Sevenoaks District Council

Air Quality Annual Status Report

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

June 2025

www.sevenoaks.gov.uk/airquality

Sevenoaks
DISTRICT COUNCIL

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This ASR has been approved by:

Dr Anjan Ghosh, Director of Public Health, KCC, on 16 June 2025.

This ASR has been signed off by a Director of Public Health.

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Executive Summary: Air Quality in Our Area

Air Quality in Sevenoaks District

Breathing in polluted air affects our health and costs the NHS and our society billions of pounds each year. Air pollution is recognised as a contributing factor in the onset of heart disease and cancer and can cause a range of health impacts, including effects on lung function, exacerbation of asthma, increases in hospital admissions and mortality.

Air pollution particularly affects the most vulnerable in society, children, the elderly, and those with existing heart and lung conditions. Low-income communities are also disproportionately impacted by poor air quality, exacerbating health and social inequalities.

Table ES 1 provides a brief explanation of the key pollutants relevant to Local Air Quality Management and the kind of activities they might arise from.

Table ES 1 - Description of Key Pollutants

Pollutant	Description
Nitrogen Dioxide (NO_2)	Nitrogen dioxide is a gas which is generally emitted from high-temperature combustion processes such as road transport or energy generation.
Sulphur Dioxide (SO_2)	Sulphur dioxide (SO_2) is a corrosive gas which is predominantly produced from the combustion of coal or crude oil.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Particulate matter is everything in the air that is not a gas. Particles can come from natural sources such as pollen, as well as human made sources such as smoke from fires, emissions from industry and dust from tyres and brakes. PM_{10} refers to particles under 10 micrometres. Fine particulate matter or $PM_{2.5}$ are particles under 2.5 micrometres.

Sevenoaks District faces air pollution primarily due to Nitrogen Dioxide (NO_2) and Particulate Matter (PM_{10} & $PM_{2.5}$), which mainly originate from road traffic. The Sevenoaks District is intersected by three major motorways: the M25, M26, and M20. These crucial roads connect London and the north of the UK to the port at Dover and the Channel Tunnel. Consequently, there is a continuous flow of continental Heavy Goods Vehicles

(HGVs). Additionally, commuter traffic—whether directly into London or connecting to it—and local journeys, such as school runs, contribute significantly to several air pollution hotspots in Sevenoaks, Swanley, and various small towns along the A25.

In 2024, Sevenoaks District Council decommissioned both automatic monitoring stations, which means we are now only able to report on nitrogen dioxide (NO_2) concentrations. At all monitoring locations in 2024, annual mean NO_2 concentrations were reported to be below the annual mean AQS objective of 40µg/m^3.

- 55/58 of the diffusion tubes within Sevenoaks District showed an annual decline in average concentrations.
- 44/58 diffusion tubes within Sevenoaks District have shown a continuous four-year declining trend.

The maximum reported concentration was 30.5µg/m^3, reported at DT99 located on Seal Road, Bat and Ball on the A25. No other site reported an annual mean concentration >30µg/m_3. The second highest concentration (28.8 µg/m^3) was reported at DT31 located on Seal Road, Bat and Ball on the A25.

Both diffusion tubes DT99 and DT31 are located approximately 60 metres from each other, within AQMA 13. Despite declining trends across the district within all AQMA's, Sevenoaks District Council will continue to monitor these closely, as future developments may cause a change in these trends.

In April 2022, Sevenoaks District Council adopted a new Air Quality Action Plan (AQAP) 2022-2027. The measures included within this action plan are detailed within this report.

Sevenoaks District Council collaborates with other councils in Kent as part of the Kent and Medway Air Quality Partnership and the UK Health Security Agency. Together, they work on projects that benefit the entire region, not just our own district. Sevenoaks District Council has also provided matching funding to support towards DEFRA Air Quality grants to enhance air quality. These projects include initiatives like Pollution Patrol education packs for schools and educating doctors about the signs and health impacts of air pollution.

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.

