2015 Updating and Screening Assessment for South Cambridgeshire District Council

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

April 2015

Local Authority Officer	Kenny Abere, Scientific Officer
Department	Health and Environmental Services
Address	South Cambridgeshire Hall Cambourne Business Park Cambourne Cambridgeshire CB23 3EA
Telephone	01954 713070
e-mail	Kenny.Abere@scambs.gov.uk
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Executive Summary

This Report constitutes the 2015 Air Quality Review and Assessment Updating and Screening Assessment (USA) Report for South Cambridgeshire District Council. The Report includes air quality monitoring data from 2014. It also covers other issues and developments that have occurred in the last twelve months, since the Progress Report of 2014 that may have an impact on the local air quality.

The review of the new monitoring data has identified the following:
The objectives for nitrogen dioxide were met at all the monitoring locations (continuous and passive monitoring). The daily and annual mean objectives for PM10 were also achieved at all the three monitoring stations. Although, the data capture at Impington for $NO_{2\ and}$ PM_{10} result was low due to the mechanical breakdown of the monitoring equipment and the need for a replacement analyser at the beginning of the year

The assessment of new sources has not identified any new sources that have not been considered previously. A detailed assessment of any new sources is not therefore required.

The Updating and Screening assessment has not identified any locations where a Detailed Assessment for any source or pollutant should be conducted. South Cambridgeshire District Council will continue monitoring at all existing sites within the District and will continue to implement the measure outlined in its Air Quality Plan for the existing AQMA.

The next air quality review and assessment report will be the 2016 Progress Report.

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1 Introduction

1.1 Description of Local Authority Area

South Cambridgeshire is a rural district in East Anglia, which entirely surrounds but does not include the city of Cambridge. It is the southernmost district of the county of Cambridgeshire and borders Bedfordshire to the west, Hertfordshire to the south, Essex to the southeast and Suffolk to the east. The district is comprises of 102 parishes with all settlements classified as villages. The landscape and villages are equally varied.

The area has good road and rail links with London and the South-East. The M11/A11 and A14 corridors pass through the District to the west/south and north of Cambridge respectively. To date, air quality issues within the District of South Cambridgeshire have been linked directly to the volume of traffic that runs through the District, specifically along the A14. The A14 is congested on a regular basis between Bar Hill (to the West of Cambridge) and Milton (to the North North-East of Cambridge). This has resulted in the declaration of an Air Quality Management Area for nitrogen dioxide (NO_2) and PM_{10} along the stretch of the A14 between Bar Hill and Milton. Traffic levels have continued to grow along the A14 through the District so that the road is now almost at its maximum capacity.

1.2 Purpose of Report

This report fulfils the requirements of the Local Air Quality Management 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.

The objective of this Updating and Screening Assessment is to identify any matters that have changed which may lead to risk of an air quality objective being exceeded. A checklist approach and screening tools are used to identify significant new sources or changes and whether there is a need for a Detailed Assessment. The USA report should provide an update of any outstanding information requested previously in Review and Assessment reports.

1.3 Air Quality Objectives

The air quality objectives applicable to LAQM **in England** are set out in the Air Quality (England) Regulations 2000 (SI 928), The Air Quality (England) (Amendment) Regulations 2002 (SI 3043), and are shown in Table 1.1. This table shows the objectives in units of micrograms per cubic metre μg/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 1.1 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 μg/m^3	Running annual mean	31.12.2003
	5.00 μg/m^3	Running annual mean	31.12.2010
1,3-Butadiene	2.25 μg/m^3	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5 μg/m^3	Annual mean	31.12.2004
	0.25 μg/m^3	Annual mean	31.12.2008
Nitrogen dioxide	200 μg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 μg/m^3	Annual mean	31.12.2005
Particles (PM_{10}) (gravimetric)	50 μg/m^3, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 μg/m^3	Annual mean	31.12.2004
Sulphur dioxide	350 μg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 μg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 μg/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

Table 1.2: Summary of previous review and assessment work

Report	Year	Conclusion
Review and Assessment	1998	The report progress benzene, 1-3 butadiene, lead, carbon monoxide, PM_{10} and nitrogen dioxide to a Stage 2 assessment. The overall conclusion was that all objectives were likely to be met.
Review and Assessment	2000	All objectives likely to be met, however, given the increasing traffic on the A14 and the introduction of new industrial sources, it was concluded that detailed monitoring would be required for nitrogen dioxide, PM_{10} and sulphur dioxide.
Updating and Screening Assessment	2003	Based on monitoring results, it was concluded that all objectives were likely to be met.
Progress Report	2004	Monitoring results were showing exceedences of the annual mean for nitrogen dioxide along a stretch of the A14, therefore a Detailed Assessment was required for NO_2. All other objectives were predicted as likely to be met.
Detailed Assessment of Nitrogen Dioxide Along the A14 Corridor	2006	The annual mean objective for nitrogen dioxide was not likely to be met along the A14 between Bar Hill and Milton; therefore, it was necessary to declare an Air Quality Management Area.
Progress Report	2007	Monitoring results were showing exceedences of the daily mean for PM_{10} along a stretch of the A14, therefore a Detailed Assessment was required for PM_{10}. Monitoring of NO_2 along the A14 continued to show exceedences of the annual mean objective. All other objectives were predicted as likely to be met.
Detailed Assessment of PM_{10} Along the A14 Corridor	2008	The daily mean objective for PM_{10} was not likely to be met along the A14 between Bar Hill and Milton; therefore, it was necessary to declare an Air Quality Management Area.
Progress Report	2008	A Further Assessment of NO_2 and PM_{10} were required. Objectives for all other pollutants were predicted as likely to be met.
Further Assessment of nitrogen dioxide and PM_{10} Along the A14 Corridor	2008	The AQMA for NO_2 and PM_{10} was declared. An Air Quality Action Plan (AQAP) is required and consultation is underway for its development.
Updating and Screening Assessment	2009	Based on the monitoring results from the previous year, it was concluded that levels of NO_2 and PM_{10} along the A14 between Bar Hill and Milton would remain above the national objective. No other significant developments or increases in traffic or industrial emissions were identified.
Air Quality Action Plan	2010	Acceptance of Air Quality Action Plan by Defra. Detailed priority actions to be worked on over the coming years.
Progress Report	2010	Progress made towards improving air quality with improvements to local policy and strategy. No significant local / infrastructure changes.
Progress Report	2011	During 2010, the objectives for nitrogen dioxide were met at all monitoring locations. However, the daily PM_{10} objective was exceeded at the Bar Hill and Impington continuous monitoring stations and the annual mean PM_{10} objective was exceeded at Impington.
Modelling Assessment (not submitted as review and assessment report)	2011	As a result of recent monitoring results and review of the Air Quality Management Area, an air quality assessment was conducted using ADMS-Urban model the air quality

		along A14. In summary: • The modelling study concluded that there continues to be exceedences of air quality objectives for NO_2 (annual mean) and PM_{10} (daily mean) on both the north and south sides of the A14. • The modelling study shows that, despite current exceedences, all locations will achieve national objectives by 2016. • Depending on future monitoring, it is possible that the AQMA may have to be expanded on the north side of the A14 to incorporate Hill Farm Cottages at Swavesey • If monitoring at all locations on the south side of the A14 continue to indicate that national objectives are being achieved at those locations, the AQMA may be modified so that it only incorporates the north side of the A14 (no exceedences, no need for an AQMA).
Updating and Screening Assessment	2012	No new sources identified for any Detailed Assessment to have been required. However, an NO_2 (annual mean) in excess of the 40 $\mu g/m^3$ objectives was measured at one of the automatic monitoring sites in Bar Hill. There is no exceedance of the NO_2 1-hour mean objective at any of the automatic monitoring stations but an annual mean PM_{10} concentration in excess of the 40 $\mu g/m^3$ objective was measured at the Impington automatic monitoring site. The 50 $\mu g/m^3$ 24-hr mean objective was exceeded 119 times at the same site whilst all the air quality objectives were achieved at other monitoring locations of relevant exposure outside the existing AQMA.
Progress Report	2013	Whilst there are no new sources identified for detailed assessment to be carried out, monitoring data showed exceedences of the daily and annual mean objective for PM_{10} at the Impington monitoring station but this with Nitrogen Dioxide was achieved at the Orchard Park and Girton monitoring stations whilst the NO_2 objectives was also achieved at the Impington site.
Progress Report	2014	There are no new sources identified for detailed assessment to be carried out whilst the daily and annual mean AQ objectives for NO_2 were achieved at Impington, Orchard Park and Girton. It was a similar achievement for the PM_{10} at Girton and Orchard Park but this was exceeded at Impington. Although little attention should be paid to the Impington PM_{10} result due to the low data capture at the site for this.

