

Air Quality Report

Produced by AQDM on behalf of Bradford

BRADFORD TREADWELL MILLS 2018

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

Site Environment and Description

ROADSIDE: Treadwell Mills, Bradford

Statistical Summary Report

This 2018 report contains all the statistics required for the LAQM reporting.

First table – Air Quality Statistics

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	3 days	0	1 day
Gravimetric PM _{2.5}	4 days	1 day	1 day
NO ₂	0 hours	0	0

Gravimetric PM₁₀ was

Moderate on 5th Feb, 6th 23rd Nov with a daily mean reaching 65 µg m⁻³.

Very High on 5th Nov with a daily mean reaching 106 µg m⁻³.

Gravimetric PM_{2.5} was

Moderate on 3rd 4th Mar, 22nd 23rd Nov with a daily mean reaching 46 µg m⁻³.

High on 6th Nov with a daily mean reaching 55 µg m⁻³.

Very High on 5th Nov with a daily mean reaching 100 µg m⁻³.

Data Captures

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

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Second table – Air Quality Exceedences

Gravimetric PM₁₀ – annual data capture was 86.6 %

The maximum daily mean was $106 \mu\text{g m}^{-3}$ so the daily mean limit value of $50 \mu\text{g m}^{-3}$ was exceeded on 4 days. The annual allowance is 35 days so this Objective was not exceeded.

The annual mean was $21 \mu\text{g m}^{-3}$ which did not exceed the $40 \mu\text{g m}^{-3}$ Objective.

Gravimetric PM_{2.5} – annual data capture was 86.1 %

The annual mean was $13 \mu\text{g m}^{-3}$ which did not exceed the $25 \mu\text{g m}^{-3}$ Objective. Note, however, that the PM_{2.5} standard is not set in regulations.

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

NO₂ – annual data capture was 87.9 %

The annual mean was $48 \mu\text{g m}^{-3}$ which **exceeded** the $40 \mu\text{g m}^{-3}$ Objective.

The maximum hourly mean was $182 \mu\text{g m}^{-3}$ so there were no exceedences of the NO₂ hourly limit of $200 \mu\text{g m}^{-3}$. 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 _{2.5} [~]	NO ₂	NO	NO _x
Number Very High #	1	1	0	-	-
Number High #	0	1	0	-	-
Number Moderate #	3	4	0	-	-
Number Low #	308	303	7697	-	-
Maximum 15-min mean	-	-	184 µg m ⁻³	727 µg m ⁻³	1279 µg m ⁻³
Maximum hourly mean	365 µg m ⁻³	359 µg m ⁻³	182 µg m ⁻³	599 µg m ⁻³	1058 µg m ⁻³
Maximum running 8-hr mean	248 µg m ⁻³	241 µg m ⁻³	117 µg m ⁻³	343 µg m ⁻³	616 µg m ⁻³
Maximum running 24-hr mean	129 µg m ⁻³	123 µg m ⁻³	96 µg m ⁻³	225 µg m ⁻³	425 µg m ⁻³
Maximum daily mean	106 µg m ⁻³	100 µg m ⁻³	89 µg m ⁻³	218 µg m ⁻³	413 µg m ⁻³
Average	21 µg m ⁻³	13 µg m ⁻³	48 µg m ⁻³	52 µg m ⁻³	128 µg m ⁻³
Data capture	86.6 %	86.1 %	87.9 %	87.9 %	87.9 %

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

* PM₁₀ in gravimetric units µg m⁻³

+ PM₁₀ as measured by a FDMS using a gravimetric factor of 1

~ PM_{2.5} as measured by a FDMS using a gravimetric factor of 1

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	106 µg m ⁻³	4	4	35 days	No
PM ₁₀ Particulate Matter (Gravimetric)	Annual mean > 40 µg m ⁻³	21 µg m ⁻³	0	-	-	No
PM _{2.5} Particulate Matter (Gravimetric) *	Annual mean > 25 µg m ⁻³	13 µg m ⁻³	0	-	-	No
Nitrogen Dioxide	Annual mean > 40 µg m ⁻³	48 µg m ⁻³	1	-	-	Yes
Nitrogen Dioxide	Hourly mean > 200 µg m ⁻³	182 µg m ⁻³	0	0	18 hours	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
PM ₁₀	91.4	99.4	98.9	46.3	95.4	87.2	86.4	98.3	79.2	99.7	99.2	57.7
PM _{2.5}	90.6	98.2	99.1	46.1	94.8	86.9	85.5	97.2	78.9	99.5	99.2	57.9
Nitrogen Dioxide	99.5	99.6	99.2	46.3	98.9	87.4	86.8	99.9	79.0	99.9	99.2	58.7

