

Air Quality Report

Produced by AQDM on behalf of Lancaster

LANCASTER CABLE STREET 2019

These data have been fully ratified by AQDM to the LAQM (TG16) standards

Site Environment and Description

ROADSIDE: Cable Street, Lancaster

Statistical Summary Report

This 2019 report contains all the statistics required for the LAQM reporting.

The Volatile Correction Model (VCM) has been run on the TEOM data to calculate the *EU Reference Equivalent* PM₁₀ required for the LAQM reports. This uses data from nearby FDMS instruments <http://www.volatile-correction-model.info>.

First table – Air Quality Statistics

The TEOM gravimetric PM₁₀ is shown in the 2nd column. The uncorrected TEOM PM₁₀ is in the 3rd.

The top four lines show the duration within the bands of the Daily Air Quality Index (DAQI). This was introduced by Defra on January 2012 and revised April 2013. The number of occasions within each band is summarised as follows.

DAQI Pollutant	Moderate	High	Very High
Gravimetric PM ₁₀	1 day	0	0
NO ₂	0 hours	0	0

Gravimetric PM₁₀ was Moderate on 21st June with a daily mean reaching 71 µg m⁻³.

Data Captures

The annual data captures are shown on the bottom line. These were above the 85% target.

Second table – Air Quality Exceedences

Gravimetric PM₁₀ – annual data capture was 93.1 %

The maximum daily mean was 71 µg m⁻³ so the daily mean limit value of 50 µg m⁻³ was exceeded on 1 day. The annual allowance is 35 days so this Objective was not exceeded.

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

NO₂ – annual data capture was 98.4%

The annual mean was 34 µg m⁻³ which did not exceed the 40 µg m⁻³ Objective.

The maximum hourly mean was 107 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 this Objective was not exceeded.

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Air Quality Statistics

Pollutant	PM ₁₀ ⁺	PM ₁₀ [*]	NO ₂	NO	NO _x
Number Very High #	0	-	0	-	-
Number High #	0	-	0	-	-
Number Moderate #	1	-	0	-	-
Number Low #	336	-	8619	-	-
Maximum 15-min mean	-	625 µg m ⁻³	126 µg m ⁻³	455 µg m ⁻³	731 µg m ⁻³
Maximum hourly mean	436 µg m ⁻³	436 µg m ⁻³	107 µg m ⁻³	375 µg m ⁻³	662 µg m ⁻³
Maximum running 8-hr mean	158 µg m ⁻³	158 µg m ⁻³	91 µg m ⁻³	275 µg m ⁻³	485 µg m ⁻³
Maximum running 24-hr mean	73 µg m ⁻³	73 µg m ⁻³	70 µg m ⁻³	171 µg m ⁻³	325 µg m ⁻³
Maximum daily mean	71 µg m ⁻³	71 µg m ⁻³	68 µg m ⁻³	165 µg m ⁻³	315 µg m ⁻³
Average	17 µg m ⁻³	17 µg m ⁻³	34 µg m ⁻³	47 µg m ⁻³	106 µg m ⁻³
Data capture	93.1 %	93.1 %	98.4 %	98.4 %	98.4 %

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

+ PM₁₀ as measured by a TEOM using the VCM for Indicative Gravimetric Equivalent

* PM₁₀ as measured by a TEOM

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
PM ₁₀ Particulate Matter (Gravimetric)	Daily mean > 50 µg m ⁻³	71 µg m ⁻³	1	1	35 days	No
PM ₁₀ Particulate Matter (Gravimetric)	Annual mean > 40 µg m ⁻³	17 µg m ⁻³	0	-	-	No
Nitrogen Dioxide	Annual mean > 40 µg m ⁻³	34 µg m ⁻³	0	-	-	No
Nitrogen Dioxide	Hourly mean > 200 µg m ⁻³	107 µg m ⁻³	0	0	18 hours	No

