







ASHFORD BOROUGH COUNCIL

2011 AIR QUALITY PROGRESS REPORT

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Executive Summary

Part IV of the Environment Act 1995 places a statutory duty on local authorities to review and assess the air quality within their area and take account of Government Guidance when undertaking such work. This Progress Report is a requirement of the Fourth Round of Review and Assessment and is a requirement for all local authorities. The report is submitted within the permitted schedule of reporting - end of April 2011. The Report has been undertaken in accordance with the Technical Guidance LAQM.TG (09) and associated tools (as updated in 2010).

This Progress Report considers all new monitoring data and assesses the data against the Air Quality Objectives. It also considers any development changes that may have an impact on air quality as well as updating on any relevant strategy and policy changes.

Having considered the latest monitoring data and development updated, it is concluded that the air quality objectives for benzene, 1, 3-butadiene, carbon monoxide, lead, PM₁₀ and sulphur dioxide will be met. There is no requirement to undertake a detailed assessment for these pollutants.

Moreover in 2010 there were no exceedences of the AQS objectives for nitrogen dioxide at any monitoring site within Ashford.

Therefore there is no need for a Detailed Assessment at this stage.

Proposed actions arising from this Progress Report are as follows:

- Continue with monitoring programme around J10 of the M20 to ensure continuing compliance with the air quality objectives.
- Continue with monitoring within Ashford town centre to confirm on going compliance with the air quality objectives.
- Progress to the 2012 Updating Screening and Assessment.

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1 Introduction

1.1 Description of Local Authority Area

The largest borough in Kent, Ashford has a fast-growing population which has more than trebled in the last 40 years to around 112,000 residents. Designated by the Government as a growth area, a £2.5 billion investment programme is under way to provide 31,000 new homes and 28,000 jobs by 2031. Although the urban area of Ashford is expanding, much of the borough is rural in character, including protected areas such as Romney Marsh, the North Downs and the High Weald.

The main source of air pollution in the borough is road traffic emissions from major roads, notably the M20, A20, A28 and A292. Other pollution sources, including commercial, industrial and domestic sources, also make a contribution to background pollution concentrations.

1.2 Purpose of Progress Report

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 Local Authority (LA) 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 Local Air Quality Management (LAQM) in England are set out in the Air Quality (England) Regulations 2000 (SI 928), and the Air Quality (England) (Amendment) Regulations 2002 (SI 3043). They are shown in Table 1. This table shows the objectives in units of microgrammes per cubic metre $\mu\text{g}/\text{m}^3$ (for carbon monoxide the units used are milligrammes per cubic metre, mg/m^3). Table 1 includes the number of permitted exceedences in any given year (where applicable).

Table 1 - Air Quality Objectives included in Regulations for the purpose of Local Air Quality Management in England.

Pollutant			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 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5 $\mu\text{g}/\text{m}^3$	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
Particles (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

Between 1998 and 2001, Ashford Borough Council undertook its first round of review and assessment of air quality. The first round assessments (Stages 1, 2 and 3) concluded that it was not necessary to declare any Air Quality Management Areas (AQMA) for any pollutant.

The first phase of the second round of review and assessment, the Updating and Screening Assessment (USA), was completed in May 2003 and this provided an update with respect to air quality issues within the borough since the previous round. The USA concluded that a detailed assessment was required for particulates (PM₁₀) due to road traffic emissions from the M20 between Junctions 9 & 10. The highest predicted levels were identified at receptors 25 m south of the M20, near Canterbury Road. The Detailed Assessment (April 2004) concluded that the objectives would in fact be met at relevant receptors near the M20 and no AQMA declaration was required.

The third round of review and assessment, undertaken between 2006 and 2008, concluded that all prescribed objectives would be met and no detailed assessment was required. Therefore, no AQMA was declared.

The first phase of the fourth round of review and assessment (USA 2009) concluded that the air quality objectives for benzene, 1, 3-butadiene, carbon monoxide, lead, PM₁₀ and sulphur dioxide would be met. However, the USA identified exceedences of the annual mean NO₂ objective in 2008 as follows:

- at one location in Lees Road, near the M20 J10 (identified through passive diffusion tube monitoring);
- At a kerbside location in Canterbury Road (identified through passive diffusion tube monitoring), where there was no relevant exposure. This site was re-located in 2008 to a relevant receptor location in Gore Court;
- On the basis of DMRB modelling, annual mean NO₂ concentrations were predicted to be above 36 µg/m³ (but met the objective of 40µg/m³) at three locations, such as to warrant further investigation. These locations were junctions of the A292 Somerset Road with North Street, Wellesley Road and New Street.

At the time of the USA, proposals by the Highway Agency to build a new junction 10A (as the capacity of J10 is insufficient to enable further major development in the southeast part of Ashford) had not been finalised. Also, proposals to address 'operation stack' (when the police use the M20 for parking HGVs when there is a problem at the Port of Dover) were unclear. Therefore, Ashford Borough Council did not consider it prudent to proceed to a detailed assessment on the basis of the marginal NO₂ annual mean exceedence in Lees Road, but instead established a continuous NO₂ analyser in the locality.

In addition, since the USA 2009, Ashford Borough Council has undertaken additional monitoring of NO₂ using passive diffusion tubes at relevant receptor locations at junctions along the A292 Ashford Circular Road where DMRB model predictions in 2008 were above 36µg/m³.

The 2010 Annual Progress Report found there were no exceedences of the annual mean NO₂ objective, identified through passive diffusion tube monitoring, near Junction 10 of the M20 at the location relevant of public exposure. Also monitoring indicated the objectives were likely to be met at the junctions along the A292 Ashford Circular Road system. Thus there was no need for any detailed assessments at that time.

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

This section provides details of monitoring carried out in 2010, the year covered by this report.

Only one change in monitoring sites since the year 2009 (as reported in the Annual Progress Report 2010) was made as follows (all other sites remained the same):

- The temporary automatic NO₂ monitoring near Junction 10 M20 (Lees Road) was extended from a 6 month period to a 12 month duration between 10/11/2009 – 10/11/2010.

2.1.1 Automatic Monitoring Sites

Figure 1 - Automatic Monitoring Sites Ashford Background (Ashford School) Continuous Analyser