Due to the nature of the emission sources (a notable amount of HGV through traffic on the major road network and a large proportion of commuter traffic) it is difficult to target specific 'hot spot' areas within the district so the council is looking to carry out several measures that will target road user behaviours. And although these will not be entirely focused on specific areas it is the belief that these will help to significantly improve pollution throughout the district to ensure that residents are not exposed to high pollution levels. In addition to the measures detailed within the AQAP, the plan will also target and encourage the reduction of emissions of PM_{10} & $PM_{2.5}$.

Over the past reporting year, Sevenoaks District Councils core actions have included:

- Continue to promote the AQAP and deliver measures identified.
- Continue to implement the Local Cycling and Walking Infrastructure Plans (LCWIPs) for Sevenoaks and Swanley.
- Finalising the decommissioning of our existing Air Quality Stations and purchasing new alternates for air quality monitoring.

Photographs of air quality initiatives in Sevenoaks District

Photograph promoting the Darent Valley Community Rail Partnership (Swanley to Sevenoaks), in May 2024.

Photographs showing new road signage for new 20mph speed limits in Sevenoaks High Street.

Photograph of beginning construction in Autumn 2024 for the East/West walking, wheeling and cycling route.

Photographs showing new signage to accompany the East/West walking, wheeling and cycling route.

Conclusions and Priorities

The following conclusions can be made from this year's ASR:

- Annual mean NO_2 concentrations at all monitoring sites are below the AQS objective of 40ug/m^3 and no exceedances have recorded.
- The highest monitored concentration within the district was recorded at site DT99, located on Seal Road, Bat and Ball along the A25. This peak concentration (30.5 µg/m^3) remained below the national objective level and was also lower than the five highest concentrations recorded by diffusion tubes in 2023.
- All four remaining AQMAs have now demonstrated sustained compliance with national air quality objectives for five to six consecutive years, with current levels measuring less than half of the original exceedance values.

Sevenoaks District Council has the following priorities for the coming year:

- Continue to promote the Air Quality Action Plan (AQAP) and work towards the implementation and completion of the outstanding measures identified within it.
- Focusing on:
    - To design projects to address emissions of $PM_{2.5}$, particularly those that are associated with domestic burning or bonfires (Measures 25 and 27).
    - Continue to implement the Local Cycling and Walking Infrastructure Plans (LCWIPs) for Sevenoaks and Swanley (Measure 8).
    - To assist with Junction improvements at Bat & Ball Junction (A25/ A225 Junction) (Measure 2).
- Installing a new network of advanced real-time sensors to better understand local air quality impacts—particularly in areas affected by new development across the district.
- Proposal for possible revocation of all four remaining four AQMA's (AQMA 8, 10, 13 & 14) due to continuous compliance and recommendations for revocation in previous ASR responses by DEFRA.

How to get Involved

Members of the public can help to improve air quality by making small changes to their everyday lives.

- Finding alternative methods to making car journeys, such as walking or cycling, will help to reduce local traffic, improve congestion and reduce vehicle emissions.
- When vehicles are stationary, such as if you are in a traffic jam, are waiting at traffic lights or at level crossings do not allow car engines to idle. Instead turn off your vehicle to reduce emissions which will also save fuel.
- By anticipating the flow of traffic, remaining in a higher gear and maintaining a continuous speed at low revs per minute (RPM), this helps to reduce pollution from your vehicle whilst also saving on fuel consumption.
- Research alternative vehicle types such as electric, hybrid or ULEZ compliant cars which produce lower emissions and help to improve local air quality.
- Ensure that vehicles are regularly maintained, making sure that filters and oil are inspected and replaced regularly to support optimum performance. If sooty exhaust emissions are coming from your vehicle, take it to a garage for servicing, as this will significantly be contributing to poor air quality. Regular tyre maintenance and pressure checks are important to achieve your vehicles optimum fuel consumption, consequently also saving you money.
- Avoid making short journeys by car as to work effectively engines need to reach a high temperature to work at optimal performance. Walking, cycling or use of public transport will produce much lower emissions,
- For shorter journeys, walking cycling or using public transport can often be a cheaper and the more environmentally conscious option.
- Find alternatives to using wood burners, burning solid fuels and having garden bonfires as they produce harmful toxins, and contribute a significant amount to particulate pollution.