Figure 1.1 Map(s) of AQMA Boundaries

The Air Quality Management Area (as pictured in Figure 1.1, above) was initially declared in July 2007 following measured and modelled exceedences of the annual mean objective for nitrogen dioxide. The following year, exceedences of the daily mean objective for PM_{10} were identified at the Bar Hill and Impington continuous monitoring stations. As a result of this, a Detailed Assessment of PM_{10} was carried out. This led to the revocation of the original AQMA and the designation of a 2nd AQMA to include PM_{10} in July 2008. After discussions with Defra, it was decided that the boundary for the PM_{10} (which was originally slightly smaller than that of the NO_2 AQMA) would be the same as the original boundary for nitrogen dioxide.

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

South Cambridgeshire District Council operated automatic monitoring stations at 3 different sites within the District in the year 2014. These are the Orchard Park, Girton and Impington monitoring sites for measuring PM_{10} and NO_2 apart from the Girton monitoring site that also measures $PM_{2.5}$. The particulate matter analyser at the Impington monitoring site was temporarily off line from January, 2014 – March, 2014 whilst the Council await the installation of the new analyser. Details of these sites are provided in Table 2.1.

- Ratification and QA/QC of automatic monitoring data is carried out by AEA Technology (http://www.aeat.co.uk) now Ricardo – AEA.

- Tri-annual audits of the monitoring stations are carried out by AEA Technology.

- Services of all the three AQ monitoring stations i.e. Impington, Girton and Orchard Park are carried out bi-annually by the equipment suppliers; Enviro - Technology.

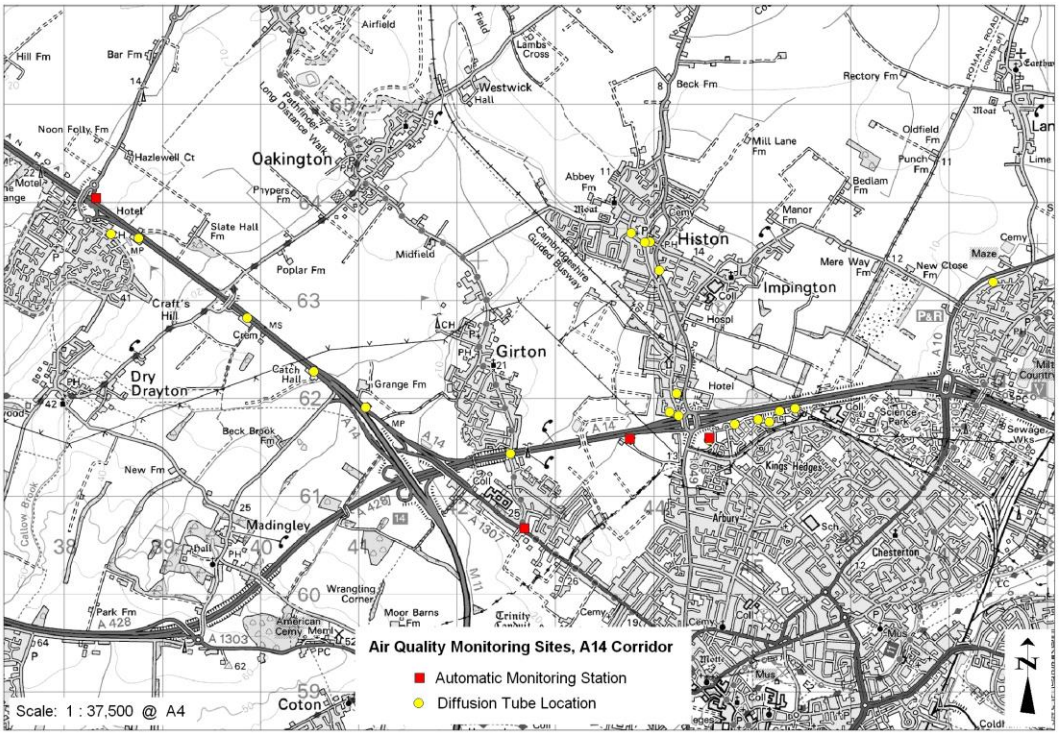
- The sites are manually calibrated on a monthly basis by the Local Site Operative. The output from the calibrations is forwarded to AEAT now Ricardo – AEA for QA/QC and ratification purposes.

- South Cambridgeshire District Council is a member of the Calibration Club, operated by AEAT now Ricardo – AEA.

- All NOx analysers are chemiluminescence analysers.

- All particulate matter analysers are BAMs. In line with current guidance, BAM data is multiplied by 1.3 to give the gravimetric equivalent.

Figure 2.1 Map(s) of Automatic Monitoring Sites



= Diffusion tube location

= Automatic monitoring station

Table 2.1 Details of Automatic Monitoring Sites

Site Name	**Site Type**	**X OS Grid Reference**	**Y OS Grid Reference**	**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?**
Impington (A14)	Roadside	543739	261625	NO_x (NO_2) PM_{10}	Y	ET M200E ET BAM1020	Y (12m)	N/A	Y
Orchard Park Primary School (A14)	Urban background	544558	261579	NO_x (NO_2) PM_{10}	Y	ET M200E ET BAM1020	Y (1m)	N/A	Y
Girton	Roadside	542676	260667	NO_x (NO_2) PM_{10},$PM_{2.5}$	N	ET M200E ET BAM1020	Y (5m)	5	Y

2.1.2 Non-Automatic Monitoring Sites

The monitoring of nitrogen dioxide by diffusion tube has been an on-going project since 1995. There are currently 27 sites within the District as detailed in Figure 2.2 with the locations including a kerbside, intermediate as well as urban background sites.
During 2014, NO_2 monitoring was undertaken at 27 sites within the district using passive diffusion tubes. However, the Orchard Park School monitoring site was use as a co-location with triplicate tubes at the site.
The tubes are supplied and analysed by Environmental Scientifics Group (ESG - formerly Harwell Scientifics), a UKAS accredited laboratory (0322). The tube preparation method is 50% TEA in Acetone and analysis is by desorption with distilled water, with the extract analysed using a segmented flow auto analyser with ultraviolet detection. The exposure periods for the diffusion tubes are those of the UK Nitrogen Dioxide Diffusion Tube Network run by NETCEN which effectively is a four or five week duration. QA/QC procedures are as detailed in the UK NO_2 Diffusion Tube Network Instruction Manual which can be found at www.airquality.co.uk/archive/reports/cat06/no2instr.pdf
A laboratory bias adjustment factor of 0.81 (taken from the 2014 national database of diffusion tube adjustment factors) has been applied to the 2014 diffusion tube results. Full details of the diffusion tube QA/QC are presented in Appendix 1.

Summary of tube details:

- Analysing lab: Environmental Scientifics Group (ESG) Ltd
  (Formerly Harwell Scientifics Ltd)
  12 Moorbrook
  Southmead Industrial Park
  Didcot
  Oxon
  OX11 7HP

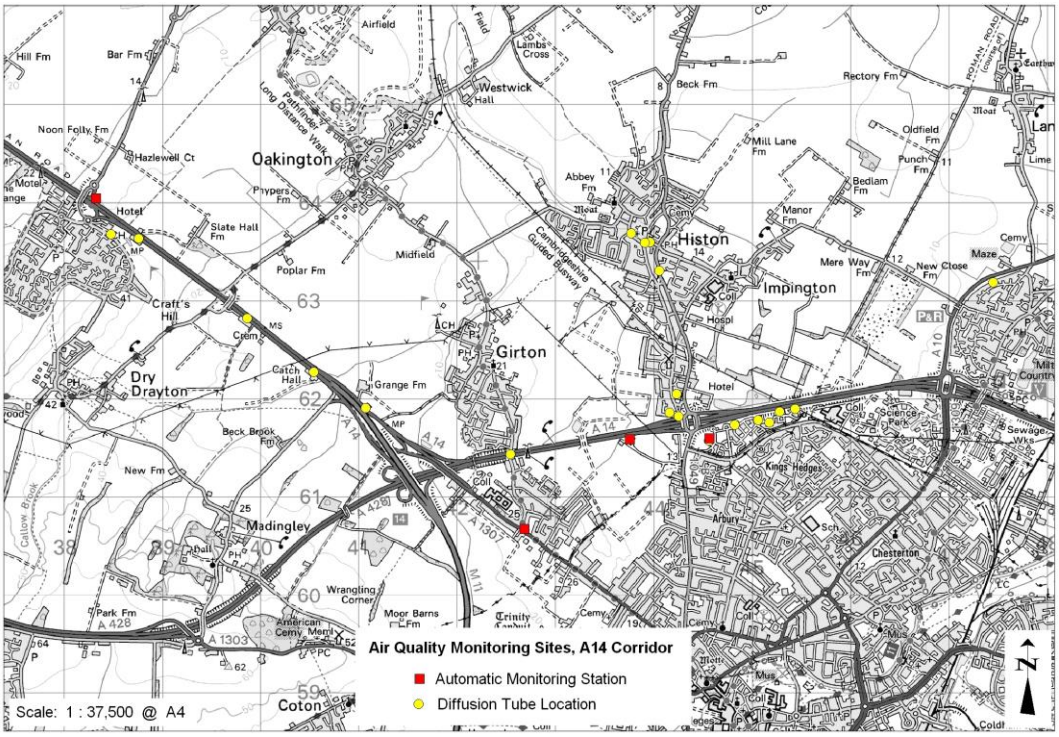
- Diffusion tube preparation method used: 50:50 (acetone:triethanolamine)