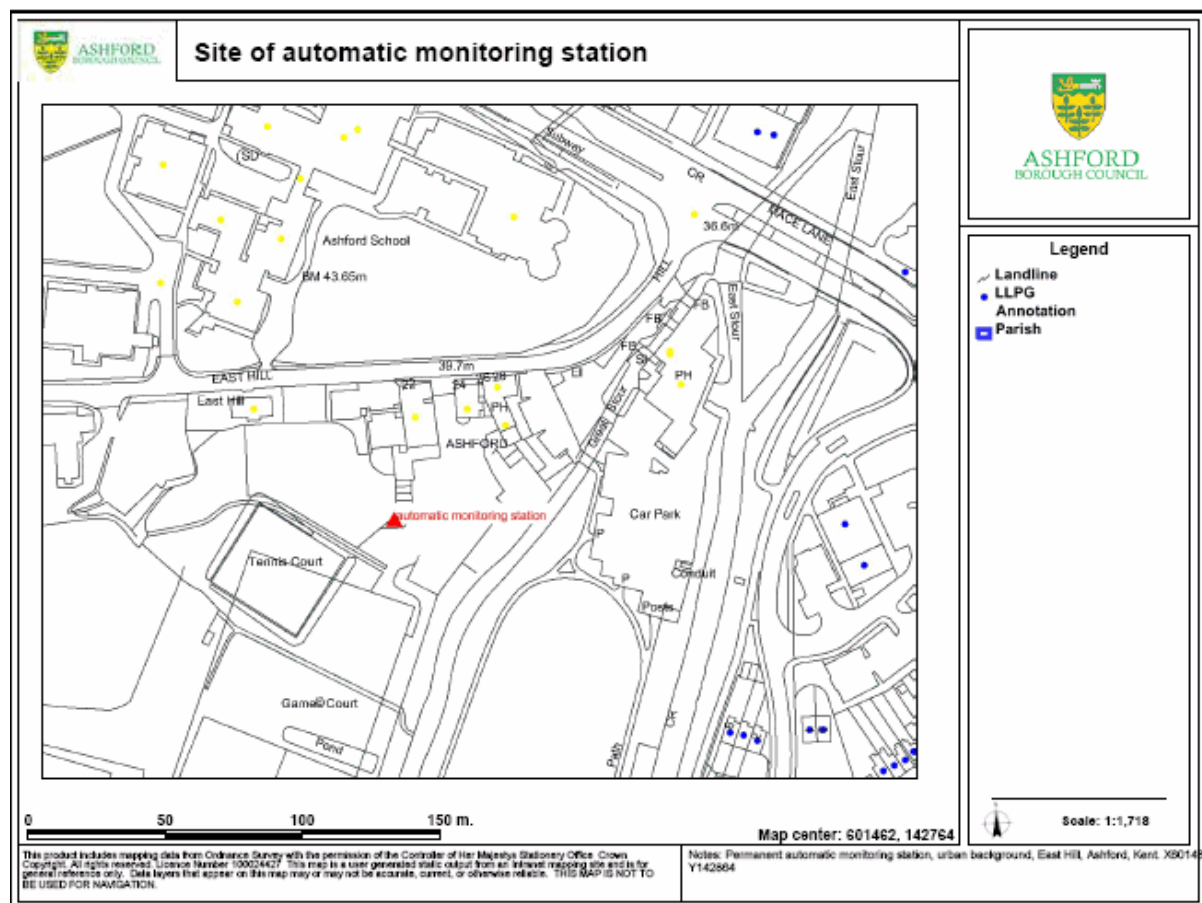
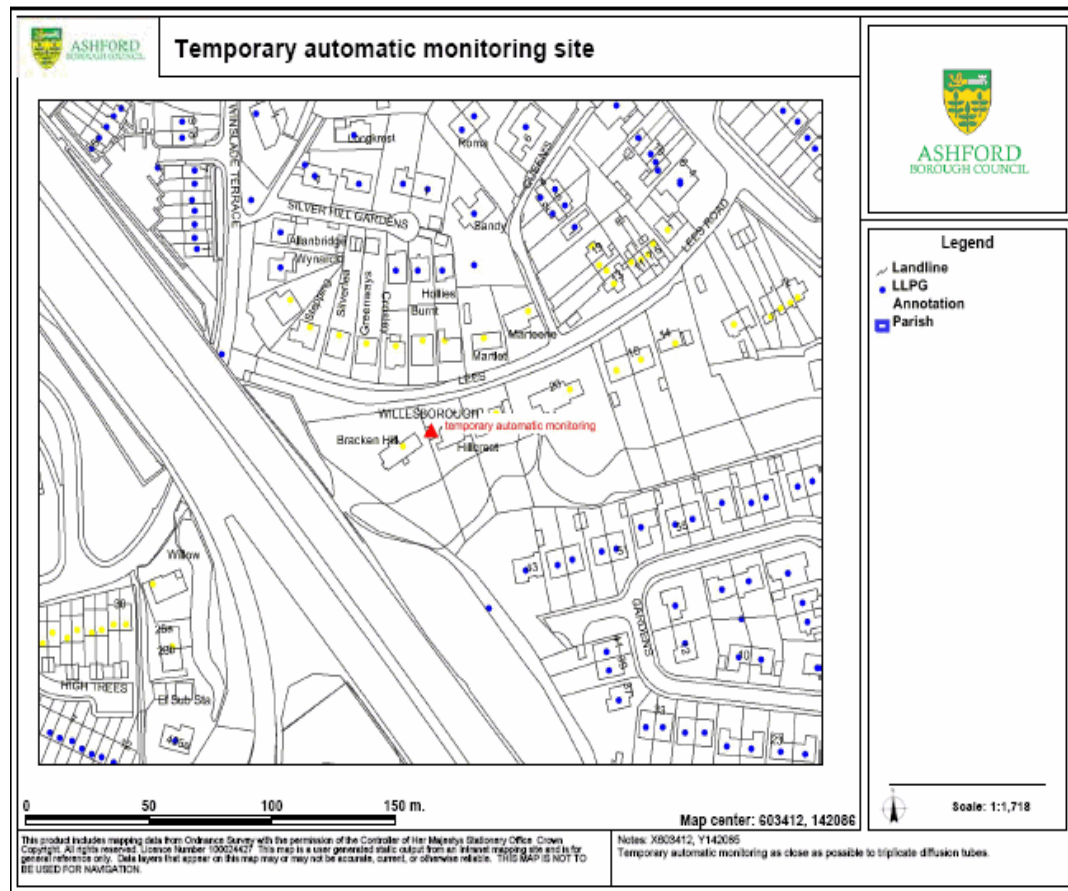


Figure 2 - Ashford M20 (Lees Road) Background Continuous Analyser



There is currently automatic monitoring of NO₂ (using a chemiluminescent analyser), PM₁₀ (using a Tapered Element Oscillating Microbalance (TEOM)) and ozone undertaken at the urban background Ashford Background (Ashford School) site, which commenced in September 2008, when it was relocated from its former location at the nearby roadside site. The station is owned by the Kent and Medway Air Quality Monitoring Network (KMAQMN) and managed by current network managers AEA. The Council calibrates the site every two weeks. There are triplicate NO₂ diffusion tubes co-located at the site, which can provide co-location data for calculation of the bias adjustment factor. This has been taken into account in this report and should be considered as part of future reports.

The Quality Assurance/Quality Control (QA/QC) procedures for the KMAQMN are equivalent to the UK Automatic Urban and Rural Network (AURN) procedures with the exception of the following:

- Calibration of NO_x analysers with NO gas (AURN also use NO₂)
- Data checks are done once daily and downloads are done twice daily (AURN are hourly)
- Independent audits of the stations are undertaken annually (AURN are 6 monthly).

Continuous data monitoring (urban background site for NO₂ only) has been undertaken at a property on Lees Road, near J10 of the M20. This site was installed on a 12 month basis to verify the NO₂ passive diffusion tube measurements at this site. This site was chosen as the closest possible to the triplicate diffusion tubes on the neighbouring property. The automatic monitoring and passive monitoring were set at an equivalent height.

