2023 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the Environment Act 1995 Local Air Quality Management, as amended by the Environment Act 2021

Date: May 2023

Information	Ashford Borough Council Details
Local Authority Officer	Linda Spicer
Department	Environmental Protection
Address	Civic Centre Tannery Lane Ashford TN23 1PL
Telephone	01233 330 645
E-mail	Environmental.ProtectionComplaints@ashford.gov.uk
Report Reference Number	AIR18388676
Date	May 2023

Executive Summary: Air Quality in Our Area

Air Quality in Ashford Borough Council

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, the elderly, and those with existing heart and lung conditions. There is also often a strong correlation with equalities issues because areas with poor air quality are also often less affluent areas[1,2].

The mortality burden of air pollution within the UK is equivalent to 29,000 to 43,000 deaths at typical ages[3], with a total estimated healthcare cost to the NHS and social care of £157 million in 2017[4].

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.

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 contribute to background pollutant concentrations. Except for one monitoring site which reports NO_2 annual mean concentration within 10% of the AQS objective, other pollutant concentrations within the borough are all comfortably below the AQS objective. The latest monitoring data show levels are increasing slightly in

---

[1] Public Health England. Air Quality: A Briefing for Directors of Public Health, 2017

[2] Defra. Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

[3] Defra. Air quality appraisal: damage cost guidance, January 2023

[4] Public Health England. Estimation of costs to the NHS and social care due to the health impacts of air pollution: summary report, May 2018

2022 compared to 2021. This is likely due to the increased road traffic emissions as traffic activities recovered from the impact of COVID-19 pandemics.

Actions to Improve Air Quality

Whilst air quality has improved significantly in recent decades, there are some areas where local action is needed to protect people and the environment from the effects of air pollution.

The Environmental Improvement Plan[5] sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term $PM_{2.5}$ targets. The National Air Quality Strategy, due to be published in 2023, will provide more information on local authorities' responsibilities to work towards these new targets and reduce $PM_{2.5}$ in their areas. The Road to Zero[6] details the approach to reduce exhaust emissions from road transport through a number of mechanisms; this is extremely important given that the majority of Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

Air quality in the borough is considered to be good, with concentrations below the national air quality objectives at relevant locations. Ashford Borough Council protects air quality within its borough using Core Strategy Policy CS1 to encourage sustainable development and high-quality designs and Policy ENV12 which concerns major development proposals and their potential impact on air quality. 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. Recently, Ashford Borough Council has progressed the following actions:

- 35,165 kWh total energy consumption were recorded within the Ashford EV charging points network in 2022.
- Communications campaign about air quality and links to shared cross county webpage https://kentair.org.uk and Care for Air education resource https://care-for-air.kentair.org.uk/

---

[5] Defra. Environmental Improvement Plan 2023, January 2023

[6] Dft The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018

- Planning conditions require electric vehicle charging points where appropriate.
- Ashford Borough Council supports 'Inspires Schools' charity via the Walk to School Scheme and have given a grant of £1,000 for 2022/2023.
- Supported Kent and Medway Air Quality Partnership in obtaining Defra funding for digital educational resource (Pollution Patrol) and have also contributed towards funding towards this project.
- Supported Kent and Medway Air Quality Partnership in obtaining Defra grant for support to public health/medical professionals, including commitment to funding.
- The major developments to be built or in operation are all in line with guidance from the Institute of Air Quality Management.
- A 3-year scheme to encourage electric and hybrid taxis is now completed and has been extended to March 2025.

Conclusions and Priorities

This Annual Status Report confirms that air quality within Ashford continues to meet the relevant air quality objectives, and that air quality is generally good. The main source of pollution within the borough is road traffic. The Local Transport Plan for Kent is crucial, setting out policies to improve transport, and encourage sustainable transport within the borough. A number of actions to maintain and improve current air quality are included in the ASR. The planning system is also key to ensuring that air quality does not deteriorate, especially given the large amount of development planned in this area. The Ashford Local Plan was adopted in February 2019, and Policy ENV12 aims to protect and improve air quality.

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, in conjunction with Kent and Medway Air Quality Partnership encourages the promotion of air quality, and educational materials 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.

Local Responsibilities and Commitment

This ASR was prepared by the Environmental Protection Officer at Ashford Borough Council with the support and agreement of the following officers and departments:

• Bureau Veritas UK Ltd

• Ashford Borough Council - Parking, Economic Development, Planning, Strategy and Policy Development and Environmental Protection

This ASR has been approved by: Shelia Davison, Assistant Director Safety and Wellbeing, Ashford Borough Council.

This ASR has not been signed off by a Director of Public Health.

If you have any comments on this ASR please send them to Linda Spicer at:

Environmental Protection Team,

Ashford Borough Council,

Civic Centre

Tannery lane

Ashford Kent

TN23 1PL

Tel: 01233 331111

Email: Environmental.ProtectionComplaints@ashford.gov.uk

Table of Contents

Figures

Tables

1 Local Air Quality Management

This report provides an overview of air quality in Ashford Borough Council during 2022. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), 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 order to achieve and maintain the objectives and the dates by which each measure will be carried out. 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 are presented in Table E.1.

