



2014 Air Quality Progress Report for

East Cambridgeshire District Council

In fulfillment of Part IV of the
Environment Act 1995
Local Air Quality Management

May 2014

(updated version, initially submitted to DEFRA April 2014)

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Executive Summary

East Cambridgeshire District Council remain committed to the process known as Local Air Quality Management and support Government plans to protect and improve ambient air quality. This report sets out the findings of the third stage (Progress Report) of the fifth review and assessment of local air quality in the district of East Cambridgeshire.

This Progress Report has involved analysing the prescribed pollutants to see if they require further detailed assessment. There are currently no Air Quality Management Areas ('AQMAs') in East Cambridgeshire. The 2013 Progress Report identified that a single further detailed assessment was necessary in an area of Ely, Cambridgeshire, which is currently being developed due to an exceedance of the annual mean objective for Nitrogen Dioxide. The 2014 data gathered from the same area (albeit slightly different location) identified a lower (acceptable) annual mean concentration of Nitrogen Dioxide, although following a distance adjustment calculation, it was indicated that a possible exceedance of the objective still exists and therefore a detailed assessment is necessary and shall be completed. With the exception of this exceedance, the 2014 Progress Report finds that there are no other exceedances of the air quality objectives.

The data within this report relates to data gathered between 1st January 2013 and 31st December 2013.

This report forms the basis for consultation with statutory consultees. Representations regarding its content should be made to Environmental Services, East Cambridgeshire District Council ('ECDC'), The Grange, Nutholt Lane, Ely, CB7 4EE. Tel: 01353 665555.

Table 1: Summary findings of the 2013 Progress Report for East Cambridgeshire

Pollutant	Exceedence observed/predicted	Existing AQMA	Proposed AQMA	Proposed DA
Benzene	No	No	No	No
1,3 Butadiene	No	No	No	No
Carbon Monoxide	No	No	No	No
Lead	No	No	No	No
Nitrogen Dioxide (NO₂)	Yes*	No	No	Yes
Fine Particles (PM₁₀)	No	No	No	No
Sulphur Dioxide	No	No	No	No

* In 2013, the NO₂ automatic instrument location was changed slightly (due to logistical requirements) although still positioned on the same junction and the 2013 data within this report has been adjusted accordingly for 'fall off' with distance).

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1 Introduction

1.1 Description of Local Authority Area

Population Growth

Data from the 2011 Census for the East of England has been disseminated from the Office of National Statistics (ONS), in July 2012. Based on these latest population forecasts, since 2001 the population of Cambridgeshire has increased by 12% to 621,300. The largest percentage increase was in East Cambridgeshire where the population has increased by 14.2% to 83,800 in 2011 (Office for National Statistics, 2012).

Cambridgeshire County Council's Research, Performance and Business Intelligence Team produce population estimates for parishes, wards and settlements in the administrative area of Cambridgeshire (which, since 1st April 1998, no longer includes Peterborough), together with forecasts of the future population of each District. These are summarised in Tables 2 and 3, whereby population estimates are shown for districts and parishes (in East Cambridgeshire), respectively. Parishes with estimated populations of over 5,000 have been highlighted for clarity.

Table 2: Summary of population estimates by district in the 2011 Census (ONS, 2012)

2011 population estimates for Cambridgeshire districts				
District	2001 population	2011 population	% change 2001-2011	change
Cambridge City	109,900	123,900	12.7%	14,000
East Cambridgeshire	73,400	83,800	14.2%	10,400
Fenland	83,700	95,300	13.9%	11,600
Huntingdonshire	157,200	169,500	7.8%	12,300
South Cambridgeshire	130,500	148,800	14.0%	18,300
County	554,700	621,300	12%	66,600

Source: Office for National Statistics (ONS 2012)

Table 3: Summary of Cambridgeshire County Council population estimates by parish (Cambridgeshire County Council, 2010)

Parishes	% Change				Area (Hectares)
	1991	2001	2010	2001-10	
Ashley	510	570	610	7.0%	903
Bottisham	1,770	1,920	2,110	9.9%	1,155
Brinkley	380	370	370	0.0%	527
Burrough Green	320	370	360	-2.7%	919
Burwell	4,660	5,650	6,120	8.3%	2,563
Cheveley	1,720	1,850	2,010	8.6%	1,035
Chippenham	400	510	550	7.8%	1,739
Coveney	380	410	390	-4.9%	1,290
Downham	2,210	2,330	2,550	9.4%	4,457
Dullingham	620	700	720	2.9%	1,370
Ely	11,730	14,630	18,820	28.6%	5,921
Fordham	2,220	2,540	2,770	9.1%	1,671
Haddenham	2,770	3,130	3,450	10.2%	3,605
Isleham	1,960	2,270	2,400	5.7%	2,117
Kennett	290	350	370	5.7%	580
Kirtling	330	360	370	2.8%	1,265
Littleport	6,460	7,280	8,380	15.1%	7,400
Lode	840	860	890	3.5%	1,269
Mepal	640	890	900	1.1%	744
Reach	300	350	360	2.9%	459
Snailwell	170	220	230	4.5%	806
Soham	7,770	8,820	10,550	19.6%	5,265
Stetchworth	540	670	760	13.4%	1,170
Stretham	1,480	1,630	1,720	5.5%	1,629
Sutton	3,090	3,260	3,750	15.0%	2,858
Swaffham Bulbeck	770	830	840	1.2%	1,663
Swaffham Prior	770	740	740	0.0%	1,980
Thetford	470	670	680	1.5%	543
Wentworth	190	150	180	20.0%	554
Westley Waterless	120	150	170	13.3%	464
Wicken	700	810	900	11.1%	1,601
Wilburton	1,050	1,190	1,320	10.9%	1,716
Witcham	400	420	460	9.5%	1,061
Witchford	1,440	2,270	2,330	2.6%	939
Woodditton	1,720	1,730	1,770	2.3%	1,929
East Cambridgeshire District	61,200	70,900	80,900	14.1%	64,941

Source: Cambridgeshire County Council Research Group

Traffic levels/growth

Over the last 15 years there has been considerable traffic growth across Cambridgeshire. However, the latest available traffic flow data* relates to 2012 and shows generally consistent, traffic flows in and around Ely and across the district, with largely unchanged recorded traffic levels compared to previous years although some minor decreases in recorded traffic on various roads were recorded. It should also be noted that recorded rainfall in 2012 was particularly high and therefore this may have influenced fewer cycle journeys and more car journeys, as the report highlights, and therefore further decreases in traffic flows could be a more logical true conclusion for 2012.

* = The 2012 Traffic Monitoring Report (Cambridgeshire County Council, 2012)

Industrial Processes – Environmental Permitting Regulations 2010

A complete list of processes permitted under the Environmental Permitting Regulations 2010 are presented in Appendix B. Each process has been considered in conjunction with Annex 2 of Technical Guidance LAQM.TG (09) to identify those that may have significant emissions of prescribed pollutants. Where there is judged to be a potentially significant release these have been screened in accordance with pollutant specific guidance.

1.2 Purpose of Progress Report

This report fulfils the requirements of the Local Air Quality Management (LAQM) process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 and the relevant Policy and Technical Guidance documents. The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where exceedences are considered likely, the local authority must then declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives.

Progress Reports are required in the intervening years between the three-yearly Updating and Screening Assessment reports. Their purpose is to maintain continuity in the LAQM process.

They are not intended to be as detailed as Updating and Screening Assessment Reports, or to require as much effort. However, if the Progress Report identifies the risk of exceedance of an Air Quality Objective, the Local Authority (LA) should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment.

East Cambridgeshire District Council remain committed to the process known as Local Air Quality Management and support Government plans to protect and improve ambient air quality. This report sets out the findings of the third stage (Progress Report) of the fifth review and assessment of local air quality in the district of East Cambridgeshire.

This Progress Report has involved analysing the prescribed pollutants to see if they require further detailed assessment. There are currently no Air Quality Management Areas ('AQMAs') in East Cambridgeshire. The 2013 Progress Report identified that a single further detailed assessment was necessary in an area of Ely, Cambridgeshire, which is currently being developed. ECDC have limited resources to commit to assessing local air quality, often utilising external funding sources, so it has been challenging to commence work on the detailed assessment although the authority remain committed to this area of work.

This 2014 Progress Report finds that there are no exceedances of the air quality objectives, with the exception of the previously identified exceedance in Ely. The data within this report relates to data gathered between 1st January 2013 and 31st December 2013.

The 2013 Progress Report identified that a single further detailed assessment was necessary in an area of Ely, Cambridgeshire, which is currently being developed due to an exceedance of the annual mean objective for Nitrogen Dioxide. The 2013 data gathered from the same area, albeit slightly different location, identified a lower (acceptable) annual mean concentration of Nitrogen Dioxide, although following a distance adjustment calculation, it was indicated that a possible exceedance of the objective still exists and therefore a detailed assessment is necessary and shall be completed. With the exception of this exceedance, the 2014 Progress Report finds that there are no other exceedances of the air quality objectives.

