



## 2014 Air Quality Progress Report for *Hastings Borough Council*

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

July 2015 (Revised February 2016)

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## Executive Summary

The Hastings Borough Council is committed to improving air quality in the Borough and this 2014 Air Quality Progress report fulfils one aspect of this ongoing commitment.

The Council's Air Quality Progress report updates air quality monitoring in Hastings and considers other local developments that might affect local air quality. If major changes are noted the Council is required to undertake a Detailed Assessment. This is in accordance with Defra Local Air Quality Management (LAQM) guidance.

This report details the monitoring results for the calendar year, i.e. 2013. The report also considers the actions that the Council and others are undertaking in pursuit of the objectives under Part IV of the Environment Act 1995.

The report identifies that:

From the monitoring and other assessment there is no need to undertake a Detailed Assessment.

In view of the findings the Council will undertake the following actions:

1. Undertake consultation with the statutory and other consultees as required.
2. Maintain the existing monitoring programme.
3. Prepare for the submission of its next Air Quality report.

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# **1 Introduction**

## **1.1 Description of Local Authority Area**

The Hastings Borough Council serves the towns of Hastings and St. Leonards, which are situated on the south coast within East Sussex. The Borough is small and mostly urban, covering an area of just over 29km<sup>2</sup>. The estimated population for 2013 was 90,754 (from the Office of National Statistics (ONS)).

Most employment within the Borough is service based; health, public services, retail and education. Tourism is also important to the Borough. There are various industrial estates that lie mostly on the outskirts of the Borough; these include engineering, catering, motoring and construction businesses.

The main sources of atmospheric pollutants in the Borough arise from road transport. The principal roads through the Borough include the A21, A259 and the A2102.

## **1.2 Purpose of Progress 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.

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 Local Air Quality Management 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 exceedence of an Air Quality Objective, the Council should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment.

### **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 microgrammes per cubic metre  $\mu\text{g m}^{-3}$  (milligrammes per cubic metre,  $\text{mg m}^{-3}$  for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).

Table 1.2 details other air quality objectives in England that are in addition to those set for the purpose of LAQM.

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

**Table 1.2 Air Quality Objectives not included in Regulations for the purpose of LAQM in England**

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
<b>PM<sub>2.5</sub> (Not Scotland)</b>	25 µg m <sup>-3</sup>	Annual mean	2020
	Target of 15% reduction in concentrations at urban background locations	3-year mean	Between 2010 and 2020
<b>Ozone</b>	100 µg m <sup>-3</sup> not to be exceeded more than 10 times a year	8 hour mean	31.12.2005

## 1.4 Summary of Previous Review and Assessments

The Hastings Borough Council started monitoring air quality in 1998. At that time the monitoring indicated that across most of the Borough met the Government's air quality objectives.

Subsequently however, more detailed work around the A259 Bexhill Road and the Freshfields landfill operation was carried out to investigate the levels of particulate matter. This included the completion of a Detailed Assessment for particles (PM<sub>10</sub>) in 2003. The aim of this was to determine with reasonable certainty whether or not there is a likelihood of the AQ objectives being achieved.

Monitored concentrations at that time confirmed that the daily mean PM<sub>10</sub> objective was exceeded. Further modelled predictions based on vehicle activity associated with the landfill operation at Freshfields highlighted that the objectives were exceeded in areas close to busy roads and junctions. Relevant public exposure was also identified at residences in the area and on the basis of the findings the Council designated an Air Quality Management Area (AQMA) for the PM<sub>10</sub> in December 2003.

The AQMA encompassed properties in Bulverhythe between the junction of the A259 (Bexhill Road) and Harley Shute Road, and number 576 Bexhill Road on its northern side, and numbers 211 to 585 Bexhill Road on its southern side (see Figure 1).

The Council subsequently produced an Action Plan and undertook a Further Assessment in 2004. Both of these focussed on the high numbers of slow moving traffic and the re-suspension of dusts, which added to the background levels in the area.

The Council's subsequent Updating and Screening Assessments and Progress reports were also completed and the findings were that concentrations had reduced upon closure of the closure of the landfill operation at Freshfields in 2008.