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 should prepare an Air Quality Action Plan (AQAP) within 18 months. The AQAP should specify how air quality targets will be achieved and maintained and provide dates by which measures will be carried out.

Ashford Borough Council currently does not have any declared AQMAs. For reference, a map of Ashford Borough Council's monitoring locations is provided in Appendix D.

2.2 Progress and Impact of Measures to address Air Quality in Ashford Borough Council

Defra's appraisal of last year's ASR concluded:

1. *"Reference to the Public Health Outcomes Framework has been made and this practice should continue going forward.*

2. *Trends have been presented with a robust comparison to the Air Quality Objectives.*

3. *QA/QC procedures are robust, with sufficient supporting evidence provided."*

Ashford Borough Council has taken forward a number of direct measures during the current reporting year of 2022 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are provided below.

Local Plan 2030

The Ashford Local Plan was adopted in February 2019.

Policy ENV12 on 'Air Quality' states that *"All major development proposals should promote a shift to the use of sustainable low emission transport to minimise the impact of vehicle emissions on air quality.*

Development should be located where it is accessible to support the use of public transport, walking and cycling.

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…"

Electric Vehicle Charging

Kent County Council are leading a project with seven of the Kent local authorities to implement more charging points around Kent. 153 car parks have been put forward as potential locations and over 600 public chargers will be installed around the county between 2022 and 2024.

Table 2.1 shows the total energy consumption from the electric charging points in 2020, 2021 and 2022. Although the use of Elwick Place and Julie Rose Stadium Car Park increased significantly in 2022 (67% and 66% increase), all of the other sites had no data mostly due to charging points being out of service. However, forthcoming charging points

include three locations that are due to be live imminently. The locations are Adleys Yard Car Park, Victoria Road Car Park and Vicarage Lane Car Park.

Table 2.1 – Electric Vehicle Energy Consumptions

Location	Sum of Total Energy Consumption /kWh			
	2020	2021	2022	%change
Civic/ Stour Centre, Ashford x2	4693	3420	-	-
Julie Rose Stadium Car Park, Ashford x2	1436	7009	11664	66
Leisure Centre, Tenterden x2	890	30	-	-
Station Road (West) Car Park, Tenterden x2	1147	-	-	-
Vicarage Lane Car Park, Ashford x2	1126	-	-	-
Elwick Place, Ashford x4	12152	14174	23501	67
Grand Total	**21444**	**24633**	**35165**	**43**

The network of Electric Vehicle Charging Points (EVCP) is planned to be expanded in the following years. Ashford Borough Council has been successful in a funding bid to the Office for Low Emission Vehicles (OLEV) to help forge ahead with plans to increase the number of EVCPs in council-managed car parks. The council has been awarded a grant with a maximum value of £174,300 to install on-street charge points for those wishing to charge their plug-in electric vehicles while parked in the borough council's car parks. Cabinet has already approved the release of funds from its Climate Change Reserve Fund to install even more EVCPs in locations that are ineligible for funding through the OLEV scheme. By utilising this grant as well as directly funding additional charging points, the council can support the global move towards electric vehicles and work towards achieving its green objectives.

To consider the cumulative impacts of development on air quality, and to encourage electric vehicle ownership, Ashford Borough Council requires future new builds to incorporate electric vehicle charging points. Each new dwelling with a designated parking space (driveway, carport, or garage), is required to provide at least one electric vehicle charging point. All Electric Vehicle charger points shall be provided to Mode 3 standard (providing up to 7kw) and SMART (enabling Wi-Fi connection). The charging point shall thereafter be retained available, in a working order for the charging of electric vehicles. Approved models are shown on the Office for Low Emission Vehicles Home charge Scheme approved ChargePoint model list:

https://www.gov.uk/government/publications/electric-vehicle-homecharge-scheme-approved-chargepoint-model-list.

Green Travel

The council continues to contribute towards the KM Charity Walk to School scheme during 2022. The KM Charity Team runs green travel initiatives for schools including parent-led walking buses, and other initiatives including Green Footsteps. A number of schools have achieved the Green Travel Mark Awards (at different levels), encouraging children to walk, cycle or travel to school in some active way. The scheme has attempted to improve road awareness, encourage physical activity and reduce the use of vehicles, which should improve air quality.

The council launched a scheme to encourage electric and hybrid vehicle uptake amongst taxi and private hire fleets in the borough. The initial stage was completed in March 2022 and has now been extended to March 2025. Furthermore, the council intends to explore options to provide fuel efficient driver training for taxi and private hire drivers to reduce vehicle emissions.

Climate Action Strategy

In July 2022, the Cabinet endorsed publication of a Climate Change Strategy to outline its ambitions to deliver net zero in its own operations by 2030 and Borough wide by 2050. It recognised that this needed to be done not only by delivering sustainable services but integrating climate considerations into all decision making and supporting behaviour change. Part of this strategy requires a centralised approach whereby all services share accountability to deliver on 8 core priorities.