The Kent and Medway Air Quality Partnership launched the Pollution Patrol website, which was funded by DEFRA's 2021 Air Quality Grants. This innovative and interactive platform aims to educate primary school students, children, and families about air pollution, its harmful effects, and ways to mitigate its impact by adopting better behaviours. The website

features engaging elements such as games, an immersive 360-degree story mode, curriculum-linked teaching resources, and even a school assembly plan. Sign up to this free resource using the link above.

Sevenoaks District Council has one Smoke Control Order in place under the Clean Air Act 1993. To check if a property is subject to a Smoke Control Order residents can visit the Council's website.

Within a Smoke Controlled Area only authorised fuels, or any of the below 'smokeless' fuels can be burnt, unless an exempt appliance is used.

- Gas
- Low volatile steam coal
- Anthracite
- Semi-anthracite

If your property does not fall within a Smoke Control Area, you should still be aware that appliances that burn solid fuel will contribute to local air pollution, evidence shows that these contributions are increasing due to gaining popularity for occasional heating requirements, particularly during the winter months.

The council have noted a rise in complaints concerning smoke emissions from domestic properties, as burning solid fuels can generate significant levels of particulate pollution. Non-compliance with the smoke control legislation can result in a fine of up to £1,000.

DEFRA have produced guidance should residents still wish to use solid fuels or solid fuel appliances.

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1 Local Air Quality Management

This report provides an overview of air quality in Sevenoaks District Council during 2024. 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 < Sevenoaks District 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.

A summary of AQMAs declared by Sevenoaks District Council can be found in Table 2.1. The table presents a description of the four AQMAs that are currently designated within Sevenoaks District. Appendix D: Map(s) of Monitoring Locations and AQMAs provides maps of AQMAs and the air quality monitoring locations in relation to the AQMAs. The air quality objectives pertinent to the current AQMA designations are as follows:

- NO_2 annual mean

Following discussions with DEFRA and recommendations from previous ASR feedback, at the time of writing this ASR, Sevenoaks District council are considering proposing revocation of all remaining four AQMA's (AQMA 8, 10, 13 & 14). (See Table 2.1 – Declared Air Quality Management Areas, which demonstrates the Number of Years Compliant with Air Quality Objective).

Table 2.1 – Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Number of Years Compliant with Air Quality Objective	Name and Date of AQAP Publication	Web Link to AQAP
AQMA 8	01/09/2006	NO_2 Annual Mean	Swanley - London Road (East); High Street; Bartholomew Way and parts of Central town area.	YES	56.7µg/m^3	23.8 µg/m^3	6	Sevenoaks Air Quality Action Plan 2022	Sevenoaks Air Quality Action Plan 2022
AQMA 10	10/01/2008	NO_2 Annual Mean	Sevenoaks – High Street & London Road.	YES	46.5µg/m^3	17.4 µg/m^3	5	Sevenoaks Air Quality Action Plan 2022	Sevenoaks Air Quality Action Plan 2022
AQMA 13	14/01/2014	NO_2 Annual Mean	The entire length of the A25 from the border with Tonbridge and Malling in the east to the border with Tandridge in the west.	YES	55.3µg/m^3	22.1 µg/m^3	5	Sevenoaks Air Quality Action Plan 2022	Sevenoaks Air Quality Action Plan 2022
AQMA 14	14/01/2014	NO_2 Annual Mean	The junction of London Road and Birchwood Road, Swanley.	YES	48.8µg/m^3	20.1 µg/m^3	5	Sevenoaks Air Quality Action Plan 2022	Sevenoaks Air Quality Action Plan 2022

☒ **Sevenoaks District Council confirm the information on UK-Air regarding their AQMA(s) is up to date.**

☒ **Sevenoaks District Council confirm that all current AQAPs have been submitted to Defra.**

2.2. Progress and Impact of Measures to address Air Quality in Sevenoaks District

Defra's appraisal of last year's ASR concluded that the report is well structured, detailed, and provides the information specified in the Guidance. The following comments are designed to help inform future reports:

1. **Local Bias Adjustment Factor**:
    - **Previous Comment**: The Council are encouraged to determine a local bias adjustment factor from the co-location study with CM2. The appropriate bias adjustment factor can then be determined based on LAQM.TG (22) guidance. Where a local bias adjustment factor has not been determined, the reasoning should be stated.
    - **Response**: This year, the Council has determined a national bias adjustment factor as the local monitoring stations were decommissioned in 2024.