Figure 1 Hastings AQMA No. 1 (within Red line)



## 2 New Monitoring Data

### 2.1 Summary of Monitoring Undertaken

#### 2.1.1 Automatic Monitoring Sites

The Council participates in the Sussex Air Quality Partnership and undertakes automatic monitoring at the following fixed long-term site:

Hastings - Bulverhythe – a roadside site located near to housing in Bulverhythe (see Figure 1). Monitoring at this site first commenced in 2002 and is still in progress. Nitrogen dioxide (NO<sub>2</sub>) and PM<sub>10</sub> are monitored at the site (see Table 2.1). The sample inlet is approximately 3m from the kerb of the A259. (See <http://www.sussex-air.net/AQNearMe/Monitoring/SiteDetails.aspx?SiteCode=HT1&SiteName=Hastings%20-%20Bulverhythe>)

Figure 2 Hastings Bulverhythe site



The Council previously operated a separate roadside site; Hastings - Freshfields, which was adjacent to Bulverhythe sports pavilion. Monitoring of NO<sub>2</sub> and PM<sub>10</sub> at this site started in 2008 and ended in 2011. The sample inlet was approximately 2m from the kerb. (See <http://www.sussex-air.net/AQNearMe/Monitoring/SiteDetails.aspx?SiteCode=HT2&SiteName=Hastings%20-%20Fresh%20Fields>)

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As the sites are part of the Sussex Air Quality Network, the standards of QA/QC are similar to those of the government's AURN sites. The calibrations and filter change data are sent to the Environmental Research Group (ERG) at Kings College, London on a fortnightly basis.

The ERG collect data from the instruments on a daily basis, verifying the data against other monitoring stations in the south-east and ratifying it using the calibration information supplied. The Local Site Operations (LSO) duties are carried out by trained officers from the Council.

Subsequent data ratification is also undertaken by ERG. In all cases the data are fully ratified unless reported otherwise. Further details of the sites can be found at [www.sussex-air.net](http://www.sussex-air.net).

Table 2.1 Details of Automatic Monitoring Sites

Site Name (ID)	Site Type	Easting	Northing	Inlet Height (m)	Pollutants Monitored	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?
Hastings - Bulverhythe	Roadside	577633	108726	2	NO <sub>2</sub> PM <sub>10</sub>	TEOM	Y (0)	5	N
Hastings - Freshfields*	Roadside	577036	108726	2.5	NO <sub>2</sub> PM <sub>10</sub>	TEOM	Y (100)	2	Y

\* Closed in 2011

### 2.1.2 Non-Automatic Monitoring Sites

The Hastings Borough Council also undertakes the Hastings diffusion tube monitoring survey to supplement and extend its understanding of air quality. During 2013, the diffusion tube survey was based on 14 locations. All sites had single tubes exposed and none were co-located with the continuous monitoring station. The details of the diffusion tube monitoring locations are given in the table below.

The diffusion tubes were supplied and analysed by Kent Scientific Services (KSS), with a preparation method using 20% TEA in water. KSS participated in the Health and Safety Laboratory's (HSL) Workplace Analysis Scheme for Proficiency (WASP) programme for diffusion tubes, which provides a Quality Assurance / Quality Control (QA/QC). The rating was determined in the laboratory performance testing rounds 116 – 123 for the period January 2012 and December 2013; four rounds were determined as 100% satisfactory; three were 75% and one 50%.

A major disadvantage of undertaking monitoring using diffusion tubes is that the method is less precise and accurate than continuous monitoring. The recommended methods to reduce errors include the use of good QA/QC practices and bias adjustment factors that are derived from co-location studies between continuous analysers and diffusion tubes.

The bias adjustment factors are specific to each year, analysing laboratory, method of analysis and location. The factors are therefore also limited to the data supplied. The Review and Assessment website advises that "in many cases, using an overall correction factor derived from as many co-location studies as possible will provide the 'best estimate' of the 'true' annual mean concentration, it is important to recognise that there will still be uncertainty associated with this bias adjusted annual mean. One analysis has shown that the uncertainty for tubes bias adjusted in this way is  $\pm 20\%$  (at 95% confidence level). This compares with a typical value of  $\pm 10\%$  for chemiluminescence monitors subject to appropriate QA/QC procedures."

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A local co-location study was not undertaken and so the default factor obtained from the Defra helpdesk default factor spreadsheet (version 09/14) was used. The tube precision for 2013 was reported as good (based on a study of the Marylebone Road site).

<b>Year</b>	<b>Bias Default factor</b>
2013	0.77

The above factor indicates that the diffusion tube results overestimate continuously monitored concentrations.