Priority 1: Raise awareness of climate change *air quality* to increase understanding and knowledge, empower and enable our partners and residents

Priority 2: Ensure the council's decision-making processes, strategic documents and procedures contribute to climate change; reducing carbon emissions, positively impacting biodiversity *and air quality,* and increasing local resilience to climate change

Priority 3: Reduce reliance on fossil fuels for energy by increasing renewable energy generation and consumption

Priority 4: Encourage and enable a shift towards cleaner modes of transport and reduce car dependency with co-benefits to *air quality* and health.

Priority 5: Enable business growth while maximising opportunities to reduce carbon emissions (including specific objective to strengthen anti idling messaging to improve *air quality*)

Priority 6: Reduce the environmental footprint of buildings through retrofitting existing buildings and improved building standards within new build developments

Priority 7: Protect, enhance, and increase green space for the benefit of people, wildlife and carbon sequestration

Priority 8: Reduce waste and continue high levels of recycling

As outlined above air quality is recognised as a fundamental co-beneficiary of the wider work to mitigate climate change. It is also explicitly referenced in the performance management framework for the strategy – looking at monitoring sites with NO_2 below 40 µg/m^3 reiterating the agenda's consideration within the wider strategy.

2.3 PM$_{2.5}$ – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG22 (Chapter 8), 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 taking the following measures to address PM$_{2.5}$: 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 taking the following measures to address PM$_{2.5}$: 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 Health and members of the Local Healthwatch. The Board produced the Kent Joint Health and Wellbeing Strategy (Kent County Council, 2014), 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 to help reduce the health burden from air pollution. The Public Health Outcomes Framework (PHOF) is a Department of Health data tool for England, intended to focus public health action on increasing life expectancy and reducing differences in life expectancy between communities. The PHOF includes an indicator[7], based on the effect of particulate matter (PM$_{2.5}$) on mortality. For Ashford, this indicator (D01) for 2021 is 4.9% of deaths attributable to PM$_{2.5}$, which is slightly lower than the regional average (5.4%) and slightly higher than the average for England (5.5%). The approach used, in partnership with Public Health colleagues, includes the encouragement of active travel, which will also

---

[7] https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/1/gid/1000043/pat/15/ati/501/are/E07000170/iid/93861/age/230/sex/4/cat/-1/ctp/-1/yrr/1/cid/4/tbm/1

have wider public health benefits captured in other indicators such as increased physical activity (indicator C17a) and reducing excess weight at various ages (indicators C09a and b and C16).

The Local Transport Plan for Kent (Kent County Council, 2017) sets out a 15-year transport delivery plan for the county. Ashford has been identified 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 associated with road traffic emissions; reducing transport emissions within the borough is therefore of key importance. The Local Transport Plan proposes a number of strategies to improve transport within Ashford, including improvements to local bus and rail services and district and borough cycling strategies.

Planning is also important for reducing future concentrations of $PM_{2.5}$ and Ashford Borough Council is focussed through its planning policy on preventing concentrations being inadvertently increased. Policy ENV12 within the Local Plan states that:

"All major development proposals should promote a shift to the use of sustainable low emission transport to minimise the impact of vehicle emissions on air quality.

Development should be located where it is accessible to support the use of public transport, walking and cycling.

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"

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

This section sets out the monitoring undertaken within 2022 by Ashford Borough Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2018 and 2022 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

There is no automatic monitoring undertaken within the borough.

3.1.2 Non-Automatic Monitoring Sites

Ashford Borough Council undertook non- automatic (i.e., passive) monitoring of NO_2 at 25 sites during 2022. Table A.1 in Appendix A presents the details of the non-automatic 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. Monitoring was completed in line with the Defra Calendar.

3.2 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for bias, annualisation (where the annual mean data capture is below 75% and greater than 25%), and distance correction. Further details on adjustments are provided in Appendix C.

3.2.1 Nitrogen Dioxide (NO2)

Table A.2 in Appendix A compare the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40µg/m^3. Note that the concentration data presented represents the concentration at the location of the

monitoring site, following the application of bias adjustment and annualisation, as required (i.e., the values are exclusive of any consideration to fall-off with distance adjustment).

For diffusion tubes, the full 2022 dataset of monthly mean values is provided in Appendix B. Note that the concentration data presented in Table B.1 includes distance corrected values, only where relevant.

During 2022, no monitoring location reported an annual mean NO_2 concentration exceeding the AQS objective of 40µg/m^3. Monitoring location AS51 is located on the Wellesley Road and reported an annual mean concentration of 36.8µg/m^3 in 2022 which is within 10% of the AQS objective of 40µg/m^3. This monitoring location is not located at a site of relevant exposure. Following fall-off with distance correction calculations, there is a predicted annual mean NO2 concentration of 35.9µg/m^3 at the nearest relevant receptor.

Across all the monitoring locations in Ashford, there is a general decrease trend in the annual mean NO_2 concentration reported from 2018 to 2020, with all sites below the AQS objective. However, there is an average increase of 0.2 µg/m^3 observed from 2020 to 2022, with approximately half the sites decreasing slightly. This is likely to be a sign of traffic levels gradually recovering from the impacts of COVID-19 through 2020 to 2022.