This report forms the basis for consultation with statutory consultees. Representations regarding its content should be made to Environmental Services, East Cambridgeshire District Council ('ECDC'), The Grange, Nutholt Lane, Ely, CB7 4EE. Tel: 01353 665555.

1.3 Air Quality Objectives

The air quality objectives applicable to LAQM **in England** are set out in the Air Quality (Standards) Regulations 2010, The National Emissions Ceilings Regulations 2002 and the Air Quality (England) Regulations 2000 (SI 928) inc the Air Quality (England) (Amendment) Regulations 2002 (SI 3043), and are shown in Table 4. This table shows the objectives in units of microgrammes per cubic metre $\mu\text{g}/\text{m}^3$ (milligrammes per cubic metre, mg/m^3 for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).

Table 4 Air Quality Objectives included in Regulations for the purpose of LAQM in England

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
	5.00 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
Carbon monoxide	10 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.50 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
	0.25 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2005
Particulate Matter (PM ₁₀) (gravimetric)	50 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
Sulphur dioxide	350 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

1.4 Summary of Previous Review and Assessments

The first 'round' of Review and Assessment was carried out in Cambridgeshire as a joint exercise by the District Councils working together with the County Council. It was commenced in 1997 and completed in 2000, concluding that Air Quality Management Areas ('AQMAs') were necessary in parts of the County outside of East Cambridgeshire, where no AQMAs were deemed necessary.

The second 'round' of Review and Assessment benefited from the publication of new technical guidance 'LAQM.TG (03)' which reduced the stages of the process to two and introduced statutory timescales and a more formalised approach generally. This was also completed jointly across Cambridgeshire and accordingly also concluded that no Air Quality Management Areas were necessary in East Cambridgeshire.

Reporting on the fifth 'round' of review and assessment began in April 2012 with the submission of the Updating and Screening Assessment, which concluded that East Cambridgeshire predicted to comply with air quality objectives by the due dates. The 2013 Progress Report identified that a single further detailed assessment was necessary in an area of Ely, Cambridgeshire, which is currently being developed.

This 2014 Progress Report finds that there are no exceedances of the air quality objectives, with the exception of the previously identified Nitrogen Dioxide exceedance in Ely. This report was initially submitted in April 2013 but the NO₂ automatic data within that report was in its raw format (i.e pending scaling/ratification by Kings College London). Since this data has subsequently become available in full scaled/ratified form, this report has been re-submitted in an updated format to include that data although the conclusions remain the same. This report relates to data gathered between 1st January 2013 and 31st December 2013.

This document constitutes the third stage of the fifth round of Review and Assessment and is the Progress Report for the district of East Cambridgeshire 2014.

This Progress Report involves screening each of the prescribed pollutants to see if they will require a more detailed assessment to determine if they are going to meet their respective objectives. It involves looking at busy and congested roads, factories and other sources of air pollution to see if the particular components are present that are likely to give rise to an air quality issue. Where certain factors are present in combination then the situation is studied using

screening tools provided by the revised Policy and Technical Guidance documents. Where scenarios are identified as potential problems they would be progressed through to the detailed assessment, to be completed within 2014.

East Cambridgeshire District Council has identified a breach of the NO₂ annual mean AQS objective at Station Road, Ely and therefore a detailed assessment is required. All other data across the district indicates that the air quality objectives are likely (to continue) to be met throughout its area and so will next report findings with its subsequent Updating and Screening Assessment in April 2015, together with the aforementioned detailed assessment.

