

# Air Quality Report

Produced by AQDM on behalf of Lancaster

## LANCASTER CABLE STREET 2017

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 2017 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* PM<sub>10</sub> required for the LAQM reports. This uses data from at least two nearby FDMS instruments <http://www.volatile-correction-model.info>.

#### First table – Air Quality Statistics

The TEOM gravimetric PM<sub>10</sub> is shown in the 2<sup>nd</sup> column. The uncorrected TEOM PM<sub>10</sub> is in the 3<sup>rd</sup>.

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 <sub>10</sub>	0 days	0	0
NO <sub>2</sub>	0 hours	0	0

#### Data Captures

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

High percentiles are included where the annual data capture was less than 85%.

#### Second table – Air Quality Exceedences

*Gravimetric PM<sub>10</sub> – annual data capture was 59.2 %*

The maximum daily mean was 47 µg m<sup>-3</sup> so the daily mean limit value of 50 µg m<sup>-3</sup> was not exceeded. The annual allowance is 35 days so this Objective was not exceeded.

The annual mean was 21 µg m<sup>-3</sup> which did not exceed the 40 µg m<sup>-3</sup> Objective.

*NO<sub>2</sub> – annual data capture was 74.0 %*

The annual mean was 35 µg m<sup>-3</sup> which did not exceed the 40 µg m<sup>-3</sup> Objective.

The maximum hourly mean was 109 µg m<sup>-3</sup> so there were no exceedences of the NO<sub>2</sub> hourly limit of 200 µg m<sup>-3</sup>. There is an annual allowance of 18 hours so this Objective was not exceeded.

# Air Quality Report

## LANCASTER CABLE STREET 2017

### Air Quality Statistics

Pollutant	PM <sub>10</sub> <sup>+</sup>	PM <sub>10</sub> <sup>*</sup>	NO <sub>2</sub>	NO	NO <sub>x</sub>
Number Very High <sup>#</sup>	0	-	0	-	-
Number High <sup>#</sup>	0	-	0	-	-
Number Moderate <sup>#</sup>	0	-	0	-	-
Number Low <sup>#</sup>	216	-	6481	-	-
Maximum 15-min mean	-	447 µg m <sup>-3</sup>	122 µg m <sup>-3</sup>	565 µg m <sup>-3</sup>	914 µg m <sup>-3</sup>
Maximum hourly mean	249 µg m <sup>-3</sup>	247 µg m <sup>-3</sup>	109 µg m <sup>-3</sup>	460 µg m <sup>-3</sup>	746 µg m <sup>-3</sup>
Maximum running 8-hr mean	81 µg m <sup>-3</sup>	80 µg m <sup>-3</sup>	92 µg m <sup>-3</sup>	304 µg m <sup>-3</sup>	536 µg m <sup>-3</sup>
Maximum running 24-hr mean	57 µg m <sup>-3</sup>	53 µg m <sup>-3</sup>	74 µg m <sup>-3</sup>	222 µg m <sup>-3</sup>	404 µg m <sup>-3</sup>
Maximum daily mean	47 µg m <sup>-3</sup>	47 µg m <sup>-3</sup>	69 µg m <sup>-3</sup>	197 µg m <sup>-3</sup>	360 µg m <sup>-3</sup>
99.8 <sup>th</sup> percentile of hourly means <sup>†</sup>	-	-	98 µg m <sup>-3</sup>	-	-
90.4 <sup>th</sup> percentile of daily means <sup>†</sup>	34 µg m <sup>-3</sup>	-	-	-	-
90 <sup>th</sup> percentile of daily means <sup>†</sup>	33 µg m <sup>-3</sup>	-	-	-	-
98.1 <sup>st</sup> percentile of daily means <sup>†</sup>	42 µg m <sup>-3</sup>	-	-	-	-
Average	21 µg m <sup>-3</sup>	20 µg m <sup>-3</sup>	35 µg m <sup>-3</sup>	47 µg m <sup>-3</sup>	108 µg m <sup>-3</sup>
Data capture	59.2 %	59.2 %	74.0 %	74.0 %	74.0 %