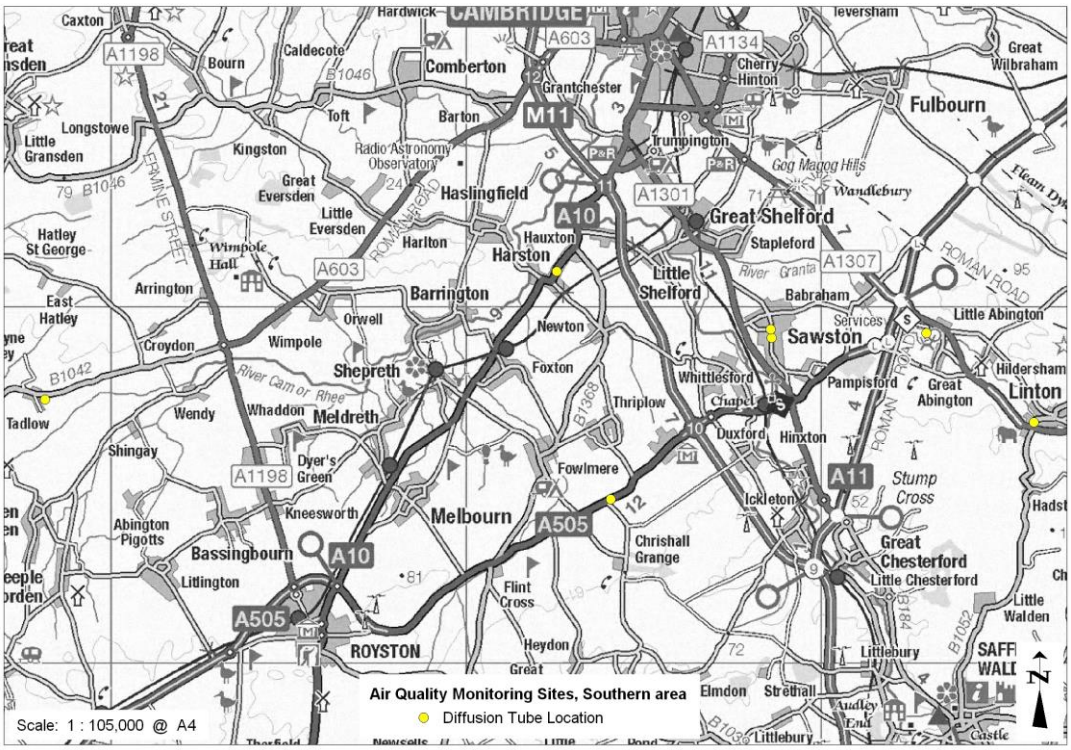
- ESG Ltd confirms that the methods and procedures they follow meet the guidelines set out in Defras' "Diffusion Tubes for Ambient Monitoring: Practical Guidance". A copy of the confirmation is provided in Appendix 1.

- Whilst, South Cambridgeshire District Council has relied on the national database bias adjustment factors for this report diffusion tube calculation, however, from a co-location study which began at Orchard Park Primary School (grid reference 544557, 261571) in April 2009 a factor of 0.78 was obtained from the local study calculation for 2014.

- ESG takes part in the WASP Proficiency Scheme. The laboratory performance is rated at the highest level of “good”. Full details of the ESG diffusion tube performance and WASP scores are provided in Appendix 1.

Figure 2.2 Map(s) of Non-Automatic Monitoring Sites





= Diffusion tube location

= Automatic monitoring station

Table 2.2 Details of Non-Automatic Monitoring Sites

Site Name	Site Type	**X OS Grid Reference**	**Y OS Grid Reference**	**Pollutants Monitored**	**In AQMA?**	**Is Monitoring Co-located with a Continuous Analyser (Y/N)**	**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?**
1 Coppice, Histon	Urban background	544230	262048	NO_2	N	N	Y (7m)	0.5m	Y
The Gables, High Street, Histon	Roadside	543770	263678	NO_2	N	N	Y (5m)	1m	Y
Hill Farm Cottages, Lolworth	Roadside	536926	264956	NO_2	Y	N	N	4m	Y
White Lion, 96 High St., Sawston	Urban background	548600	249136	NO_2	N	N	Y (5m)	1m	Y
Rhadegund Farm Co. Lolworth	Roadside	538744	263640	NO_2	Y	N	Y (1m)	33m	N
64 High St., Linton	Roadside	556179	246815	NO_2	N	N	Y (7m)	0.5m	Y
20 High St.,Tadlow	Roadside	528131	247399	NO_2	N	N	Y (10m)	2m	N
47 High Street, Harston	Urban background	542554	251002	NO_2	N	N	Y(5m)	1m	Y
3 Garner Close, Milton	Urban background	547452	263175	NO_2	N	N	Y(5m)	1m	N
1A Weavers Field, Girton	Urban background	542537	261467	NO_2	Y	N	Y(15m)	1m	Y
Heath Hse., A505, Thriplow	Urban background	544034	244585	NO_2	N	N	Y (10m)	1m	Y
19 Lonetree Av., Impington	Roadside	544119	261862	NO_2	Y	N	Y (7m)	0.5m	Y
1 Brook Close, Histon	Urban Background	543955	263588	NO_2	N	N	Y (2m)	1m	Y
22 Water Lane, Histon	Roadside	544050	263306	NO_2	N	N	Y (2m)	0.5m	Y
72 Cambridge Rd, Impington	Urban background	544243	261819	NO_2	Y	N	Y (7m)	0.5m	Y

Site Name	Site Type	**X OS Grid Reference**	**Y OS Grid Reference**	**Pollutants Monitored**	**In AQMA?**	**Is Monitoring Co-located with a Continuous Analyser (Y/N)**	**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?**
Hackers Fruit Farm, Lolworth	Roadside	539846	262826	NO_2	Y	N	Y(5m)	12m	N
5 Mill Lane, Sawston	Roadside	548545	249366	NO_2	N	N	Y (15m)	1m	N
1 Catchall Farm Cottages	Roadside	540509	262290	NO_2	Y	N	Y (1m)	10m	Y
Crafts Way, Bar Hill	Roadside	538472	263675	NO_2	N	N	Y (15m)	1m	N
Chieftain Way, Arbury Park	Roadside	544828	261738	NO_2	Y	N	Y (1m)	0.5m	Y
Topper Street, Arbury Park	Roadside	545056	261784	NO_2	Y	N	Y (1m)	0.5m	Y
Flack End, Arbury Park	Roadside	545435	261906	NO_2	Y	N	Y (2m)	35m (from A14 WB)	Y
Orchard Park School	Urban background	544557	261571	NO_2	Y	Y	Y (1m)	50m	Y
Orchard Park School	Urban background	544557	261571	NO_2	Y	Y	Y (1m)	50m	Y
Orchard Park School	Urban background	544557	261571	NO_2	Y	Y	Y (1m)	50m	Y
Co-op, High Street, Histon	Roadside	543768	263708	NO_2	Y	N	Y (1.5m)	2.6m	Y
13 Engledow Drive, Orch. Park	Urban background	545259	261873	NO_2	Y	N	Y (5m)	4.5m	Y
22 Topper Street , Arbury Park	Roadside	545169	261764	NO_2	Y	N	Y (4.2m)	0.2m	Y
Church Lane, Little Abington	Urban background	552961	249251	NO_2	Y	N	Y (14m)	2.0m	N

2.2 Comparison of Monitoring Results with Air Quality Objectives

The monitoring stations at Girton and Impington are considered to be sites representative of nearby receptors situated alongside the A14, whilst the Orchard Park monitor is located within the grounds of a school. All the three monitoring sites with the exception of Girton are located within the existing Air Quality Management Area for NO_2 and PM_{10}.

The data capture during 2014 for NO_2 was above the required 90% at Girton and Orchard Park monitoring stations whilst 55.08% data was captured at Impington due to the mechanical breakdown of the monitoring equipment between April – December, 2014. The PM_{10} data captured at Girton and Orchard Park were above the required 90% but only 57.19% data was captured at Impington due to the temporary suspensions of the particulate matter analyser at the beginning of the year because it is composed of radioactive material and has to be replaced following the Environment Agency visit and directives. Following the replacement in April, a further low data capture was recorded from June – September as a result of data logging fault.

Following the bias adjustment, all the nitrogen dioxide diffusion tubes showed compliance with the annual mean objective for nitrogen dioxide. Moreover, the current monitoring result compare to the diffusion tube result of 2013, shows a slight improvement on the annual mean result for many of the tube locations with an improved data capture of 86% compare to 58% over a similar period in 2013.