Table 2.2 Details of Non- Automatic Monitoring Sites (2013)

Ref (Tube no.)	Address	Easting	Northing	Location	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
1	St Luke's, 19 Barnfield Close	580831	109964	Roadside	N(10)	1.0	Y
2	Carlisle Parade	581496	109288	Roadside	Y(2)	1.0	Y
3	Manor Road	582223	110361	Roadside	Y(2)	1.0	Y
4	Ore Church, Old London Road	583610	111325	Roadside	Y	1.0	Y
5	Harley Shute	578382	109601	Roadside	N(10)	1.0	Y
6	Bexhill Road Boat	576770	108101	Roadside	N(15)	1.5	Y
7	81 Bexhill Road	578500	108771	Roadside	Y	1.5	Y
8	45 Bexhill Road	578637	108798	Roadside	Y(1.5)	1.0	Y
9	71 Bexhill Road	578532	108776	Roadside	Y(0.1)	1.5	Y
10	139 Bexhill Road	578290	108819	Roadside	Y(1.5)	2.0	Y
11	Bexhill Rd rail bridge	578447	108794	Roadside	N	1.5	Y
12	West Marina Gardens	578946	108746	Roadside	Y(2)	3.0	Y
13	114 Bohemia Road	580252	110058	Roadside	Y	1.5	Y
14	116 Bohemia Road	580246	110064	Roadside	Y	1.5	Y

## 2.2 Comparison of Monitoring Results with Air Quality Objectives

The monitoring reported below represents the 2013 results along with recent years' monitoring from 2009. The results are reported in accordance with the requirements of TG09. Further details of the automatic sites, including site maps and photographs can also be found on the Sussex Air Quality Network website (See <http://www.sussex-air.net/AQNearMe/Default.aspx>).

### 2.2.1 Nitrogen Dioxide (NO<sub>2</sub>)

The results for nitrogen dioxide are reported separately for the Council's automatic sites and diffusion tube network. The automatic results are directly compared to the annual mean and hourly mean objectives, whereas the diffusion tube results are compared to the annual mean objective and also to an annual mean of 60 µg m<sup>-3</sup>, which is used to represent an indicative value for the hourly mean objective. This is in line with TG09 guidance.

#### Automatic Monitoring Data

The nitrogen dioxide monitoring results for the Council's automatic sites are in the following tables (Tables 2.3 and 2.4), which provide results for the period from 2009 to 2013 inclusive. The data are fully ratified for all years.

For 2013 the data capture at the Bulverhythe site was poor (representing only around 32% of the year). (Note – monitoring resumed in 2014 and these results will be reported in the Council's next air quality report). For previous years the data capture at the site was mostly good.

The Bulverhythe site is located close to the roadside of the A259 Bexhill Road in a suburban part of West St. Leonards. The measurements confirm that the site easily met the AQS annual mean objective of 40 µg m<sup>-3</sup> for all years, with annual mean concentrations around 22 µg m<sup>-3</sup> for most of the period reported. The adjusted 2013 result for the site was 19.4 µg m<sup>-3</sup>. This was derived using an adjustment factor of

0.7, which was derived from continuously monitored background sites in other Sussex local authority areas (see details in the next section).

The other roadside site in the Borough, i.e. the site at Freshfields closed in 2011, which was established for a short period to provide an understanding of tail pipe emissions from those vehicles (mostly HGVs) using the road, also met the objective for all years when monitoring was undertaken, recording concentrations that were slightly lower around  $18 \mu\text{g m}^{-3}$  for the 3 years reported.

Table 2.4 provides a comparison with the AQS hourly mean objective, which requires that the number of periods that exceed a one-hour mean of  $200 \mu\text{g m}^{-3}$  does not arise more than 18 times over a calendar year. These episodic periods arise during meteorological conditions that are conducive e.g. such as settled conditions in the wintertime when there is reduced dispersion from local sources.

The results show that the hourly standard of  $200 \mu\text{g m}^{-3}$  was not exceeded at all for the period reported and therefore the hourly mean objective was not exceeded.

**Table 2.3 Results of Automatic Monitoring for NO<sub>2</sub>: Comparison with Annual Mean Objective**

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period %	Valid Data Capture 2013%	Annual Mean Concentration ( $\mu\text{g m}^{-3}$ )				
					2009	2010	2011	2012	2013
Bulverhythe	Roadside	Y	-	32	22	24	22	22	28 (19.4)
Freshfields	Roadside	N	-	0	16	18	20	-	-

In bold, exceedence of the NO<sub>2</sub> annual mean AQS objective of  $40\mu\text{g m}^{-3}$ ; italics indicates less than 75% data capture. In brackets the mean "annualised" as in Box 3.2 of TG(09) (<http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38>).

**Table 2.4 Results of Automatic Monitoring for NO<sub>2</sub>: Comparison with 1-hour Mean Objective**

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period %	Valid Data Capture 2013 %	Number of Hourly Means > $200\mu\text{g m}^{-3}$				
					2009	2010	2011	2012 <sup>c</sup>	2013
Bulverhythe	Roadside	Y	-	32	0	0	0	0	0
Freshfields	Roadside	N	-	0	0	0	0	0	0

In bold, exceedence of the NO<sub>2</sub> hourly mean AQS objective ( $200\mu\text{g m}^{-3}$  – not to be exceeded more than 18 times per year)

## Diffusion Tube Monitoring Data

The monitoring results given in Table 2.5 are the annualised and bias adjusted results, with distance correction applied where needed, for the diffusion tubes exposed in 2013 (as detailed earlier in Table 2.2). There were no results that exceeded  $60 \mu\text{g m}^{-3}$ ; indicating that the hourly objective was not exceeded.

