2017 Air Quality Annual Status Report (ASR)

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

May 2017

ASHFORD
BOROUGH COUNCIL

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Executive Summary: Air Quality in Our Area

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.

This document is Ashford Borough Council's Annual Status Report (ASR). Results from monitoring by the Council are presented and sources of air pollution are identified. The ASR determines those changes since the last assessment that could lead to the risk of an air quality objective being exceeded.

This Annual Status Report confirms that air quality within Ashford continues to meet the relevant air quality objectives. No significant changes in existing emissions sources within Ashford have been identified. Furthermore, there have been no new relevant industrial installations and no new significant commercial, domestic or fugitive sources of emissions.

Air Quality in Ashford

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas[1,2].

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion[3].

Ashford is the largest borough in Kent, with a fast-growing population. In 2003, Ashford was identified as one of the Growth Areas in the government's Sustainable Communities Plan with a £2.5 billion investment programme underway to provide 31,000 new homes and 28,000 new jobs by 2031. Although the urban area of Ashford is expanding, much of the borough is rural in character, including protected areas such as the North Downs and the High Weald.

[1] Environmental equity, air quality, socioeconomic status and respiratory health, 2010
[2] Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006
[3] Defra. Abatement cost guidance for valuing changes in air quality, May 2013

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. Pollutant concentrations within the borough are all below the national air quality objectives and the latest monitoring data show levels are decreasing slightly.

Actions to Improve Air Quality

Air quality in the borough is considered to be good, with concentrations below the national air quality objectives. Ashford Borough Council largely protects air quality within its borough by using Core Strategy Policy CS1 to encourage sustainable development and high quality designs. The main source of pollution within the borough is road traffic emissions, and the Local Transport Plan for Kent sets out policies to improve transport, and encourage sustainable transport within the borough. Ashford Borough Council has been working closely with Kent County Council to improve air quality; below are details of the actions taken recently.

Local Plan to 2030

Ashford Borough Council is currently preparing a new Local Plan for the Borough; public consultation of the draft version of the Local Plan 2030 ran between 15th and 10th August 2016, which sets out the land that needs to be provided in accordance with the principles of sustainable development.

Draft policy ENV12 on 'Air Quality' concerns major development proposals and their potential impact on air quality, it states that *"…Development proposals that might lead to a significant deterioration in air quality or national air quality objectives being exceeded, either by itself, or in combination with other committed development, will require the submission of an Air Quality Assessment to be carried out in accordance with the relevant guidance…"*

Following the consultation process described above, Ashford Borough Council is anticipating to submit the final draft of the Local Plan to the Secretary of State and Planning Inspectorate in late 2017.

Electric Vehicle Charging

At the beginning of 2014 the Council (in partnership with KCC) agreed to install a total of five double electric-vehicle charging points as part of a 43 strong network across Kent. This is part of a wider Government backed initiative to provide the infrastructure to support electric vehicle use. Although there are currently only a small number of electric vehicle owners, surveys suggest that this will increase in future years.

All of the charging points provided in the Council's area are operational, and this has resulted in 1,813 charging sessions in 2015/16. A total of 13,188 kilowatts have been drawn to charge the vehicles. The charging points installed at the Civic Centre and Vicarage Lane car parks see the highest usage figures in the Borough.

The Council will continue to monitor their use and this will inform future discussions with partners and other stakeholders.

Green Travel

In 2014 the Council, with grant funding from Kent County Council's Health Inequalities Fund, extended the 'Walk to School' programme in Ashford. The delivery partner (KM Charity Group) targeted those primary schools considered to have a specific need for this initiative. The program has encouraged children to walk, cycle or travel to school in some other active way. The programme has attempted to improve road awareness, encourage physical activity and reduce the use of vehicles, which should improve air quality.

This project has been very successful. Thirteen schools participate in the program and three schools have introduced 'walking buses'. The Council continues to fund the KM Charity Walk to School scheme.

A28 Chart Road Improvement Scheme

The A28 is a strategic route serving the east and south side of Ashford from Junction 9 of the M20. The existing transport corridor from Junction 9 to the A28 'Tank Roundabout' has been progressively improved over past years. However, following the award of Local Growth funding and the proposed development at Chilmington Green, Kent County Council is actively promoting this scheme.

The existing road and junctions are regularly congested, the route lacks continuity of footway and cycle provision and the vertical alignment over the existing railway bridge is poor. An outline design has been prepared to provide a two lane dual carriageway with shared unsegregated footway and cycleway along both sides of the road. It includes improved junction capacity at the Tank Roundabout, Matalan Roundabout and Loudon Way and the public engagement process has now started.

An air quality technical review by Amey (report ref. C004300246) has been undertaken and issued to stakeholders. The improvements recommended in the review are to include incentives to encourage walking and cycling along this route. It remains an on-going project within the borough.

Local Priorities and Challenges

M20 Junction 10a

The need for additional motorway junction capacity to the southeast of Ashford has been recognised since at least the turn of the century. The limited available capacity at the existing Junction10 would mean that some development proposals in the then emerging Borough Local Plan 2000 would be unable to be fully built out unless a new 'Junction 10a' could be provided. Since then, the Council has adopted the Core Strategy (2008) which remains the principal Development Plan Document for the Borough and the subsequent Urban Sites & Infrastructure DPD (2010). Both documents place significant weight on the need for Junction 10a to be delivered in order for allocated sites to be built out. The emerging Ashford Local Plan to 2030 relies on the delivery of Junction 10a to an even greater degree as it will be fundamental to the Council's ability to demonstrate the deliverability of key proposed site allocations for housing and employment development.

In August 2016 Highways England submitted an application for a development consent order (DCO) for the new Junction 10a under the Nationally Significant Infrastructure project regime. These are dealt with by the Planning Inspectorate and are a "one stop shop" dealing with not only planning consent but other authorisations such as the compulsory acquisition of land. Ashford Borough Council is a consultee rather than the determining authority.

The application was accompanied by an environmental impact assessment that included a chapter on air quality. At the time of writing, the DCO application is at the examination stage that will end on 2 June 2017. The examining authority will then have a 3 month period to make a recommendation on the project to the Secretary of State for Transport who has a further 3 months to make the final decision (due before December 2017). If granted, works are expected to start in 2018.

Network Rail LTPP – Kent Route Study

The Long Term Planning Process (LTPP) is a new initiative designed to facilitate strategic planning of the rail network. Each route area within Network Rail will be involved and the Kent Route Study (KRS) is part of a second tranche which started in September 2015.