Automatic Monitoring Data

- At Impington, the annual and daily mean objectives for NO_2 and PM_{10} were achieved but the amount of data capture were low thou; a better improvement on the previous figure.
- At the Orchard Park School and Girton Road monitoring stations, both the NO_2 and PM_{10} air quality annual mean objectives were achieved in 2014. The daily mean objectives i.e. (days where concentrations were calculated to be >50$\mu g/m^3$) and hourly mean objectives i.e. (hours where concentrations were calculated to be >200$\mu g/m^3$) for PM_{10} and NO_2 respectively at both monitoring sites were also achieved.
- Results are given in Tables 2.3 and 2.4, below.

2.2.1 Nitrogen Dioxide

Automatic Monitoring Data

The monitoring stations at Girton Road and Impington are considered to be sites representative of nearby receptors situated alongside the A14, whilst the Orchard Park monitor is located within the grounds of a school. All of the monitoring stations with the exception of the Girton monitoring site are located within the existing Air Quality Management Area for NO_2 and PM_{10}. A brief summary of performance at each monitoring station is given below:

- At Impington, all objectives were met for NO_2. The result was an improvement to the value achieved in 2013.

- At the Orchard Park monitoring station, all objectives for NO_2 were met.

- At Girton Road monitoring station which was commissioned December 2011, all objectives for NO_2 were also met.

- Results are given in Tables 2.3 below.

Table 2.3 Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with Annual Mean Objective

Location	Site Type	Within AQMA?	Data Capture 2014 %	Annual mean concentrations (μg/m^3)						
				2008	2009	2010	2011	2012	2013	2014
Impington	Roadside	Y	55.08	35	33	30*	31	31	27	23
Orchard Park	Urban Background	Y	91.13	N/A	20	28	25	21	22	19
Girton	Roadside	N	91.14	N/A	N/A	N/A	N/A	27	26	25

Figure 2.3a Trends in Annual Mean NO_2 Concentrations Measured at Automatic Monitoring Site at Impington from 2008 - 2014

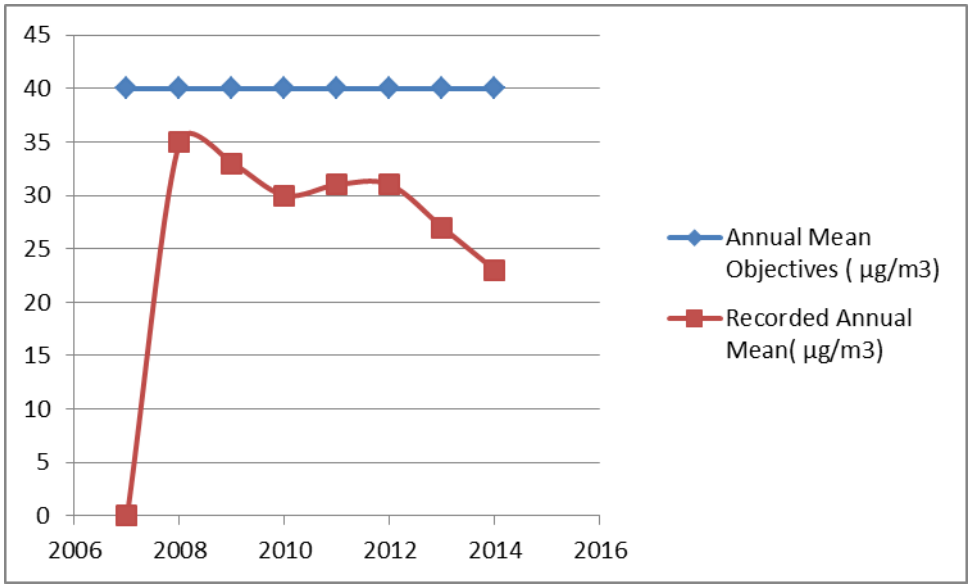


Figure 2.3b Trends in Annual Mean NO_2 Concentrations Measured at Automatic Monitoring Site at Orchard Park from 2008 - 2014

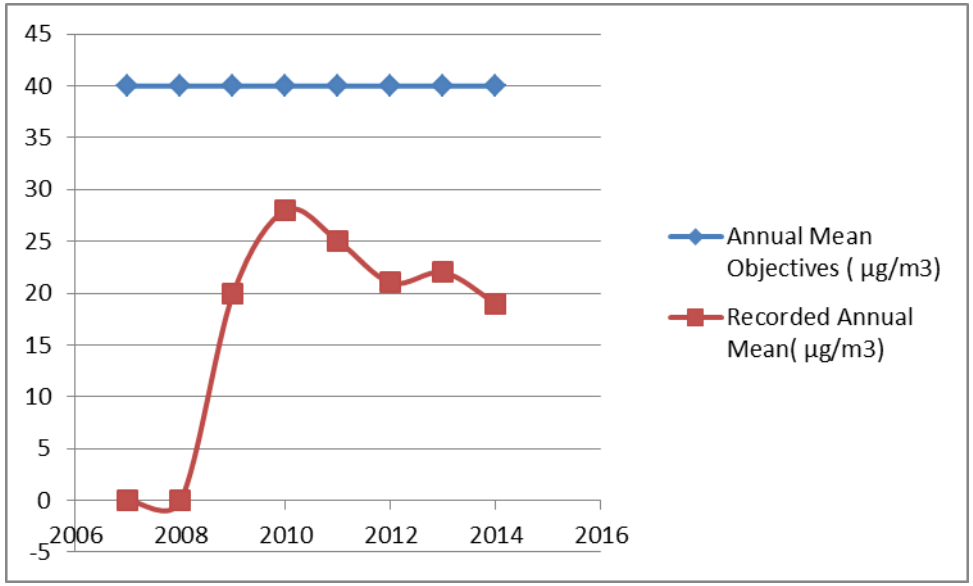


Figure 2.3c Trends in Annual Mean NO_2 Concentrations Measured at Automatic Monitoring Site at Girton from 2008 - 2014

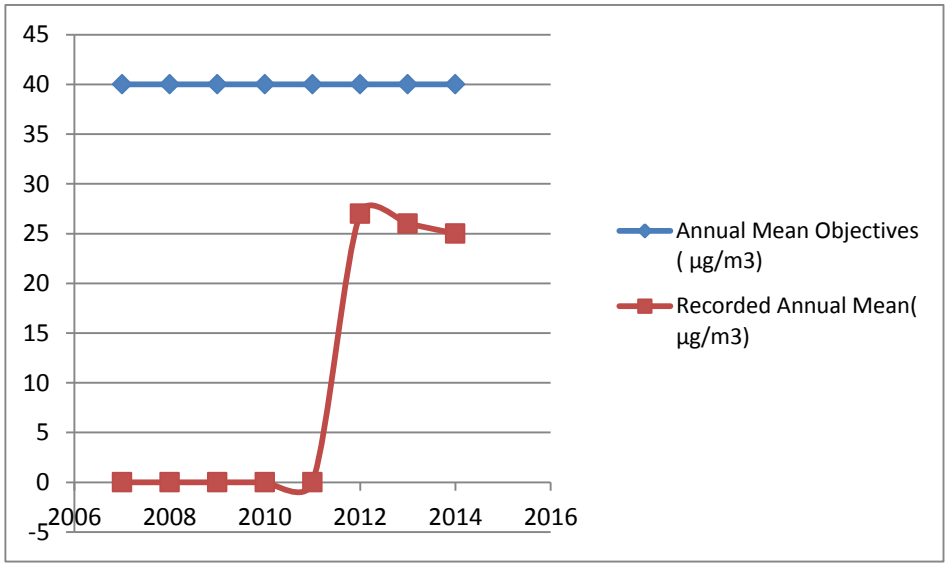


Table 2.4 Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with 1 – hour Mean Objective

Location	Site Type	Within AQMA?	Data Capture 2014 %	**Number of Exceedences of hourly mean (200 µg/m^3)** Where valid data is less than 90% of a full year, the 99.8%ile of hourly means is provided in brackets						
				2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Impington	Roadside	Y	55.08	0	0	0 (115)	0	0	1	0
Orchard Park	Urban Background	Y	91.13	N/A	0	0 (103)	0	0	0(86)	0
Girton	Roadside	N	91.14	N/A	N/A	N/A	N/A	0	0	0

Diffusion Tube Monitoring Data

Details of the bias adjusted annual mean NO_2 concentrations measured at the diffusion tube sites (using the National Bias Adjustment Factor obtained from the national database of bias adjustment factor) during 2014 are presented in Table 2.5. Trends of results obtained from 2008 to 2014 are presented in Table 2.6 whilst the Bar chart showing the recent trends in NO_2 annual mean NO_2 concentrations measured with diffusion tubes are presented in Figure 2.4

None of the diffusion tubes location annual means NO_2 concentration is in excess of the 40$\mu g/m^3$ during the year 2014. Therefore, all the passive NO_2 monitoring sites achieved the National Annual Mean Objectives of 40$\mu g/m^3$.