Table 2 - Details of Automatic Monitoring Sites

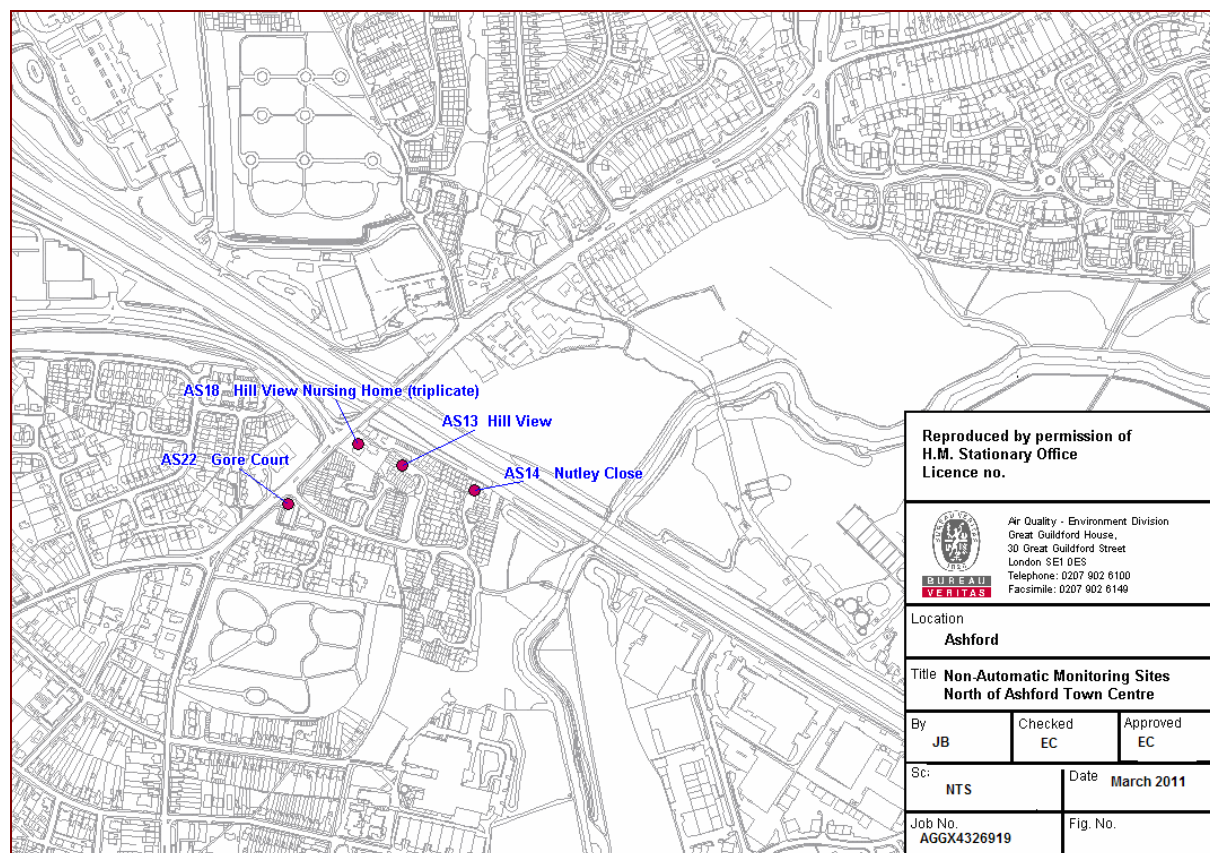
Site Name	Site Type	OS Grid Ref (X, Y)	Pollutants Monitored	Monitoring Technique	In AQMA?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to Kerb of Nearest Road (N/A if not applicable)	Does Location Represent worst-case Exposure?
Ashford School Background	Urban Background	X=601431, Y=142735	O ₃ , NO ₂ , PM ₁₀	Chemiluminescent (NO ₂) ultra violet absorption (O ₃) TEOM (PM ₁₀)	No	Y-0m	N/A	No
Ashford M20 (Lees Road) Background	Urban Background	X=603412 Y=142085	NO ₂	Chemiluminescent	No	Y-0m	N/A	No

2.1.2 Non-Automatic Monitoring

Outside the continuous monitoring network, Ashford Borough Council undertook monitoring at 14 NO₂ diffusion tubes sites in 2010. The diffusion tubes are supplied and analysed by Harwell Scientifics utilising the 50% Triethanolamine (TEA) in acetone preparation method. Harwell Scientifics participate in the Workplace Analysis Scheme for Proficiency (WASP: see Appendix A) for NO₂ diffusion tube analysis and the Annual Field Inter-Comparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO₂ concentrations reported are of a high calibre. The lab follows the procedures set out in the Harmonisation Practical Guidance.

With regard to the application of a bias adjustment factor for the diffusion tubes, the technical guidance LAQM.TG (09) and the LAQM Support Helpdesk¹ recommends use of a local bias adjustment factor where available and relevant to diffusion tube sites. Ashford Borough Council has a background site co-location study, which is not considered as representative of the diffusion tube sites, typically roadside or façade-based, in the area. Therefore, the bias factor has been incorporated into the diffusion tube spreadsheet of national comparison studies² to derive a bias-adjustment factor for 2010 of 0.78. Additional information is provided in Appendix A). The bias adjustment factors for previous years were taken from previous LAQM reports. These were 0.81 in 2009, 0.80 in 2008.

Figure 3 - Map of Non-Automatic (Diffusion Tube) Monitoring Sites: North of Ashford Town Centre



¹ <http://laqm.defra.gov.uk/>

² <http://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html>

Figure 4 - Map of Non-Automatic (Diffusion Tube) Monitoring Sites: Ashford Town Centre

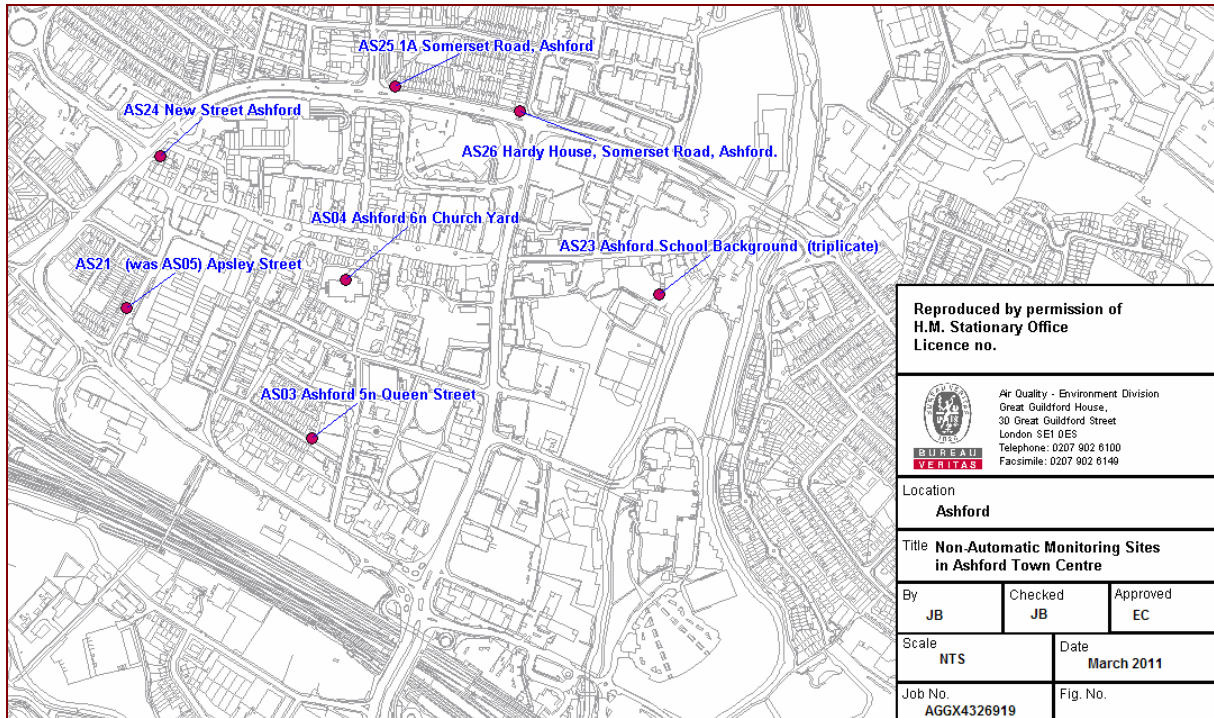


Figure 5 - Map of Non-Automatic (Diffusion Tube) Monitoring Sites: Near Junction 10 M20