<sup>#</sup> Daily Air Quality Index (DAQI) as defined by COMEAP January 2012 and revised April 2013

<sup>†</sup> Percentile required for data capture < 85%

<sup>+</sup> PM<sub>10</sub> as measured by a TEOM using the VCM for Indicative Gravimetric Equivalent

<sup>\*</sup> PM<sub>10</sub> as measured by a TEOM

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

NO<sub>x</sub> mass units are NO<sub>x</sub> as NO<sub>2</sub> µg m<sup>-3</sup>

### Air Quality Exceedences

Pollutant	Air Quality (England) Regulations 2000 & (Amendment) Regulations 2002	Max Conc	Number	Days	Allowed	Exceeded
PM <sub>10</sub> Particulate Matter (Gravimetric)	Daily mean > 50 µg m <sup>-3</sup>	47 µg m <sup>-3</sup>	0	0	35 days	No
PM <sub>10</sub> Particulate Matter (Gravimetric)	Annual mean > 40 µg m <sup>-3</sup>	21 µg m <sup>-3</sup>	0	-	-	No
Nitrogen Dioxide	Annual mean > 40 µg m <sup>-3</sup>	35 µg m <sup>-3</sup>	0	-	-	No
Nitrogen Dioxide	Hourly mean > 200 µg m <sup>-3</sup>	109 µg m <sup>-3</sup>	0	0	18 hours	No

# Air Quality Report

## LANCASTER CABLE STREET 2017

### Monthly Data Captures %

Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PM <sub>10</sub>	0.0	0.0	0.0	84.9	99.6	52.8	0.0	72.4	99.4	99.6	99.6	99.9
Nitrogen Dioxide	0.0	0.0	0.0	84.9	99.9	99.7	100.0	99.9	99.6	99.7	99.9	100.0