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Monthly Data Captures %

Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PM ₁₀	99.9	99.6	98.9	99.6	92.2	99.9	96.1	100.0	99.6	88.3	79.9	63.7
Nitrogen Dioxide	99.9	99.9	100.0	99.0	96.9	97.2	99.9	97.7	99.3	96.8	96.9	97.3

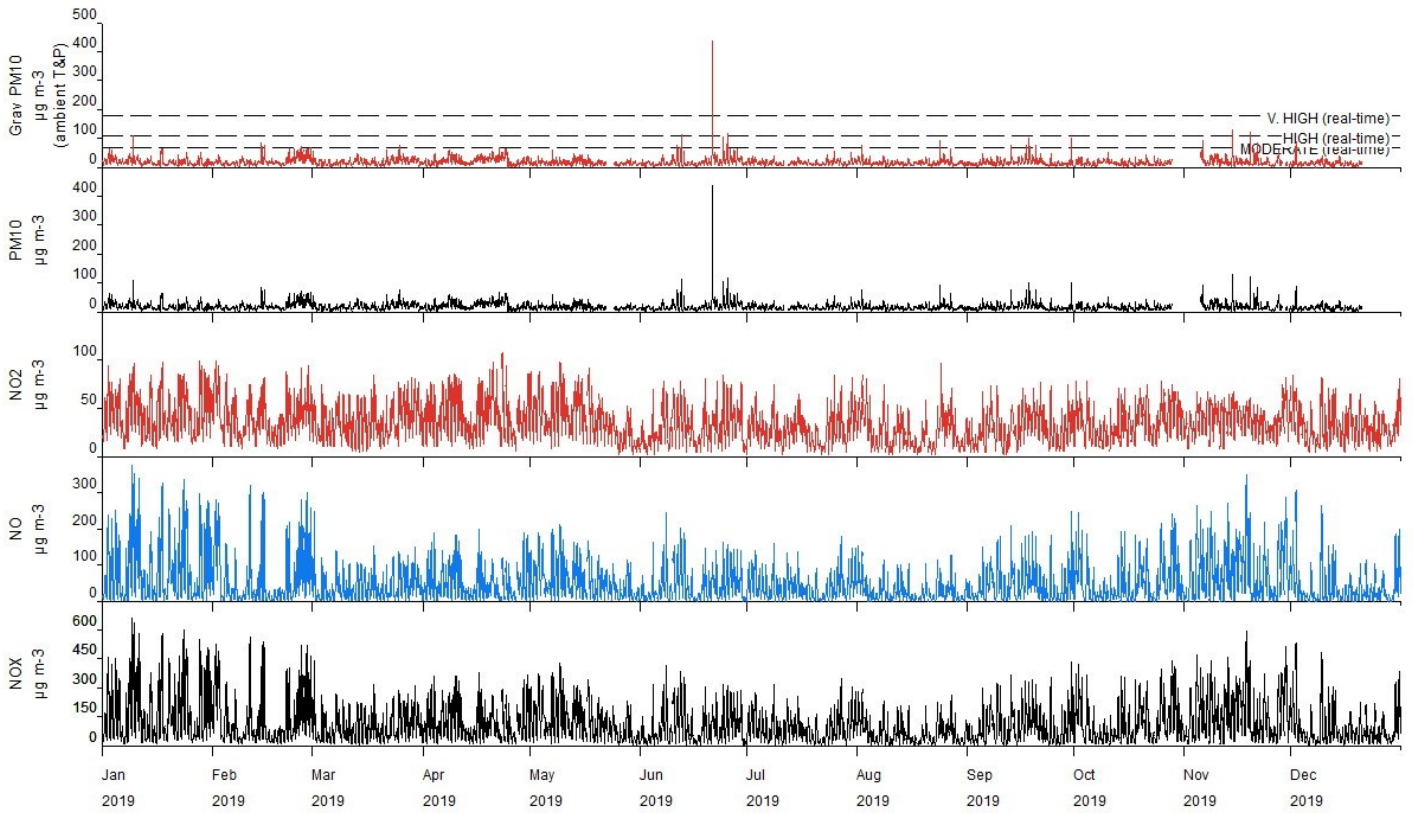
Monthly Means

Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PM ₁₀ $\mu\text{g m}^{-3}$	19	20	18	22	15	20	16	15	17	14	19	13
Nitrogen Dioxide $\mu\text{g m}^{-3}$	44	39	35	40	37	29	28	25	29	35	38	30