The KRS includes the following main lines:

- the Chatham main line from London Victoria via Bromley South which splits into two separate routes at Swanley; one of these routes is the line to Ashford International via Maidstone East;
- the Tonbridge main line from London Charing Cross via Sevenoaks which splits into two separate routes at Tonbridge; one of these routes is the line to Ashford International via Paddock Wood. Some peak only services also operate to London Cannon Street and lines east of Ashford International, via both Dover Priory and Canterbury West;
- existing connections to the High Speed Line (HS1) near Longfield, Gravesend and Ashford International (refer to comments below); and
- the Marshlink line from Ashford International to Hastings.

The output from the KRS will no doubt influence the future funding available for each route during Network Rail's Control Period 6 (2019-2024).

Ashford International Station

When the Channel Tunnel Rail Link was constructed, the preferred route alignment passed immediately to the north of Ashford IPS and spurs were constructed to allow Eurostar trains to stop and pick up passengers. These spurs, which are owned and managed by Network Rail, are signalled using a system that is incompatible with the

new Siemans e320 and DB ICE trains to be deployed on the HS1 line in the future, which means that access to Ashford IPS would not be permitted.

A £4.8m fund has been secured via the Local Growth Fund (round 3 allocation) as part of a larger £10.5m project surrounding the upgrade to signalling. It is anticipated that a business case is to be put forward to the South East Local Enterprise Partnership in May 2017 recommending approval, and delivery in Spring 2018.

Major Town Centre Redevelopment Proposals

The Council has recently embarked upon a major challenge to revitalise Ashford Town Centre. This includes the acquisition of an existing shopping centre (Park Mall) and negotiation to secure the redevelopment of former underused and derelict land adjacent to the main transport corridor in central Ashford.

This project includes the following sites:

- Ashford Designer Outlet Expansion – a detailed planning application has been granted to enlarge the footprint of the existing retail space and there is currently a further application to seek amendments. Construction is likely to occur towards the end of 2017, over a two year build. The development has the potential to attract additional visitors to Ashford and improve the environment between the Ashford IPS/Domestic Station and existing designer outlet;
- Chilmington Green – Major development including up to 5,750 residential units and supporting infrastructure. The first phases of this development started in early 2017;
- Conningbrook Lakes – the Council has approved major development at Conningbrook Lakes including a country park, residential development and leisure activities (e.g. water sports) and the first phase of residential development has been sold to a developer to progress this project;
- AIMREC/Klondyke Works – a brownfield site adjacent to the Ashford to Hastings railway line which has been identified as a suitable location for a Model Railway visitors centre with a viewing platform and associated parking, landscaping and access. The Council has resolved to permit the application subject to S.106 agreement;

- Victoria Road & George Street Site – a brownfield site occupying a prominent location opposite the Ashford IPS which has been identified for a mixed use redevelopment including, a food-store, brewery, hotel, commercial units, residential and associated parking, landscaping and access. Permission was granted in April 17, with indication that the brewery and food store elements will progress shortly;
- Victoria Crescent – a brownfield site in two parts. Permission resolved to be granted for 59 flats subject to completion of S.106 agreements;
- Former Powergen Site – ground works have commenced for five plots comprising 660 dwellings and ancillary uses (A1/A3) together with parking, landscaping and access works;
- Elwick Place – a major 'brownfield' site adjacent to the main railway corridor in central Ashford designated for a mixed retail, leisure, office and residential use. Permission has been granted for the hotel, leisure and car park elements, but has not yet been granted for the residential element. Groundworks have now started on the hotel and the leisure elements;
- Former Godinton Way Industrial Estate – a 'brownfield' site for residential development. Planning permission has been granted for 83 dwellings and works are in progress;
- Commercial Quarter – the site has the potential to deliver an Enterprise/Innovation Centre as part of one of the office buildings, providing start up space and small serviced office space within Ashford. Ground works have started on this development;
- Ashford College Campus – a former 'brownfield' site occupying a prominent location at the corner of Elwick Road and Station Road which was identified for redevelopment as an educational centre. Substantial works have been completed, and the campus is due to open in September 2017. There is possibility of a further extension to this development.

There is potential for these developments either singly or cumulatively to have an impact on air quality at particular locations. Ashford Borough Council is using the planning system to ensure that where necessary, planning applications have a robust air quality assessment submitted with them, and mitigation is requested if required.

Local Engagement and How to get Involved

Members of the public can help improve air quality in the borough by travelling using sustainable transport options, such as walking, running, cycling and using public transport. Ashford Borough Council encourages the promotion of air quality, and education material can be provided.

Further information on local air quality can be obtained via the UBreathe app for iPhone and Android, which provides air pollution health advice where you need it.

Table of Contents

List of Figures

Ashford Borough Council agrees with the conclusions and recommendations presented in this report.

1 Local Air Quality Management

This report provides an overview of air quality in Ashford during 2016. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) 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 an exceedance is considered likely the local authority must 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. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by Ashford Borough Council to improve air quality and any progress that has been made.

The statutory air quality objectives applicable to LAQM in England can be found in Table E.1 in Appendix E.

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority must prepare an Air Quality Action Plan (AQAP) within 12-18 months setting out measures it intends to put in place in pursuit of compliance with the objectives.

Ashford Borough Council currently does not have any AQMAs.

2.2 $PM_{2.5}$ – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG16 (Chapter 7), local authorities are expected to work towards reducing emissions and/or concentrations of $PM_{2.5}$ (particulate matter with an aerodynamic diameter of 2.5µm or less). There is clear evidence that $PM_{2.5}$ has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

Ashford Borough Council is part of the Kent Health and Wellbeing Board, which brings together County and District Councillors, senior officers from the NHS Area Team, Clinical Commissioning Groups, Social Care and Public and members of the Local Healthwatch. The board produced the Kent Joint Health and Wellbeing Strategy, which sets out how the multidisciplinary teams can align their plans to improve public health and tackle key health issues over the coming years.

Ashford Borough Council is working with Public Health colleagues to prioritise action on air quality in its local area to help reduce the health burden from air pollution. The Public Health Outcomes Framework is a Department of Health data tool for England, intended to focus public health action on increasing healthy life expectancy and reducing differences in life expectancy between communities. The PHOF includes an indicator, based on the effect of particulate matter ($PM_{2.5}$) on mortality. The approach used, in partnership with Public Health colleagues, includes the encouragement of active travel, which will also have wider public health benefits captured in other indicators such as increased physical activity (indicator 2.13) and reducing excess weight at various ages (indicators 2.6 & 2.12).

The Local Transport Plan for Kent sets out a 20 year transport delivery plan for the county. Ashford has been identified by the previous Government as an area for significant growth in housing and employment and contains one of the UK's four Growth Areas. $PM_{2.5}$ is one of the main pollutants released in road traffic emissions; improving transport within the borough is therefore of key importance. The Local Transport Plan proposes a number of strategies to improve transport within Ashford, including an Urban Traffic Management and Control (UTMC) system, improvements to local bus services, a Smartlink Bus Rapid Transit (BRT) scheme, and the potential for a new junction on the M20.