2. **PM2.5 Discussion**:
    - **Previous Comment:** An extensive discussion regarding $PM_{2.5}$ and the measures in place to reduce PM2.5 concentrations has been included. A discussion of the Public Health Outcomes Framework D01 indicator highlights that the Sevenoaks fraction of 5.5% is lower than both regional and national levels. The Council should continue the consideration of $PM_{2.5}$ in future years.
    - **Response:** The Council has continued to consider $PM_{2.5}$ in this year's report. However, following the decommissioning of the monitoring stations needed to be completed to determine the finances available for investment in new low-cost sensor technology. Several low-cost sensor-based monitoring "Nodes" that link via GSM technology to cloud based data storage and viewing for several pollutants including PM2.5, will be purchased. This will enhance future monitoring and reporting.

3. **Proposed Developments**:

- **Previous Comment:** Several proposed developments have been identified by the Council which may affect air quality. The inclusion of the modelling assessment for Swanley is welcomed and highlights that the Council is committed to improving air quality. Additional monitoring should be undertaken in the next reporting year because of the proposed developments and conclusions of the modelling report to ensure the AQMAs are revoked, kept in place, or amended as necessary.
- **Response:** The Council has not completed any additional monitoring in response to proposed developments and the conclusions of the modelling report within 2024. However, the decommissioning of the monitoring stations needed to be completed to determine the finances available for investment in new low-cost sensor technology. The use of low-cost sensor-based monitoring will be adopted in 2025, which will enhance future monitoring and reporting. One of these devices will be installed within Swanley in line with the conclusions of the report. Please note that these low-cost sensors are intended for indicative purposes only and are not suitable for compliance monitoring, in line with LAQM technical guidance.

Sevenoaks District Council has taken forward several direct measures during the current reporting year of 2024 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2.

Thirty-two measures are included within Table 2.2, with the type of measure and the progress Sevenoaks District Council have made during the reporting year of 2024 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.2.

More detail on these measures can be found in their respective Action Plans Our Climate Change Strategy , Our Climate Change Action Plan 2024 , The Movement Strategy 2022 , Sevenoaks Urban Area Local Cycling and Walking Infrastructure Plan.

Key completed measures are:

- Measure 11- Reduction in vehicle idling through the promotion of health impacts at primary and secondary schools

- Measure 12- Educational Campaigns for schools- including attendance at assembly and delivery of key messages
- Measure 16- Installing EV charging points within all Council owned carparks
- Measure 21- Implementation of flexible/ hybrid working arrangements for District Council staff
- Measure 23- Complete a detailed modelling assessment of the Swanley Area to quantify the local air quality
- Measure 24- Hire an Air Quality Promotions Officer

Sevenoaks District Council expects the following measures to be completed over the course of the next reporting year:

- Measure 30 - To review the effectiveness of introducing 20mph zones within areas where AQS objective levels are highest (Sevenoaks High Street, A25 Seal, Bat & Ball Junction, Riverhead, Westerham).
    - KCC is monitoring the 20mph zones for speeds and crashes and SDC will review the diffusion tube results to determine if any improvements have been made in NO_2 since implementation.
- Several measures (Measures 7, 8, 13, 17, 18, 20, 22, 25, 26, 27, 28, and 31) are currently scheduled for completion in 2027. We are committed to making strong progress throughout 2025 and 2026, with the aim of achieving as many of these measures as possible within the scheduled timeframes.
    - While we remain optimistic, it is important to note that some measures may require more time—or may ultimately prove unachievable—due to unforeseen challenges or changing circumstances.