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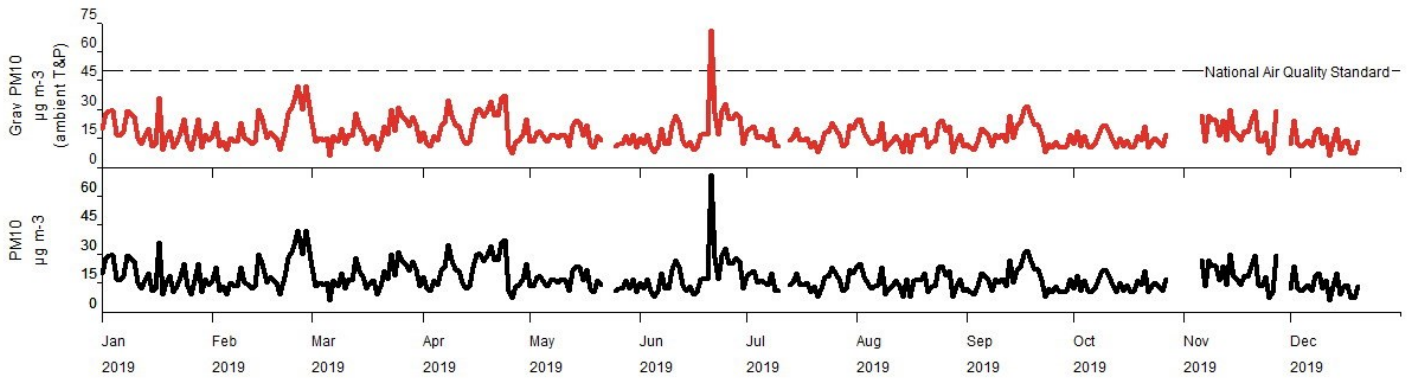
Hourly Means



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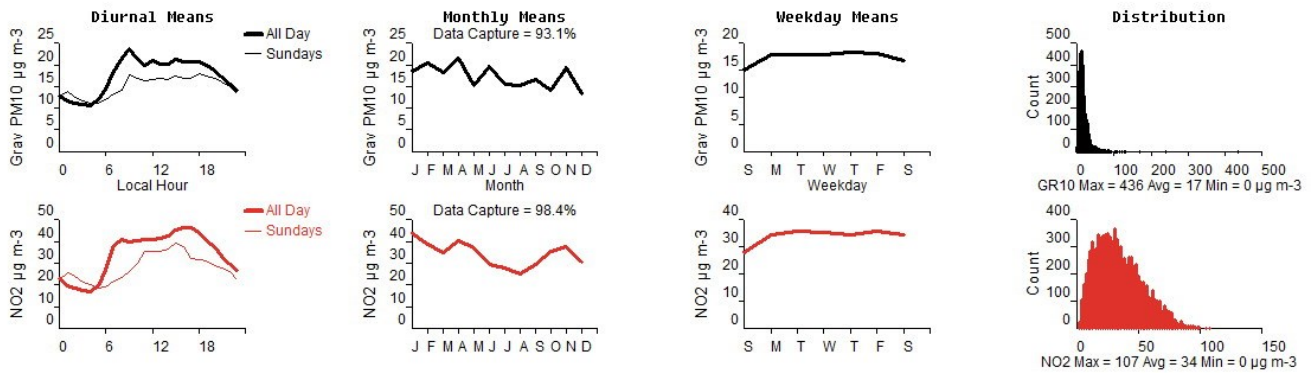
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Daily Means



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