2 New Monitoring Data

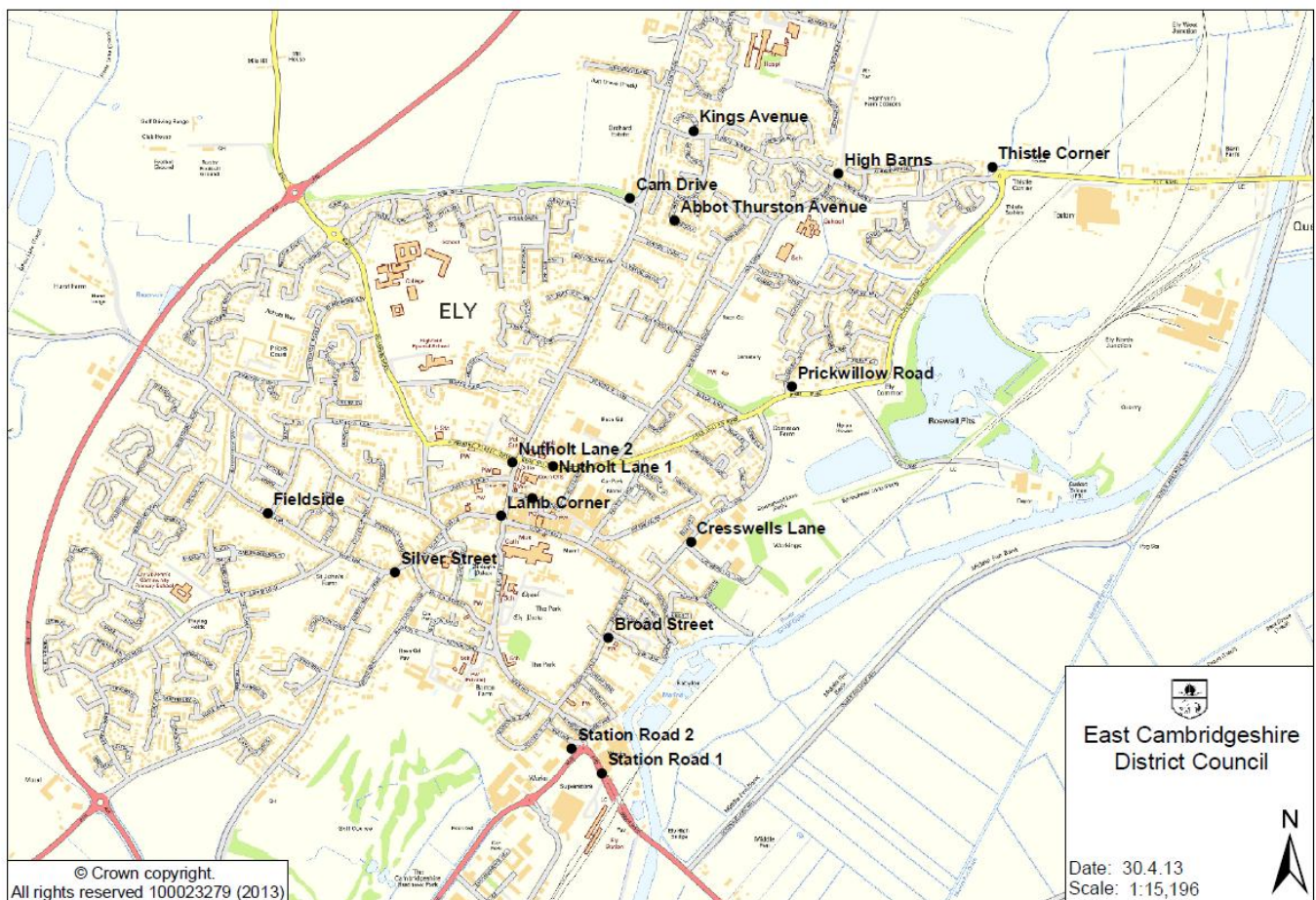
2.1 Summary of Monitoring Undertaken

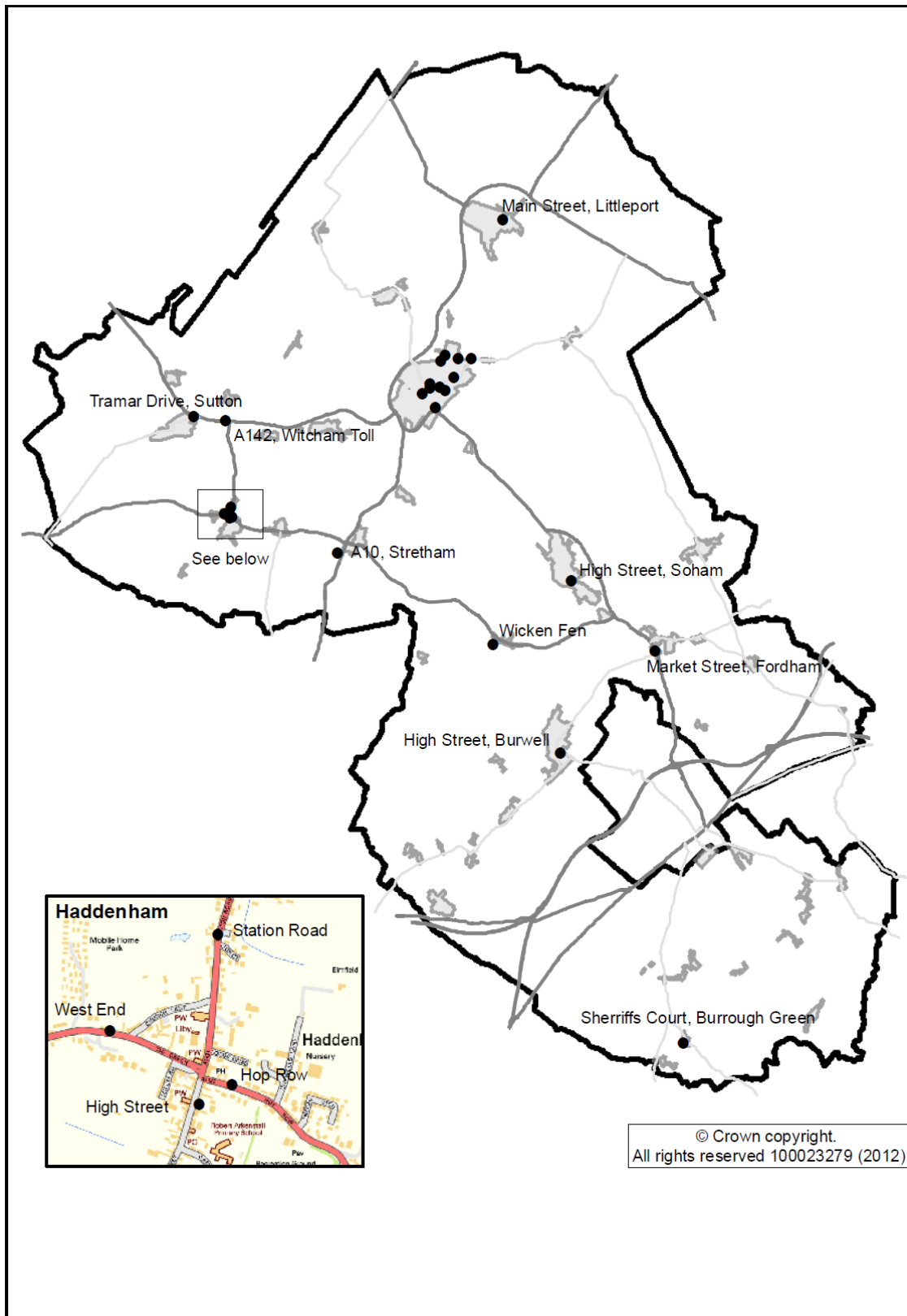
2.1.1 Automatic Monitoring Sites

In 2013, there was one automatic monitoring site in East Cambridgeshire, as detailed in Table 5, comprising an automatic Nitrogen Dioxide monitor.

In previous years, ECDC have operated, with funding assistance from Cambridgeshire County Councils Local Transport Plan, a PM10 monitor located at Wicken Fen nature reserve. This was the only PM₁₀ automatic continuous monitoring site in East Cambridgeshire. The instrument was an Eberline Beta Attenuation Monitor (Kr-85 radioactive source). In mid 2012, due to the age of the radioactive source within the instrument becoming too decayed to provide accurate data, the instrument was decommissioned. The radioactive source has been disposed of by the Active Collection Bureau and the environmental permit successfully surrendered to the Environment Agency.

Figure 1 Map(s) of Automatic Monitoring Sites





Note: Only 'Station Road 2' is both an NO₂ diffusion tube and automatic monitor site.
 Wicken Fen is a decommissioned automatic PM₁₀ site.

Table 5 Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Inlet Height (m)	Pollutants Monitored	In AQMA?	Monitoring Technique	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Does this Location Represent Worst-Case Exposure?
ECDC-AQ2	Ely NO2	Roadside	554,309,	279,638	2.25m	NO ₂ (NO & NO _x)	N	Illumination of chemiluminescent gas phase reaction of NO and O ₃	Y (15m)	15m	N

2.1.2 NO₂ – ECDC AQ2

ECDC operated an automatic Nitrogen Dioxide monitor in 2013. This was a continuation of an arrangement undertaken initially with funding via a Section 106 agreement with Sainsbury's supermarkets for 'Environmental Impacts' of a new supermarket opening in Ely (Sainsbury's – Lisle Lane). Then in 2013, it was funded through assistance from Cambridgeshire County Councils Local Transport Plan budget.

The instrument has been operated in a joint partnership with Leicester City Council (LCC) whereby ECDC pay LCC for the hire, and full quality assurance, ratification of the instrument and dataset. Marcus Bell of ECDC carried out the fortnightly calibration checks and the instrument was serviced by Enviro Technology, but the service contract resided with LCC. LCC retrieve the data, validate it as necessary, then send it back to ECDC in a ratified format. LCC have several other monitors which are used in the same way, through their Monet system. ECDC have committed to continue working with LCC into 2014/15.

For NO₂, the annual mean objective being 40µg/m³ and the 1-hour mean objective being 200µg/m³, not to be exceeded more than 18 times a year. The 2013 results did not identify an annual average exceeding this annual mean objective in the recorded data but did identify an exceedance when adjusted for distance 'fall-off' from the roadside, see Table 8 for details.

2.1.3 Non-Automatic Monitoring Sites

In East Cambridgeshire, diffusion tube monitoring of Nitrogen Dioxide was the only form of non-automatic monitoring undertaken in 2013. For nitrogen dioxide, the annual mean objective is 40µg/m³ by 31st December 2005. This was achieved in all previous rounds of review and assessment and was again met in 2013. It is predicted that the objective will continue to be met. This objective continues to be the reference objective until it is superseded.

The number of diffusion tube sites located in East Cambridgeshire increased from 14 to 28 in 2011, continuing in 2012 and providing the first complete year of data for the

additional sites. Although the number of diffusion tube sites has subsequently reduced to 17 in October 2013 since the associated funding for the extra tubes was a result of the aforementioned Section 106 funding and therefore it has expired.

The increase in tube sites was also partly due to partnership working with Haddenham Parish Council who co-funded the monitoring of three additional tubes (in Haddenham) from January 2011 and the locating of an additional eleven tube sites (in Ely) from October 2011 was the result of an opportunity made available through Section 106 funds secured for 'Environmental Impacts' of a new supermarket opening in Ely (Sainsbury's – Lisle Lane). These additional diffusion tube sites in Ely were located generally in areas likely to be affected by the additional traffic caused by the new supermarket. The locations were also chosen to closely reflect the locations of traffic counts which are being undertaken by the County Council so that a comparison can be made when a sufficient amount of data is available (these eleven sites were decommissioned in November in 2013).

This S106 money also created the opportunity for the installation of a continuous Nitrogen Oxide/Dioxide automatic monitor in Ely, which came online in February 2012. This continuous monitoring site was co-located with an NO₂ diffusion tube (ref NDS8), as shown in Table 6. However, in February 2013, the automatic monitor was moved slightly (on the same junction) so it was then not specifically co-located with NDS 8.

The 28 NO₂ diffusion tube locations are given in Table 6, most of which are located at the roadside or kerbside along with seven urban background sites.

To account for any short-term data capture in 2013 (below 75%), adjustment factors were determined using Box 3.2 of the Technical Guidance LAQM. TG (09), to allow estimations of annual means to be derived for these sites. The calculations for these adjustment factors are given in Appendix A.

Forecasts of nitrogen dioxide diffusion tube results to 2015 have been made and are presented in Table 12 in Appendix A. They were made using the updated method outlined in Technical Guidance LAQM. TG (09), Box 2.1.

ESG supplied and analysed the nitrogen dioxide tubes for East Cambridgeshire District Council in 2013. The tubes are prepared by spiking acetone: triethanolamine (50:50) onto the grids prior to being assembled. The tubes are desorbed with distilled water and the extract analysed using a segmented flow autoanalyser with ultraviolet detection. The tubes were analysed in accordance with ESG's standard operating procedure HS/WI/1015 issue 14. This method meet the guidelines set out in DEFRA's 'Diffusion Tubes For Ambient NO₂ Monitoring: Practical Guidance'. As set out in the practical guidance, the results were initially calculated assuming an ambient temperature of 11°C, the reported values have been adjusted to 20°C to allow for direct comparison with EU limits.

The laboratory's analysis of the diffusion tube samples to determine the amount of nitrogen dioxide present is within the scope of their UKAS accreditation schedule. In the WASP intercomparison scheme for comparing spiked Nitrogen Dioxide diffusion tubes, ESG are currently ranked as a **Category Good** laboratory.