Ashford Borough Council work closely with local bus operators and are part of the Quality Bus Partnership comprising of Council Officers, bus companies, local councillors and other key partners. Through this partnership there have been some positive moves towards improving air quality across the borough. Such measures include

- Removal of higher polluting Euro 2 buses from all routes several months before the government deadlines.
- Introduction of the little and often bus fleet comprising of the latest Euro 6 diesel engine buses.
- Improved frequency means less sitting around, especially in built up Town Centre areas.

As part of the commitment to improving air quality, updates are provided to the QBP by the Environmental Team through the quarterly meeting.

Kent County Council is currently developing the "Local Transport Plan 4: Delivering Growth without Gridlock (2016 – 2031)". A public consultation for the draft Local Transport Plan ran from 8th August 2016 to 30th October 2016, which was subsequently revised taking into account the consultation responses. A number of transport priorities have been identified including the implementation of Ashford Cycling Strategy and the bus service improvement within the council.

Planning is also particularly important for $PM_{2.5}$ and Ashford Borough Council is focussed through its planning policy on preventing particulate matter concentrations being inadvertently increased. Policy CS1 within the Core Strategy states that *"sustainable development and high quality design are at the centre of the Council's approach to plan making and deciding planning applications"* and developments should respect the environmental limits and protect air quality standards.

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance

3.1 Summary of Monitoring Undertaken

This section sets out what monitoring has taken place and how the outcomes compare with objectives.

3.1.1 Automatic Monitoring Sites

The Ashford background automatic monitoring site measuring NO_2, PM_{10} and ozone operated from September 2008 until April 2011. This site was closed as it became unreliable. No other automatic monitoring has been carried out in the borough since.

3.1.2 Non-Automatic Monitoring Sites

Ashford Borough Council undertook non- automatic (passive) monitoring of NO_2 at 20 sites during 2016. Table A.1 in Appendix A shows the details of the sites.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on Quality Assurance/Quality Control (QA/QC) for the diffusion tubes, including bias adjustments and any other adjustments applied (e.g. “annualisation” and/or distance correction), are included in Appendix C.

3.1.3 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for bias, “annualisation” and distance correction. Further details on adjustments are provided in Appendix C.

3.1.4 Nitrogen Dioxide (NO_2)

Table A. in Appendix A compares the ratified and adjusted monitored NO_2 annual mean concentrations for the past 5 years with the air quality objective of 40µg/m^3. For diffusion tubes, the full 2016 dataset of monthly mean values is provided in Table B.1 in Appendix B.

The measured concentrations are below the annual mean air quality objective at all monitoring sites in 2016. The concentrations are also below 60 µg/m^3, indicating that an exceedance of the 1-hour mean objective is also unlikely at these sites.

Measured annual mean concentrations for the past 5 years are presented in Table A.2. There is a slight downward trend in measured concentrations over this period, indicating that air quality conditions within the borough are improving. Concentrations between 2015 and 2016 have remained stable.

The highest concentrations have been measured at Lees Road (AS15) although they have remained below the objective.

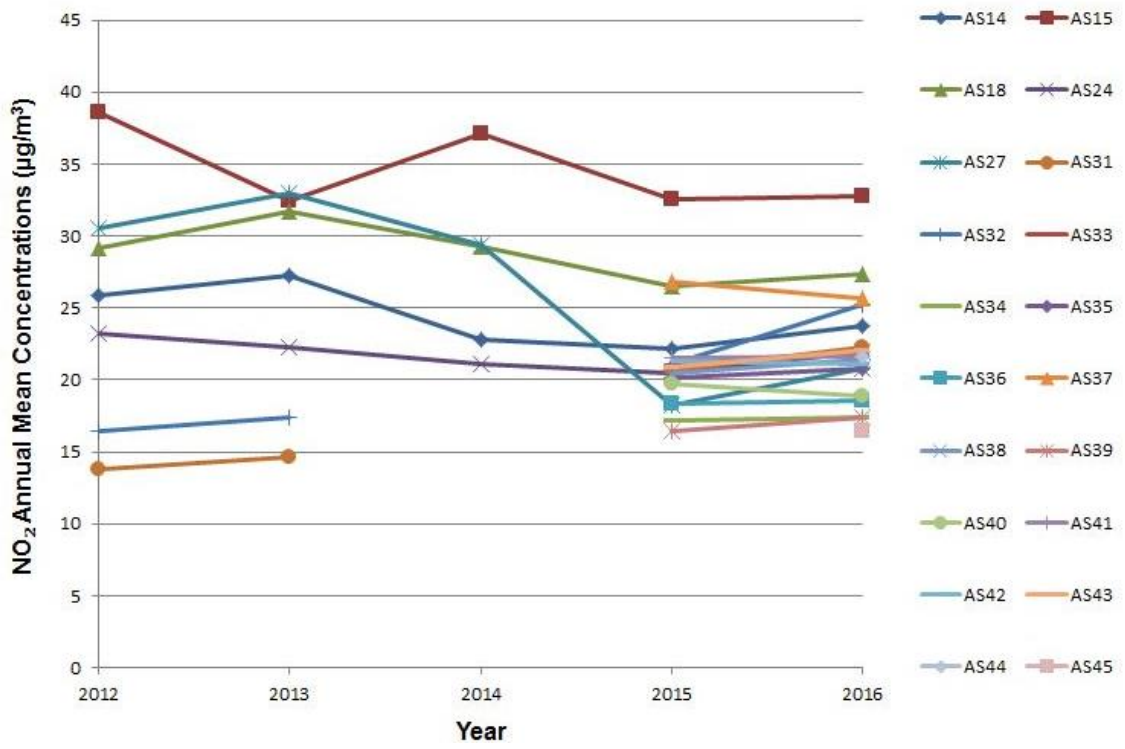

Figure 3.1: Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at the Diffusion Tube Monitoring Sites

Appendix A: Monitoring Results

Table A.1 – Details of Non-Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?	Height (m)
AS14	Nutley Close	Roadside	601460	143509	NO_2	N	4	3	N	3
AS15	Lees Road	Other (Motorway)	603393	142073	NO_2	N	0	33	N	3
AS18	Hill View nursing home, Canterbury Road	Suburban	601321	143568	NO_2	N	0	17.3	N	3
AS24	New Street	Roadside	600778	142910	NO_2	N	0	7.4	N	2
AS27	Victoria Road Primary School, Victoria Road	Roadside	600794	142320	NO_2	N	1	2.1	N	2.1
AS31	42, Newtown Green	Roadside	601828	141461	NO_2	N	0	3.8	N	N/A