The overall data capture rates for all of the diffusion tube monitoring sites during 2013 was reasonable (at 72%). Five of the sites had over 80% data capture; whereas two others had only 50%. There were staffing problems during the year, which hampered the survey and led to occasional lengthy exposure periods. To partly compensate for the reduced data capture, annualising factors were derived from continuous monitoring sites in the Sussex Air Quality Monitoring Network that had good data capture, in accordance with Defra's TG09 guidance. The background sites chosen were Brighton Preston Park and Lullington Heath (these sites are also part of the Defra AURN network), plus Holly Park in Eastbourne. The annualising factors derived from these sites were between 1.01 and 1.18; with the greatest adjustment needed for the two diffusion tube sites with only 50% data capture.

Three sites had results that were very close to the annual mean objective of  $40 \mu\text{g m}^{-3}$ . These were located at along Bexhill Road (sites 6, 7 and 9). Of these, site 6 near the Boat on Bexhill Road is located close to a bus stop and it has no relevant exposure close by. With a distance correction the annual mean concentration falls to around  $28 \mu\text{g m}^{-3}$ , and thus easily meets the objective. Sites 7 and 9 are located within 20m of one another. Both are located close to house facades on the southern side of Bexhill Road, near to where the road bends under the railway bridge. As a consequence the location frequently had queuing traffic on the westbound side of the road, resulting in the elevated measured concentrations. The results for both with distance correction only just met the objective.

Of the other roadside sites, only the site in Harley Shute was border-line (i.e. above  $36 \mu\text{g m}^{-3}$ ). This site is located around 10m from the nearest site of relevant exposure and therefore concentrations at the nearest façade are much less. The remainder of

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the sites also met the objective, with six of these measuring between 20 and 30  $\mu\text{g m}^{-3}$  and two others measuring less than 20  $\mu\text{g m}^{-3}$ .

In previous years all of the Hastings sites have also met the objective.

Table 2.5 Results of NO<sub>2</sub> Diffusion Tubes 2013

Site ID	Location	Site Type	Within AQMA?	2013 Data Capture (Number of Months)	2013 Bias adjusted annual mean ( $\mu\text{g m}^{-3}$ ) <sup>a b</sup> (Bias Adjustment factor used = 0.77)
1	St Luke's, 19 Barnfield Close	Roadside	N	7	18.9
2	Carlisle Parade	Roadside	N	10	26.9
3	Manor Road	Roadside	N	9	14.3
4	Ore Church, Old London Road	Roadside	N	9	25.7
5	Harley Shute	Roadside	N	8	37.4
6	Bexhill Road Boat	Roadside	N	10	42.9 (28.2)
7	81 Bexhill Road	Roadside	N	6	39.5
8	45 Bexhill Road	Roadside	N	9	29.7
9	71 Bexhill Road	Roadside	N	6	40.1 (39.7)
10	139 Bexhill Road	Roadside	N	9	29.3
11	Bexhill Rd rail bridge	Roadside	N	7	24.7
12	West Marina Gardens	Roadside	N	10	28.5
13	114 Bohemia Road	Roadside	N	10	35.1
14	116 Bohemia Road	Roadside	N	10	33.7

In bold, exceedence of the NO<sub>2</sub> annual mean AQS objective of 40 $\mu\text{g m}^{-3}$

<sup>a</sup> The results for all sites were "annualised" as in Box 3.2 of TG(09)(<http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38>).

<sup>b</sup> The results in brackets were those with the NO<sub>2</sub> concentration at the nearest relevant exposure derived using a distance correction as in Box 2.3 of TG(09) (<http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=30>).

### 2.2.2 Particulate Matter (PM<sub>10</sub>)

The TG09 guidance highlights that any PM<sub>10</sub> monitoring undertaken must conform to criteria relating to the gravimetric European reference method or its approved equivalent. The Council uses a TEOM instrument, which requires the use of the VCM (Volatile Correction Model) correction to meet the equivalence criteria.

The VCM method is based on the assumption that the volatile component of PM<sub>10</sub> lost during the heated sampling of PM with the standard TEOM is consistent across a defined geographical area. The model uses the FDMS purge measurement as an indicator of this volatile component. As FDMS instruments have met the equivalence criteria, the VCM correction is also considered equivalent to the European reference method.

