

KENT & MEDWAY AIR QUALITY MONITORING NETWORK PROGRESS REPORT: NOVEMBER 2011

Introduction

This monthly report of the Kent & Medway Air Quality Monitoring Network (KMAQMN) outlines air quality throughout Kent during November 2011. The Network is a joint project funded by twelve of the thirteen councils within Kent, representing a combined effort to effectively and efficiently monitor the quality of air in and around Kent.

The revision to the Technical Guidance (LAQM.TG (09)¹) requires the use of the Volatile Correction Model (www.volatile-correction-model.info) to correct TEOM data against FDMS data as opposed to the previous requirement to apply a correction factor of 1.3 to raw TEOM data. However, within this report the PM₁₀ TEOM data shall continue to be presented as indicative corrected, i.e. 'raw' TEOM PM₁₀ data with a 1.3 factor applied. The VCM will be applied to the full annual datasets for presentation of annual statistics and comparison against the UK Air Quality Objectives in the annual report.

We welcome any suggestions and feedback on the report content and format.

Air Quality Results to End of November 2011

The statistics reported below are a comparison to the Air Quality Strategy objectives calculated over the previous twelve months (data capture not considered at this stage). Please note that the UK Air Quality Objectives usually would apply to a calendar year but these statistics give a good indication as to the likelihood of complying with the objectives. Gravimetric conversion factors of 1.3 for TEOMs and 0.83 for BAMs have been applied to the PM₁₀ particulate data in calculating these statistics.

All figures given in **bold** indicate that the objective was not achieved in the last twelve months. All data is subject to later ratification and scaling. Data capture is not taken into account since these figures are not for a calendar year and are intended to be indicative only.

Please note that the network site Ashford Background was closed on 7th April 2011.

Ozone (O ₃)	No. of days with max. 8 hour rolling average >100 µgm ⁻³ (10 allowed per year)
Canterbury*	22
Chatham Luton Background	19
Folkestone Suburban	19
Maidstone Rural	21
Rochester Stoke	12

*Canterbury AURN site enhanced with an ozone analyser 15th March 2011

Carbon Monoxide (CO)	8 hour means >10 mgm ⁻³
Chatham Luton Background	0

¹ <http://www.defra.gov.uk/environment/airquality/local/guidance/pdf/tech-guidance-laqm-tg-09.pdf>

PM ₁₀	Days with 24-hour means >50 µg ^m ⁻³ (35 allowed per year)	12-month mean (µg ^m ⁻³) (>40 µg ^m ⁻³ threshold)
Canterbury PM ₁₀	4	20
Chatham Centre Roadside [†]	20	25
Chatham Luton Background	7	22
Dartford Bean Interchange Roadside*	14	25
Dartford St Clements Roadside*	32	30
Dartford Town Centre Roadside*	21	28
Dover Centre Roadside	19	30
Folkestone Suburban	1	17
Gravesham A2 Roadside*	5	20
Gravesham Industrial Background*	34	31
Maidstone A229 Kerbside	11	27
Maidstone Rural	7	19
Rochester Stoke	4	15
Swale Ospringe Roadside 2	20	29
Thanet Birchington Roadside*	32	29
Thanet Ramsgate Roadside*	44	33
Tunbridge Wells A26 Roadside	10	30

[†]Previously called Chatham Roadside. This site was affiliated into the AURN on 1 July 2010.

Please be advised, an indicative gravimetric correction has been included for PM₁₀ data from TEOM and BAM instruments (BAMs are indicated by *).

Canterbury's PM₁₀ analyser was de-affiliated from the AURN network on 10 October 2007 but is still reported as part of the Kent and Medway Air Quality Monitoring Network, re-named Canterbury PM₁₀.

Sulphur Dioxide	Number of 15-minute readings >266 µg ^m ⁻³ (35 allowed per year)	Number of hourly averages >350 µg ^m ⁻³ (24 allowed per year)	Number of 24-hour averages >125 µg ^m ⁻³ (3 allowed per year)
Chatham Luton Background	0	0	0
Dover Docks	1	0	0
Folkestone Suburban	0	0	0
Maidstone Rural	0	0	0
Rochester Stoke	0	0	0
Swale Sheerness	0	0	0

Nitrogen Dioxide (NO ₂)	No. of hourly means >200 µgm ⁻³ (18 allowed per year)	12-month mean (µgm ⁻³) (>40 µgm ⁻³ threshold)	November 2011 Monthly Mean (µgm ⁻³) [*]
Canterbury	0	16	19
Canterbury Military Road	0	36	37
Canterbury Roadside	0	37	39
Canterbury St Peters Place ^{**}	1	45	51
Chatham Centre Roadside [†]	0	32	-
Chatham Luton Background	0	28	28
Dartford Bean Interchange Roadside	3	54	56
Dartford St Clements Roadside	10	55	66
Dartford Town Centre Roadside	0	42	49
Dover Docks	2	44	-
Dover Old Town Hall Roadside	0	37	44
Folkestone Suburban	0	19	22
Gravesham A2 Roadside	0	35	34
Gravesham Industrial Background	0	27	29
Maidstone A229 Kerbside	0	54	52
Maidstone Rural	0	14	19
Rochester Stoke	0	20.1	25.6
Swale Canterbury Road	0	35	39
Swale Newington 3 [‡]	0	29	39
Swale Ospringle Roadside 2	0	40	44
Thanet Airport	0	20	25
Thanet Birchington Roadside	0	35	49
Thanet Margate Background	0	21	25
Thanet Ramsgate Roadside	0	28	33
Tonbridge Roadside 2	1	45	40
Tunbridge Wells A26 Roadside ^{‡‡}	0	42	48
Tunbridge Wells Town Centre	2	21	28