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?	Height (m)
AS32	2A Hollington Place	Roadside	600973	143027	NO_2	N	0	5	N	2
AS33	East Lodge, Chart Road,	Urban	599826	143084	NO_2	N	0	12.7	N	1.8
AS34	13 Thornlea	Urban Background	599458	142968	NO_2	N	0	45.7	N	1.8
AS35	102 Brookfield Road	Urban	599513	142110	NO_2	N	0	14.3	N	1.8
AS36	99 Beaver Lane	Urban	600023	141445	NO_2	N	0	11.6	N	1.8
AS37	30 Kingsnorth Road	Urban	600488	141277	NO_2	N	0	7	N	1.8
AS38	22 Magazine Road	Urban	600701	143168	NO_2	N	0	7.3	N	1.8
AS39	Lime Court, Kennington	Urban	601736	145328	NO_2	N	0	9	N	2

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?	Height (m)
AS40	4 Blackwall Road North	Urban	603229	142795	NO_2	N	0	14	N	1.8
AS41	408 Hythe Road	Suburban	603160	141971	NO_2	N	0	14	N	2
AS42	Sunnyside, Elwick Road	Urban	601020	142434	NO_2	N	0	13.7	N	1.9
AS43	60 Godinton Road	Urban	600665	142703	NO_2	N	0	8.8	N	1.9
AS44	Dovecote House, 73 The Street, Willesborough	Urban Background	603800	141792	NO_2	N	0	22.16	N	1.8
AS45	Warren Lodge, Hythe Road, Willesborough	Urban Background	604211	141457	NO_2	N	0	21	N	1.8

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on/adjacent to the façade of a residential property).

(2) N/A if not applicable.

Table A.2 – Annual Mean NO_2 Monitoring Results

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2016 (%) (2)	NO_2 Annual Mean Concentration ($\mu g/m^3$) (3)				
					2012	2013	2014	2015	2016
AS14	Roadside	Diffusion Tube	83	83	25.9	27.3	22.8	22.2	23.8
AS15	Other (Motorway)	Diffusion Tube	100	100	38.6	32.5	37.1	32.6	32.8
AS18	Suburban	Diffusion Tube	100	100	29.2	31.7	29.3	26.5	27.4
AS24	Roadside	Diffusion Tube	100	100	23.2	22.3	21.1	20.5	22.0
AS27	Roadside	Diffusion Tube	100	100	30.5	33.0	29.4	18.2	20.8
AS31	Roadside	Diffusion Tube	100	100	13.8	14.6	-	20.7	22.3
AS32	Roadside	Diffusion Tube	100	100	16.4	17.4	-	21.1	25.2
AS33	Urban	Diffusion Tube	92	92	-	-	-	21.2	21.8
AS34	Urban Background	Diffusion Tube	100	100	-	-	-	17.2	17.4
AS35	Urban	Diffusion Tube	100	100	-	-	-	20.1	20.8
AS36	Urban	Diffusion Tube	100	100	-	-	-	18.3	18.6
AS37	Urban	Diffusion Tube	92	92	-	-	-	26.8	25.7
AS38	Urban	Diffusion Tube	92	92	-	-	-	20.5	21.4
AS39	Urban	Diffusion Tube	100	100	-	-	-	16.4	17.4
AS40	Urban	Diffusion Tube	100	100	-	-	-	19.7	18.9
AS41	Suburban	Diffusion Tube	100	100	-	-	-	21.5	21.6
AS42	Urban	Diffusion Tube	100	100	-	-	-	21.3	21.1
AS43	Urban	Diffusion Tube	92	92	-	-	-	20.9	22.1
AS44	Urban Background	Diffusion Tube	100	100	-	-	-	-	21.6
AS45	Urban Background	Diffusion Tube	83	83	-	-	-	-	16.4

☒ **Diffusion tube data has been bias corrected**

☒ **Annualisation has been conducted where data capture is <75%**

☒ **If applicable, all data has been distance corrected for relevant exposure**

Notes:

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

NO_2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined.**

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year (e.g. if monitoring was carried out for 3 months and results were available for all three monthly tubes then the data capture is 100%).

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

(3) Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per Boxes 7.9 and 7.10 in LAQM.TG16 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Appendix B: Full Monthly Diffusion Tube Results for 2016

Table B.1 – NO_2 Monthly Diffusion Tube Results - 2016

Site ID	NO_2 Mean Concentrations ($\mu g/m^3$)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean		
													Raw Data	Bias Adjusted (0.77) and Annualised [1]	Distance Corrected to Nearest Exposure [2]
AS14	28.1	40.4	32.9	33.9	-	31.1	17	19.4	27	-	41	38.8	31.0	23.8	22.2
AS15	54.9	45.3	38.2	44.4	41.8	27.4	43.3	43.6	48.3	32	45	47.4	42.6	32.8	32.8
AS18	34.4	44.2	38.8	28.6	32.6	32.2	22.9	27.6	33.3	42.3	46.5	43	35.5	27.4	27.4
AS24	32.6	38.6	29.2	30.3	25.8	20.9	17.6	17.5	26	32.6	31.8	39.5	28.5	22.0	22.0
AS27	26.7	33.2	28.4	27.1	22.7	18	14.6	17.7	26.6	35.2	34.5	39.4	27.0	20.8	20.2
AS31	33.7	38.2	28.2	29.6	24	17.9	23.8	19.7	29.5	29.8	35.6	36.9	28.9	22.3	22.3
AS32	38.7	37.8	33.6	37.7	32.9	21.4	20	23	30.3	36.1	39.7	41.9	32.8	25.2	25.2
AS33	31	33.8	28.3	-	27.1	18.6	22.4	22.6	28.9	26.5	33.4	38.7	28.3	21.8	21.8
AS34	26	30	21.5	22.1	21.7	13.2	11.8	12.5	23.6	23.8	28.2	37.1	22.6	17.4	17.4
AS35	32.6	33.3	28	28.5	22.1	16.7	19.7	18.1	26.3	28.2	33.7	36.6	27.0	20.8	20.8
AS36	26.1	29.4	24.8	25.6	24.4	17.8	16.4	17	21.1	24.9	27.6	35.1	24.2	18.6	18.6
AS37	35.1	37.7	32.3	37.7	-	23.3	22.8	23.4	34.3	37.7	36.5	45.7	33.3	25.7	25.7
AS38	28.1	34.6	26.3	27.3	29.9	20.6	-	21.4	19.9	27.6	36.1	34.6	27.9	21.4	21.4
AS39	24.3	26.4	23.3	19.5	19	12.9	13.3	14.9	27.9	23.7	28.3	37.3	22.6	17.4	17.4
AS40	25.8	26.6	22.1	25.6	21.7	16.6	25	24.6	26.3	22.4	27	31.3	24.6	18.9	18.9
AS41	25.1	34.9	36.1	30.3	26.7	22.3	16.3	19.3	23.8	33.6	32.8	35.2	28.0	21.6	21.6
AS42	26.1	34.3	27	29	24.5	17.8	16.4	20.7	29.7	29.7	35.1	39.1	27.5	21.1	21.1
AS43	31.2	-	27.7	29	27.7	20.1	19.3	18.3	29.7	32.9	38.7	41.5	28.7	22.1	22.1
AS44	38.3	30.9	23.7	26.5	25.8	18.2	26	25.7	29.9	24.9	31.5	34.5	28.0	21.6	21.6
AS45	25.6	-	19.1	-	21.3	13.8	19.6	18.3	22.3	16.7	25.1	31	21.3	16.4	16.4

