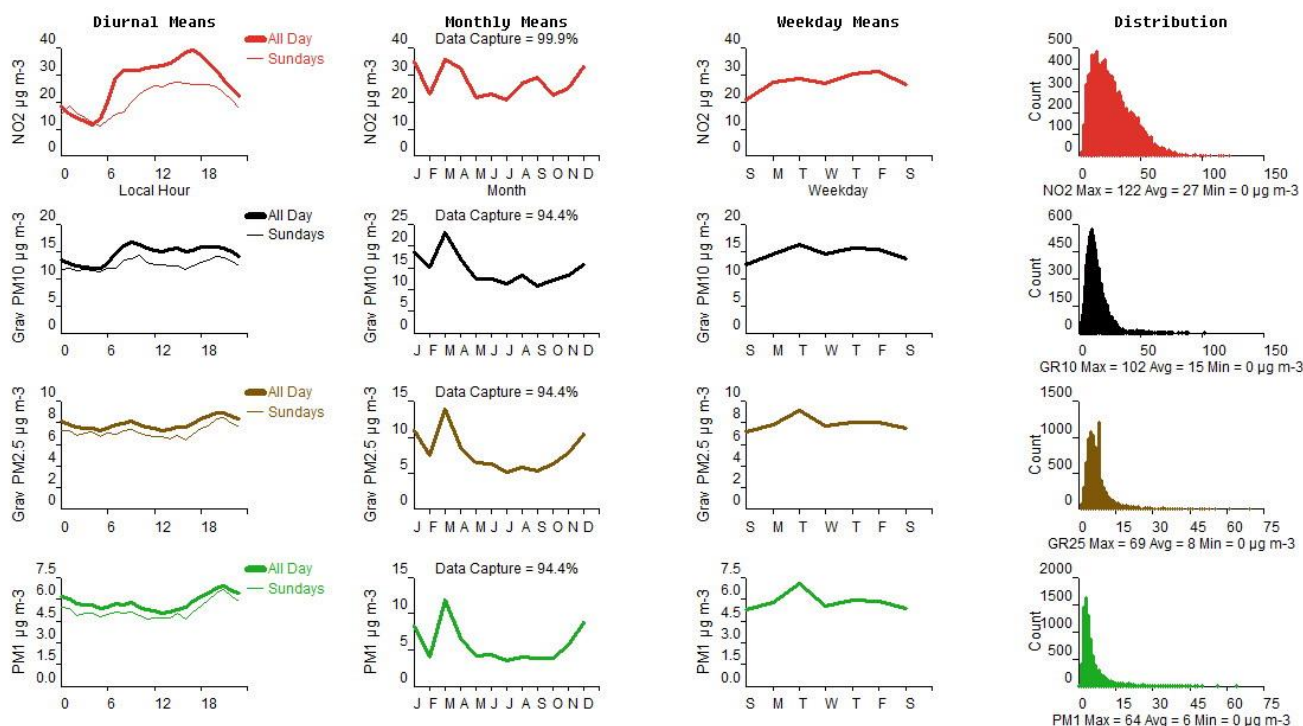
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Daily Means



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