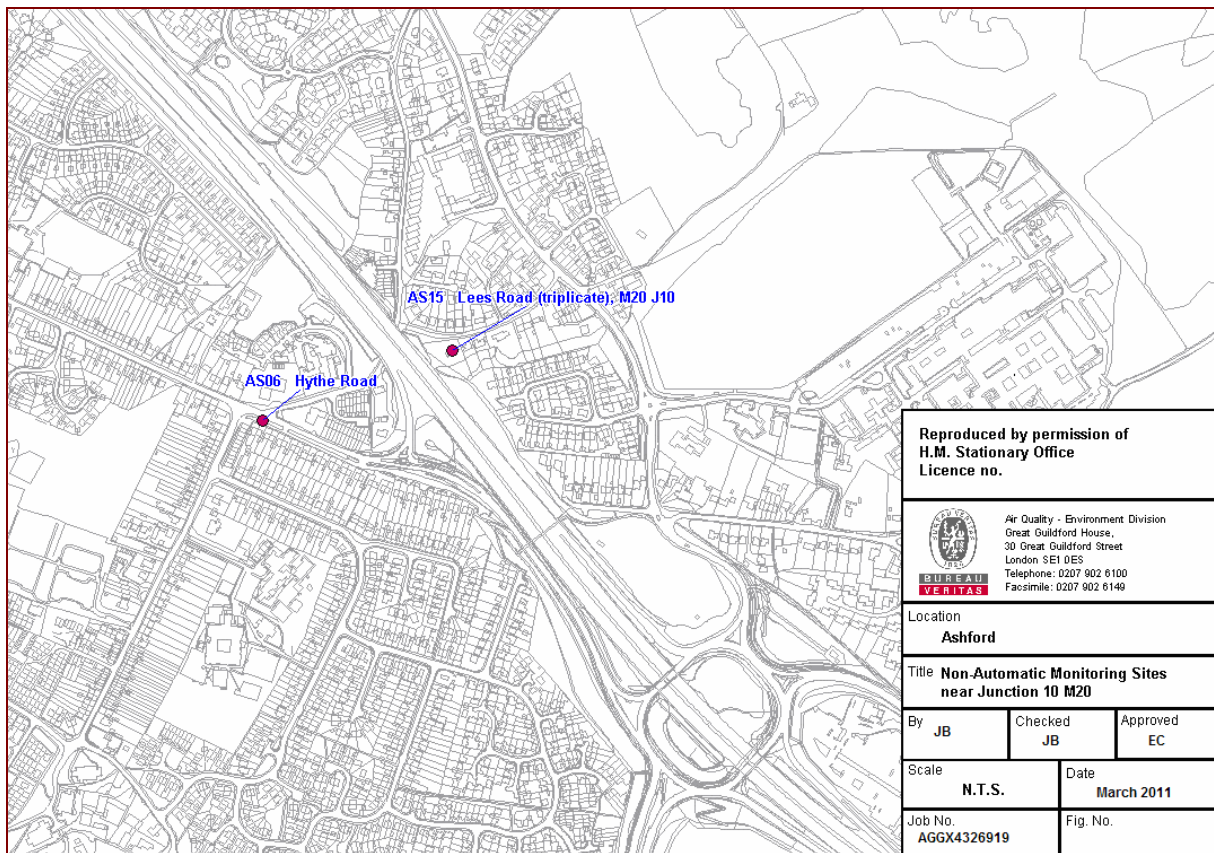


Figure 6 - Map of non-automatic (Diffusion Tube) monitoring site: Tenterden

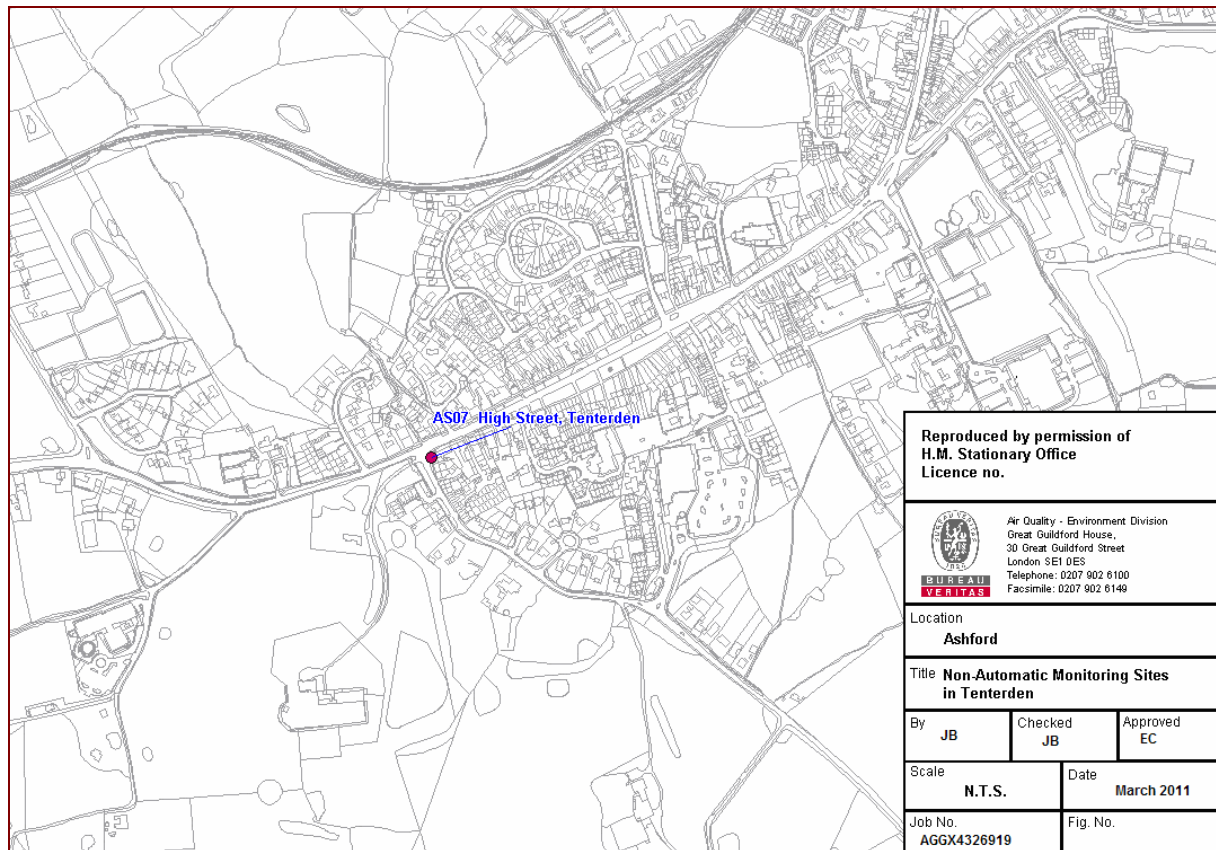


Table 3 - Details of Non- Automatic Monitoring Sites

Site Name	Site Type	OS Grid Ref (x, y)		Pollutants Monitored	In AQMA?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Worst-case Location?
AS03 Ashford 5n Queen Street	Roadside	600976	142547	NO ₂	No	Y – in line with facade	3 m	No
AS04 Ashford 6n Church Yard	Background	601021	142754	NO ₂	No	N	N/A	No
AS06 Hythe Road	Roadside	603153	141990	NO ₂	No	Y-6 m	2 m	No
AS07 High Street, Tenterden	Roadside	587945	133079	NO ₂	No	N	8 m	No
AS13 Hill View	Roadside	601367	143541	NO ₂	No	Y-0 m	45 m	No
AS14 Nutley Close	Roadside	601460	143509	NO ₂	No	Y-0 m	22 m	No
AS15 Lees Road (triplicate), M20 J10	Roadside	603401	142081	NO ₂	No	Y-0 m	30 m (M20)	No
AS18 Hill View Nursing Home (triplicate)	Roadside	601309	143569	NO ₂	No	Y-0 m	16.5 m	No
AS21 (was AS05) Apsley Street	Roadside	600734	142717	NO ₂	No	Y-0 m	3.5 m	No
AS22 Gore Court	Roadside	601218	143491	NO ₂	No	Y-0 m	11 m	No
AS23 Ashford School Background (triplicate)	Background	601431	142735	NO ₂	No	Y-0 m	N/A	No
AS24 New Street Ashford	Roadside	600778	142915	NO ₂	No	N	10m	No
AS25 1A Somerset Road, Ashford	Roadside	601085	143007	NO ₂	No	Y- 0m	2.5m	Yes
AS26 Hardy House, Somerset Road, Ashford.	Roadside	601249	142975	NO ₂	No	Y -1.8m	3.5 m	Yes

2.2 Comparison of Monitoring Results with Air Quality Objectives

2.2.1 Nitrogen Dioxide

Automatic Monitoring Data – Ashford School Background

The 2010 data show no exceedences of the nitrogen dioxide objectives at the Ashford School background automatic monitoring site (Table 4 and Table 5). The data capture for 2010 was below the recommended 75%, and therefore annualisation was carried out. Details are provided in Appendix A.

Table 4 - Results of Automatic Monitoring for NO₂: Comparison with Annual Mean Objective

Site ID	Location	Within AQMA?	Data Capture for Full Calendar Year 2010 %	Annual Mean Concentrations (µg/m ³)		
				2008	2009	2010
ZA3	Ashford School Background	No	56	24	21	20.0*

*Annualised

Table 5 - Results of Automatic Monitoring for NO₂: Comparison with 1-hour Mean Objective

Site ID	Location	Within AQMA?	Data Capture for Full Calendar Year 2010 %	Number of Exceedences of Hourly Mean (200 µg/m ³)		
				2008	2009	2010
ZA3	Ashford School Background	No	56	0	0	0 (90)

* If the period of valid data is less than 90% of a full year, the 99.8th percentile of hourly means is shown in brackets

Automatic Monitoring Data – Ashford M20 J10 Background

The 2010 data show no exceedences of the annual mean nitrogen dioxide objective at the Ashford M20 J10 background automatic monitoring site (Table 6). The monitoring programme covered a 12 month period (10/11/2009-10/11/2010).

Table 6 - Results of Automatic Monitoring for NO₂: Comparison with Annual Mean Objective

Site ID	Location	Within AQMA?	Monitoring Period	Data Capture for Monitoring Period %	Data Capture for Full Calendar Year 2010 %	Period Mean Concentration (µg/m ³)	Number of Exceedences of Hourly Mean (200 µg/m ³)
Ashford M20 J10 Background	Lees Road	No	10/11/2009 – 10/11/2010	94	80.3	34.5	0 (115)

* If the period of valid data is less than 90% of a full year, the 99.8th percentile of hourly means is shown in brackets

Diffusion Tube Monitoring Data

The NO₂ diffusion tube data are summarised in Table 7. The full dataset (monthly mean values) are included in Appendix B.