Table 2.5 Results of Nitrogen Dioxide Diffusion Tubes in 2014

Locations	Site Type	Within AQMA?	Triplicate or Co-located Tube (Y/N)	Full Calendar Year Data Capture 2014 (%)	Confirm if data has been distance corrected (Y/N)	2014 Annual Mean Concentration (µg/m^3) (Bias Adj. factor = 0.81)
1 The Coppice, Histon	UB	N	N	100.0	N	18.9
The Gables, High Street, Histon	R	N	N	100.0	N	31.5
Hill Farm Cottages, Lolworth	R	Y	N	100.0	N	31.8
White Lion, 96 High Street, Sawston	UB	N	N	91.7	N	28.3
Rhadegund Farm Cottages, Lolworth	R	Y	N	100.0	N	21.7
64 High Street, Linton	R	N	N	100.0	N	31.1
20 High Street, Tadlow	R	N	N	100.0	N	11.9
47 High Street, Harston	UB	N	N	91.7	N	28.0
3 Garner Close, Milton	UB	N	N	100.0	N	17.3
1A Weavers Field, Girton	UB	Y	N	100.0	N	30.5
Heath House, A505, Thriplow	UB	N	N	100.0	N	28.2
19 Lonetree Avenue, Impington	R	Y	N	100.0	N	21.1
1 Brook Close, Histon	UB	N	N	100.0	N	19.7
22 Water Lane, Histon	R	N	N	100.0	N	28.6
72 Cambridge Road, Impington	UB	Y	N	100.0	N	22.3
Hackers Fruit Farm, Lolworth	R	Y	N	100.0	N	38.0
5 Mill Lane, Sawston	R	N	N	91.7	N	15.1
1 Catchhall Farm Cottages	R	Y	N	100.0	N	25.4
Crafts Way, Bar Hill	R	N	N	100.0	N	22.9
Chieftain Way, Arbury Park	R	Y	N	100.0	N	21.9
Topper Street, Arbury Park	R	Y	N	100.0	N	20.8
Flack End, Arbury Park	R	Y	N	91.7	N	24.1
Orchard Park School, Arbury Park	UB	Y	Y	100.0	N	20.4
Orchard Park School, Arbury Park	UB	Y	Y	100.0	N	19.8
Orchard Park School, Arbury Park	UB	Y	Y	100.0	N	19.4
Co-Op, High Street, Histon	R	Y	N	100.0	N	21.2
13 Engledow Drive, Arbury Park	R	Y	N	100.0	N	24.0
22 Topper Street, Arbury Park	R	Y	N	100.0	N	21.5
Church Lane, Little Abington	UB	Y	N	100.0	N	12.5

Table 2.6 Results of Nitrogen Dioxide Diffusion Tubes (2009 to 2014)

Locations	Site Type	Within AQMA?	Annual Mean Concentration (adjusted for bias) µg/m^3					
			2009 (Bias Adj. Factor = 0.8)	2010 (Bias Adj. Factor = 0.85)	2011 (Bias Adj. Factor = 0.84)	2012 (Bias Adj. Factor = 0.79)	2013 (Bias Adj. Factor = 0.80)	2014 (Bias Adj. Factor = 0.81)
1 The Coppice, Histon	UB	N	24.5	22.8	20.6	19.8	15.3	18.9
The Gables, High Street, Histon	R	N	39.5	37.6	36.3	33.8	28.2	31.5
Hill Farm Cottages, Lolworth	R	Y	-	-	39.1	36.7	27.5	31.8
White Lion, 96 High Street, Sawston	UB	N	33.1	32.9	27.8	29.2	28.0	28.3
Rhadegund Farm Cottages, Lolworth	R	Y	-	-	15.7	22.0	26.0	21.7
64 High Street, Linton	R	N	33.4	33.6	30.7	32.4	28.2	31.1
20 High Street, Tadlow	R	N	15.3	14.5	13	12.4	14.1	11.9
47 High Street, Harston	UB	N	28.1	29.6	23.7	25.6	25.7	28.0
3 Garner Close, Milton	UB	N	24.6	22.6	20.8	20.2	19.9	17.3
1A Weavers Field, Girton	UB	Y	35.6	32.4	32.6	29.5	26.8	30.5
Heath House, A505, Thriplow	UB	N	29.2	29.2	29.1	27.2	25.9	28.2
19 Lonetree Avenue, Impington	R	Y	26.2	25.7	23.7	21.8	20.2	21.1
1 Brook Close, Histon	UB	N	26.0	24.8	21.1	19.5	19.0	19.7
22 Water Lane, Histon	R	N	33.2	35.5	31.2	29.1	25.2	28.6
72 Cambridge Road, Impington	UB	Y	35.9	28.2	25.3	23.1	25.1	22.3
Hackers Fruit Farm, Lolworth	R	Y	-	-	28.5	**41.5**	**42.9**	38.0
5 Mill Lane, Sawston	R	N	19.4	20.1	17.2	17.9	17.8	15.1
1 Catchhall Farm Cottages	R	Y	27.6	36.2	25.6	24.4	26.4	25.4
Crafts Way, Bar Hill	R	N	24.6	30.1	21.4	23.9	23.7	22.9
Chieftain Way, Arbury Park	R	Y	24.6	26.9	22.9	21.7	21.2	21.9
Topper Street, Arbury Park	R	Y	26.0	26.2	22.5	21.7	22.0	20.8
Flack End, Arbury Park	R	Y	-	30.7	26.3	25.8	24.8	24.1
Orchard Park School, Arbury Park	UB	Y	22.9	23.6	21.0	19.9	19.4	20.4
Orchard Park School, Arbury Park	UB	Y	22.5	23.7	21.0	18.9	19.2	19.8
Orchard Park School, Arbury Park	UB	Y	23.6	24.8	21.0	21.5	19.6	19.4
Co-Op, High Street, Histon	R	Y	-	26.6	22.9	22.2	21.1	21.2
13 Engledow Drive, Arbury Park	R	Y	-	33.3	25.0	25.9	24.6	24.0
22 Topper Street, Arbury Park	R	Y	-	32.5	23.6	24.0	21.6	21.5
Church Lane, Little Abington	UB	Y	-	16.5	13.5	12.7	15.2	12.5

Figure 2.4a Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Diffusion Tube Monitoring Sites

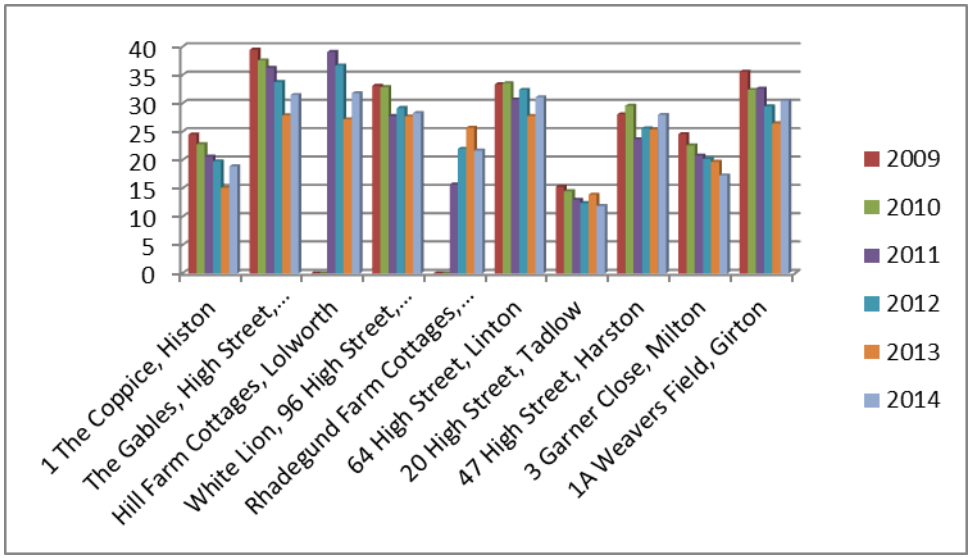


Figure 2.4b Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Diffusion Tube Monitoring Sites