Sevenoaks District Council's priorities for the coming year are:

- Continue to promote the Air Quality Action Plan (AQAP) and work towards the implementation and completion of the outstanding measures identified within it.
- Focusing on:
    - Designing projects to address emissions of $PM_{2.5}$, particularly those that are associated with domestic burning or bonfires (Measures 25 and 27).

    - Continue to implement the Local Cycling and Walking Infrastructure Plans (LCWIPs) for Sevenoaks and Swanley (Measure 8).
    - To assist with Junction improvements at Bat & Ball Junction (A25/ A225 Junction) for example providing support or assisting with consults for developments (Measure 2).
- Installing a new network of advanced real-time sensors to better understand local air quality impacts—particularly in areas affected by new development across the district.
- Proposal to revoke of all four remaining four AQMA's (AQMA 8, 10, 13 & 14) due to continuous compliance and recommendations for revocation in previous ASR responses by DEFRA.

Sevenoaks District Council have worked to implement these measures in partnership with the following stakeholders during 2024:

- Neighbouring local authorities
- Highways England
- Town and Parish Councils
- Local businesses and fleet operators

The principal challenges and barriers to implementation that Sevenoaks District Council anticipates facing are constraints on funding and disruption risks. Many large-scale infrastructure projects are not funded (Measures 2, 3, 4, 5, 17, 20, 32) and significant traffic improvement measures (Measures 2, 3, 4, 5) may cause substantial disruption during implementation.

Progress on the following measures has been slower than expected due to:

- Public infrastructure and transport projects (Measures 2, 3, 5, 13, 15, 17) are progressing slowly due to funding and planning constraints.

In October 2023, Sevenoaks District Council agreed to decommissioning both automatic monitoring stations, because of both stations approaching the end of their serviceable

lifespans and are expected to become uneconomical to repair. Decommissioning took longer than expected but the savings allowed the purchase of low-cost sensor-based monitoring “Nodes” capable of collecting real time data on several pollutants. These monitors are light weight and could be positioned in locations of interest for several years before redeployment. The relatively low cost could allow the monitoring network to be expanded to include areas of concern following development or highway changes.

The Kent and Medway Air Quality Partnership acquired a Defra AQ Grant for a 5-year initiative aimed at creating a digital training resource for Health Care Practitioners across Kent and Medway. They will be equipped to guide patients with cardio-vascular disease or respiratory conditions on minimizing their exposure to air pollution. Further update on this was due to be commented on in this ASR, however, will be provided in the 2026 ASR.

Sevenoaks District Council anticipates that the measures stated above and in Table 2.2 will continue to achieve compliance in AQMA 8, AQMA 10, AQMA 13 and AQMA 14.

Table 2.2 – Progress on Measures to Improve Air Quality

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
1	Local Plan policy and guidance – Ensure that developers take account of onsite and offsite air quality when assessing the environmental impact of their proposals. That suitable onsite and offsite air quality mitigation measures are included (including financial contributions to strategic air quality improvement measures) as part of a proposal such that future air quality is either improved or sustained at a level that would be achieved without the development.	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2022	2040	SDC/KCC	Internal/ Existing	Funded	£10k - 50k	Implementation	NO_2, whilst guidance already exists, it is important to keep these up-to-date as policies and strategies evolve.	Implementation of policy	A new Local Development Scheme timetable for the new Local Plan (Plan 2040) was agreed on 13 February 2025. This sets out: • A third Regulation 18 consultation in Autumn 2025 • Regulation 19 Publication in Summer 2026 • Submission for Examination by end of December 2026. The Regulation 18 consultation in Autumn 2025 will include and ask for representations on an Air Quality policy. Specific consultation will be undertaken directly with the Council's Environmental Health team. Air Quality Management Areas are also considered in the site assessment process for potential Local Plan allocations, and again specific consultation with SDC's Environmental Health team will be undertaken.	Plan 2040 will include a detailed Air Quality policy, and air quality will be considered in the site selection process for emerging allocations.