Exposure periods for the diffusion tubes are those of the UK Nitrogen Dioxide Diffusion Tube Network run by NETCEN, with the tubes being changed every four or five weeks. QA/QC procedures are as detailed in the UK NO₂ Diffusion Tube Network Instruction Manual, which can be found at:

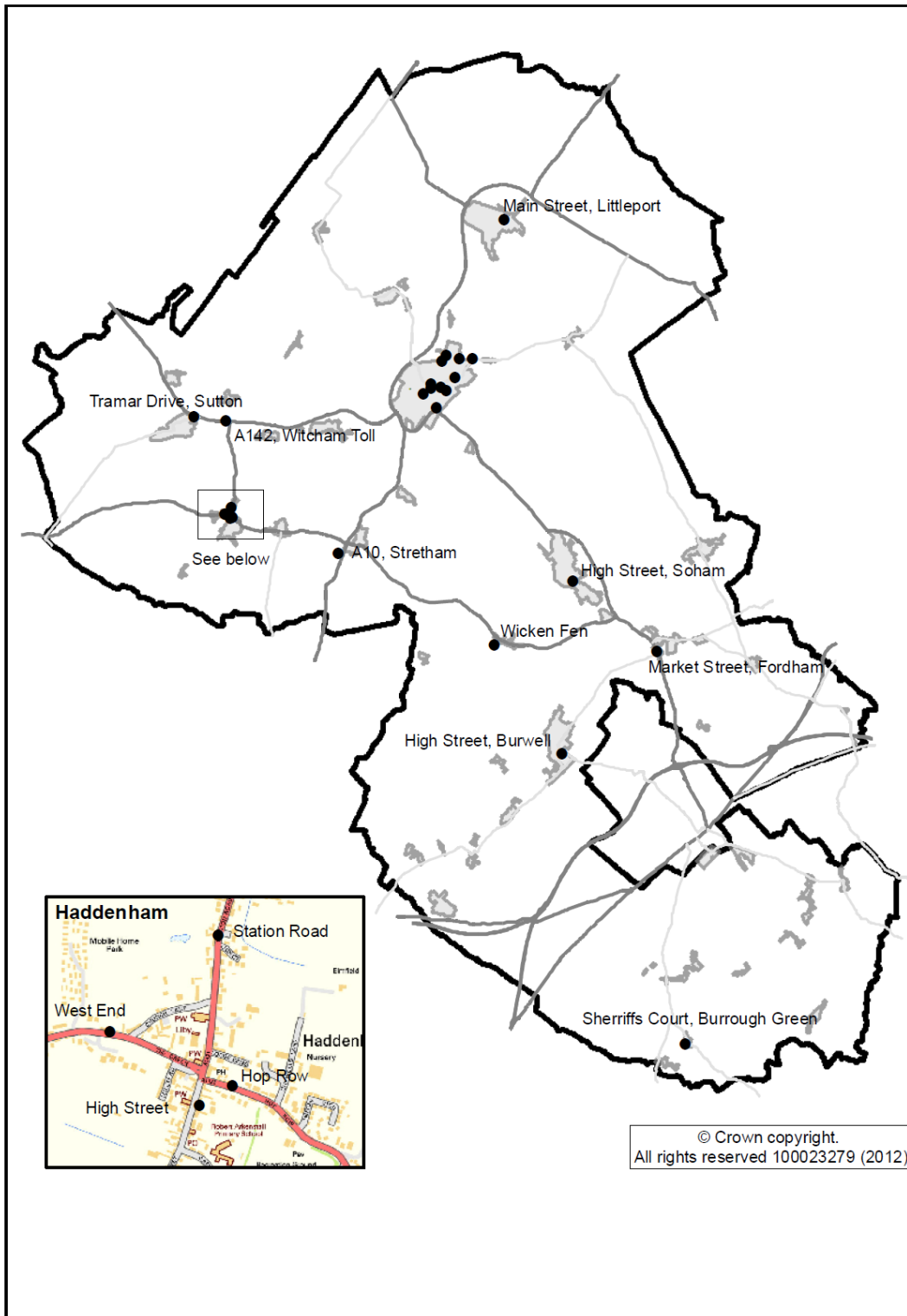
www.airquality.co.uk/archive/reports/cat06/no2instr.pdf

The diffusion tube values have been multiplied by a bias correction factor obtained from the AQR&A support provided by UWE. The bias correction factor was derived from sets of diffusion tubes (for 2013 data), which were collocated with real-time analysers in 2013.

Bias Adjustment Factors used in this report are given in Appendix A.

Figure 2: Map of Non-Automatic Monitoring Sites

Air Quality Monitoring Locations in East Cambridgeshire (all sites are Nitrogen Dioxide diffusion tubes except 'Wicken Fen', which is a former automatic PM10 monitor & Station Road #2 (which is the site of a NO₂ diffusion tube as well as an NO/NO₂ automatic monitoring site in 2012-13).