The 2010 diffusion tube results show no site exceeding the annual mean NO₂ objective. The only site approaching the annual mean objective is site A S06 found at Hythe Road–38.3µg/m³. This is higher than with the diffusion tube monitoring carried out in 2008.

Due to the uncertainties regarding on-going traffic management along the M20 near Junction 10, it is recommended that NO₂ monitoring (passive) be continued at this location, although there is no need at present to proceed to a Detailed Assessment.

Table 7 - Results of Nitrogen Dioxide Diffusion Tubes

Site ID	Location	Within AQMA?	Data Capture for Full Calendar Year 2010 %	Annual Mean Concentrations (µg/m ³)		
				2008	2009	2010
				Bias adjustment factor 0.80	Bias adjustment factor 0.81	Bias adjustment factor 0.78
AS03	Queen Street	N	75	24	20.5	21.8
AS04	Church Yard	N	100	21	19.0	22.0
AS06	Hythe Road	N	92	36	32.4	38.2
AS07	High Street, Tenterden	N	100	29	27.4	27.6
AS13	Hill View	N	100	27	25.1	25.9
AS14	Nutley Close	N	100	28	25.5	29.3
AS15 –17	J10 M20 Lees Road - Triplicate	N	100	43	38.4	34.0
AS18 –20	Hill View Nursing Home - Triplicate	N	100	32	28.9	31.3
AS21	Apsley Street	N	100	N/A	22.9	24.5
AS22	Gore Court	N	100	37	32.3	30.8
AS23 –25	Ashford School background - Triplicate	N	100	24	18.4	18.6
AS24	New Street A292	N	100	N/A	24.2	24.9
AS25	1A Somerset Rd A292	N	100	N/A	29.8	29.0
AS26	Hardy House A292	N	100	N/A	33.8	32.0

In bold exceedence of the NO₂ annual mean AQS objective of 40µg/m³

2.2.2 PM₁₀

The 2010 results (Table 8) show that the PM₁₀ objectives are continuing to be met at the Ashford School Background site. Data for the years 2008-2010 have been fully ratified. Data for 2009 and 2010 are VCM³ corrected.

Table 8 - Results of Automatic Monitoring for PM₁₀: Comparison with Annual Mean Objective

Site ID	Location	Within AQMA?	Data Capture for Full Calendar Year 2010 %	Annual Mean Concentrations (µg/m ³)		
				2008	2009 (VCM Corrected)	2010 (VCM Corrected)
Ashford School Background	East Hill	No	83.4	20	18	21

Table 9 Results of PM₁₀ Automatic Monitoring - Comparison with 24-hour Mean Objective

Site ID	Location	Within AQMA?	Data Capture for Monitoring Period %	Data Capture for Full Calendar Year 2010 %	Number of Daily Means > 50µg/m ³ *		
					2008	2009	2010
Ashford School Background	East Hill	No	83.4	83.4	-	3	0 (46.8)

* If data capture < 90%, the 90.4th percentile of daily means is included in brackets

2.2.3 Ozone (O₃)

Continuous monitoring of O₃ is undertaken by Ashford Borough Council at the Ashford School Background monitoring site. Data have been taken from the Kent & Medway Air Quality Monitoring Network. Ozone is a transboundary pollutant; the sources of ozone are frequently spatially distant from the measured site of the concentrations. This pollutant is not a prescribed air quality objective for LAQM.

The results from 2010 indicate the objective for ozone is being met.

Table 10 - Results of Automatic Monitoring for Ozone: Comparison with Objectives

Location	Within AQMA?	Description	% Data capture 2010	2008	2009	2010
Ashford School Background	No	Maximum 8-hour running mean > 100 µg/m ³	83	0	7	5

³ <http://www.volatile-correction-model.info/Default.aspx>

2.2.4 Summary of Compliance with AQS Objectives

Ashford Borough Council has examined the results from monitoring in the borough. Concentrations measured in 2010 are all below the objectives, therefore there is no need to proceed to a Detailed Assessment.

