

Air Quality Report

Produced by AQDM on behalf of Lancaster

LANCASTER CABLE STREET 2021

Fully ratified by AQDM to the LAQM (TG16) standards using the AURN methodology

Site Environment and Description

ROADSIDE: Cable Street, Lancaster

[Map](#)

[Photo](#)

[Dashboard](#)

Statistical Summary Report

This 2021 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	1 day	0	1
PM _{2.5} Particulate Matter	1 day	0	0

Gravimetric PM₁₀ was Moderate on 3rd Mar with a daily mean reaching 52 µg m⁻³.

Gravimetric PM₁₀ was Very High on 21st Oct with a daily mean reaching 302 µg m⁻³.

Gravimetric PM_{2.5} was Moderate on 3rd Mar with a daily mean reaching 36 µg m⁻³.

Air Quality Exceedences of the AQS Objectives

NO₂ - annual data capture was 99.0 %

The annual mean was 32 µg m⁻³ which did not exceed the 40 µg m⁻³ Objective.

The maximum hourly mean was 117 µg m⁻³ so there were no exceedences 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 90.9 %

The annual mean was 17 µg m⁻³ which did not exceed the 40 µg m⁻³ Objective.

The maximum daily mean was 302 µg m⁻³ so there were 2 exceedences 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 90.6 %

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	-	-	1	0	-
Number High #	0	-	-	0	0	-
Number Moderate #	0	-	-	1	1	-
Number Low #	8676	-	-	326	326	-
Maximum 15-min mean	143 µg m ⁻³	379 µg m ⁻³	658 µg m ⁻³	-	-	269 µg m ⁻³
Maximum hourly mean	117 µg m ⁻³	315 µg m ⁻³	568 µg m ⁻³	792 µg m ⁻³	150 µg m ⁻³	115 µg m ⁻³
Maximum running 8-hr mean	89 µg m ⁻³	248 µg m ⁻³	428 µg m ⁻³	564 µg m ⁻³	57 µg m ⁻³	44 µg m ⁻³
Maximum running 24-hr mean	64 µg m ⁻³	157 µg m ⁻³	279 µg m ⁻³	312 µg m ⁻³	37 µg m ⁻³	35 µg m ⁻³
Maximum daily mean	63 µg m ⁻³	156 µg m ⁻³	278 µg m ⁻³	302 µg m ⁻³	36 µg m ⁻³	33 µg m ⁻³
Average	32 µg m ⁻³	42 µg m ⁻³	97 µg m ⁻³	17 µg m ⁻³	8 µg m ⁻³	6 µg m ⁻³
Data capture	99.0 %	99.0 %	99.0 %	90.9 %	90.6 %	90.9 %

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

+ Grav PM₁₀ as measured by a FIDAS using 1 gravimetric factor

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

§ PM₁ as measured by a FIDAS

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 Exceedences

Pollutant	Air Quality (England) Regulations 2000 & (Amendment) Regulations 2002	Max Conc	Number	Days	Allowed	Exceeded
Nitrogen Dioxide	Annual mean > 40 µg m ⁻³	32 µg m ⁻³	0	-	-	No
Nitrogen Dioxide	Hourly mean > 200 µg m ⁻³	117 µg m ⁻³	0	0	18 hours	No
PM ₁₀ Particulate Matter (Gravimetric)	Annual mean > 40 µg m ⁻³	17 µg m ⁻³	0	-	-	No
PM ₁₀ Particulate Matter (Gravimetric)	Daily mean > 50 µg m ⁻³	302 µg m ⁻³	2	2	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	98.7	98.5	98.9	98.6	98.7	99.2	98.8	98.7	98.8	99.9	100.0	99.9
Grav PM ₁₀	100.0	100.0	79.0	99.4	100.0	79.4	96.6	82.0	93.5	100.0	72.6	88.6
Grav PM _{2.5}	100.0	100.0	79.0	99.4	100.0	75.7	96.6	82.0	93.5	100.0	72.6	88.6
PM ₁	100.0	100.0	79.0	99.4	100.0	79.4	96.6	82.0	93.5	100.0	72.6	88.6