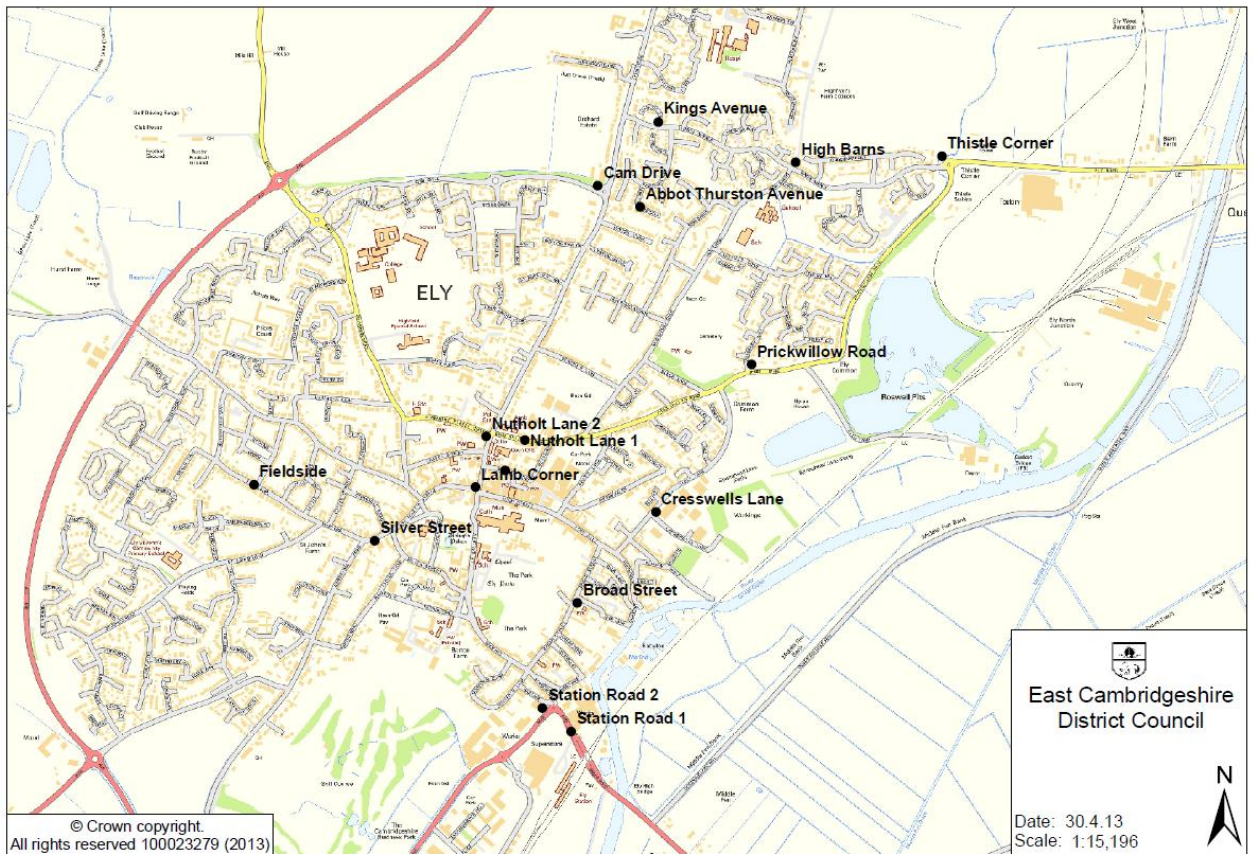


Table 6 Details of Non- Automatic Monitoring Sites

Site ID	Site Name	Site Type	OS Grid Ref	Height	Pollutants Monitored	Is monitoring collocated with a Continuous Analyser (Y/N)	In AQMA?	Relevant Exposure?	Distance to kerb of nearest road	Worst-case location?
NAS1	38 Market St, Ely	Roadside	X: 554154 Y: 280427	2.5m	NO ₂	N	N	Y (1m)	1.5m	Y
NAS2	Abbot Thurston Av, Ely	Urban Background	X: 554616 Y: 281320	2m	NO ₂	N	N	Y (4.5m)	1.5m	N
NAS3	Station Rd, Ely	Roadside	X: 554322 Y: 279566	3.5m	NO ₂	N	N	N (15m)	3.5m	Y
NAS4	Fieldside, Ely	Urban Background	X: 553385 Y: 280309	3.5m	NO ₂	N	N	Y (7m)	3m	Y
NAS5	Main St, Littleport	Roadside	X: 556845 Y: 286801	2.5m	NO ₂	N	N	Y (2.5m)	2m	Y
NAS6	High St, Soham	Roadside	X: 559418 Y: 273089	2.5m	NO ₂	N	N	Y (1.5m)	1.5m	N
NAS7	Market St, Fordham	Roadside	X: 562682 Y: 270294	3m	NO ₂	N	N	Y (1.5m)	1.5m	Y
NAS8	Sheriffs Court, B'Green	Urban Background	X: 563721 Y: 255387	2m	NO ₂	N	N	Y (2m)	1.5m	N
NAS9	Station Road, Haddenham	Roadside	X: 546419 Y: 275628	3.5m	NO ₂	N	N	N (13m)	1m	Y
NAS10	Tramar Drive, Sutton	Urban Background	X: 545012 Y: 279286	2m	NO ₂	N	N	Y (8m)	2m	Y
NAS11	Nutholt Lane, Ely	Roadside	X: 554255 Y: 280536	2.5m	NO ₂	N	N	Y (2.5m)	2.5m	Y
NAS12	A142, Witcham Toll	Roadside	X: 546346 Y: 279106	3.5m	NO ₂	N	N	Y (5m)	1m	Y
NAS13	A10 Stretham	Roadside	X: 550811 Y: 274395	3m	NO ₂	N	N	N (12m)	1.5m	Y
NAS14	High St, Burwell	Roadside	X: 558896 Y: 266364	2m	NO ₂	N	N	Y (4m)	2m	N
NAS15	Hop Row, Haddenham	Roadside	X: 546466 Y: 275463	2.5m	NO ₂	N	N	Y (2m)	1m	Y
NAS16	High St, Haddenham	Roadside	X: 546382 Y: 275411	2.5m	NO ₂	N	N	Y (2m)	1m	Y
NAS17	West End, Haddenham	Roadside	X: 546185 Y: 275594	3.5m	NO ₂	N	N	Y (3m)	1m	Y
NDS1	Cam Drive, Ely	Roadside	X: 554478 Y: 281476	3m	NO ₂	N	N	N (13m)	1m	Y
NDS2	Kings Ave, Ely	Urban Background	X: 554625 Y: 281600	3m	NO ₂	N	N	Y (6m)	1m	N
NDS3	High Barns, Ely	Urban Background	X: 555079 Y: 281472	3m	NO ₂	N	N	Y (7m)	1m	N
NDS4	Thistle Corner, Ely	Urban Background	X: 555586 Y: 281460	3m	NO ₂	N	N	N (20m)	1.5m	N
NDS5	Prickwillow Rd, Ely	Roadside	X: 554896 Y: 280760	3m	NO ₂	N	N	N (24m)	1m	N
NDS6	Cresswells Lane, Ely	Roadside	X: 554622 Y: 280273	3m	NO ₂	N	N	N (25m)	1m	Y
NDS7	Broad St, Ely	Roadside	X: 554420 Y: 280133	3m	NO ₂	N	N	Y (1m)	1m	Y
NDS8	Station Road #2, Ely	Roadside	X: 554264 Y: 279633	3m	NO ₂	Y	N	Y (28m)	2m	Y
NDS9	Silver Street, Ely	Roadside	X: 553700 Y: 280212	3m	NO ₂	N	N	N (5m)	2m	N
NDS10	Lamb Corner, Ely	Roadside	X: 553937 Y: 280390	3m	NO ₂	N	N	Y (10m)	2m	Y
NDS11	Nutholt Lane #2, Ely	Roadside	X: 554074 Y: 280549	3m	NO ₂	N	N	Y (14m)	1m	Y

2.2 Comparison of Monitoring Results with Air Quality Objectives

2.2.1 Nitrogen Dioxide (Non-Automatic Monitoring Sites)

Compared with the data gathered in 2012, the corrected diffusion NO₂ diffusion tube concentrations for 2013 are consistently lower. In addition, the recorded data for 2013 shows a unique consistent downwards trend in comparison to previous years. As such, therefore all sites continue to achieve the National Objectives. Generally the results of NO₂ diffusion tube monitoring since 2006 have remained consistent, with slight increases in some years, notably 2008 and 2010 and decreases in others, notably 2009 and 2011. A map detailing the locations of the diffusion tubes are shown in Figure 1.

The national air quality objective being 40µg/m³ to be achieved by 31st December 2005, as outlined in Table 1, has been achieved at all diffusion tube monitoring locations in 2006-2013, as shown in tables 10 and 11.

For 2013, and in some previous years (2008, 2009, 2011, 2012) data capture at certain monitoring locations was below the threshold of 75% (formerly 90%) necessary to have confidence in the standard annual mean, therefore the data was 'annualised' to allow estimations of annual means to be derived for these sites, the relevant calculations are included in Appendix A and cover all annualised data used in this report, from the years 2008, 2009, 2011, 2012 and 2013. There were no sites that recorded data capture of less than 90% in 2010.

Forecasts of nitrogen dioxide diffusion tube results to 2015 have been made and are presented in Table 12 in Appendix A. They were made using the updated method outlined in Technical Guidance LAQM. TG (09), Box 2.1. Although prior 2013, the general trend of recorded nitrogen dioxide concentrations in East Cambridgeshire was generally stable, it had to be considered that little reliance could be placed on forecasted 2015 data as with all previous forecasted results, they have underestimated the recorded result in the past, this may not be the case if the 2013 downward trend continues.

2.2.1 Nitrogen Dioxide (Automatic Monitoring Sites)

The continuous Nitrogen Dioxide monitor located on Station Road, Ely, ('ECDC-AQ2') recorded an annual mean concentration of $32.65\mu\text{g}/\text{m}^3$ in 2013, however, once this figure was adjusted for 'fall off' with distance from the nearest road, it presented an exceedance of the AQS objective of $52.1\mu\text{g}/\text{m}^3$.

In 2012, an exceedance of the annual mean objective of $41.5\mu\text{g}/\text{m}^3$ was recorded at ECDC-AQ2 which exceeds the NO_2 annual mean AQS objective of $40\mu\text{g}/\text{m}^3$. The instrument was only brought online in February 2012, as such, there can be no clear trends identified and no annualising of the dataset is necessary (data capture >75%).

In late 2013, LCC transferred the data management responsibilities to Kings College London, which resulted in LCC not being able to provide the validated/ratified data within the timeframe required for the production of the progress report, hence, this revised report. However, a detailed assessment will be produced due to the NO_2 exceedance identified in Ely and this will include the 2013 & 2012 data and it will also need to take account of a slight adjustment in the location of the monitor in 2013, as it was moved to a different position (on the same junction) due to logistical requirements in February 2013.

As such, the following needs to be considered when viewing the data. Two monitoring locations make up the 2013 dataset, as detailed above. Further, two different analysers were used in these two locations (although the make/model are the same). However, there are likely to be slight discrepancies in the performance of these two analysers. As the locations differ, so too will the ambient conditions being monitored (i.e. road layout, levels of congestion, braking, accelerating and queuing traffic and distance from road source of the analysers).

Table 7 Results of Automatic Monitoring for NO₂: Comparison with Annual Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period % ^a	Valid Data Capture 2012 % ^b	Data capture 2013	Annual Mean Concentration ($\mu\text{g}/\text{m}^3$)		
						2011* ^c	2012 ^c	2013
ECDC-AQ2	Roadside	N	96%	84%	85%	NA	41.5	32.65

2.2.1 NO₂ Fall-off with distance adjustment

The instrument NO₂ – ECDC-AQ2 was moved slightly to a different area on the same junction because the building the instrument was attached to was sold (it was a mobile unit but required the electricity from the building). The new location is further from the round than the previous site and the most relevant receptor (1m from road), on the opposite side of the junction of Station Road and Angel Drove. Therefore as an exceedance (in 2012) was previously measured at this monitoring site but the new location is not representative of public exposure, the NO₂ concentration at the nearest relevant exposure has been estimated based on the “[NO₂ fall-off with distance](http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html)” calculator (<http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html>), and following the procedure outlined in section [in Box 2.3 of Technical Guidance LAQM.TG\(09\)](http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=30) (<http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=30>). The results are shown in Table 8.

Table 8 Results of Automatic Monitoring for NO₂ Annual Mean with fall-off distance adjustment

Site Name	Grid Reference (Background Map)	NO ₂ Background concentration	NO ₂ Annual recorded mean 2013	Inlet Height (m)	Distance to Kerb of Nearest Receptor (m)	Distance from instrument to Kerb of Nearest Road (m)	Distance adjusted NO ₂ annual mean
Ely NO ₂	554500, 279500	16.44µg/m ³	32.65µg/m ³	2.25m	1m	15m	52.1µg/m³

It should be noted that as the monitor is more than 10m further from the kerb than the receptor, this result should be treated with caution.

Therefore the recorded data still indicates an exceedance and a detailed assessment is still warranted. An exceedance, shown in bold, of the NO₂ annual mean AQS objective of 40µg/m³.