Ashford Borough Council has examined the results from monitoring in the borough. Concentrations are all below the objectives, therefore there is no need to proceed to a Detailed Assessment.

3 New Local Developments

3.1 Road Traffic Sources

There have been no changes to motorway junctions. The planned new junction along the M20 south of Ashford (10A) has been put on hold.

Changes have been made to increase the traffic capacity at Drovers roundabout (next roundabout from Junction 9 for Ashford approach using Fougères Way and Maidstone Road).

A new road is also under construction, Victoria Way is being built to accommodate the anticipated additional traffic from developments proposed around The Warren (North of Ashford).

The council are unable to provide greater detail at this time due to the unavailability of the Kent County Council traffic department who are responsible for these changes. Thus in order to assess the air quality impacts both these new roads will be assessed by the council during the 2012 Updating Screening and Assessment.

3.2 Other Transport Sources

Ashford Borough Council confirms there are no newly identified or newly implemented other transport sources, which may have an impact on air quality within the Local Authority area.

3.3 Industrial Sources

Ashford Borough Council confirms that there are no new or newly identified industrial sources (either under the LAPC regime or EP Regulations) which may have an impact on air quality within the Local Authority area.

3.4 Commercial and Domestic Sources

Ashford Borough Council confirms that there are no new or newly identified commercial or domestic sources which may have an impact on air quality within the Local Authority area.

3.5 New Developments with Fugitive or Uncontrolled Sources

Ashford Council confirms there are no new developments with fugitive or uncontrolled sources.

Ashford Borough Council has identified the following new or previously unidentified local developments which may impact on air quality in the Local Authority area.

- New road development at Drovers Roundabout
- New development at Victoria Road

These will be taken into consideration in the next Updating and Screening Assessment, scheduled for 2012.

4 Local / Regional Air Quality Strategy

Ashford Borough Council does not have a Local Air Quality Strategy, but works in partnership with Kent County Council and the Kent and Medway district authorities through the Kent & Medway Air Quality Partnership on air quality issues across Kent.

Kent County Council, in partnership with Kent local authorities, has produced a Regional Environment Strategy⁴, which considers air quality issues county-wide and includes the following objectives relevant to air quality:

- Meeting National Air Quality Objectives
- Reducing the impact on environmental health
- Planning new development appropriately
- Tackling transboundary pollution

The Kent Environment Strategy Progress Report (2007) provides an update with respect to progress with actions relating to air quality, as shown below:

- Despite reductions in some air pollutants, overall air quality in Kent is showing no clear improvement;
- Long-standing problems have been exacerbated by traffic growth, increased ozone pollution from distant sources and extreme weather such as heat waves which are becoming more likely as a result of global warming;
- The identification of new Air Quality Management Areas (AQMAs) is an indication of the problem – but only a first step in solving it;
- The effort going into ‘monitoring and action planning’ is still not being matched by ‘implementation’ of actual measures to improve air quality;
- Reducing emissions from HGV and car traffic remains the key challenge to improve air quality.

The Environment Strategy has been revised and a final version will be published at the end of March 2011.

⁴ http://www.kent.gov.uk/environment_and_planning.aspx

5 Planning Applications

A planning application has been received for development proposals in Warren South, (to the North West of the borough) which include a Park and Ride scheme and adjacent housing development. Ashford Borough Council has requested an air quality assessment for the proposed scheme. It is recommended that due consideration be given to this proposed scheme (subject to its status) in the Updating and Screening Assessment 2012.

6 Air Quality Planning Policies

All of Ashford Borough Councils Development Plan Documents (DPDs) include the production of a Sustainability Appraisal (SA) in parallel to the production of the DPD in question. The SA Framework used by the Council to assess the sustainability of the evolving policies within each DPD, includes a section on air quality, as well as other cross-cutting topics such as Transport. This ensures that air quality, and the impacts of potential policies on air quality, are considered as part of the planning process.

Ashford Borough Councils Core Strategy has two main policies that are relevant to air quality in the borough. Policy CS10 (Sustainable Design) is reproduced below in its entirety, as it is an innovative policy for a Local Authority Core strategy. Policy CS15, on transport, stresses the need for modal shift and the provision of public transport. This will help manage the impact of traffic movements in an ever developing borough and help manage air quality impact. Details of Policy CS15 are provided in Section 7.

POLICY CS10: Sustainable Design and Construction

All major developments must incorporate sustainable design features to reduce the consumption of natural resources and to help deliver the aim of zero carbon growth in Ashford. Unless it can be demonstrated that doing so is not technologically practicable, would make the scheme unviable or impose excessive costs on occupiers, developments are expected to:

A) Achieve the standard set out below or specified in a later DPD, or an equivalent quality assured scheme, with a strong emphasis on energy, water and materials. These requirements will be met through:

- (a) Energy and water efficiency,
- (b) Sustainable construction materials, and,
- (c) Waste reduction.

B) Reduce carbon dioxide emissions through on-site sustainable energy technologies at the percentage set out below or at such other level as may be specified in a subsequent DPD.

C) Be carbon neutral which can be met through a combination of (A) and (B) above, with any shortfall being met by financial contributions to enable residual carbon emissions to be offset elsewhere in the Borough.

Where any site is brought forward as two or more separate development schemes of which one or more falls below the relevant threshold for this policy, the Council will require the relevant targets in the table below to be met as though the site had come forward as a single scheme.

Ashford LDF 2007 - 2014						
			(CS3) Town Centre & (CS4) Brownfield Urban Sites	(CS5) Urban Extensions & (CS4) Greenfield Urban Sites	(CS6) Tenterden, the Villages	Existing and refurbishment
(A)	BREEAM	Residential	Code Level 3	Code Level 4	Code Level 2	EcoHomes 'Very Good'
		Overall level	Very Good	Excellent	Good	Very Good
		Energy Credits	Excellent	Excellent	Excellent	Excellent
		Water Credits	Maximum	Maximum	Excellent	Excellent
		Material Credits	Excellent	Excellent	Very Good	Very Good
(B)		Minimum Carbon Dioxide Reduction				
			20%	30%	10%	10%

The Kent and Medway Air Quality Partnership have produced an Air Quality and Planning Guidance (January 2009) document which is available in draft. The document gives general advice to developers, consultants and local authorities regarding air quality issues with respect to development proposals in Kent. With regard to Air Quality Assessments the guidance recommends that all assessments within Kent should follow similar methodologies. With regard to sustainable transport and travel plans, the guidance recommends that all new developments should make provisions to encourage cycling and walking, and development should be supported by Travel Plans. The Guidance also recommends that car parking should be minimised where developments are located within AQMAs and those close to public transport links. The Air Quality Planning Guidance aims to promote the provision for refuelling of alternative fuels together with installing electric vehicle charging points in car parks, with the aim of promoting the use of cleaner-fuelled vehicles. The guidance also recommends that local authorities seek appropriate funds through Section 106 agreements to help to improve air quality.

7 Local Transport Plans and Strategies

The Final Draft of the Kent County Transport Strategy “Growth without Gridlock” was published in November 2009. The document provides strategies for the whole of Kent, but also some which are directly aimed at transport improvement in Ashford.

Kent wide policies from the Integrated Transport Strategy include the following options for controlling local roads:

- Reallocation of Road Space – to allow more sustainable travel road space will be reallocated to car sharers and bus transit systems.
- Red Routes – status assigned to certain roads during peak periods to reduce loading and parking. The aim of this is to minimise delays on such routes.