The results for the Hastings sites are reported below as **reference equivalent**, these represent TEOM measurements that were corrected using the VCM. The data are all fully ratified. The data capture for the Bulverhythe site was low in 2013 and therefore it was adjusted using annualised factor (of 0.98) derived from the nearby Sussex sites in Lewes, Chichester and Rother.

Both Hastings monitoring sites met the annual mean objective for the 2009 to 2013 period (as shown in Table 2.6) (although the Freshfields site closed in 2011). The annual mean concentration monitored for 2013 at the Bulverhythe site was around 21  $\mu\text{g m}^{-3}$  and 2012 was 22  $\mu\text{g m}^{-3}$ . The annual mean concentrations for previous years at both sites were higher around 26 to 30  $\mu\text{g m}^{-3}$ .

The daily mean objective, which has been exceeded more widely across the UK than the annual mean objective, is reported in Table 2.7. The 2013 monitoring results for the Bulverhythe site indicate that the objective was met. There were no days that exceeded 24-hour mean concentrations over 50  $\mu\text{g m}^{-3}$  during the period of monitoring in 2013. The 90.4<sup>th</sup> percentile of daily means was 31  $\mu\text{g m}^{-3}$  and therefore much less than 50  $\mu\text{g m}^{-3}$  again confirming that the objective was met.

Prior to 2011 the two Hastings sites had an increased number of days that exceeded compared to previous years. This was mainly due to the higher vehicle activity in the area when the Freshfields site was operating. This decrease in concentrations measured in Hastings over time compared to other Sussex monitoring sites is shown in Figure 3.