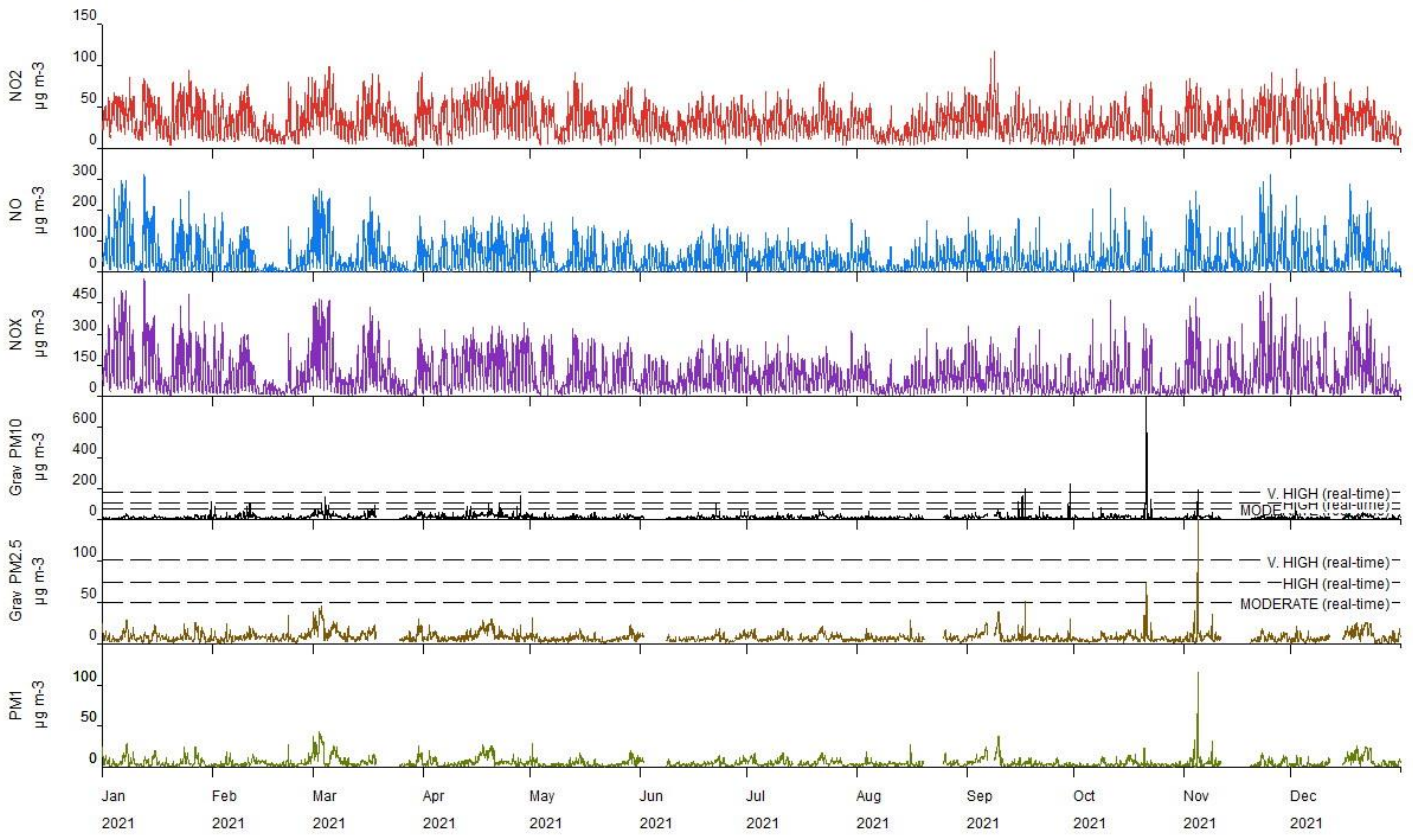
Monthly Means

Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nitrogen Dioxide $\mu\text{g m}^{-3}$	38	27	34	43	33	30	31	26	30	25	36	33
Grav PM ₁₀ $\mu\text{g m}^{-3}$	12	15	25	22	13	14	15	13	17	23	14	15
Grav PM _{2.5} $\mu\text{g m}^{-3}$	8	7	12	9	6	6	7	6	8	7	8	9
PM ₁ $\mu\text{g m}^{-3}$	6	5	9	7	4	5	6	4	6	4	5	7