☐ **Local bias adjustment factor used**

☒ **National bias adjustment factor used**

☒ **Annualisation has been conducted where data capture is <75%**

Notes:

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

NO_2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined.**

(1) See Appendix C for details on bias adjustment and annualisation.

(2) Distance corrected to nearest relevant public exposure.

Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC

Supporting Technical Information

Changed and new sources of pollution have been investigated and any changes to existing sources, or new sources are listed below:

Table C.1 – Supporting Technical Information

New or Existing Source	Screening Assessment Required?
Narrow Congested Streets with residential properties close to the kerb	NO
Busy Streets where people may spend 1-hour or more close to traffic	NO
Roads with a high flow of buses and/or HGVs	NO
Junctions	New Junction on the M20 (Junction 10A) covered in the main body of the report
New roads constructed since the last round of Review and Assessment	NO
New roads constructed since the last round of Review and Assessment	NO
Roads with significantly changed traffic flows	NO
Bus and coach stations	NO
Railway (diesel and steam trains)	NO
Industrial installations (new installations and those with significantly increased emissions)	NO
Major petrol storage depots	NO
Petrol Stations	NO
Poultry farms	NO
Biomass combustion (including domestic solid-fuel burning for PM_{10})	NO
CHP installations	NO
Domestic solid-fuel burning (SO_2)	NO
Quarries, landfill sites, opencast coal mining, waste transfer sites, materials handling (i.e. ports, major construction sites)	NO

New or Existing Source	Screening Assessment Required?
New Developments	The council has recently embarked upon a major challenge to revitalise the Ashford Town Centre. Further details are provided in the main body of the report

Diffusion Tube Bias Adjustment Factors

The Ashford Borough Council background site co-location study was closed in April 2011 and therefore it is not appropriate to use these data to calculate a bias adjustment factor. Therefore, the bias factor has been taken from the diffusion tube spreadsheet of national comparison studies. This has given a bias-adjustment factor for 2016 of 0.77. The bias adjustment factors for previous years were 0.79 in 2012, 0.80 in 2013, 0.81 in 2014 and 0.81 in 2015.

QA/QC of diffusion tube monitoring

Nitrogen dioxide analysis procedures are compliant with the Diffusion Tubes for Ambient NO_2 Monitoring: Practical Guidance for users and laboratories (February 2008). The diffusion tubes are supplied and analysed by ESG Didcot utilising the 50% Triethanolamine (TEA) in acetone preparation method. ESG Didcot is a UKAS accredited laboratory which participates in the AEA inter-comparison, AIR PT and the WASP scheme. In 2016, ESG Didcot was between 75% and 100% satisfactory in all AIR PT/WASP trials.