Table 9 Results of Automatic Monitoring for NO₂: Comparison with 1-hour Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period % ^a	Valid Data Capture 2013 % ^b	Number of Hourly Means > 200µg/m ³		
					2011* ^c	2012 ^c	2013
ECDC-AQ2	Roadside	N	84%	84%	NA	0 (143.8)	0 (117.9)

In bold, exceedance of the NO₂ hourly mean AQS objective (200µg/m³ – not to be exceeded more than 18 times per year)

^a i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

^b i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

^c If the data capture for full calendar year is less than 90%, include the 99.8th percentile of hourly means in brackets

2.2.2 Diffusion Tube Monitoring Data

There are no co-location sites, triplicate tubes or any multiple tube locations included within East Cambridgeshire's network although for part of 2013, an NO₂ diffusion tube site (Station Road #2) was co-located with a continuous NO/NO₂ automatic monitoring site (ECDC-AQ2) as was the case since February 2012, but the automatic instrument was moved to a different position (on the same junction) in 2013, while the diffusion tube stayed in its original position until its removal in October 2013.

Table 10 Results of NO₂ Diffusion Tubes 2013

Site ID	Location	Within AQMA?	Data Capture (Full calendar year - 2013)	2013 Annual mean concentrations	Has data been distance corrected (Y/N)
				($\mu\text{g}/\text{m}^3$) Adjusted for bias inc annualised results	
NAS1	38 Market St, Ely*	N	92%	23.5	N
NAS2	Abbot Thurston Av, Ely*	N	100%	14.0	N
NAS3	Station Rd, Ely*	N	92%	23.2	N
NAS4	Fieldside, Ely*	N	92%	15.6	N
NAS5	Main St, Littleport	N	83%	17.2	N
NAS6	High St, Soham	N	100%	22.0	N
NAS7	Market St, Fordham	N	100%	19.7	N
NAS8	Sheriffs Court, B'Green	N	100%	11.4	N
NAS9	Station Road, Haddenham	N	92%	26.4	N
NAS10	Tramar Drive, Sutton	N	100%	16.3	N
NAS11	Nutholt Lane, Ely	N	100%	22.0	N
NAS12	A142, Witcham Toll	N	100%	30.9	N
NAS13	A10 Stretham	N	100%	24.1	N
NAS14	High St, Burwell	N	92%	21.6	N
NAS15	Hop Row, Haddenham	N	92%	28.3	N
NAS16	High St, Haddenham	N	100%	20.9	N
NAS17	West End, Haddenham	N	100%	22.7	N
NDS1	Cam Drive, Ely	N	67%	25.3*	N
NDS2	Kings Ave, Ely	N	83%	17.2	N
NDS3	High Barns, Ely	N	83%	15.9	N
NDS4	Thistle Corner, Ely	N	75%	12.7	N
NDS5	Prickwillow Rd, Ely	N	83%	18.0	N
NDS6	Cresswells Lane, Ely	N	83%	19.1	N
NDS7	Broad St, Ely	N	83%	24.0	N
NDS8	Station Road, Ely	N	83%	31.7	N
NDS9	Silver Street, Ely	N	75%	20.4	N
NDS10	Lamb Corner, Ely	N	83%	23.6	N
NDS11	Nutholt Lane, Ely	N	75%	24.1	N

*= Adjustment factors used to determine annual mean from short term monitoring data (see Appendix A) due to data capture <75%

Table 11 - Results of Nitrogen Dioxide Diffusion Tubes 2006 - 2012

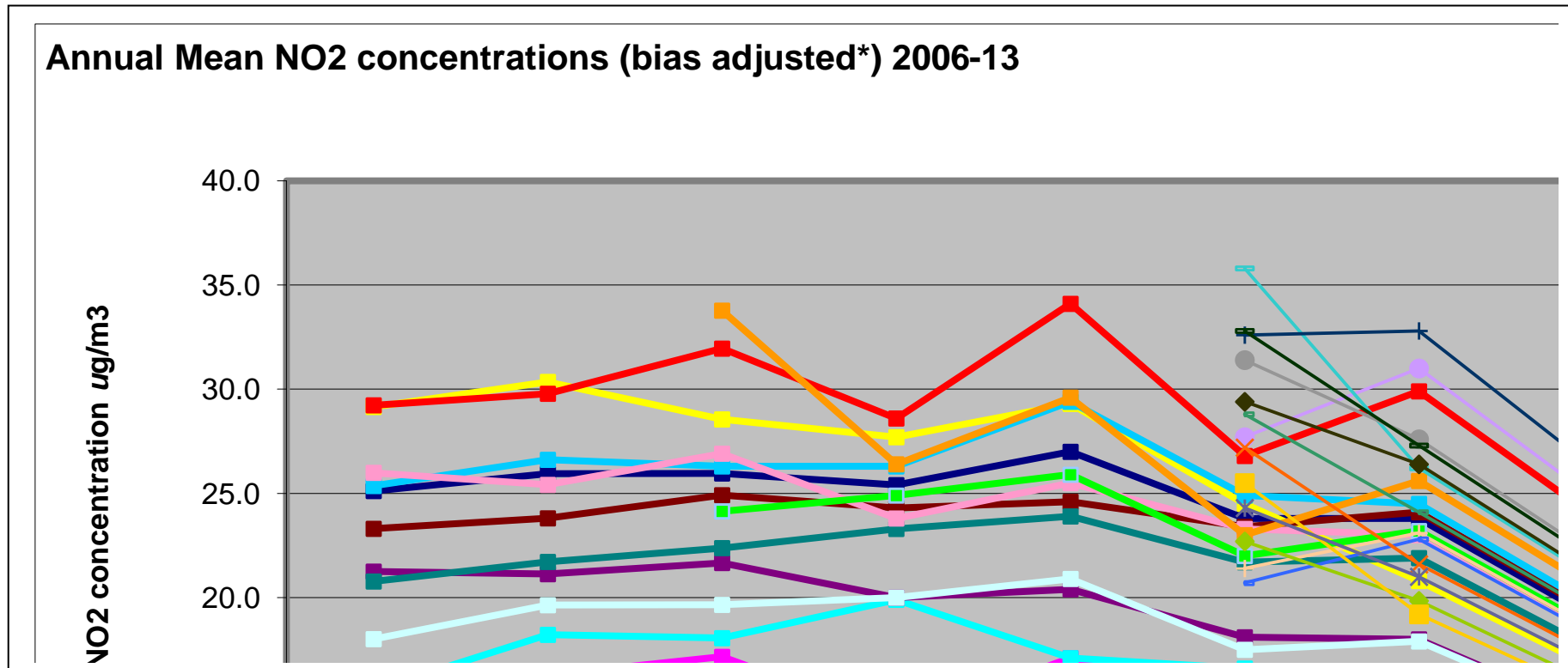
Site ID	Location	Within AQMA?	Annual mean concentrations ($\mu\text{g}/\text{m}^3$) Adjusted for bias***							
			2006	2007	2008	2009	2010	2011	2012	
NAS1*	38 Market St, Ely	N	25.1	25.9	26.0	25.4**	27.0	23.8	23.8	
NAS2*	Abbot Thurston Av, Ely	N	15.7	16.3	17.2	14.1	17.1	15.8	14.9	
NAS3*	Station Rd, Ely	N	29.2	30.4	28.6	27.7	29.3	24.5	20.8	
NAS4*	Fieldside, Ely	N	15.6	18.2	18.1	19.9	17.1	16.6	15.4	
NAS5	Main St, Littleport	N	21.3	21.1	21.7	20.0	20.4	18.1	18.0	
NAS6	High St, Soham	N	23.3	23.8	24.9	24.3**	24.6	23.4	24.1**	
NAS7	Market St, Fordham	N	20.8	21.7	22.4	23.3	23.9	21.7	21.9	
NAS8	Sheriffs Court, B'Green	N	11.5	12.9	14.1	13.6	13.6	13.2	13.2	
NAS9	Station Road, Haddenham	N	25.4	26.6	26.3	26.3	29.4	24.9	24.5	
NAS10	Tramar Drive, Sutton	N	18.0	19.6	19.7	20.0	20.9	17.5	17.9	
NAS11	Nutholt Lane, Ely	N	26.0	25.4	26.9	23.8	25.5	23.3	23.0	
NAS12	A142, Witcham Toll	N	29.2	29.8	32.0	28.6	34.1	26.8**	29.9	
NAS13	A10 Stretham	N	N/A - Tube installed in August 2008			20.7**	24.9**	25.9	22.0	23.2
NAS14	High St, Burwell	N				29.7**	26.4	29.6	23.0	25.6**
NAS15	Hop Row, Haddenham	N						27.7	31.0	
NAS16	High St, Haddenham	N	N/A Tubes installed Jan 2011					21.4**	23.1	
NAS17	West End, Haddenham	N						20.7**	22.8	
NDS1	Cam Drive, Ely	N						35.8***	26.21**	
NDS2	Kings Ave, Ely	N						22.7***	19.85**	
NDS3	High Barns, Ely	N						25.5***	19.2	
NDS4	Thistle Corner, Ely	N						15.9***	14.9	
NDS5	Prickwillow Rd, Ely	N						27.2***	21.6	
NDS6	Cresswells Lane, Ely	N						24.3***	21.0**	
NDS7	Broad St, Ely	N						31.4***	27.6	
NDS8	Station Road, Ely	N						32.6***	32.8	
NDS9	Silver Street, Ely	N						28.8***	24.1	
NDS10	Lamb Corner, Ely	N						32.8***	27.3	
NDS11	Nutholt Lane, Ely	N						29.4***	26.4	

**= Adjustment factors used to determine annual mean from short term monitoring data (see Appendix A) due to data capture <90%

***= Limited data available to new sites brought online in October 2011, therefore annualisation deemed not appropriate.

Bias adjustment factors used for previous years are given in Appendix A

Figure 3 Trends in Annual Mean Nitrogen Dioxide Concentration Measured at Diffusion Tube Monitoring Sites



* = Bias adjustment factors used for previous years are given in Appendix A

2.2.3 Particulate Matter (PM₁₀)

No PM₁₀ monitoring has been undertaken in East Cambridgeshire in 2013. Previously continuous monitoring had been undertaken at Wicken Fen but as outlined in Section 2.1.1, the monitor was decommissioned in 2012. The data gathered at this site between 2003-12 recorded consistent hourly and 24hr means that were within the national objectives.