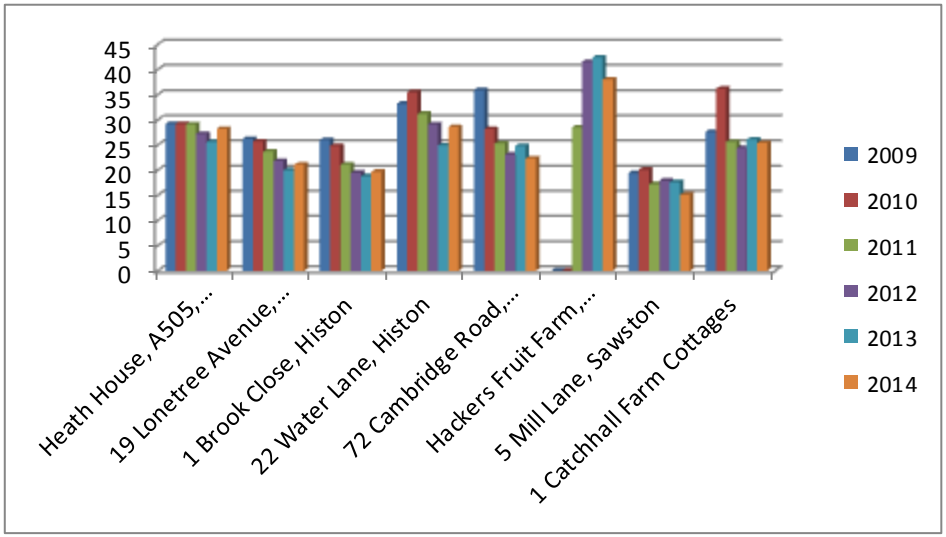
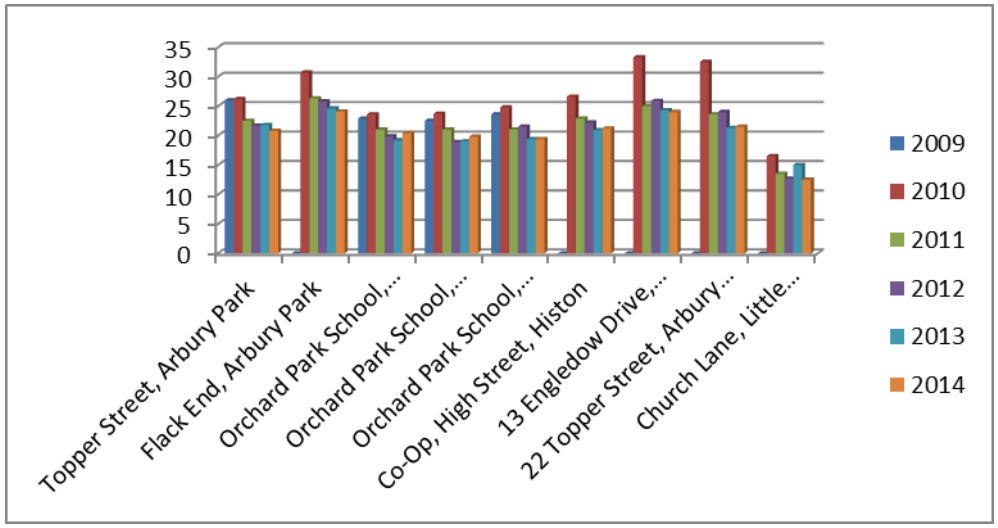


Figure 2.4c Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Diffusion Tube Monitoring Sites



Examination of the trend in NO_2 annual means measured across the network of diffusion tubes indicates the concentrations have in general be on decrease since 2010 at some of the passive monitoring location. In general, the trend shows a steady improvement on meeting the Air-Quality objectives for the district.

2.2.2 PM_{10}

In 2014, fine particles were monitored at all the three different AQ monitoring locations within the South Cambridgeshire District Council although; the PM_{10} analyser at Impington site was temporarily offline for some part of the year. The annual mean PM_{10} concentrations measured from 2008 – 2014 are presented in Table 2.7 and Figure 2.5.

The number of 24-hour mean PM_{10} concentrations in excess of the 50 **µg/m^3** short-term objective; measured from 2008 – 2014 are presented in Table 2.8.

The annual and daily mean objectives were achieved at all the three monitoring sites at Girton, Orchard Park and Impington thou with less data capture.

Table 2.7 Results of Automatic Monitoring of PM_{10}: Comparison with Annual Mean Objective

Location	Site Type	Within AQMA?	Data Capture 2014 %	Annual mean concentrations (µg/m^3)						
				2008	2009	2010	2011	2012	2013	2014
Impington	Roadside	Y	57.19	33	41	42	54	58	55	22
Orchard Park	Urban Background	Y	93.89	N/A	16	17*	23	21	22	22
Girton	Roadside	N	93.23	N/A	N/A	N/A	N/A	26	30	16

Table 2.8 Results of Automatic Monitoring for PM_{10}: Comparison with 24-hour mean Objective

Location	Site Type	Within AQMA?	Data Capture 2014 %	Annual number of days when PM_{10} levels exceeded a daily mean of 50 ($\mu g/m^3$)						
				2008	2009	2010	2011	2012	2013	2014
Impington	Roadside	Y	57.19	43 days	55 days	36 days	119 days	180 days	21 days	4 days
Orchard Park	Urban Background	Y	93.89	N/A	0 days	0 days	10 days	4 days	7 days	7 days
Girton	Roadside	N	93.23	N/A	N/A	N/A	N/A	16 days	23 days	2 days

Figure 2.5a Trends in Annual Mean PM_{10} Concentrations in $\mu g/m^3$ from 2008 – 2014

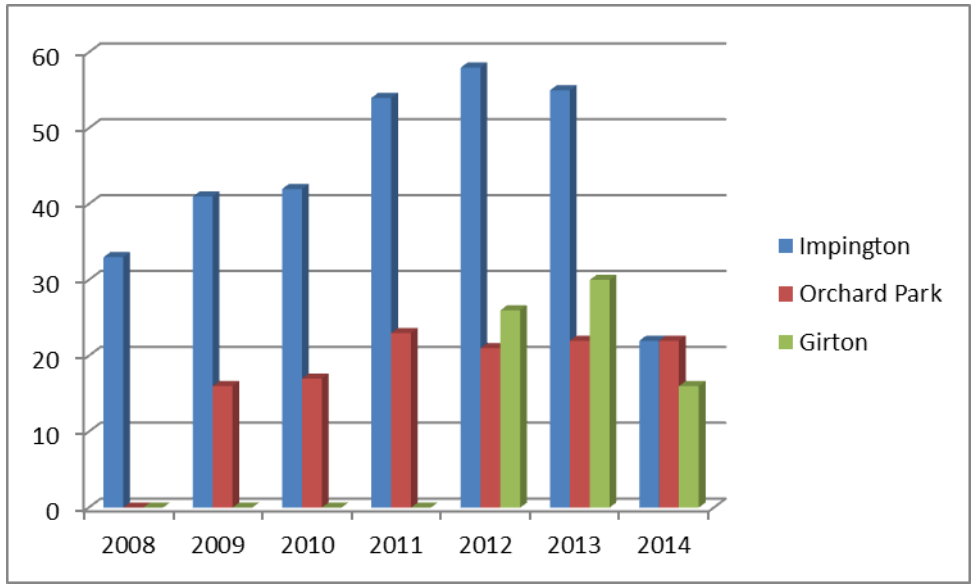
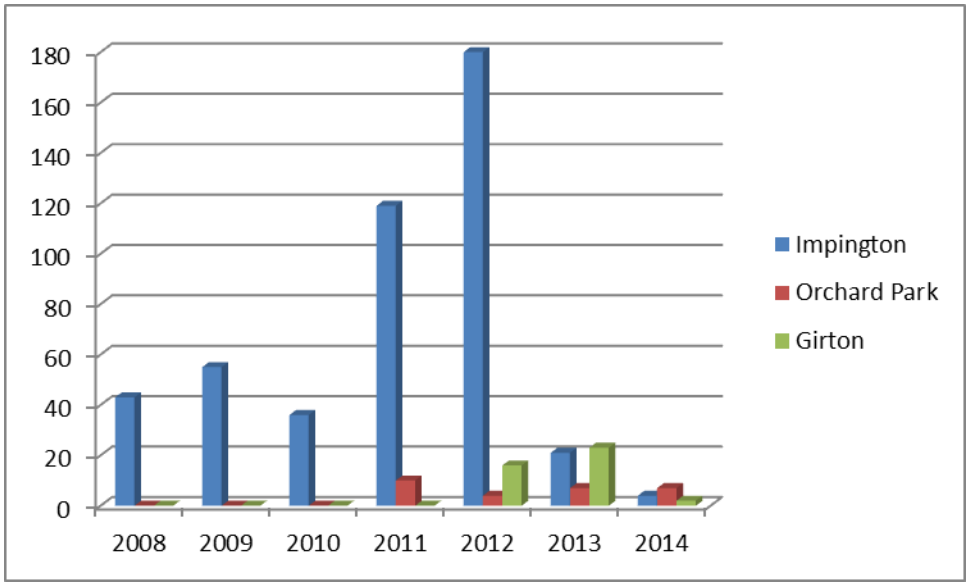


Figure 2.5b Trends in Annual Mean PM_{10} in Comparison with the Daily Mean Objectives in (µg/m^3)



2.2.3 Sulphur Dioxide

South Cambridgeshire Council do not currently monitor sulphur dioxide concentrations.

2.2.4 Benzene

South Cambridgeshire Council do not currently monitor benzene concentrations.