Appendix D: Map(s) of Monitoring Locations and AQMAs

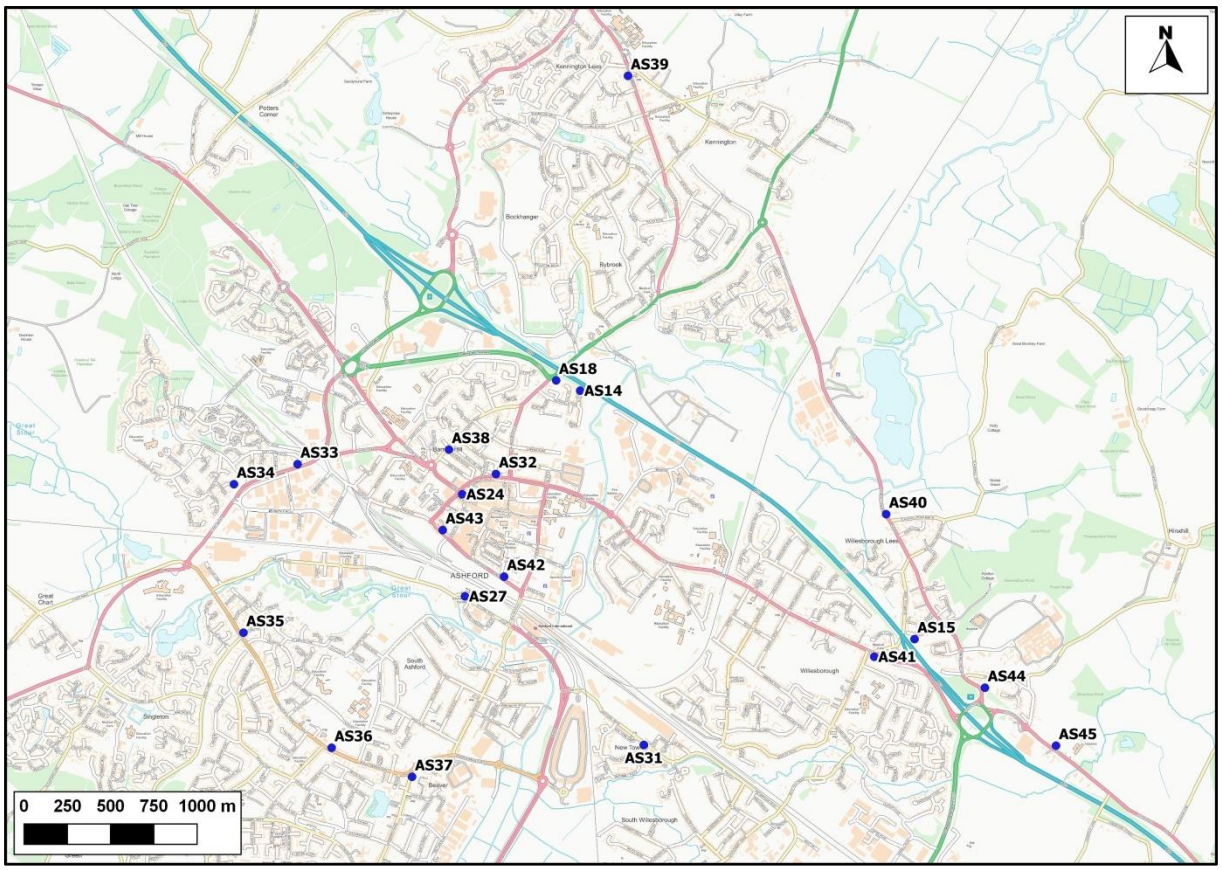

Figure D.1: Map of Non-Automatic Monitoring Locations

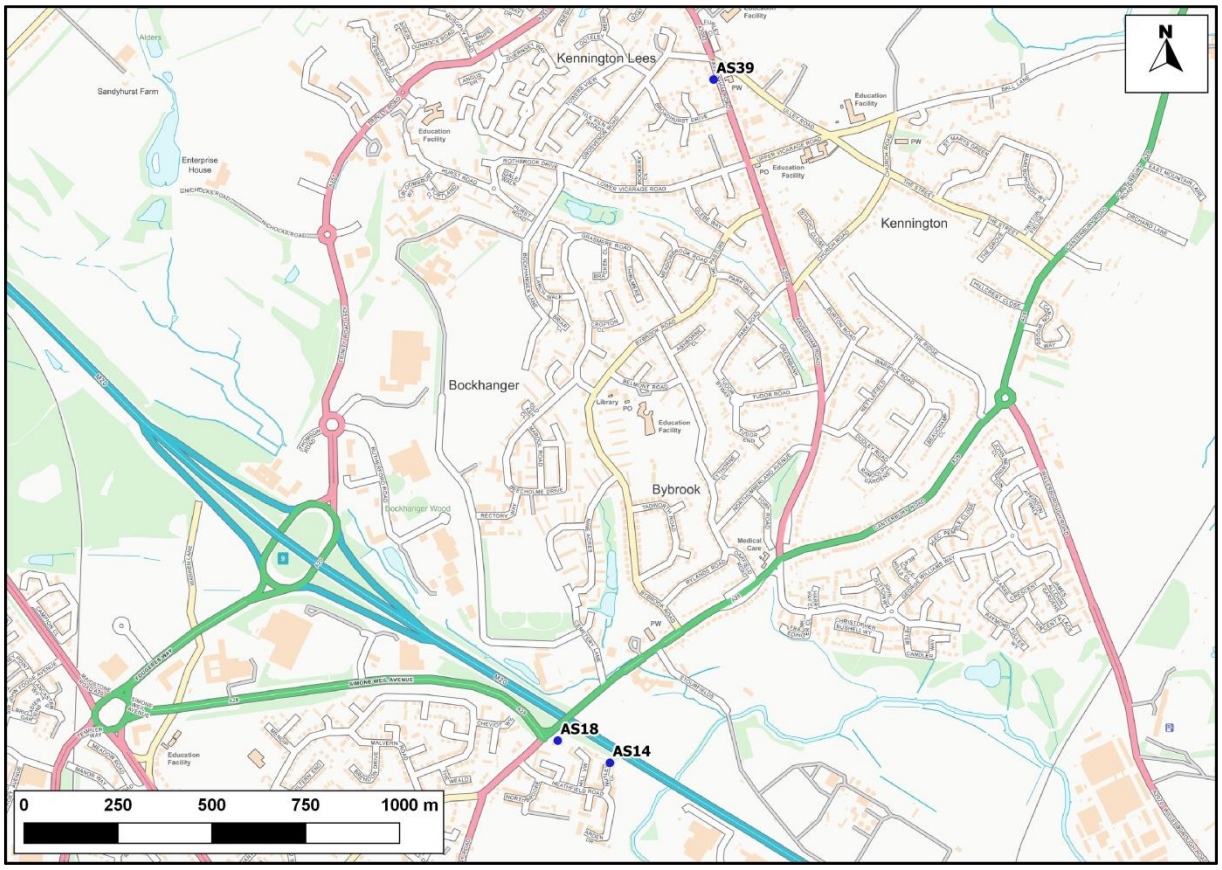

Figure D.2: Diffusion Tubes North of Ashford

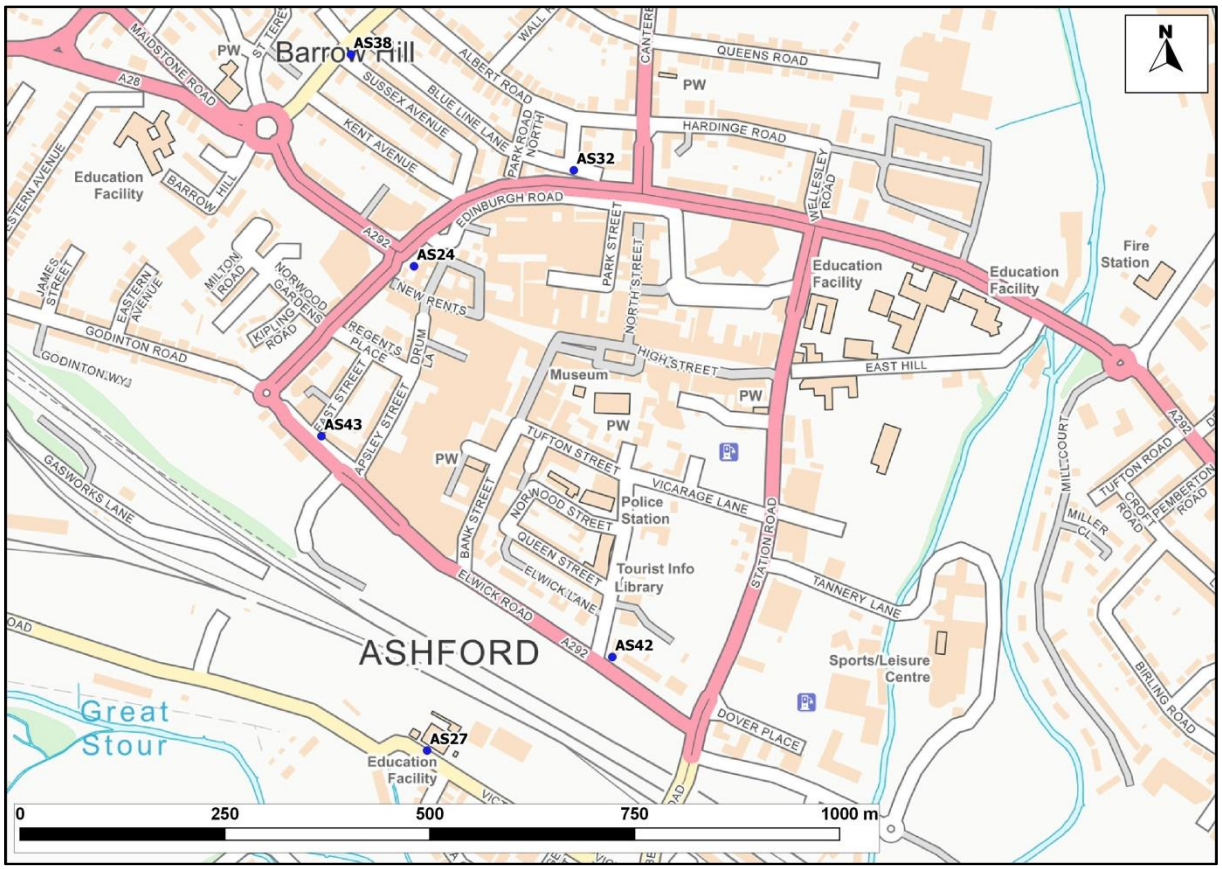

Figure D.3: Diffusion Tubes Centre of Ashford

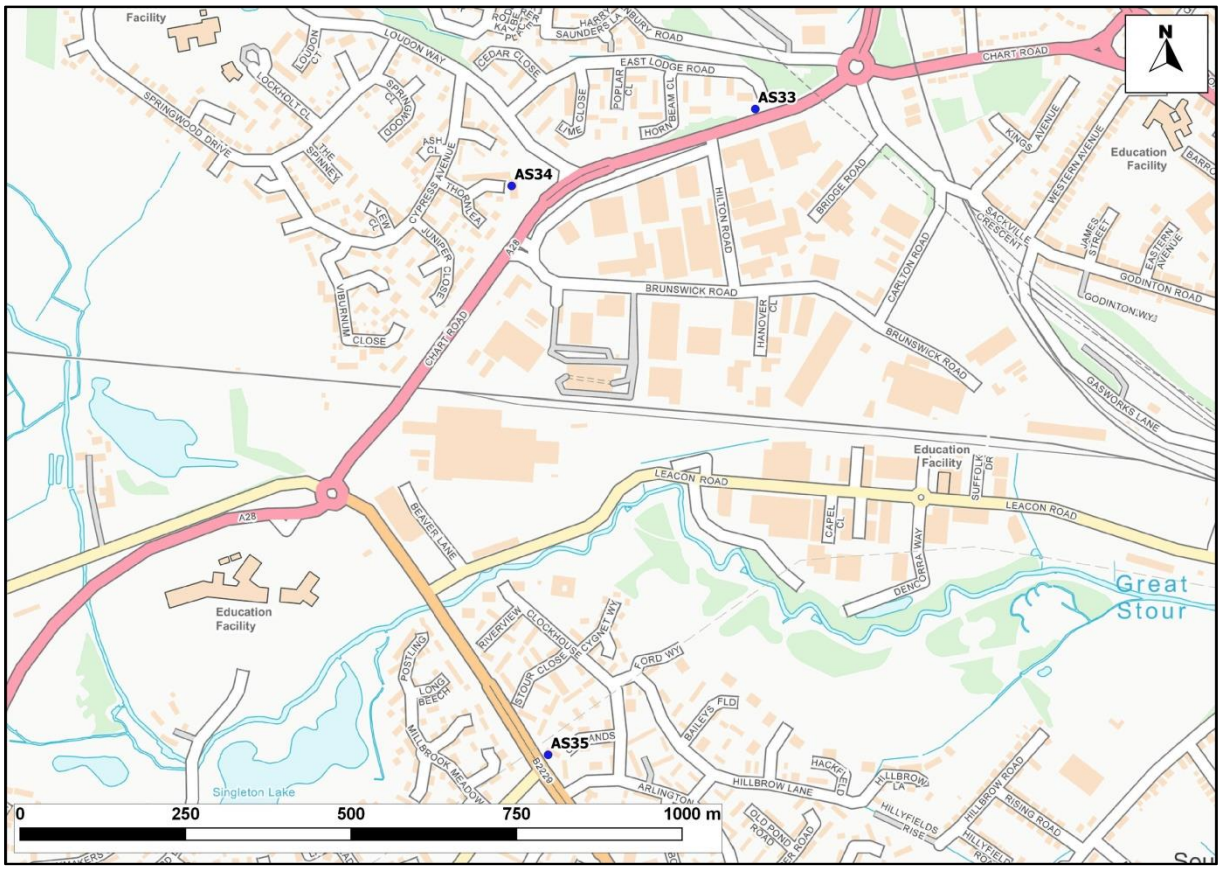

Figure D.4: Diffusion Tubes West of Ashford

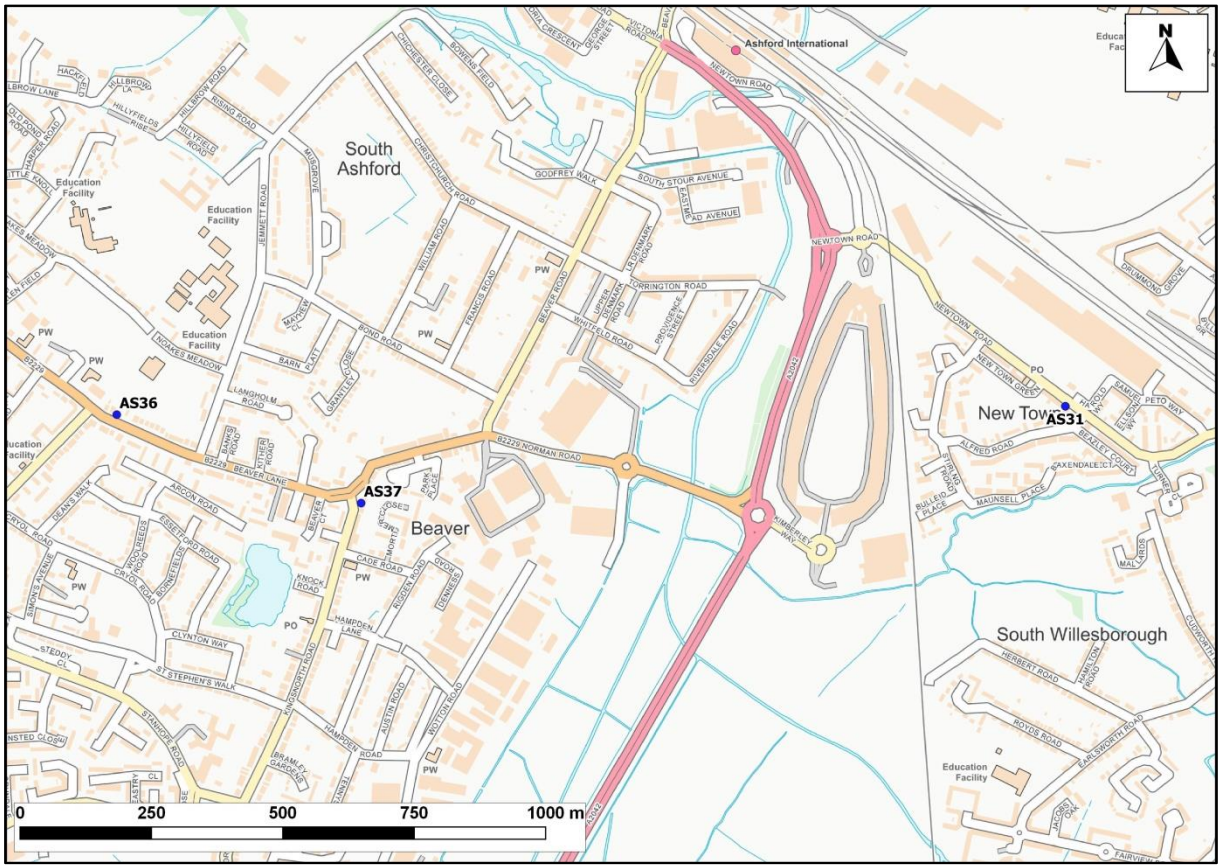

Figure D.5: Diffusion Tubes South of Ashford

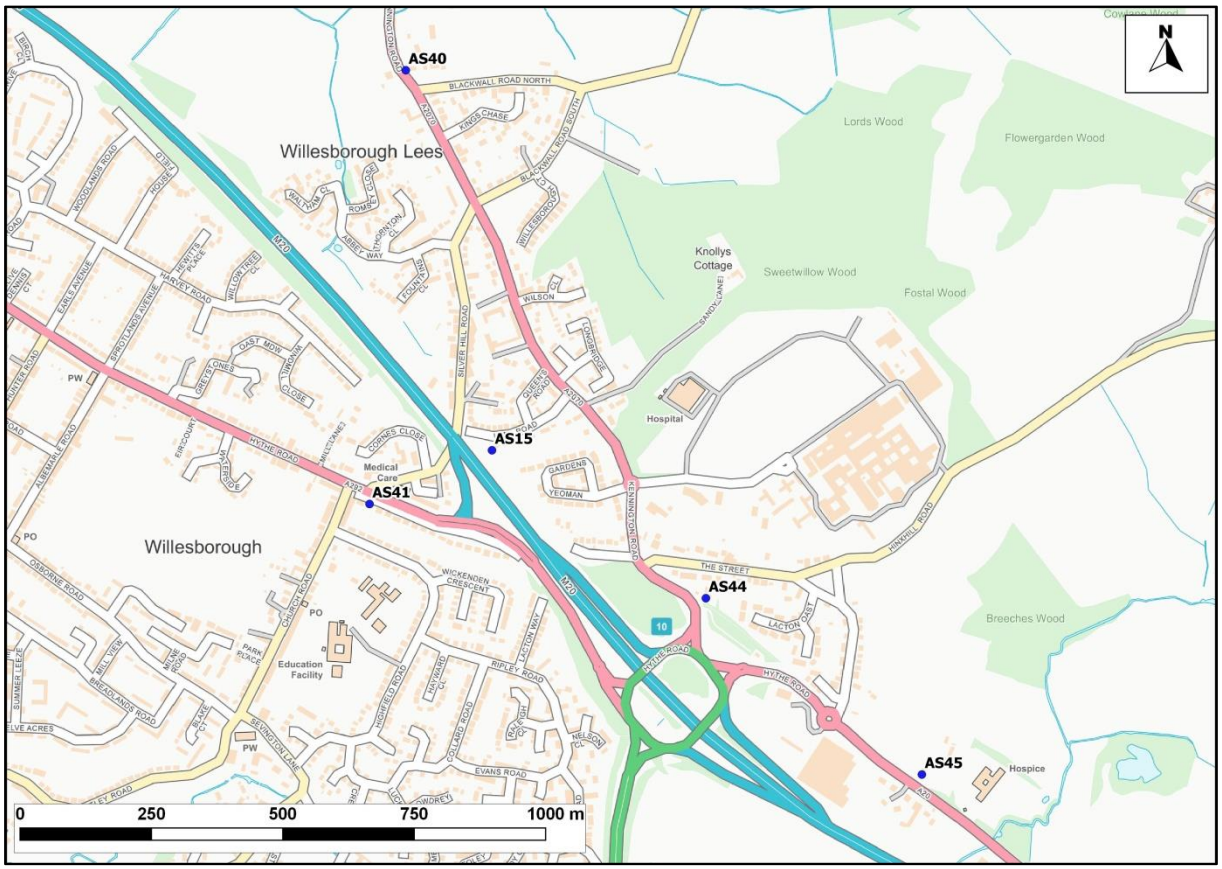

Figure D.6: Diffusion Tubes East of Ashford

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England

Pollutant	Air Quality Objective[4]	
	Concentration	Measured as
Nitrogen Dioxide (NO_2)	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean
	40 µg/m^3	Annual mean