It should be noted that through funding assistance from the County Councils LTP, further monitoring for PM₁₀ is likely to be undertaken from 2014 onwards.

2.2.4 Sulphur Dioxide (SO₂)

No monitoring of this pollutant has been carried out.

2.2.5 Benzene

No monitoring of this pollutant has been carried out.

2.2.6 Other Pollutants Monitored

No monitoring of other pollutants has been carried out.

2.2.7 Summary of Compliance with AQS Objectives

East Cambridgeshire District Council has measured concentrations of Nitrogen Dioxide above the annual mean objective at a relevant location (outside of an AQMA), and **will therefore need to proceed to a Detailed Assessment**. The area is the Station Road/Angel Drove/Back Hill area of Ely. This is currently being developed.

All other data across the district indicates that the air quality objectives are likely (to continue) to be met throughout its area.

3 New Local Developments

East Cambridgeshire District Council confirms that there are no new or newly identified local developments which may have an impact on air quality within the Local Authority area.

East Cambridgeshire District Council confirms that all the following have been considered:

- **Road traffic sources**
- **Other transport sources**
- **Industrial sources**
- **Commercial and domestic sources**
- **New developments with fugitive or uncontrolled sources.**

4 Local / Regional Air Quality Strategy

East Cambridgeshire District Council does not currently have an Air Quality Strategy nor is one currently in development. However, given the NO₂ exceedance identified through the automatic monitor in Ely, it is possible that this strategy will be looked at in the future.

5 Planning Applications

Several developments have been proposed or identified as necessary for the 'Station Gateway' in Ely. This is a planning framework which will influence the nature of the development in the Station Road, Angel Drove areas of Ely. The air quality data gathered in 2012 & 2013 has already fed into it and will continue to do so in 2014. This has allowed an account to be made for impacts on local air quality at the early design stages of the developments.

Planning Applications for North Ely (2000+ dwellings) have been assessed for their impacts on local air quality as well a large new mixed use development on Angel Drove, Ely. The report references and outcomes are as follows:

13/00785/ESO - Land North Of Cam Drive Ely Cambridgeshire - Impacts to Local Air Quality

LDA Environmental Statement Chapter 11: Local Air Quality, updated version dated August 2013 authored by WSP UK Ltd and the 'APPENDIX 11.1: Summary of LAQM Construction Phase Impact Assessment Procedure'.

A new access road between the A10 and Ely via this development was presented as well as traffic calming measures on an existing road which were installed and designed to have a net benefit over the current situation, in terms of impacts on air quality.

13/00122/ESF - Land South East Of Cambridgeshire Business Park Angel Drove Ely: Impacts to Local Air Quality

'Air Quality Assessment: Update Note for Angel Drove, Ely September 2013', Air Quality Consultants.

There is an ongoing dialogue with the consultants and developer to mitigate potential impacts on local air quality from this development as air quality is particularly

sensitive in this area. The issue of parking provision and vehicles movements is the key area.

6 Air Quality Planning Policies

In addition to national planning policies, the Council has local aims and objectives with regard to air quality and other environmental objectives as set out in its Core Strategy Development Plan Document (2009) as part of its Local Development Framework. On adoption of the Core Strategy, Policy CS6 – Environment, and Policy – EN8 Pollution, makes account for Air Quality through the development control process. The Core Strategy is designed to underpin the Council approach to strategic planning until 2025 although a revised Local Plan, which would supersede the Core Strategy, is expected to be adopted in October 2014. The author of this report has worked with Forward Planning to ensure that the future Local Plan policies accurately reflect the nature of objectives associated with the Local Air Quality Management Framework.

In addition, although the forthcoming Local Plan is still in its draft format pending formal adoption by the Council, there is a specific section relevant to the recent exceedances in Station Road Ely of the NO₂ objective, as follows -

6.10.2 - Air quality in the district is generally good, and there are no designated National Air Quality Management Areas (AQMA). The Council carries out monitoring at roadside sites for nitrogen dioxide, and also monitors for particulates, and all show levels within the national targets. There are concerns about levels in parts of Ely, e.g. the Station Gateway, and the impacts of further development will have to be scrutinised very carefully.

Relevant Policy extracts from East Cambridgeshire District Council Core Strategy (2009)**Policy CS 6****Environment**

All new development should contribute to the delivery of sustainable development, by being designed and located to minimise carbon emissions and the use of non-renewable resources, mitigate/adapt to future climate change, provide attractive and safe places for people, and protect and enhance the quality of the natural and built environment.

Opportunities to minimise air, land and water pollution and improve water quality should be taken wherever possible, and development will be encouraged to make maximum use of renewable energy sources. New development will also be expected to minimise the exposure of people and property to flooding.

Open spaces and amenity areas will be protected against loss or harm, and opportunities will be taken to enhance quality, promote access (particularly by non-car modes), and expand to contribute to green networks. New development proposals will be expected to incorporate open space and high quality landscaping to provide attractive environments for people and wildlife.

Support will be given to the protection and enhancement of biodiversity in the district, including designated sites of nature conservation importance. Priority habitats and species will be protected, and development proposals will be expected to maximise the retention of biodiversity and landscape features, and incorporate measures to enhance biodiversity and mitigate against losses.

In the identified Strategic Areas of Greenspace Enhancement, co-ordinated action will be taken with statutory and other agencies to improve their biodiversity and landscape value, and to promote schemes supporting quiet recreational activity. Development proposals in these areas will need to contribute to these objectives, and enhance the biodiversity, landscape and recreational values of these areas.

The quality and distinctiveness of East Cambridgeshire's towns and villages and landscapes will be conserved and enhanced. Historically or architecturally important buildings, areas and landscapes will be protected from loss or harm, and enhanced wherever possible. All development proposals will be encouraged to incorporate innovative and locally distinctive design, and will be expected to provide attractive and safe environments which are accessible to all.

Policy EN 8

Pollution

All development proposals should minimise, and where possible, reduce all emissions and other forms of pollution, including light and noise pollution, and ensure no deterioration in water quality. All applications for development where pollution is suspected must contain sufficient information to enable the Council to make a full assessment of potential hazards.

Proposals will only be permitted:

1. Where, individually or cumulatively, there are no unacceptable impacts on:
 - The natural environment and general amenity
 - Health and safety of the public;
 - Air quality
 - Surface and groundwater quality
 - Land quality and condition
 - The need for compliance with statutory environmental quality standards; or
2. In exceptional cases, where it can be clearly demonstrated that the environmental benefits of the development and the wider social and economic need for the development outweigh any adverse impact in terms of pollution. In such cases, where pollution is unavoidable, mitigation measures to reduce pollution levels will be required in order to meet acceptable limits.

New development will not be permitted where there is a potential to conflict with existing developments that require particular conditions for their operation, or that are authorized or licensed under pollution control or hazardous substances legislation, where it would be likely to impose significant restrictions on the activities of the existing use in the future.

Development proposals on contaminated land (or where there is reason to suspect contamination) must include an assessment of the extent of the contamination and any possible risks. Proposals will only be permitted where the land is, or is made, suitable for the proposed use.

7 Climate Change Strategies

In the forthcoming local plan, climate change features significantly in Section 6 'Environment and Climate Change'.

The Councils Approach is summarised within the document as follows:

Climate change and green infrastructure – The district is particularly vulnerable to the impacts of climate change such as flooding and drought, because many areas are low lying and within areas of water stress. The provision of green infrastructure is recognised as a desirable 'win-win' approach to combating climate change, since it can deliver other social, economic and environmental benefits. Maximising the creation of new green infrastructure will help to deliver a sustainable 'green living landscape'.