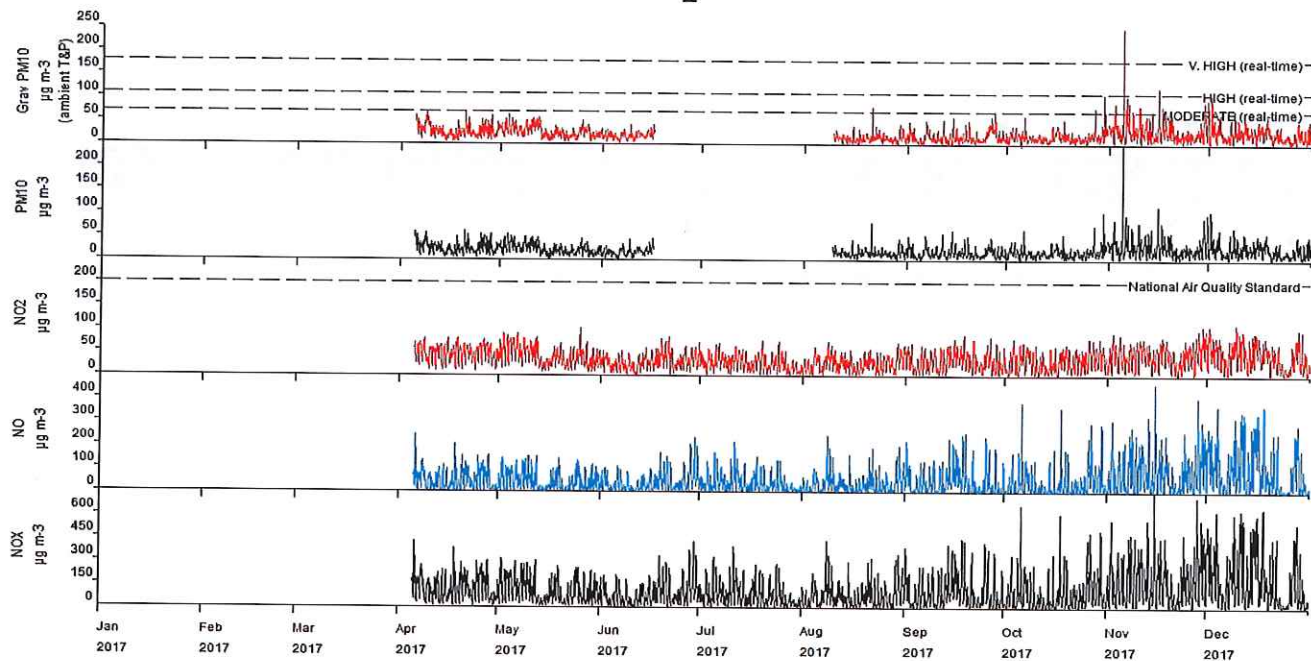
### Monthly Means

Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PM <sub>10</sub> $\mu\text{g m}^{-3}$	-	-	-	24	24	17	-	14	17	17	29	23
Nitrogen Dioxide $\mu\text{g m}^{-3}$	-	-	-	44	40	28	27	27	33	32	43	42