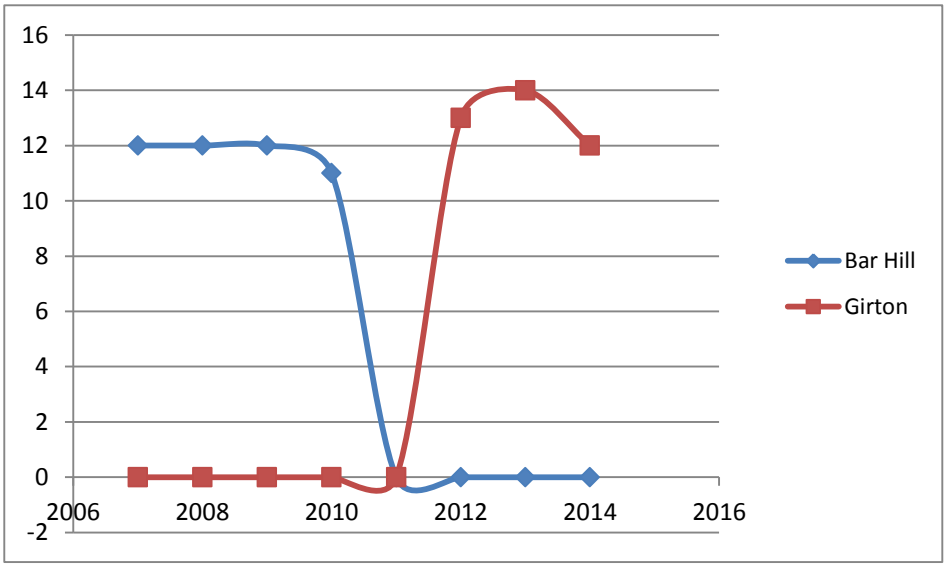
2.2.5 Other pollutants monitored

South Cambridgeshire District Council monitors $PM_{2.5}$ at the continuous monitoring station in Bar Hill prior to the eventual closure of the site. However, a new monitoring site for $PM_{2.5}$ was commissioned December, 2011 at Girton. The concentrations at both the previous and new site have remained fairly stable throughout the monitoring periods. The highest level recorded was 14$\mu g/m^3$ measured in 2013 at the new location. The annual mean concentrations have stabilised at 11 - 14$\mu g/m^3$. Table 2.9 shows the latest datasets whilst Figure 2.6 shows the annual trends in concentrations.

Table 2.9 Results of Automatic Monitoring of $PM_{2.5}$

Location	Within AQMA?	Proportion of year with valid data 2014 %	Annual mean concentrations (µg/m^3)						
			2008	2009	2010	2011	2012	2013	2014
Girton	N	95.16	N/A	N/A	N/A	N/A	13	14	12

Figure 2.6: Trends in Annual Mean $PM_{2.5}$ Measured in (µg/m^3) at Bar Hill and Girton between 2007 - 2014



2.2.6 Summary of Compliance with AQS Objectives

South Cambridgeshire District Council has examined the results from monitoring in the district. Concentrations outside of the AQMA are all below the objectives at relevant locations, therefore there is no need to proceed to a Detailed Assessment.

3 Road Traffic Sources

3.1 Narrow Congested Streets with Residential Properties Close to the Kerb

South Cambridgeshire District Council confirms that there are no new/newly identified congested streets with a flow above 5,000 vehicles per day and residential properties close to the kerb, that have not been adequately considered in previous rounds of Review and Assessment.

3.2 Busy Streets Where People May Spend 1-hour or More Close to Traffic

South Cambridgeshire District Council confirms that there are no new/newly identified busy streets where people may spend 1 hour or more close to traffic.

3.3 Roads with a High Flow of Buses and/or HGVs.

South Cambridgeshire District Council confirms that there are no new/newly identified roads with high flows of buses/HDVs.

3.4 Junctions

South Cambridgeshire District Council confirms that there are no new/newly identified busy junctions/busy roads.

3.5 New Roads Constructed or Proposed Since the Last Round of Review and Assessment

South Cambridgeshire District Council has assessed new/proposed roads meeting the criteria in Section A.5 of Box 5.3 in TG (09), and concluded that it will not be necessary to proceed to a Detailed Assessment.

3.6 Roads with Significantly Changed Traffic Flows

South Cambridgeshire District Council has assessed new/newly identified roads with significantly changed traffic flows, and concluded that it will not be necessary to proceed to a Detailed Assessment.

3.7 Bus and Coach Stations

South Cambridgeshire District Council confirms that there are no relevant bus stations in the Local Authority area.

4 Other Transport Sources

4.1 Airports

Cambridge Airport is the largest airfield within the District. The predicted annual throughput of passengers and tonnes of freight equivalent is expected to be less than 5 million passengers per annum in 2014. Therefore, based on the predicted throughput of less than 5mppa (passengers and freight combined), it is not necessary to proceed to a detailed assessment.

South Cambridgeshire District Council confirms that there are no airports in the Local Authority area that require a detailed assessment.

4.2 Railways (Diesel and Steam Trains)

There have been no significant changes to the rail network within South Cambridgeshire District Council since the last round of review and assessment.

4.2.1 Stationary Trains

South Cambridgeshire District Council confirms that there are no locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m.

4.2.2 Moving Trains

South Cambridgeshire District Council confirms that there are no locations with a large number of movements of diesel locomotives, and potential long-term relevant exposure within 30m.

4.3 Ports (Shipping)

South Cambridgeshire District Council confirms that there are no ports or shipping that meets the specified criteria within the Local Authority area.

5 Industrial Sources

5.1 Industrial Installations

5.1.1 New or Proposed Installations for which an Air Quality Assessment has been Carried Out

Each of the development proposal following the last USA report such as the North West Cambridge (University Site), Orchard Park, Bayer Crop Science Site, Trumpington Meadows, Windmill Estate, Fulbourn and Cambourne had been subject to an extensive and detailed air quality impact assessment prior to approving such application with none having potential to impact the District Air Quality negatively.

South Cambridgeshire District Council has assessed new/proposed industrial installations, and concluded that it will not be necessary to proceed to a Detailed Assessment.

5.1.2 Existing Installations where Emissions have Increased Substantially or New Relevant Exposure has been introduced

South Cambridgeshire District Council confirms that there are no industrial installations with substantially increased emissions or new relevant exposure in their vicinity within its area or nearby in a neighbouring authority.

5.1.3 New or Significantly Changed Installations with No Previous Air Quality Assessment

South Cambridgeshire District Council confirms that there are no new or proposed industrial installations for which planning approval has been granted within its area or nearby in a neighbouring authority.

5.2 Major Fuel (Petrol) Storage Depots

South Cambridgeshire District Council confirms that, there are no major fuel (petrol) storage depots within the Local Authority area.

5.3 Petrol Stations

South Cambridgeshire District Council confirms that there are no petrol stations meeting the specified criteria**.**

5.4 Poultry Farms

South Cambridgeshire District Council confirms that there are no poultry farms meeting the specified criteria.

6 Commercial and Domestic Sources

6.1 Biomass Combustion – Individual Installations

South Cambridgeshire District Council confirms that there is no biomass combustion plant in the Local Authority area.

6.2 Biomass Combustion – Combined Impacts

South Cambridgeshire District Council confirms that there are no biomass combustion plants in the Local Authority area.

6.3 Domestic Solid-Fuel Burning

South Cambridgeshire District Council confirms that there are no areas of significant domestic fuel use in the Local Authority area.

7 Fugitive or Uncontrolled Sources

Since the last round of review and assessment, no new locations where fugitive dust emissions will have a significant impact have been identified within the District.

South Cambridgeshire District Council confirms that there are no potential sources of fugitive particulate matter emissions in the Local Authority area.

8 Conclusions and Proposed Actions

8.1 Conclusions from New Monitoring Data

The 2014 monitoring data for all the automatic monitoring sites shows a distinct improvement for the AQ objectives pollutants compared to the 2013 albeit, monitoring work will continue within the AQMA with the possibility to expand the monitoring network at every opportunity should the need arises.

Monitoring and assessment of areas within the District and outside the AQMA has shown there are currently no other areas of concern and no reason to carry out further or detailed assessment. The results are summarised below:

- At Impington, the annual and daily mean objectives for both the NO_2 and PM_{10} were achieved but the data capture for the year is low.

- At the Orchard Park School and Girton Road monitoring stations, both the NO_2 and PM_{10} air quality annual mean objectives were achieved in 2014. The daily mean objectives i.e. (days where concentrations were calculated to be >50$\mu g/m^3$) and hourly mean objectives i.e. (hours where concentrations were calculated to be >200$\mu g/m^3$) for PM_{10} and NO_2 respectively at both monitoring sites were also achieved.

- Examination of the trend in NO_2 annual means measured across the network of diffusion tubes indicate a slight improvement on some of the annual mean compared to 2013.

- Air quality objectives were achieved at all monitoring locations outside of the existing AQMA at locations of relevant exposure hence there is no need to proceed to a Detailed Assessment at any location.

- Thou there is an improvement on the measured annual mean concentration for PM_{10} and NO_2 compared to 2013, the current AQMA are still required due to low data capture in the core area of the designated AQMA at Impington and will be too early to be considering any revocation.

8.2 Conclusions from Assessment of Sources

The assessment of new sources has not identified any new sources that have not been considered previously. A detailed assessment is not therefore required for any new sources.