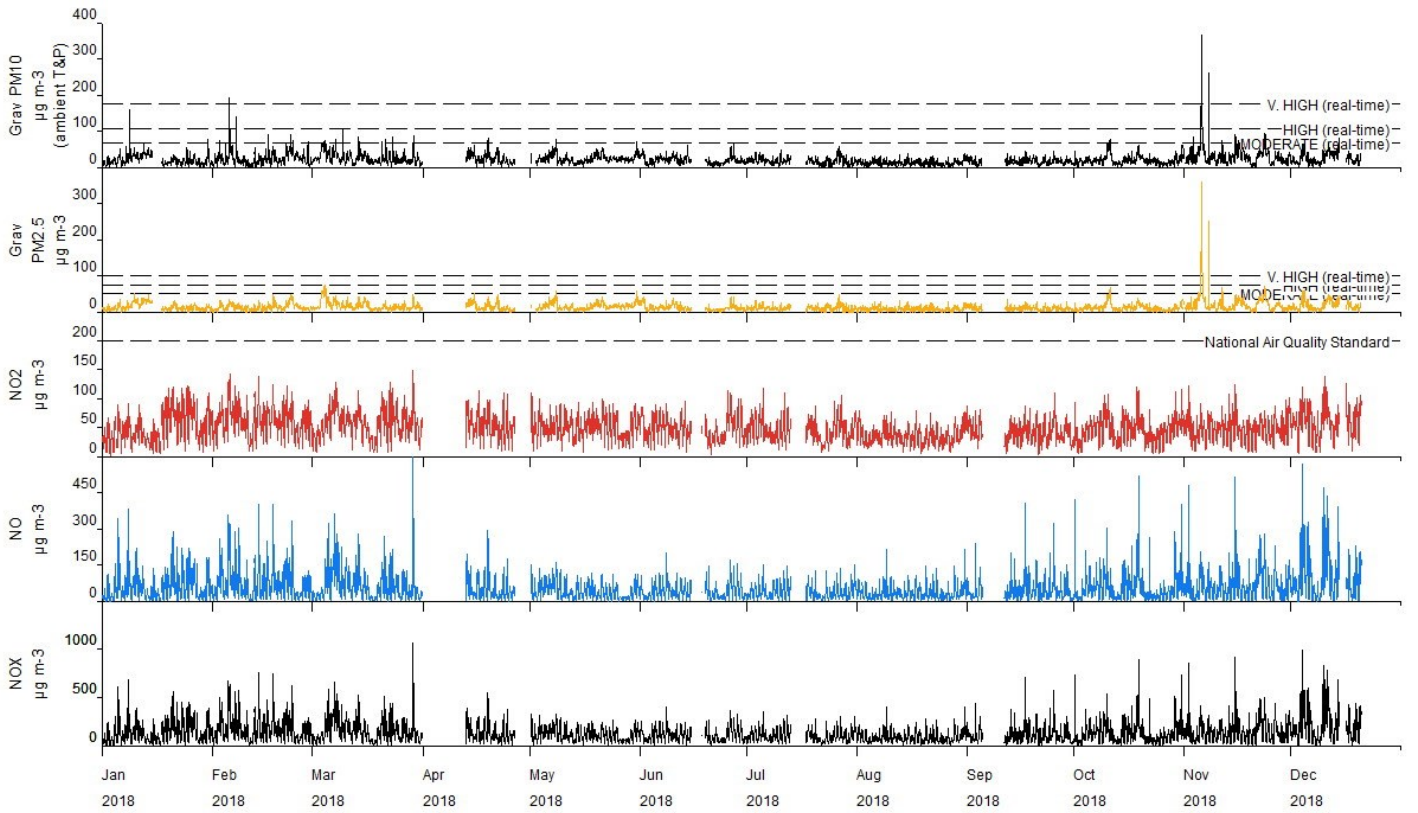
Monthly Means

Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PM ₁₀ $\mu\text{g m}^{-3}$	21	24	26	23	23	19	17	13	16	19	30	24
PM _{2.5} $\mu\text{g m}^{-3}$	14	13	16	14	15	11	11	8	9	12	21	17
Nitrogen Dioxide $\mu\text{g m}^{-3}$	48	59	54	51	49	47	45	35	42	45	48	60