Appendix A: Monitoring Results

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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
AS50	49 Hythe Road	Urban Background	601707	142748	NO_2	NO	0.0	5.7	No	2.0
AS51	Wellesley Road	Roadside	601247	142850	NO_2	NO	0.6	3.9	No	2.0
AS52	49 Somerset Road	Urban Centre	601211	142990	NO_2	NO	0.0	5.4	No	2.0
AS53	Northgate House, 1-9 North Street	Urban Centre	601055	142972	NO_2	NO	0.0	2.4	No	2.0
AS54	North Street	Roadside	601068	143048	NO_2	NO	2.7	2.0	No	2.0
AS55	5 Maidstone Road	Roadside	600367	143225	NO_2	NO	0.0	12.7	No	2.0
AS56	68 New Street	Urban Background	600667	143016	NO_2	NO	0.0	5.0	No	2.0
AS57	24 Bank Street	Urban Centre	600883	142694	NO_2	NO	0.0	4.5	No	2.0
AS58	Trafalgar House	Urban Centre	600865	142588	NO_2	NO	0.0	18.7	No	2.0
AS59	Romney Marsh Road (opposite railway station)	Urban Background	601096	142114	NO_2	NO	3.0	3.2	No	2.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
AS60	Victoria Road (opposite Curious Brewery)	Roadside	600992	142182	NO$_2$	NO	0.6	1.8	No	2.0
AS61	117 Station Road	Roadside	601150	142342	NO$_2$	NO	0.0	10.8	No	2.0
AS66	East Cross, Tenterden	Roadside	588552	133477	NO$_2$	NO	14.5	5.6	No	2.0
AS44	Dovecote House	Urban Background	603800	141792	NO$_2$	NO	0.0	22.2	No	2.0
AS49	Hythe Road	Roadside	604005	141612	NO$_2$	NO	4.3	2.0	No	2.0
AS67	West Cross	Roadside	587962	133017	NO$_2$	NO	6.9	2.0	No	2.0
AS48	Ransley House	Other	604733	140878	NO$_2$	NO	0.0	10.9	No	2.0
AS47	Kenistone, Kingsford Street	Other	604583	140961	NO$_2$	NO	0.0	21.3	No	2.0
AS15, AS16, AS17	Bracken Hill, Lees Road,	Other	603390	142075	NO$_2$	NO	0.0	33.0	No	2.0
AS33	East Lodge, Chart Road	Urban Background	599826	143084	NO$_2$	NO	0.0	12.7	No	2.0
AS31	42, Newtown Green	Roadside	601840	141457	NO$_2$	NO	0.0	3.8	No	2.0
AS64	282 Beaver Road	Urban Background	600597	141385	NO$_2$	NO	0.0	58.0	No	2.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
AS37	30 Kingsnorth Road	Urban Background	600488	141277	NO$_2$	NO	0.0	7.0	No	2.0
AS65	Maidstone Road, off Drovers Roundabout	Roadside	600188	143619	NO$_2$	NO	15.9	2.4	No	2.0
AS63	Brookfield Road	Roadside	599263	142471	NO$_2$	NO	5.8	5.9	No	2.0

Notes:

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

(2) N/A if not applicable.

Table A.2 – Annual Mean NO₂ Monitoring Results: Non-Automatic Monitoring (µg/m³)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2022 (%) [2]	2018	2019	2020	2021	2022
AS50	601707	142748	Urban Background	100.0	100.0	-	23.4	19.8	21.4	21.3
AS51	601247	142850	Roadside	90.4	90.4	-	-	31.0	37.7	36.8
AS52	601211	142990	Urban Centre	100.0	100.0	-	34.7	22.8	26.3	27.5
AS53	601055	142972	Urban Centre	100.0	100.0	-	33.3	23.7	24.3	25.2
AS54	601068	143048	Roadside	90.4	90.4	-	30.1	21.0	21.6	22.4
AS55	600367	143225	Roadside	90.4	90.4	-	23.7	16.4	17.0	18.2
AS56	600667	143016	Urban Background	100.0	100.0	-	22.4	17.0	18.7	19.2
AS57	600883	142694	Urban Centre	100.0	100.0	-	28.8	21.5	24.3	23.8
AS58	600865	142588	Urban Centre	92.3	92.3	-	26.8	22.1	23.8	19.8
AS59	601096	142114	Urban Background	82.7	82.7	-	25.1	25.3	33.3	28.2
AS60	600992	142182	Roadside	100.0	100.0	-	29.4	23.7	26.0	32.9
AS61	601150	142342	Roadside	100.0	100.0	-	31.1	22.7	24.1	24.8
AS66	588552	133477	Roadside	100.0	100.0	-	-	-	-	23.3
AS44	603800	141792	Urban Background	100.0	100.0	19.7	18.9	14.3	15.0	14.0
AS49	604005	141612	Roadside	92.3	92.3	-	37.1	26.9	26.7	23.5
AS67	587962	133017	Roadside	100.0	100.0	-	-	-	-	20.3
AS48	604733	140878	Other	100.0	100.0	13.8	13.2	10.8	13.1	12.1

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2022 (%) [2]	2018	2019	2020	2021	2022
AS47	604583	140961	Other	100.0	100.0	14.4	14.0	12.0	13.2	12.9
AS15, AS16, AS17	603390	142075	Other	100.0	100.0	30.5	27.7	22.2	20.7	21.4
AS33	599826	143084	Urban Background	100.0	100.0	19.6	18.4	16.0	15.5	16.6
AS31	601840	141457	Roadside	100.0	100.0	18.4	19.6	16.1	16.8	17.5
AS64	600597	141385	Urban Background	100.0	100.0	-	21.2	17.2	19.1	19.1
AS37	600488	141277	Urban Background	100.0	100.0	25.1	25.1	19.2	20.7	22.0
AS65	600188	143619	Roadside	100.0	100.0	-	-	-	24.2	27.7
AS63	599263	142471	Roadside	75.0	75.0	-	29.1	22.5	23.6	25.1

Notes:

The annual mean concentrations are presented as µg/m^3.