8.3 Proposed Actions

The Updating and Screening Assessment has not identified any locations where a Detailed Assessment for any source or pollutant should be conducted. South Cambridgeshire District Council will continue monitoring at all existing sites within the District as well as continue to implement the measure outlined in its current Air Quality Action Plan for the existing AQMA which thou was to be an issue of update in the year 2014 but will now be delayed till the end of year 2015 following the commencement of relevant work on the council action plan 2 and 3.

The next air quality review and assessment report will be the 2016 Progress Report.

9 References

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https://www.scambs.gov.uk/sites/default/files/documents/Progress%20Report%20 (2014).pd

Appendices

Appendix 1: QA/QC Data

Appendix 2: Map of AQMA

Appendix 3: NO_2 monthly mean measured at diffusion tubes sites 2014

Appendix 1: QA: QC Data

Diffusion Tube Monitoring

- Suppliers and Analysing lab: Environmental Scientifics Group (ESG)
  Unit 12, Moorbrook
  Southmead Industrial Estate
  Didcot
  Oxfordshire
  OX11 7HP

- Diffusion tube preparation method used: 50:50 (acetone:triethanolamine)

- Scientifics Ltd confirm that the methods and procedures they follow meet the guidelines set out in Defras' "Diffusion Tubes for Ambient Monitoring: Practical Guidance". A copy of the confirmation is provided in Appendix 1.

- From the "Summary of Laboratory Performance in WASP R98-102" (prepared by AEA on behalf of Defra, 2008), the performance of Scientifics Ltd against both the old and new criteria was rated as "good".

Diffusion tube bias adjustment factors:

National bias adjustment factor

- South Cambridgeshire District Council uses the bias adjustment factor provided on the Air Quality Archive web database. The factor used for 2014 is 0.81. This is quoted as the national average for the year issued in March, 2015.

Factor from Local Co-location Studies (if available)

- One triplicate co-location study was conducted within the district during 2014 at Orchard Park School. A co-location factor of 0.78 was calculated from this study. This is relatively closer to the bias adjustment factor reported in the national database of co-location factor for ESG during 2014.

Discussion of Choice of Factor to use

- The adjustment factor from the national database of co-location studies has been used to bias adjusts the 2014 diffusion tube results. This is consistent with the approach used to adjust South Cambridgeshire District Council's diffusion tube results in previous years.

PM Monitoring Adjustment

The BAMs in use in South Cambridgeshire are non-gravimetric with heated inlets. In order that PM_{10} data is supplied as gravimetric equivalent, all PM_{10} data has been multiplied by a factor of 1.3.

QA/QC of automatic monitoring

- QA/QC of automatic monitoring data is carried out by AEA Technology (http://www.aeat.co.uk) now Ricardo – AEA.

- Tri-annual audits of the monitoring stations are carried out by AEA Technology.

- Services of all the three AQ monitoring stations i.e. Impington, Girton and Orchard Park are carried out bi-annually by the equipment suppliers; Enviro - Technology.

- The sites are manually calibrated on a monthly basis by the Local Site Operative. The output from the calibrations is forwarded to AEAT now Ricardo – AEA for QA/QC and ratification purposes.

- South Cambridgeshire District Council is a member of the Calibration Club, operated by AEAT now Ricardo – AEA.

- All NOx analysers are chemiluminescence analysers

- All particulate matter analysers are BAMs. In line with current guidance, BAM data is multiplied by 1.3 to give the gravimetric equivalent.

Appendix 2: Map of AQMA

Appendix 3: NO_2 monthly mean measured at diffusion tubes sites 2014

2014	January	February	March	April	May	June	July	August	Septembe	October	Novembe	Decembe	MEAN	x. Bias	Adj. M	% data capture
The Coppice	36.1	30.3	24.5	20.1	18.2	14.8	14.7	14.7	21.4	25.2	35.5	24.6	**23.3**	0.81	**18.9**	100.0
The Gables, Histon	48.2	48.4	37.8	40.1	38.7	32.6	30.5	26.9	38.3	46.6	48.3	30.4	**38.9**	0.81	**31.5**	100.0
Hill Farm Cot., Lolworth	52.6	50.3	47.9	40.3	38.6	21.6	25.7	33.8	28.6	44.7	40.5	46.8	**39.3**	0.81	**31.8**	100.0
High St Sawston	48.0	41.7	38.4	27.4	28.2	Missing	23.3	22.4	36.1	32.9	45.6	40.8	**34.9**	0.81	**28.3**	91.7
Rhadegund farm Cot,L	24.4	19.3	33.3	30.7	27.3	26.0	30.9	21.0	34.4	19.3	36.5	18.0	**26.8**	0.81	**21.7**	100.0
Linton	39.9	39.9	38.7	35.3	31.3	31.8	33.1	39.3	40.2	41.9	45.6	43.3	**38.4**	0.81	**31.1**	100.0
Tadlow	24.1	16.4	18.3	14.2	10.4	5.7	7.2	10.0	13.0	15.1	23.1	19.7	**14.8**	0.81	**11.9**	100.0
Harston	47.2	38.6	40.0	32.0	24.7	22.3	24.0	18.9	41.5	41.0	49.9	Missing	**34.6**	0.81	**28.0**	91.7
Milton	28.7	29.4	27.6	19.8	12.1	9.0	10.9	15.7	20.4	25.2	31.8	25.0	**21.3**	0.81	**17.3**	100.0
Girton	58.5	51.2	42.7	34.1	31.0	24.7	26.2	28.6	31.8	35.8	42.5	43.5	**37.6**	0.81	**30.5**	100.0
Thriplow	45.3	37.6	41.6	33.2	24.1	27.5	26.1	27.8	37.3	32.4	44.3	40.1	**34.8**	0.81	**28.2**	100.0
Lone Tree Av	41.2	38.2	28.5	25.9	18.8	13.0	12.9	17.6	22.4	29.6	35.3	30.2	**26.1**	0.81	**21.1**	100.0
Brook Close Histon	36.1	30.7	30.7	21.2	15.4	13.5	12.3	13.4	24.4	22.8	39.7	31.7	**24.3**	0.81	**19.7**	100.0
Water Lane	51.8	44.8	42.1	32.5	25.4	19.6	22.9	26.6	29.5	39.5	49.7	39.3	**35.3**	0.81	**28.6**	100.0
Cambridge Rd	40.4	40.9	34.7	29.6	22.4	16.8	13.1	16.6	24.8	30.0	32.8	28.1	**27.5**	0.81	**22.3**	100.0
Hackers Fruit farm, L.	40.3	32.0	52.8	60.6	48.4	52.1	56.5	43.3	58.8	36.3	52.7	28.9	**46.9**	0.81	**38.0**	100.0
Mill Lane	25.1	22.9	Missing	19.6	14.7	10.9	10.5	12.3	18.5	21.4	34.0	15.4	**18.7**	0.81	**15.1**	91.7
1 Catchall Farm Cotts	19.5	20.4	34.1	40.2	38.9	39.8	43.5	21.4	42.5	23.1	36.7	16.1	**31.4**	0.81	**25.4**	100.0
Crafts Way, Bar Hill	24.9	31.7	36.6	31.8	21.7	17.5	22.0	20.6	34.7	24.7	42.8	30.2	**28.3**	0.81	**22.9**	100.0
Chieftain Way	35.8	29.1	33.9	29.0	20.0	18.3	20.8	19.2	26.8	22.3	34.5	33.9	**27.0**	0.81	**21.9**	100.0
Topper Street	37.6	26.8	28.2	28.2	16.8	15.5	15.5	15.0	27.2	24.2	41.9	31.7	**25.7**	0.81	**20.8**	100.0
Flack End	42.3	32.9	28.3	32.4	18.0	19.5	Missing	20.5	30.4	27.2	42.2	33.7	**29.8**	0.81	**24.1**	91.7
Orchard Pk School	31.2	29.9	26.8	25.2	17.0	18.9	17.0	18.6	24.5	25.4	34.5	33.6	**25.2**	0.81	**20.4**	100.0
Orchard Pk School	24.4	27.3	30.1	23.9	14.1	16.5	18.3	18.2	23.6	24.0	34.3	26.9	**24.5**	0.81	**19.8**	100.0
Orchard Pk School	27.3	26.1	29.1	24.9	23.1	17.5	17.3	15.6	20.5	24.0	31.5	30.2	**24.0**	0.81	**19.4**	100.0
Co-op Histon	37.0	29.9	29.0	26.2	20.8	16.9	17.5	17.0	25.4	28.9	37.3	28.6	**26.2**	0.81	**21.2**	100.0
Engledow Drive	35.9	30.3	38.0	24.5	20.2	21.3	23.8	25.3	31.4	26.3	40.6	37.2	**29.6**	0.81	**24.0**	100.0
Topper Street o/s 22	37.9	28.4	28.9	26.0	17.1	19.1	15.7	22.4	25.1	22.9	40.3	35.9	**26.6**	0.81	**21.5**	100.0
Abingdon	21.6	16.9	20.2	17.5	9.5	5.9	8.3	9.5	13.7	18.2	24.6	19.6	**15.5**	**0.81**	**12.5**	100.0