Figure 3 Percentage change in running annual mean PM<sub>10</sub> since 2006

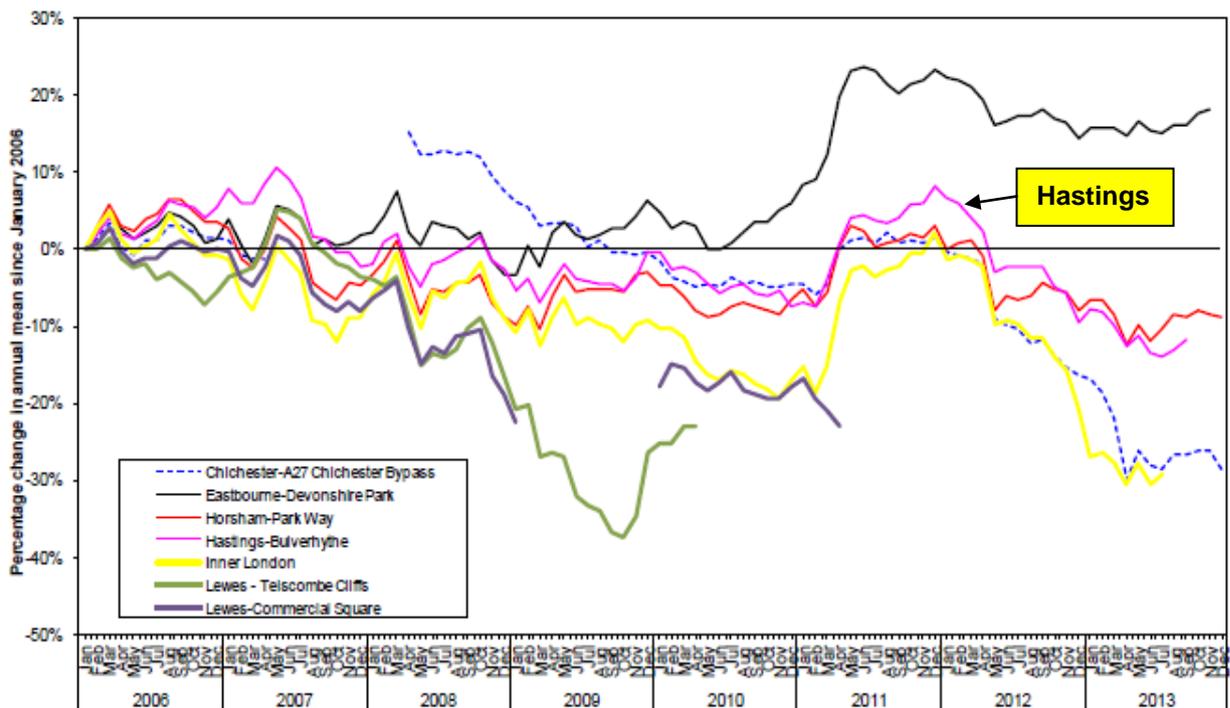
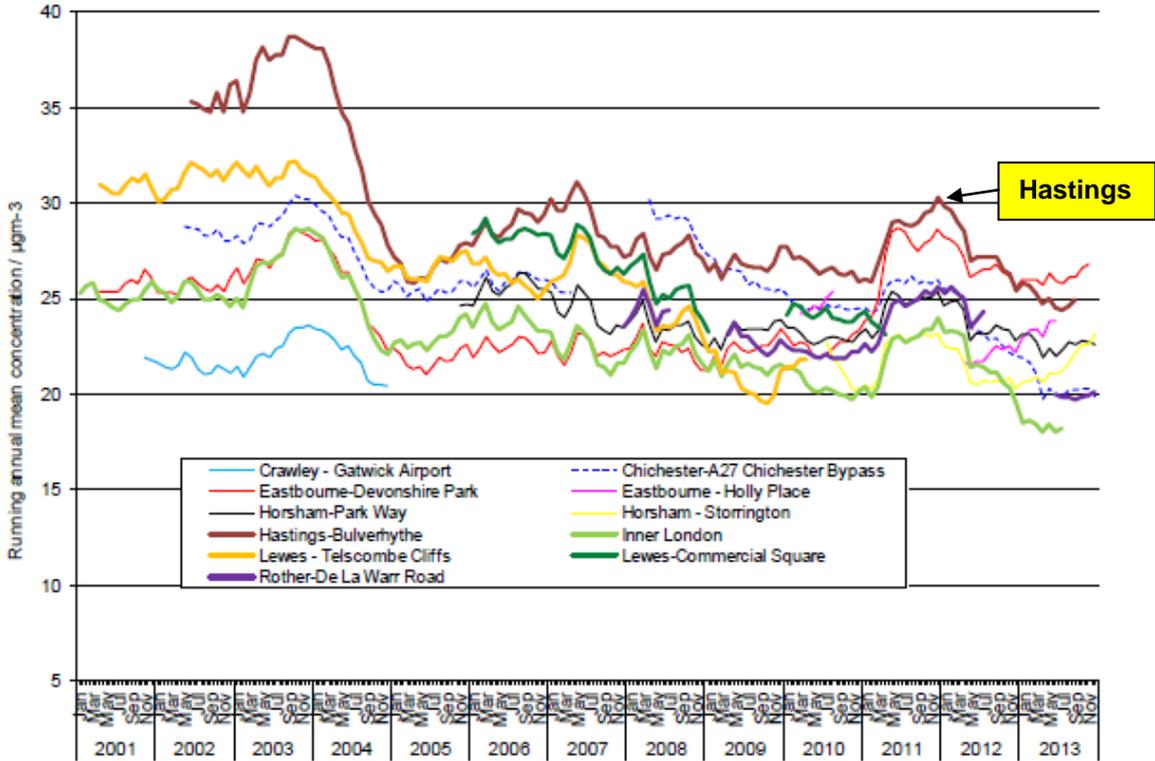


Figure 4 shows changes in concentration at the Hastings Bulverhythe site compared to other Sussex sites for the period from 2001 to 2013. This figure shows that PM<sub>10</sub> concentrations at Bulverhythe were higher than most other Sussex sites and indicative of a roadside site.

The figure shows that concentrations in general have decreased over time; most prominently around 2003. Since 2005 there has been little change, with some years having higher concentrations than others. More recently in 2011 there were widespread ‘moderate’ PM<sub>10</sub> episodes that occurred between February and May. These episodes were due to polluted continental air mass which was transported from Europe by a south easterly airflow. These episodes resulted in the higher annual mean measurements for the year.

Figure 4 Running annual mean PM<sub>10</sub> concentrations (from 2001 to 2013)



**Table 2.6 Results of Automatic Monitoring for PM<sub>10</sub>: Comparison with Annual Mean Objective**

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period %	Valid Data Capture 2013 % <sup>a</sup>	Confirm Gravimetric Equivalent (Y or N/A)	Annual Mean Concentration ( $\mu\text{g m}^{-3}$ )				
						2009	2010	2011	2012	2013 <sup>b</sup>
Bulverhythe	Roadside	Y	-	44	Y	28	26	30	22	20.6 (20.2)
Freshfields	Roadside	N	-	0	Y	27	28	35	-	-

<sup>a</sup> 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%)

<sup>b</sup> Mean "annualised" as in Box 3.2 of TG(09) (<http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38>), as valid data capture was less than 75%