# Air Quality Report

## LANCASTER CABLE STREET 2017

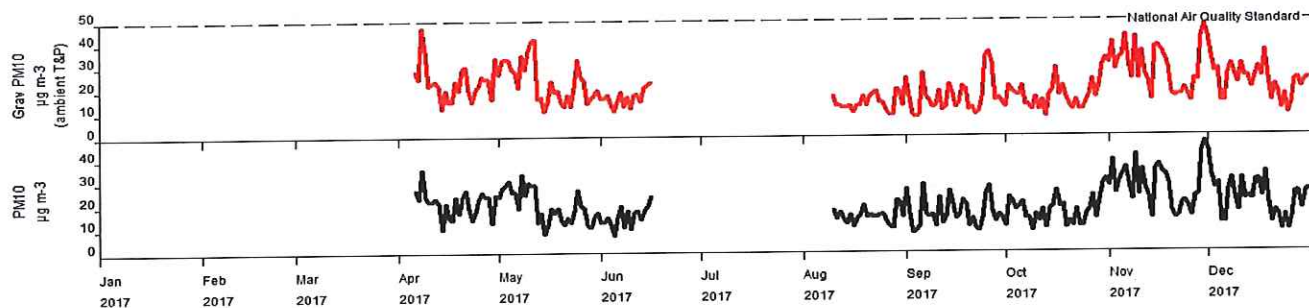
### Hourly Means



# Air Quality Report

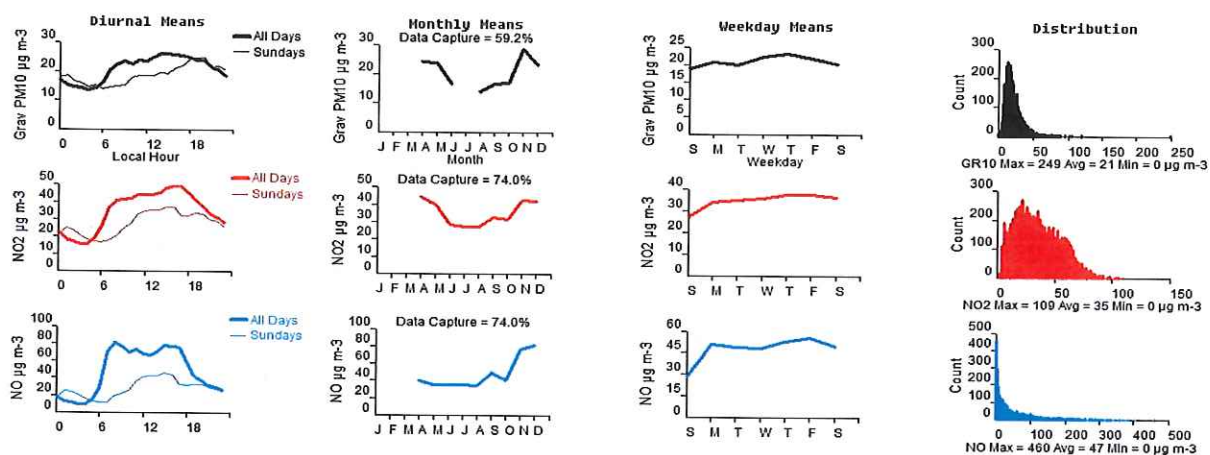
LANCASTER CABLE STREET 2017

## Daily Means



# Air Quality Report

## LANCASTER CABLE STREET 2017



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# Air Quality Report

Produced by AQDM on behalf of Lancaster

## LANCASTER DALTON SQUARE 2017

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

### Site Environment and Description

ROADSIDE: Dalton Square, Lancaster

### Statistical Summary Report

This 2017 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
Nitrogen Dioxide	0 hours	0	0

#### Data Captures

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

#### Second table – Air Quality Exceedences

*NO<sub>2</sub> – annual data capture was 99.7 %*

The annual mean was 32  $\mu\text{g m}^{-3}$  which did not exceed the 40  $\mu\text{g m}^{-3}$  Objective.

The maximum hourly mean was 128  $\mu\text{g m}^{-3}$  so there were no exceedences of the NO<sub>2</sub> hourly limit of 200  $\mu\text{g m}^{-3}$ . There is an annual allowance of 18 hours so this Objective was not exceeded.

# Air Quality Report

LANCASTER DALTON SQUARE 2017

## Air Quality Statistics

Pollutant	NO <sub>2</sub>	NO	NO <sub>x</sub>
Number Very High <sup>#</sup>	0	-	-
Number High <sup>#</sup>	0	-	-
Number Moderate <sup>#</sup>	0	-	-
Number Low <sup>#</sup>	8735	-	-
Maximum 15-min mean	147 µg m <sup>-3</sup>	630 µg m <sup>-3</sup>	1044 µg m <sup>-3</sup>
Maximum hourly mean	128 µg m <sup>-3</sup>	436 µg m <sup>-3</sup>	778 µg m <sup>-3</sup>
Maximum running 8-hr mean	94 µg m <sup>-3</sup>	219 µg m <sup>-3</sup>	403 µg m <sup>-3</sup>
Maximum running 24-hr mean	81 µg m <sup>-3</sup>	131 µg m <sup>-3</sup>	257 µg m <sup>-3</sup>
Maximum daily mean	75 µg m <sup>-3</sup>	112 µg m <sup>-3</sup>	230 µg m <sup>-3</sup>
Average	32 µg m <sup>-3</sup>	22 µg m <sup>-3</sup>	66 µg m <sup>-3</sup>
Data capture	99.7 %	99.7 %	99.7 %

<sup>#</sup> Daily Air Quality Index (DAQI) as defined by COMEAP January 2012 and revised April 2013

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

NO<sub>x</sub> mass units are NO<sub>x</sub> as NO<sub>2</sub> µg m<sup>-3</sup>

## 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 <sup>-3</sup>	32 µg m <sup>-3</sup>	0	-	-	No
Nitrogen Dioxide	Hourly mean > 200 µg m <sup>-3</sup>	128 µg m <sup>-3</sup>	0	0	18 hours	No

# Air Quality Report

LANCASTER DALTON SQUARE 2017

## Monthly Data Captures %

Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nitrogen Dioxide	99.7	100.0	100.0	100.0	99.5	99.3	100.0	99.6	100.0	99.5	99.7	99.3