^{*}Derived where data capture >75%

^{**} Canterbury St Peters Place was affiliated into the KMAQMN network on 4th June 2010.

[†]Previously called Chatham Roadside. This site was affiliated into the AURN on 1 July 2010.

[‡]Swale Newington 3 was affiliated into the network on 11th January 2011.

^{‡‡}Tunbridge Wells A26 Roadside. We have concerns regarding a potential NO cylinder outlier. The site cylinder will be **checked at the QA/QC Audit**

Conversions between µgm⁻³ and ppb can be found at

http://www.kentair.org.uk/additional_information.php?show=ppb_conversion&from=pollutionlevels&site=ZH1&view=levels&bulletindate=04/05/2007

This Month's Summary – November 2011

'Low' air pollution was recorded by all analysers throughout the month with exception of:

Site	Pollutant	No of Days Moderate and Above			Dates
		Moderate	High	Very High	
Dover Centre Roadside	PM10	2	-	-	7 th and 8 th November
Gravesham Industrial Background	PM10	2	-	-	7 th and 8 th November
Swale Ospringe Roadside 2	PM10	1	-	-	8 th November
Thanet Birchington Roadside	PM10	2	-	-	7 th and 8 th November
Thanet Ramsgate Roadside	PM10	2	-	-	7 th and 8 th November
Tunbridge Wells A26 Roadside	PM10	1			8 th November

Network Performance

Network Data Capture for 01/11/2011 to 30/11/2011

Site	CO	NO ₂	O ₃	PM ₁₀	SO ₂	Site Average
Canterbury	-	100	100	-	-	100
Canterbury Military Road	-	98.6	-	-	-	98.6
Canterbury PM10	-	-	-	97.8	-	97.8
Canterbury Roadside	-	99.7	-	-	-	99.7
Canterbury St Peters Place	-	99.0	-	-	-	99.0
Chatham Centre Roadside	-	59.6	-	100	-	86.5
Chatham Luton Background	93.6	95.8	97.8	78.8	97.4	92.7
Dartford Bean Interchange Roadside	-	99.9	-	99.4	-	99.7
Dartford St Clements Roadside	-	99.4	-	99.9	-	99.7
Dartford Town Centre Roadside	-	99.6	-	99.3	-	99.4
Dover Centre Roadside	-	-	-	99.2	-	99.2
Dover Docks	-	73.6	-	-	51.4	62.5
Dover Old Town Hall Roadside	-	99.4	-	-	-	99.4
Folkestone Suburban	-	99.6	99.7	98.9	98.6	99.2
Gravesham A2 Roadside	-	99.6	-	99.3	-	99.4
Gravesham Industrial Background	-	99.6	-	99.0	-	99.3
Maidstone A229 Kerbside	-	99.9	-	99.7	-	99.8
Maidstone Rural	-	79.3	99.6	N/A	99.6	92.8
Rochester Stoke	-	99.9	100	99.9	100	99.9
Swale Canterbury Road	-	99.7	-	-	-	99.7
Swale Newington 3	-	99.9	-	-	-	99.9
Swale Ospringe Roadside 2	-	95.3	-	99.0	-	97.2
Thanet Airport	-	95.7	-	-	-	95.7
Thanet Birchington Roadside	-	95.8	-	98.9	-	97.4
Thanet Margate Background	-	97.5	-	-	-	97.5
Thanet Ramsgate Roadside	-	97.5	-	100	-	98.8
Tonbridge Roadside 2	-	92.6	-	-	-	92.6
Tunbridge Wells A26 Roadside	-	93.3	-	98.8	-	96.0
Tunbridge Wells Town Centre	-	98.9	-	-	-	98.9

N/A Not available- Ratified FDMS Data will be provided directly by Kings/ERG.



Analysers achieving 90% or better data capture with the exception of:

Site	Pollutant	Data Capture (%)	Reason
Chatham Centre Roadside	NO₂	59.6	Data capture monitored by Bureau Veritas
Chatham Luton Background	PM₁₀	78.8	PM ₁₀ sampler was removed to check communications
Dover Docks	NO₂	73.6	Site restarting and communication and analyser issues
Dover Docks	SO₂	51.4	Site restarting and communication and analyser issues
Maidstone Rural	NO₂	79.3	Flow fault leading to data being discarded.

All queries regarding the KMAQMN can be addressed to info@kentair.org.uk

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