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 **<u>bold and underlined</u>**.

Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(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%).

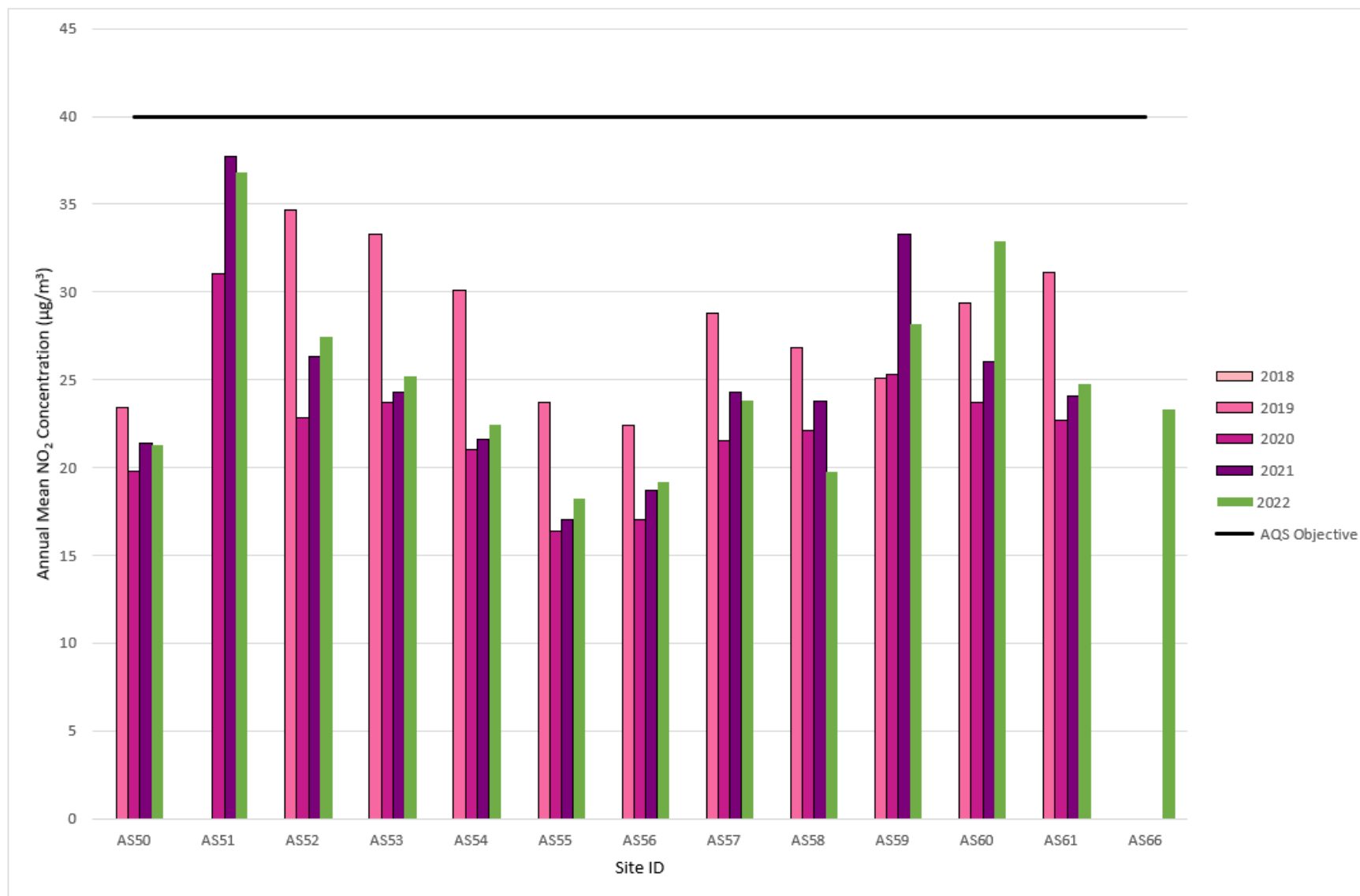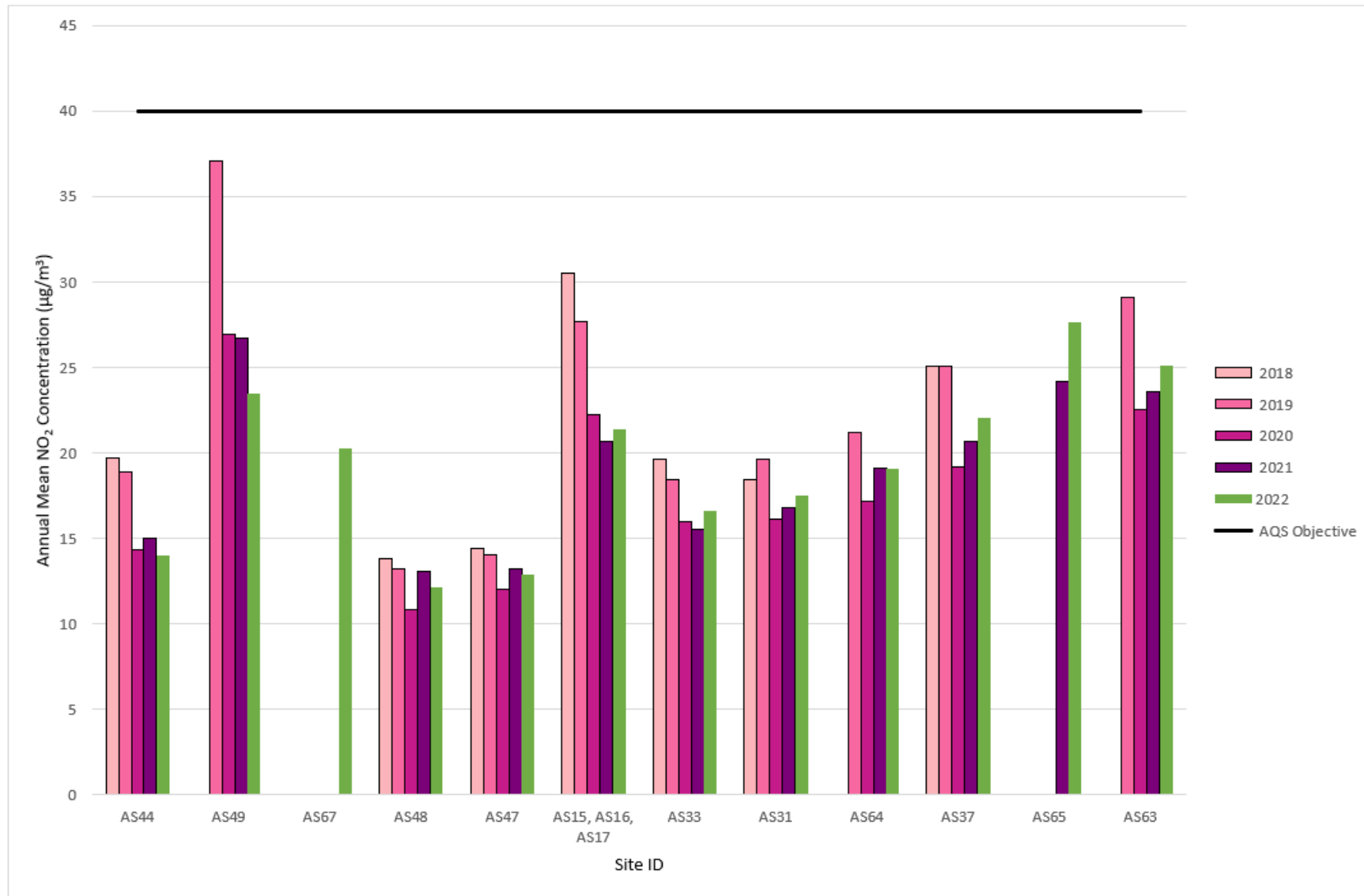**Figure A.1 – Trends in Annual Mean NO₂ Concentrations**