Together with improving the road network Kent County Council have suggested schemes which aim to reduce the travel demand. Such schemes included in the Integrated Transport Strategy include:

- Land-use planning
- Mixed use developments
- Park and ride schemes
- Variable parking charges
- Teleworking and broadband access
- Promotion of travel plans for both schools and workplaces
- Improvements to public rights of way and walking/cycling routes
- Improvements in interchanges and travel information

To reduce the pollution from vehicles Kent County Council have suggested the following schemes:

- Low emission zones – this strategy includes charging high emission vehicles during peak periods in urban centres.
- Kent County Council have proposed that they will work with bus operators and taxi firms to bring forward the use of fuel efficient and low emission buses.

Kent County Council have proposed several improvements to the current bus network in order to improve connectivity and promote the use of public transport. The following improvements have been outlined:

- Fastrack bus networks to improve longer bus journeys across the county.
- Inter-urban coach service – to give all towns direct access to public transport
- Local Bus Services – these will operate into the local communities with links to the inter-urban and the fastrack systems
- Improvement to the rural bus network through rural interchange system

The Kent Integrated Transport Strategy for Growth outlines the following key issues for Ashford:

- The development of a Traffic Management Centre (UTMC), as well as extending and upgrading the bus tracking and real-time passenger information system;
- The development of Smartlink – a bus rapid transit system planned for Ashford, which will link the major development areas to the town centre, train station, Park and Ride sites, business parks and the Designer Outlet.

- Development of a network of inter-urban coach services offering direct, fast services along major corridors.

Ashford Borough Council, as part of its Core Strategy, includes a policy on transport CS15. The content of CS15 appears below.

POLICY CS15: Transport

The Council will seek to promote public transport and other non-car based modes of travel especially in the Growth Area. This will be achieved primarily by the early introduction of a bus rapid transport system (SMARTLINK), initially on a two-arm basis but with the aim of extending this to other parts of the town as and when this is feasible, together with parking restraint in areas with good public transport. In addition, a new rail halt is planned at Park Farm and measures to encourage cycling will be promoted.

The Council will also seek the earliest possible implementation of highway and other schemes that would remove serious impediments to growth and/or secure important environmental benefits. These include a new motorway junction (J10A, plans for which have now been announced by Central Government⁵), improvements to increase the capacity of the existing motorway junctions, a new road bypassing the town centre to the south (Victoria Way) and the introduction of Park & Ride schemes.

Within this context, development proposals must show how all highway, public transport, walking and cycling needs arising from the development will be satisfied and provide for the timely implementation of all necessary infrastructure.

Developments that would generate significant traffic movements must be well related to the primary and secondary road network, and this should have adequate capacity to accommodate the development. New accesses and intensified use of existing accesses onto the primary or secondary road network will not be permitted if a materially increased risk of road traffic accidents or significant traffic delays would be likely to result.

In rural areas, proposals which would generate levels of traffic, including heavy goods vehicle traffic, beyond that which the rural roads could reasonably accommodate in terms of capacity and road safety will not be permitted. Where development sites include part of an identified key transport infrastructure route or facility, the land required should be reserved and the scheme designed to accommodate this. Proposals which are likely to prejudice such infrastructure being provided will not be permitted.

The Council's Parking Strategy will be implemented through the designation in DPDs of three Park & Ride facilities at The Warren, Waterbrook and Chilmington Green and the provision of three new, multi-storey car parks in Ashford town centre together with the redevelopment of some existing surface car parks and a parking management plan that will increase car parking charges, particularly for long stay use in the town centre. It is currently envisaged that charges will be doubled in real terms by 2021.

Maximum parking standards will accord with national standards and the South East Plan, except where existing SPG6 applies or where superseded by more restrictive standards in DPDs. In particular, as SMARTLINK and Park & Ride schemes are implemented, maximum parking standards for commercial developments in Ashford town centre will be progressively reduced with the aim of achieving a rate of half of the current PPG13 maximum standard by 2021. In addition, in the other main employment areas that are located on SMARTLINK routes or otherwise have good public transport accessibility, the aim will be to reduce

⁵ The road improvements at J10A are on hold at present to the best of the councils knowledge

maximum parking levels to 80% of the PPG13 standard. Full details will be set out in the Ashford Town Centre Area Action Plan and other DPDs.

8 Climate Change Strategies

The council has completed the Carbon Trust Local Authority Carbon Management Programme and developed a Carbon Management Plan which will be signed off after the elections. A Draft Climate Change Statement Position Statement has been developed and will be further developed into a strategy after the elections. An action plan has also been developed with the EST.

Kent County Council Select Committee on Climate Change produced some potential Climate Change targets in October 2006. It recommended a Climate Change Action Plan to support the Vision for Kent developed by the Kent Partnership and Kent County Council. The Committee used existing targets in Vision for Kent 2006, Kent Environment Strategy, Local Transport Strategy, South East Plan Kent and Medway Structure Plan as a basis for the Climate Change Strategy. In addition to the transport sources of emissions, indicators and target were proposed to:

- Reduce Kent's Ecological Footprint
- Reduce CO₂ emissions and adopt a 60% reduction by 2050
- Minimise waste growth to zero by 2012
- Promote renewable energy to 20% by 2020; 154 MW by 2016
- Efficient land use by preventing physical development which impedes ecosystem processes involved in local and global climate regulation.

The Kent Environment Strategy has been adopted across the county with Ashford adopting its principles to inform its own actions. The Strategy can be found on the KCC website⁶. Below the strategy there is also a county wide Climate Change Adaptation Action Plan, again this can be found on the website.

The Final Draft of the Kent County Transport Strategy "Growth without Gridlock" (2009) contains a number of strategies aimed at dealing with the issue of Climate Change.

These include:

- Providing alternative forms of transport, such as walking and cycling networks together with cycle hire
- Promoting school and workplace travel plans
- Encouraging vehicle fleet and taxi companies to use low emission vehicles
- Encouraging local businesses and retailers to work in partnership to co-ordinate deliveries
- Reducing the need to travel through land use planning

Delivering a Sustainable Transport System (DaSTS) (2008) is a government document which outlines immediate plans to 2014 and a proposed approach in the longer term. The two DaSTS measures which relate to climate change are:

- To reduce transport emissions of CO₂ and other Greenhouse gases
- To improve the quality of life for transport users and non-transport users, and to promote a healthy natural environment.

In order to deliver the above two DaSTS measures Kent County Council is developing the 3rd Local Transport Plan which will include measures to reduce greenhouse gas emissions and ensure that local transport shows resilience against the impacts of climate change.

⁶ http://www.kent.gov.uk/environment_and_planning/environment_and_climate_change/climate_change.aspx

9 Implementation of Action Plans

Ashford Borough Council has not declared any AQMAs. Therefore, there are no Air Quality Action Plans in place.

10 Conclusions and Proposed Actions

10.1 Conclusions from New Monitoring Data

The full year of continuous monitoring at the location of relevant exposure near J10 of the M20 (Lees Road), showed that the annual and hourly mean NO₂ air quality objectives are being met.

Both the NO₂ and PM₁₀ air quality objectives were met in 2010 at the Ashford School Background site. Concentrations of ozone were also monitored at this site and met the objective; however, this pollutant is not prescribed in Regulations for LAQM and is provided for information only.

The diffusion tube at Hythe Road is close to the objective (38.3µg/m³), it is suggested that monitoring be continued at this location at a site of relevant exposure.