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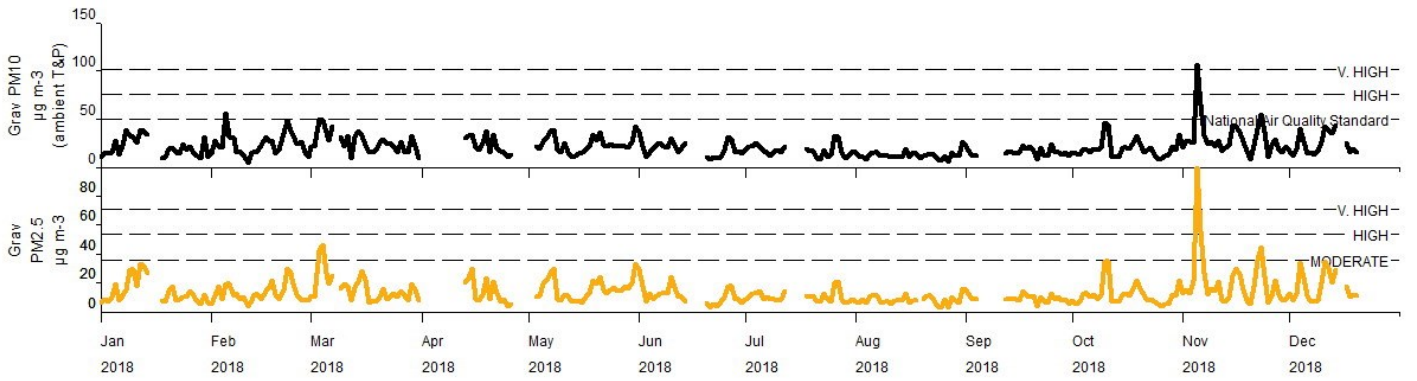
Hourly Means



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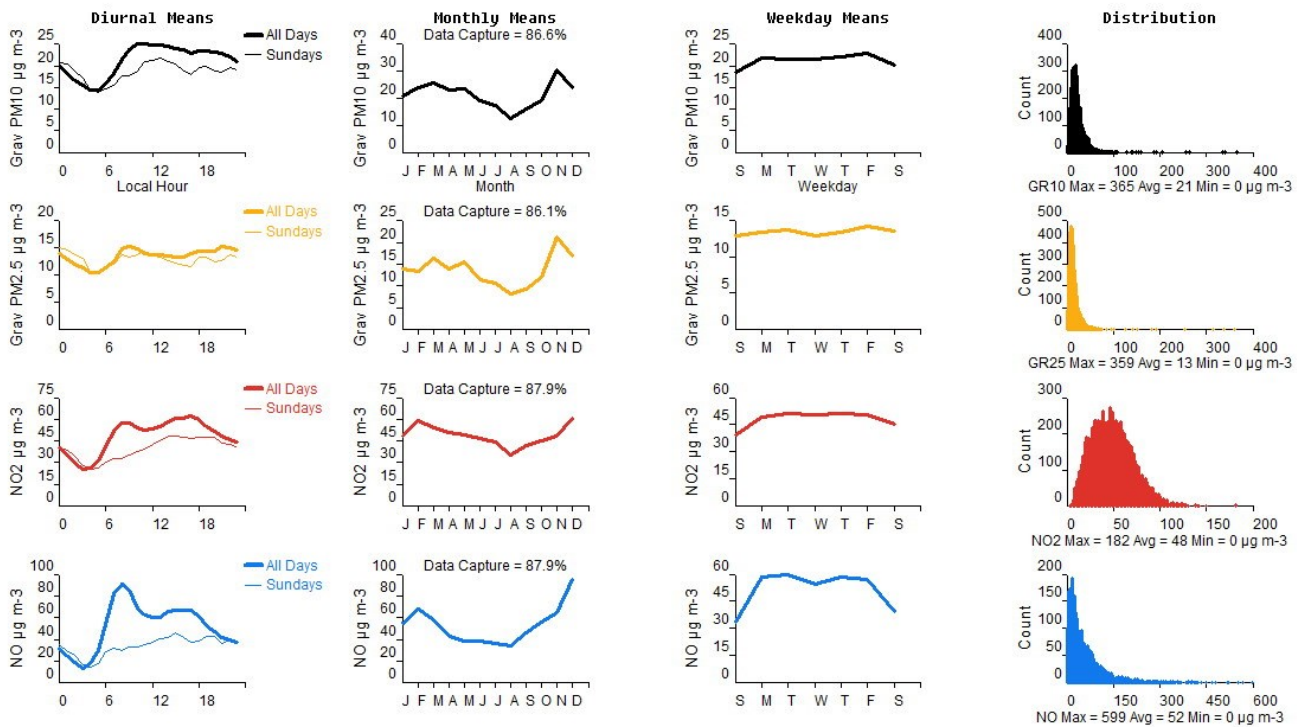
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Daily Means



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