Figure A.2 – Trends in Annual Mean NO2 Concentrations

Appendix B: Full Monthly Diffusion Tube Results for 2022

Table B.1 – NO$_2$ 2022 Diffusion Tube Results (µg/m^3)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.76)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
AS50	601707	142748	39.8	24.0	37.4	30.2	21.5	20.4	26.0	31.0	29.7	24.4	23.7	27.7	28.0	21.3		
AS51	601247	142850	59.3	38.9	57.1	44.0	40.5	41.2	50.7	53.2	53.0		50.0	45.2	48.5	36.8	35.9	
AS52	601211	142990	47.7	28.4	42.6	35.0	32.8	27.8	34.0	36.0	36.8	36.0	40.1	36.3	36.1	27.5		
AS53	601055	142972	40.3	35.3	35.9	27.2	29.5	28.8	30.3	27.3	31.8	38.7	36.9	35.3	33.1	25.2		
AS54	601068	143048	38.5	29.0	38.8	20.8		24.3	28.0	25.5	30.8	34.6	29.6	24.7	29.5	22.4		
AS55	600367	143225	33.8	24.0	32.1	19.2		17.6	22.5	22.1	22.5	25.2	22.1	22.9	24.0	18.2		
AS56	600667	143016	34.9	22.3	33.4	24.5	20.7	18.2	21.6	24.4	25.4	23.4	24.7	29.5	25.3	19.2		
AS57	600883	142694	43.0	32.0	33.6	28.3	26.9		28.1	28.4	29.8	30.8	32.2		31.3	23.8		
AS58	600865	142588		22.5	37.1	25.6	20.8	19.3	23.5	27.5	26.9	26.8	24.1	32.0	26.0	19.8		
AS59	601096	142114	44.2	49.9	53.4		27.7	27.9	35.6	32.3		37.9	32.9	29.3	37.1	28.2		
AS60	600992	142182	50.0	33.4	44.4	27.1	41.0	43.2	47.0	48.8	42.9	35.2	54.0	52.5	43.3	32.9		
AS61	601150	142342	38.0	31.8	37.4	27.6	28.1	29.6	32.0	32.1	32.4	36.1	34.6	31.6	32.6	24.8		
AS66	588552	133477	42.1	35.6	37.7	27.2	28.5	30.9	29.0	26.4	13.6	30.0	31.0	36.1	30.7	23.3		
AS44	603800	141792	26.9	24.2	21.5	13.7	16.8	13.5	14.6	14.7	15.8	17.1	20.5	21.7	18.4	14.0		
AS49	604005	141612	40.0	41.6	30.6	18.9	28.6	29.2	32.8		26.3	32.0	34.0	25.9	30.9	23.5		
AS67	587962	133017	43.1	29.1	35.7	18.9	22.9	24.5	26.6	23.6	12.1	29.7	25.0	29.2	26.7	20.3		
AS48	604733	140878	17.5	13.2	25.2	16.2	13.5	11.3	15.2	17.0	17.7	13.9	12.5	18.1	15.9	12.1		

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.76)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
AS47	604583	140961	25.4	13.6	24.9	14.6	13.1	12.0	15.0	18.5	19.3	14.1	12.5	20.7	17.0	12.9		
AS15	603390	142075	27.4	36.4	31.0	17.8	28.0	26.7	25.7	21.6	23.7	32.1	32.0	24.8	-	-		Triplicate Site with AS15, AS16 and AS17 - Annual data provided for AS17 only
AS16	603390	142075	37.4	35.9	32.7	19.0	26.6	26.0	27.1	23.8	25.1	29.7	29.8	30.6	-	-		Triplicate Site with AS15, AS16 and AS17 - Annual data provided for AS17 only
AS17	603390	142075	38.4	37.1	33.6	17.9	28.0	25.7	27.7	21.4	24.3	31.6	33.6	21.2	28.1	21.4		Triplicate Site with AS15, AS16 and AS17 - Annual data provided for AS17 only
AS33	599826	143084	26.9	22.9	30.7	17.6	19.9	18.6	22.5	18.8	19.0	22.7	22.0	20.7	21.9	16.6		
AS31	601840	141457	27.6	26.1	24.2	17.9	23.0	16.8	19.0	17.9	23.2	23.3	27.1	30.5	23.1	17.5		
AS64	600597	141385	40.7	23.6	31.8	23.6	20.0	16.1	21.2	22.0	26.8	22.5	23.3	29.4	25.1	19.1		
AS37	600488	141277	38.2	26.5	37.2	24.9	23.7	22.5	30.3	25.6	24.6	30.8	31.1	32.7	29.0	22.0		
AS65	600188	143619	44.9	35.1	44.7	34.2	31.4	30.2	25.2	39.4	40.2	34.5	37.8	39.1	36.4	27.7		
AS63	599263	142471	41.0	37.5	37.1	24.0		27.8		27.4		33.7	34.5	34.3	33.0	25.1		

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 **<u>bold and underlined</u>**.

See Appendix C for details on bias adjustment and annualisation.

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

New or Changed Sources Identified Within Ashford Borough Council During 2022

Ashford Borough Council has not identified any new sources relating to air quality within the reporting year of 2022. However, Chilmington (the largest new development identified in 2021) is now at an occupation level of 290 houses and is continuing to be built out.

Additional Air Quality Works Undertaken by Ashford Borough Council During 2022

Ashford Borough Council has not completed any additional works within the reporting year of 2022.

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 Socotec UK (formerly known as ESG Didcot) utilising the 50% Triethanolamine (TEA) in acetone preparation method.

Diffusion Tube Annualisation

All diffusion tube monitoring locations within Ashford Borough Council recorded data capture of at least 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2022 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG22 provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube

monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO_x/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

Ashford Borough Council have applied a national bias adjustment factor of 0.76 to the 2022 monitoring data. A summary of bias adjustment factors used by Ashford Borough Council over the past five years is presented in Table C.1.

Table C.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2022	National	03/23	0.76
2021	National	03/22	0.78
2020	National	03/21	0.77
2019	National	09/20	0.75
2018	National	06/19	0.76

NO_2 Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO_2 concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO_2 fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO_2 concentrations corrected for distance are presented in Table B.1.

Fall-off with distance calculations was completed at one site where concentrations were greater than 36µg/m^3 – AS51. This was completed using version 3.0 of the LAQM Diffusion Tube Data Processing Tool, and the output is presented in Table C.2.