Policy ENV 4: Energy efficiency and renewable energy in construction

All proposals for new development should aim for reduced or zero carbon development in accordance with the zero carbon hierarchy: first maximising energy efficiency and then incorporating renewable or low carbon energy sources on-site as far as practicable. Applicants will be required to demonstrate how they have considered maximising all aspects of sustainable design and construction, as set out in the Code for Sustainable Homes (or its successor). Developments of 5 or more homes are required to achieve Code for Sustainable Homes Level 4. All non-domestic developments of 1000m² or more are required to meet BREEAM Very Good standard or equivalent. The Council will negotiate with applicants over the most appropriate solutions for historic buildings and Conservation Areas.

Policy ENV 5: Carbon offsetting

Where allowable solutions are required for a development scheme, the Council will be prepared to accept alternative provision in line with the national Allowable Solutions Framework.

Where a local Community Energy Fund exists, developers will be expected to provide financial contributions to this Fund to offset the difference. The contribution

will be used to finance specific renewable energy projects within the local area. Financial contributions will be required into CEF where developments do not achieve the CO₂ reductions required under Policy ENV 4.

Policy ENV 6: Renewable energy development

Proposals for renewable energy and associated infrastructure will be supported, unless their wider environmental, social and economic benefits would be outweighed by significant adverse effects that cannot be remediated and made acceptable in relation to:

- The local environment and visual landscape impact.
- Impact on the character and appearance of the streetscape/buildings.
- Key views, in particular those of Ely Cathedral.
- Protected species.
- Residential amenity; and
- Safeguarding areas for nearby airfields.

Renewable energy proposals which affect sites of international, national and local nature importance or other irreplaceable habitats will be determined against the relevant sections of Policy ENV 7.

The visual and amenity impacts of proposed structures will be assessed on their merits, both individually and cumulatively and measures to remediate adverse impacts will be required. Provision should be made for the removal of facilities and reinstatement of the site, should they cease to operate.

8 Conclusions and Proposed Actions

8.1 Conclusions from New Monitoring Data

There are currently no AQMAs in East Cambridgeshire.

Recorded levels of nitrogen dioxide in 2013 at the automatic monitor located on Station Road, Ely, have indicated an exceedance of the annual mean AQS objective (following distance adjustment), therefore a detailed assessment will be required to assess this issue further. Although the recorded data for 2013 did not show an annual mean exceedance ($32.65\mu\text{g}/\text{m}^3$), the adjusted figure accounting for distance from the road ('fall-off') did ($52.1\mu\text{g}/\text{m}^3$).

All the other data from the NO₂ diffusion tube sites did not identify exceedences of the Local Air Quality Management objectives.

With the addition of fourteen nitrogen dioxide diffusion tubes to the monitoring network in 2011, and their first full year of monitoring in 2012 together with the installation of an automatic NO₂ monitor in Ely in February 2012, it is considered that the increased monitoring network provides a more comprehensive tool for screening and assessing air quality in East Cambridgeshire.

8.2 Conclusions relating to New Local Developments

As stated in Section 5, there are areas proposed for significant growth particularly in Ely, which are already sensitive to any worsening of air quality. As such, through continued monitoring and close working practises with the Councils Planning Department, impacts to local air quality in East Cambridgeshire will be closely regulated and mitigated through design amendments and planning conditions where necessary.

8.3 Proposed Actions

The monitoring data gathered in 2012-13 has identified the need for a detailed assessment to further assess the exceedance of the annual mean AQS objective recorded in Station Road, Ely.

Additional monitoring is required for this pollutant in this area and is currently underway in 2014.

There are no AQMAs in East Cambridgeshire and, as yet, there are no associated declarations or revocations intended. The next course of action will be to

- Submit the 2015 Updating and Screening Assessment
- and progress to a Detailed Assessment for assessing NO₂ in Station Road, Ely.

The next report on the air quality in East Cambridgeshire will be the 2015 Updating and Screening Assessment, comprising the first part of the sixth round of Review and Assessment which will cover data gathered in the period between 1st January 2014 to 31st December 2014 and will be submitted in April 2015.

9 References

Cambridgeshire County Council (2010) *'Research, Performance and Business Intelligence Team population estimates'*

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<http://www.cambridgeshire.gov.uk/business/research/populationresearch/population/population/Researchgrouppopulationestimates.htm>

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Cambridgeshire County Council (2013) *'Traffic Monitoring Report 2012'*

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DEFRA (2009a) *'Local Air Quality Management'* Technical Guidance LAQM. TG (09)

DEFRA (2009b) *'Local Air Quality Management'* Policy Guidance PG (09)

DEFRA (2013) *'LOCAL AIR QUALITY MANAGEMENT: 2013 Progress Report'* – Appraisal by T Aluko

Office of National Statistics, *'East of England Census Data'* (2012)

Available from

<http://www.ons.gov.uk/ons/rel/mro/news-release/census-shows-increase-in-population-in-the-east-of-england/censuseastenglandnr0712.html>

[Accessed 3rd March 2014]

Appendices

Appendix A: Quality Assurance / Quality Control (QA/QC) Data

Appendix B: Environmentally Permitted Sites

Appendix A: QA:QC Data

NO₂ Diffusion Tube Bias Adjustment Factors

Bias Adjustment Factors used in this report.

***Sourced from AEA Collocation Spreadsheet 03/14 which can be found at:**

<http://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html>

****Sourced from AEA Collocation Spreadsheet 03/13**

Factor from National Local Co-location Studies

(No local co-location studies have been undertaken).

Year	Bias correction factor
2006	0.79**
2007	0.82**
2008	0.78**
2009	0.82**
2010	Harwell Scientifics: 0.78**
	Environmental Scientifics Group: 0.94**
2011	0.83*
2012	0.79*
2013	0.80*

Short-term to Long-term Data adjustment

Diffusion tube sites with a data capture of less than 75% for 2013 included a single site, as shown in Table 10, Cam Drive Ely.

In previous years the threshold for short term data capture was 90%, so monitoring sites with less than the full 12 months data exposure were annualised. For the 2013 data, this threshold has been revised so that only sites with less than 9 months data are annualised.

Short-term to Long-term Data adjustment NO₂ diffusion tube data

-----2013-----

2013 – Cam Drive Ely (67% DC – Annual Mean 25.3µg/m³ (bias adjusted, non-short term adjusted).

Site	Site Type	Annual Mean (bias adjusted)	Period Mean (bias adjusted)	Ratio (AM/PM)
Market Street Ely	Roadside	23.5	24.1	0.98
Abbot Thurston Avenue Ely	Urban Background	14.0	15.6	0.90
Fieldside Ely	Urban Background	15.6	17.9	0.87
			Average	0.92

Cam Drive, Ely	Roadside	23.3µg/m ³ (bias & long term adjusted)
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8 Months 2012: Excluding April, May, November & December (dataset unavailable).

For short term adjustments for previous years, please see 2013 progress report available on ECDC’s website under ‘Air Quality’.

Table 12 East Cambridgeshire annual NO₂ concentrations forecasted to 2015

Location	Annual NO ₂ concentration 2013 (µg/m ³)	Annual NO ₂ concentration (µg/m ³) Forecast to 2015
38 Market St, Ely*	23.5	21.4
Abbot Thurston Av, Ely*	14.0	12.8
Station Rd, Ely*	23.2	21.1
Fieldside, Ely*	15.6	14.2
Main St, Littleport	17.2	15.7
High St, Soham	22.0	20.0
Market St, Fordham	19.7	17.9
Sheriffs Court, B'Green	11.4	10.4
Station Road, Haddenham	26.4	24.0
Tramar Drive, Sutton	16.3	14.9
Nutholt Lane, Ely	22.0	20.1
A142, Witcham Toll	30.9	28.1
A10 Stretham	24.1	21.9
High St, Burwell	21.6	19.7
Hop Row, Haddenham	28.3	25.7
High St, Haddenham	20.9	19.0
West End, Haddenham	22.7	20.6
Cam Drive, Ely	25.3**	23.0
Kings Ave, Ely	17.2	15.7
High Barns, Ely	15.9	14.5
Thistle Corner, Ely	12.7	11.6
Prickwillow Rd, Ely	18.0	16.4
Cresswells Lane, Ely	19.1	17.4
Broad St, Ely	24.0	21.9
Station Road, Ely	31.7	28.9
Silver Street, Ely	20.4	18.6
Lamb Corner, Ely	23.6	21.4
Nutholt Lane, Ely	24.1	21.9

*= Site included on national database

**= Adjustment factors used to determine annual mean from short term monitoring data (see Appendix A) due to data capture <75%

Appendix B: Environmentally Permitted Sites & ECDC Air Quality Planning Policies

Table 13 Relevant Environmental Permitted Processes

Name & Address	Process Description	Grid Reference
Favor Parker Ltd Chettisham Site Part A(1) Process	Animal Feed Production	555065 283297
EPR Ltd Ely Elean Business Park Sutton Part A(1) Process	Straw Fired Power Station	545166 279960
EMR Ltd Snailwell Part A(1) Process	Metal Recycling	543645 268063

END