Table 2.7 Results of Automatic Monitoring for PM<sub>10</sub>: Comparison with 24-hour Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period %	Valid Data Capture 2013 % <sup>a</sup>	Confirm Gravimetric Equivalent (Y or N/A)	Number of Daily Means > 50µg m <sup>-3</sup>				
						2009	2010	2011	2012	2013 <sup>b</sup>
Bulverhythe	Roadside	Y	-	44	Y	15	8	2	1	<i>0 (31)</i>
Freshfields	Roadside	N	-	0	Y	16	14	14	-	-

In bold, exceedence of the PM<sub>10</sub> daily mean AQS objective (50µg m<sup>-3</sup> – not to be exceeded more than 35 times per year)

<sup>a</sup> 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%)

<sup>b</sup> Data capture for full calendar year was less than 90%, the 90.4<sup>th</sup> percentile of 24-hour means in brackets

### 2.2.3 Summary of Compliance with AQS Objectives

Hastings Borough Council has examined the results from monitoring across the Borough. Concentrations are below the objectives for nitrogen dioxide and PM<sub>10</sub>. As a result of these findings there is no need to proceed to a Detailed Assessment based on monitoring. The Council will however closely monitor concentrations on the A259 where borderline results were recorded in 2013.

### 3 New Local Developments

This section deals with any changes in the Borough that may affect air quality. It has only been necessary to consider locations which have not been assessed during the earlier rounds, or where there has been a change or new development.

There have been no developments with the potential to affect air quality in the Borough since the last report.

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

Hastings 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 Air Quality Planning Policies

The Hastings Planning Strategy is at the heart of the new Local Plan and it provides a long term plan to deliver regeneration and sustainable growth in the Borough up to 2028. It is not concerned with individual development sites or specific details as its purpose is to set an overall framework for the future of the town. It ensures all development is consistent with our Community Strategy and provides an analysis of the challenges and opportunities we face.

It was assessed by an Independent Planning Inspector, who concluded that the Hastings Planning Strategy, along with the recommended Main Modifications, satisfied the requirements of Section 20(5) of the Planning and Compulsory Purchase Act and met the criteria for soundness in the National Planning Policy Framework. The Hastings Planning Strategy was adopted by Full Council on 19 February 2014, and now forms part of the statutory Development Plan for the Borough.

The Hastings Planning Strategy can be found at:

[http://www.hastings.gov.uk/environment\\_planning/planning/localplan/adoption/planning\\_strategy\\_feb2014/](http://www.hastings.gov.uk/environment_planning/planning/localplan/adoption/planning_strategy_feb2014/)

The Strategy includes a series of policies and specific examples relevant to air quality are provided below:

### *POLICY T3: Sustainable Transport*

The Council will work with East Sussex County Council using the Local Transport Plan 3 policy framework and other partners to achieve a more sustainable transport future for Hastings. Particular priority will be given to:

- improving bus routes, through support for the provision and improvement of bus priority lanes and junction approaches, services and passenger facilities,

## Hastings Borough Council

- supporting the provision of new and enhanced cycle routes in the town, and in particular, supporting the implementation of the strategic cycle network as identified on the key diagram and the Policies Map,
- improving walking routes for pedestrians,
- ensuring that new development is located close to existing public transport provision where possible,
- requiring developers to consider the needs of pedestrians and cyclists in developments and deliver appropriate measures,
- improving the safety of the highway network,
- improving air quality and the environment generally,
- examining the potential for adopting other “smarter choices” measures, including workplace and school travel plans; travel awareness campaigns, car clubs/car sharing schemes, teleworking and home shopping

Transport Assessments will also be required for development schemes depending on the potential impact on the road network.

### *The Bexhill - Hastings Link Road*

The Bexhill - Hastings Link Road will enter Hastings north of Crowhurst Road junction with Queensway. The Link Road is a key priority for both Hastings and Rother Councils, and is central to improving transport conditions in Bexhill/ Hastings and supporting the £300m of economic regeneration funding that has already been invested in education, business and residential infrastructure projects in the two towns. Delivery of the scheme will facilitate further economic regeneration as well as enable large scale housing and employment development in the Bexhill/Hastings area. This will help to address the issues of lower than average household income, high levels of unemployment compared to the rest of the region, as well as deprivation issues in Hastings specifically.

The Bexhill - Hastings Link Road will contribute to relieving congestion along the A259, allowing businesses to operate more efficiently and improving the health and quality of life of people living in the vicinity of the A259. The complementary works of developing the Combe Valley Countryside Park, implementing cycle routes and a

'greenway', a quality bus corridor along the A259 between Glyne Gap and Filsham Road, and localised improvements to the Harrow Lane and Queensway junctions on The Ridge, will enhance the positive impacts of the scheme and improve access for pedestrians, cyclists and public transport users.