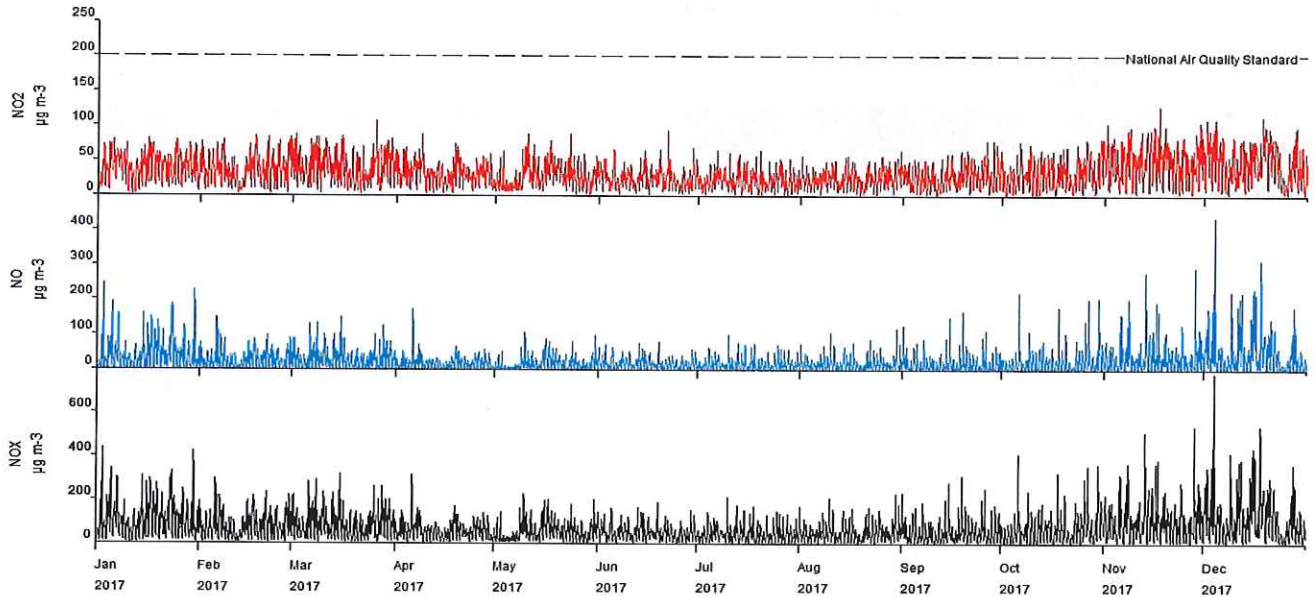
## Monthly Means

Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nitrogen Dioxide $\mu\text{g m}^{-3}$	39	34	37	29	27	24	22	25	28	31	46	44

# Air Quality Report

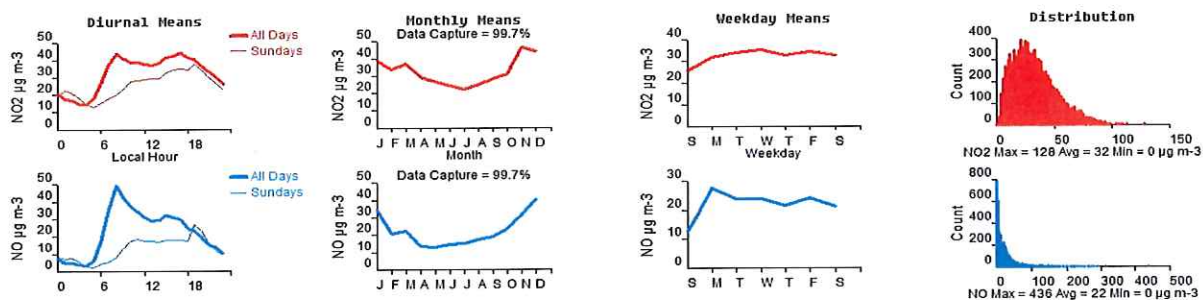
## LANCASTER DALTON SQUARE 2017

### Hourly Means



# Air Quality Report

## LANCASTER DALTON SQUARE 2017



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