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
2	Junction improvements at Bat & Ball Junction (A25/ A225 Junction)	Traffic Management	UTC, Congestion management, traffic reduction	2022	2030	SDC/ KCC/ STC	CIL / KCC / S106 Funding	Not Funded	£1 million £10 million-	Planning	NO_2. To be confirmed by further assessment once appropriate scheme is determined by partners.	Reduction in NO_2 concentrations (amount to be determined by scenario testing once suitable scheme is identified) / Reduced congestion and journey times	Junction improvements (including a new roundabout) are provided within the Tarmac Quarry planning permission (22/00512/OUT), subject to phasing triggers. A Transport Assessment testing the three proposed growth scenarios (Reg.18 consultation) has been published. Further work is ongoing test a preferred scenario and this will identify future transport challenges and opportunities to inform decision making.	The Local Plan will consider the impact of development on these junctions and potential improvements. Evidence base documents are being updated to support the Local Plan. Potential to cause significant disruption during implementation phase.

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
3	Junction improvements at A224/A25 in Riverhead	Traffic Management	UTC, Congestion management, traffic reduction	2022	2030	SDC/ KCC/ STC	CIL / KCC / S106 Funding	Not Funded	£1 million £10 million-	Planning	NO_2. To be confirmed by further assessment once appropriate scheme is determined by partners.	Reduction in NO_2 concentrations (amount to be determined by scenario testing once suitable scheme is identified) / Reduced congestion and journey times	Transport Assessments to support the development of the Local Plan have been published – these include a baseline assessment which sets out current hotspots now and in 2040 with existing growth. The model has then been used to test the three proposed growth scenarios (Reg.18 consultation). Further work is ongoing test a preferred scenario and this will identify future transport challenges and opportunities to inform decision making.	The Local Plan will consider the impact of development on these junctions and potential improvements. Evidence base documents are being updated to support the Local Plan. Cost of works likely to be significant and to cause significant disruption during implementation phase. Funding not secured.
4	Road/ Junction improvements along A225 Sevenoaks High Street	Traffic Management	UTC, Congestion management, traffic reduction	2022	2030	SDC/ KCC/ STC	CIL / KCC / S106 Funding	Not Funded	£1 million - £10 million	Implementation/ Planning	NO_2. To be confirmed by further assessment once appropriate scheme is determined by partners.	Reduction in NO_2 concentrations (amount to be determined by scenario testing once suitable scheme is identified) / Reduced congestion and journey times	Sevenoaks Town Council funded the 20mph signs, and new road markings. This was installed Summer 2024 and the restrictions started from 1 October.	There is no KCC funding currently identified to progress these proposals. Full funding is required to cover further detailed design work and eventual construction.

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
5	Road improvements along the A25 in Seal, and the A25 in Brasted	Traffic Management	UTC, Congestion management, traffic reduction	2022	2030	SDC/ KCC/ STC/ SPC/ WTC/ BPC	CIL / KCC / S106 Funding	Funded Not	£1 million £10 million-	Planning	NO_2. To be confirmed by further assessment once appropriate scheme is determined by partners.	Reduction in NO2 concentrations (amount to be determined by scenario testing once suitable scheme is identified) / Reduced congestion and journey times	Transport Assessments to support the development of the Local Plan have been published – these include a baseline assessment which sets out current hotspots now and in 2040 with existing growth. The model has then been used to test the three proposed growth scenarios (Reg.18 consultation). Further work is ongoing test a preferred scenario and this will identify future transport challenges and opportunities to inform decision making	The Local Plan will consider the impact of development on these junctions and potential improvements. Evidence base documents are being updated to support the Local Plan. Cost of works likely to be significant and to cause significant disruption during implementation phase. Funding not secured
6	Bike rental schemes	Promoting Travel Alternatives	Promotion of cycling	2022	2030	SDC/ KCC	Internal/ Existing	Funded	£1 million - £10 million	Implementation/ Planning	NO_2. Measure is more an awareness raising tool to encourage uptake and use of existing schemes	Number of bikes available and rentals	Feasibility study undertaken for e-bike hire in Sevenoaks urban area	Cycling infrastructure identified as significant barrier to bike hire schemes. Also, the size of the town poses difficulties to economies of scale and scheme would require significant investment.