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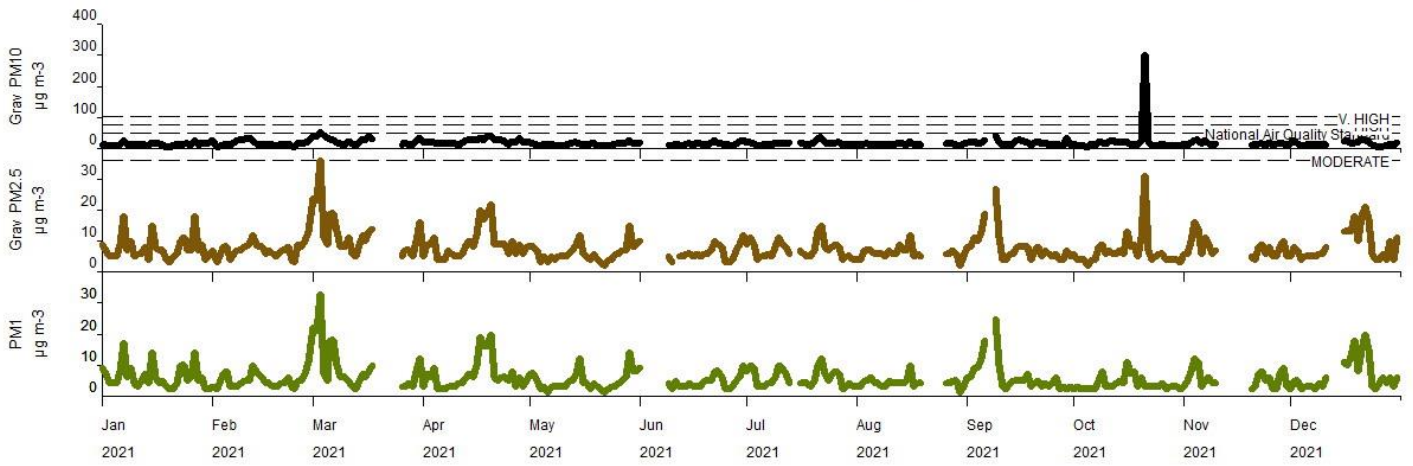
Hourly Means



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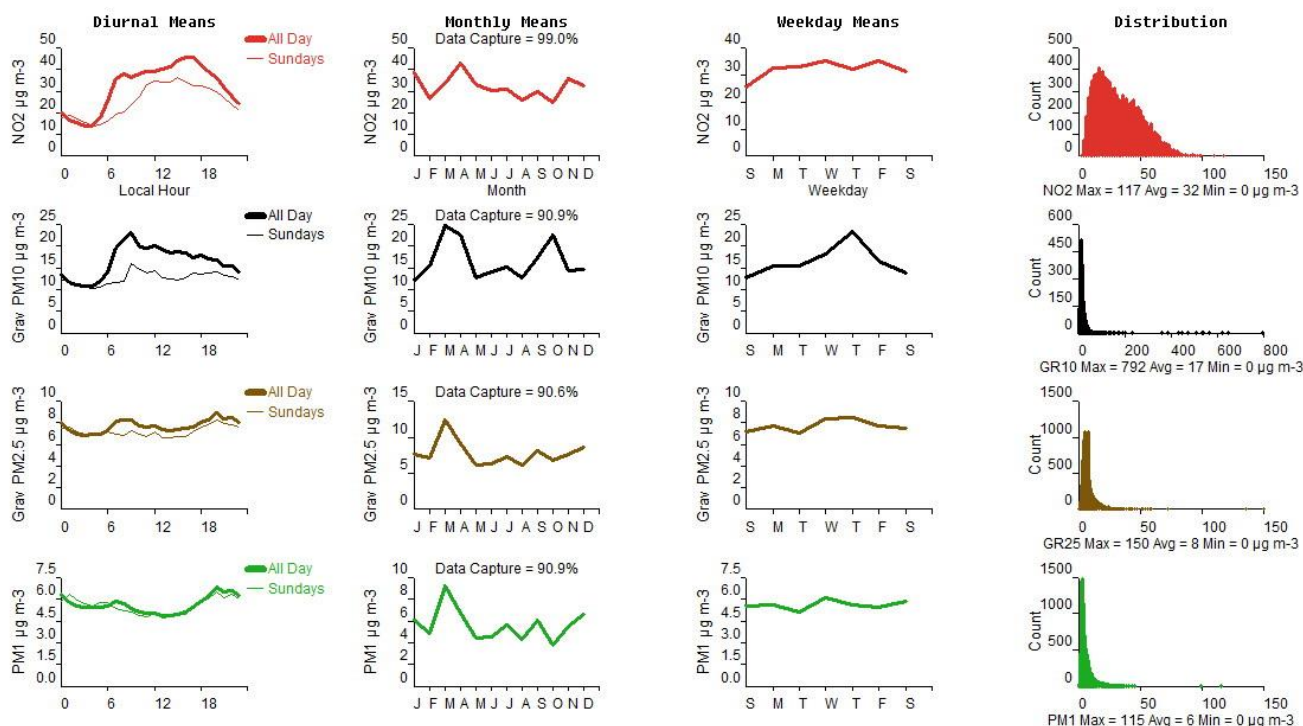
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Daily Means



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