*POLICY FA6: Strategic Policy for the Seafront*

Along the Seafront, we will:

- a) Encourage the regeneration of key landmark sites along the seafront, from the Stade to West Marina, supporting development that builds on the Seafront's distinctive heritage and attractiveness as a destination for leisure and recreational activity
- b) Take forward key projects and proposals in the Seafront Strategy to contribute to a co-ordinated plan for the Coastline in Hastings and Bexhill
- c) Implement the strategic network of cycle routes along the Seafront to connect with the strategic open spaces, nature conservation areas and community facilities in the rest of the town
- d) Support leisure and residential development to create an appealing destination at West Marina
- e) Continue to lobby and support the delivery of the Hastings - Bexhill Link Road to relieve congestion along the A259

## 5 Energy, Climate Change and Sustainability

The Hastings and St Leonards Town-wide Climate Change Strategy and Action Plan 2012 set out a vision, an approach and ten themes towards a town-wide climate change strategy and action plan.

This climate change plan connects with other strategies of the Council, other agencies and organisations, including the East Sussex Climate Change Strategy. It will also build on Hastings Borough Council's first climate change strategy, developed in 2005 and complements the emerging Local Plan, and links directly to the Anti-Poverty Strategy.

The following factors are proposed as part of the way we make decisions and in what we do with the active support of our citizens:

**Mitigation:** The action we take to limit further climate change by reducing our own, and encouraging the community to reduce their own, greenhouse gas emissions; especially carbon dioxide (CO<sub>2</sub>).

**Adaptation:** Preparing the community for the changes that are now inevitable and may increase further if we do not act now to reduce greenhouse gas emissions.

The strategy sets out ten activity areas that where we already work, or could work together in future, to tackle the impacts of climate change in the town:

- A low carbon economy and working with business

- Low carbon homes and buildings

- Renewable energy and energy efficiency

- Transport

- Waste

- Water

Natural environment and green spaces

Food

Health and wellbeing

Community engagement

## **6 Conclusions and Proposed Actions**

### **6.1 From New Monitoring and Modelling Data**

The 2013 monitoring results within the Borough confirmed that the annual mean nitrogen dioxide objective was not exceeded at roadside and nearby locations. The sites monitored are considered to represent relevant exposure. Two sites with relevant exposure nearby were however borderline and the Council will closely monitor these sites in the future. Both of these sites had reduced data capture and accordingly assumptions were made.

The 2013 monitoring results within the Borough confirmed that the PM<sub>10</sub> objectives were not exceeded at roadside and nearby locations.

Based on these findings, the Council does not need to undertake a Detailed Assessment, as no new potential or actual exceedences at relevant locations were established.

### **6.2 Relating to New Local Developments**

The Council has assessed local developments of road transport, other transport, industrial processes, commercial/domestic, fugitive emissions, plus residential and commercial sources. The findings for these have indicated that there are no new changes that require the Council to undertake a Detailed Assessment.

### **6.3 Other Conclusions**

The Council is now working with partners on projects as part of its Hastings Planning Strategy which should lead to air quality improvements on the A259 at Bulverhythe. The Council is also continuing to seek funding to optimise and focus further air quality actions as part of its Climate Change Strategy.

## 6.4 Proposed Actions

This report follows the technical guidance (TG09) and fulfils this part of the continuing LAQM process.

The findings from following this methodology are that the Council has not identified a need to proceed to a Detailed Assessment.

The Council will therefore undertake the following actions:

1. Undertake consultation on the findings arising from this report with the statutory and other consultees as required.
2. Maintain the existing monitoring programme so far as reasonably practicable.
3. Prepare for the submission of its next Air Quality report.

## 7 References

Defra, 2007. Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Volume 1). Defra, London. Cm 7169.

Defra, 2009a. Local Air Quality Management, Technical guidance LAQM.TG09. Defra, London.

KCL, 2012. Sussex Air Pollution Monitoring Network Annual Report, 2011. KCL October 2012

KCL, 2014. Sussex Air Pollution Monitoring Network Annual Report, 2013. KCL November 2014

# Appendix

## Part A/ B installations in Hastings

In the Hastings & St Leonards area, the Environment Agency is responsible for the Deutsch factory in Stanier Road whilst the Council is responsible for the following operations:

Hansons, The Quarry, Sedlescombe Road North, Hastings (batching)

The Crematorium, The Ridge, Hastings (crematorium)

St Leonards Motors, Brunel Road, St Leonards (vehicle respray)

Stamco, Highfield Drive, St Leonards (wood)

Collins and Hayes, Menzies Road, Hastings (wood)

In addition all petrol stations and dry cleaners are permitted and there are a number of premises which used to hold permits but which have since closed or where activities have fallen to a size at which a permit is no longer relevant.