Table C.2 – NO_2 Fall off With Distance Calculations (concentrations presented in µg/m^3)

Site ID	Distance (m): Monitoring Site to Kerb	Distance (m): Receptor to Kerb	Monitored Concentration (Annualised and Bias Adjusted	Background Concentration	Concentration Predicted at Receptor	Comments
AS51	3.9	4.5	36.8	12.4	35.9	AS51

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

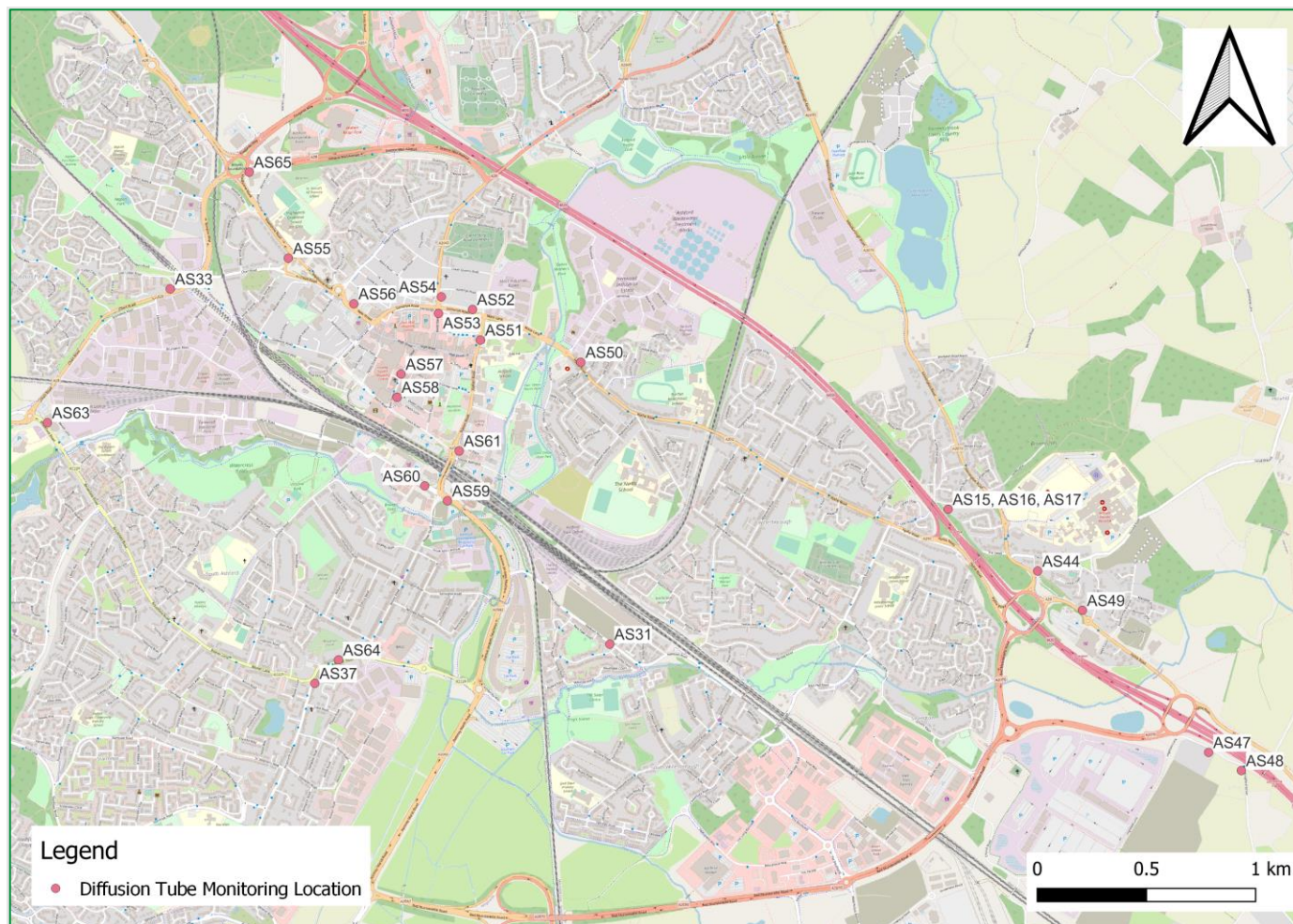**Figure D.1 – Map of Non-Automatic Monitoring Site in Ashford**

Figure D.2 – Map of Non-Automatic Monitoring Site in Tenterden

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[8]

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

---

[8] The units are in micrograms of pollutant per cubic metre of air ($\mu g/m^3$).

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	Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
EU	European Union
LAQM	Local Air Quality Management
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide
EVCP	Electric Vehicle Charging Points
OLEV	Office for Low Emission Vehicles
EV	Electric Van
PHOF	Public Health Outcomes Framework
QBP	Quality Bus Partnership

References

- Local Air Quality Management Technical Guidance LAQM.TG22. August 2022. 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.PG22. August 2022. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- Defra, 2022. National Diffusion Tube Bias Adjustment Factor Spreadsheet, v03/23 published in March 2023.
- Ashford, 2022. Annual Air Quality Status Report 2021.
- Ashford, 2021. Annual Air Quality Status Report 2020.
- Ashford, 2020. Annual Air Quality Status Report 2019.
- Ashford, 2019. Annual Air Quality Status Report 2018.
- Ashford Borough Council, 2019. Adopted Ashford Local Plan 2030.