Particulate Matter (PM_{10})	50 µg/m^3, not to be exceeded more than 35 times a year	24-hour mean
	40 µg/m^3	Annual mean
Sulphur Dioxide (SO_2)	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean
	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean
	266 µg/m^3, not to be exceeded more than 35 times a year	15-minute mean

[4] The units are in microgrammes of pollutant per cubic metre of air (µg/m^3).

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
ASR	Air quality Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England
EU	European Union
Exceedance	A period of time when the concentration of a pollutant is greater than the appropriate air quality objective. This applies to specified locations with relevant exposure
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
$\mu g/m^3$	Microgrammes per cubic metre
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
Standards	A nationally defined set of concentrations for nine pollutants below which health effects do not occur or are minimal
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide

References

Defra (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland.

Defra (2016a) Local Air Quality Management Policy Guidance (PG16).

Defra (2016b) Local Air Quality Management Technical Guidance (TG16).

Directive 2008/50/EC of the European Parliament and of the Council (2008).

HMSO (1995) Environment Act.

HMSO (2000) The Air Quality (England) Regulations, 2000, Statutory Instrument 928.

HMSO (2002) The Air Quality (England) (Amendment) Regulations, 2002, Statutory Instrument 3043.

Stationery Office (2010) The Air Quality Standards Regulations (No. 1001).