10.2 Conclusions relating to New Local Developments

As the work to improve J10 of the M20 is still underway / on hold, monitoring should be continued in this location to ensure that the expected increase in traffic volume does not cause a breach of the air quality objectives.

Monitoring for PM₁₀ may be needed around the areas of new road developments to the north of Ashford if relevant exposure exists. Also monitoring would be recommended around the new junctions and roads when they are finished to ensure the air quality objectives are still being met if relevant exposure exists.

10.3 Proposed Actions

- Continue with passive monitoring programme around J10 of the M20 to ensure continuing compliance with the air quality objectives.
- Continue with monitoring within Ashford town centre to confirm on going compliance with the air quality objectives.
- Progress to the 2012 Updating Screening and Assessment.

11 References

- Local Air Quality Management Technical Guidance LAQM.TG(09). February 2009. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland
- Local Air Quality Management Policy Guidance LAQM.PG(09). February 2009. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland
- Diffusion Tubes for Ambient NO₂ Monitoring: Practical Guidance for Laboratories and Users, Report to Defra and the Devolved Administrations , February 2008
- Ashford Borough Council 2009 Updating Screening and Assessment
- Ashford Borough Council 2008 Local Air Quality Management Annual Progress Report
- Ashford Borough Council 2007 Local Air Quality Management Annual Progress Report
- Air Quality and Planning Guidance Consultation Draft. January 2009. Kent and Medway Air Quality Partnership
- Select Committee on Climate Change Report Oct 2006, Kent County Council.
- Ashford Borough Council Core Strategy, July 2008
- Design Manual for Roads and Bridges
- Diffusion Tubes for Ambient NO₂ Monitoring: Practical Guidance for Laboratories and Users

Appendices

Appendix A - QA:QC Data

Diffusion Tube Bias Adjustment Factors

The diffusion tubes are supplied and analysed by Harwell Scientifics utilising the 50% Triethanolamine (TEA) in acetone preparation method. A bias adjustment of 0.78 for year 2010 has been derived from the national bias adjustment calculator.

Discussion of Choice of Factor to Use

The national bias adjustment calculator has been used for bias adjustment of the 2010 diffusion tube data. Ashford does have a co location study but it is not considered representative of the diffusion tube sites, typically roadside or façade-based, in the area.

PM₁₀ Monitoring Adjustment

Particulates are monitored by TEOM. Results presented in the Progress Report have been VCM-corrected. The parameters used in producing the corrected data are summarised in Table A1 below.

Table A1 - VCM Correction Data

Summary	Text
Site Name	Ashford School urban background
Organisation	Ashford Borough Council
Start Date	01/01/2010
End Date	31/12/2010
TEOM data already corrected with 1.3 factor	Yes
EPA Constant A	3
EPA Constant B	1.03
Instrument Temperature	25
Instrument Pressure	1013
Instrument reports to local ambient readings	No
Timescale	Daily
Pressure Site	Hastings - Bulverhythe (HT1)
Pressure Site Warning	
Temperature Site	Hastings - Bulverhythe (HT1)
Temperature Site Warning	
FDMS Site 1	Greenwich and Bexley - Falconwood FDMS (GB0)
FDMS Site 1 Warning	FDMS1 Correction includes unratified data.
FDMS Site 2	Greenwich - A206 Burrage Grove (GN0)
FDMS Site 2 Warning	FDMS2 Correction includes unratified data.
FDMS Site 3	Average of remaining sites within range
FDMS Site 3 Warning	FDMS3 Correction includes unratified data.

QA/QC of automatic monitoring

The Council calibrates the sites every two weeks and ETi services the stations twice per year. The QA/QC procedures for the sites are those of the Kent and Medway Air Quality Monitoring Network (K&MAQMN). The K&MAQMN procedures are equivalent to the UK Automatic Urban and Rural Network (AURN) procedures, with the exception of the following:

- Calibration of NO_x analysers with NO gas (AURN also use NO₂)
- Data checks are done once daily and downloads are done twice daily (AURN are hourly)
- Independent audits of the stations are undertaken annually (AURN are 6 monthly).

K&MAQMN managers AEA ratify the data for these sites.

QA/QC of diffusion tube monitoring

Tube preparation and analysis follows operating procedure HS/WI/1015 (NO₂). Nitrogen dioxide analysis procedures are compliant with the Diffusion Tubes for Ambient NO₂ Monitoring: Practical Guidance for users and laboratories (February 2008).

Harwell Scientifics Ltd participate in the AEA inter-comparison and the WASP scheme. In 2010, Harwell was rated as Good in both proficiency schemes.

Short-term to Long-term Data adjustment

Annualisation was carried out for the Ashford Background site as data capture for NO₂ was only 56% during 2010. Three sites in Kent were chosen for annualisation details of which are given below.

Table A2 - Results of the Short-term to Long-term Adjustment (Annualisation)

Site	Site Type	Annual Mean	Period Mean	Ratio
Canterbury Background	Urban Background	18.2	17.0	1.07
Thannet Background	Urban Background	19.8	18.01	1.10
Chatham Luton Background	Urban Background	23.8	24.45	0.97
			Average	1.05

Appendix B – Monitoring Data

Table B1 - 2010 Passive Monitoring Monthly Mean Measurements ($\mu\text{g}/\text{m}^3$)

Site Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	COUNT	AVERAGE	BIAS ADJUSTED	% Data Capture
AS03	28.9		25.6	20.7	25.4	23	16	16.9	25.3	55.1		42.1	9	27.8	21.7	75
AS04	31.9	31.5	26.9	23.8	24.3	19.9	15.7	13	21.7	22.2	69.3	38.5	12	28.2	22.0	100
AS06	56	55.2	44.1	45.9	50.3	47.6		27.5	40.2	46.5	58.1	66.8	11	49.1	38.3	92
AS07	39	42.5	36	37	32.1	31.5	23.9	24.7	33.2	34.7	44.9	45.8	12	35.4	27.6	100
AS13	36.4	33.9	28.6	32.6	33.1	27.1	20.4	24.8	31.5	35.4	44.1	49.8	12	33.1	25.9	100
AS14	47.3	43.8	36.5	39.3	37.7	28.3	21.8	25.6	33.3	39	48.6	50.3	12	37.6	29.3	100
AS15	43.3	50.1	56.1	39.7	40.3	36.1	36.8	43.6	42.8	38.1	47.6	48	12	43.5	34.0	100
AS18	39.1	44.2	36.1	41.2	42.6	37.5	26.7	32.8	39.9	39.7	49.5	53	12	40.2	31.3	100
AS21	28.7	37.2	28.8	27.3	28.5	24.7	20.5	21.1	29.3	35.1	44	51.4	12	31.4	24.5	100
AS22	43.9	40.9	38.3	40.2	44.6	38.4	31.1	39	45.4	41.1	51.3	19.1	12	39.4	30.8	100
AS23	27.5	28.4	20.8	24.6	22.1	19.6	16.2	14.9	21.2	24.7	30.8	35.7	12	23.9	18.6	100
AS24	44.2	36.8	28.8	30.2	31.7	24.4	19.8	21.1	26	32.7	40.9	46	12	31.9	24.9	100
AS25	43.3	43.2	39.7	36.3	37.3	32.6	27.9	27.8	34.3	35.5	44.4	44.2	12	37.2	29.0	100
AS26	38.9	50.1	43.4	39.8	38.8	34.7	31.9	30.3	39.3	39.4	49.2	56.4	12	41.0	32.0	100