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
7	Promotion of active travel schemes	Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	2022	2027	SDC/ KCC	Internal/Existing to develop plan + CIL/ grant to develop infrastructure	Partially Funded	£10k - 50k	Implementation	NO_2. Small impact upon NO_2concentrations from measure individually, estimated to be less than 1µg/m^3 based upon a low to medium uptake.	Movement Strategy to be adopted Spring 2022. Recruitment of an Air Quality Promotions Officer	An online public consultation took place for Edenbridge LCWIP. This asked residents for their views and experiences of walking and cycling in Edenbridge, to see where improvements could be made. The Sevenoaks East West route construction began October 2024. This was publicised in In Shape and online.	Promotion of measures to wider audience using dedicated AQPO Resource. Focus on replacing private vehicle movements (38.1% NO_2 Emissions) with sustainable alternatives.
8	Development of new walking and cycle routes	Transport Planning and Infrastructure	Cycle network	2022	2027	SDC	Internal/ Existing	Funded	£1 million - £10 million	Planning	NO_2. Measure to increase public awareness	Development of the Local Cycling and Walking Strategy. Completion of cycle routes	The Sevenoaks East West route construction began October 2024. Routes 1 and 6 outline designs progressed. Additional funding was secured for Edenbridge LCWIP and a feasibility study for Swanley LCWIP walking route 4.	We will continue to progress cycling and walking routes subject to external funding opportunities.
9	District wide promotion of active travel	Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	2023	2028	SDC	Internal / existing	Funded	< £10k	Planning	NO_2. Measure to increase public awareness	Number of promotion vents	A consultation took place for the revised Sevenoaks East West route which helped to refine the route prior to construction. The route was promoted when the construction started. Further promotion to follow in 2025.	Focus on replacing private vehicle movements (38.1% NO2 emissions) with sustainable alternatives

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
10	Behavioural change campaigns to reduce single use occupancy car journeys	Alternatives to private vehicle use	Other	2022	2030	SDC/ KCC	Internal/ Existing	Funded	£1 million - £10 million	Implementation/ Planning	NO_2. Measure is more an awareness raising tool to encourage uptake and use of existing schemes	Number of campaigns	Considered through the Council's new Climate Change Strategy and Action Plan. New Workplace Travel Plan launched in 2023 which promotes hybrid working arrangements and encourages staff to car share or use public transport.	Difficult to measure and very low impact. Need to consider how best to reach audience. Potential to focus on reducing the number of private vehicle movements within the AQMAs (38.1% NO2 emissions).
11	Reducing vehicle idling	Traffic Management	Anti-idling enforcement	2022	2023	SDC	Internal/ Existing	Funded	< £10k	Completed	NO_2. Measure largely to increase public awareness, but will help reduce pollutant levels in key hotspot areas	Reduction in NO_2 concentrations. Quantitative assessments undertaken before and after initiatives	Idling campaign was concluded in 2023. Posters were installed at schools involved in the campaign and this was promoted in the district wide quarterly magazine and social media channels.	School engagement has been difficult to establish. Campaign might be run again in the future but low impact with results.
12	Educational campaigns for schools	Public Information	Other	2022	2027	SDC	Internal/ Existing	Funded	< £10k	Completed	NO_2. Measure to increase public awareness.	Number of campaigns.	Schools have engaged with presentations and resources offered so far. Idling campaign was concluded in 2023. Installation of posters/banners across schools throughout the district. New campaigns being discussed for 2024.	School engagement has been difficult to establish throughout many campaigns. Additionally, it is hard to measure success on the impact on air quality.

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13	Collaboration with bus operators to introduce ultra-low emission vehicles into the fleets	Vehicle Fleet Efficiency	Promoting Low Emission Public Transport	2022	2027	SDC/ KCC/ Private Operators	Internal/ Existing + CIL/ Grant as necessary	Partially Funded	£50k - £100k	Planning	NO_2. Value to be confirmed by scenario testing.	Fleet Composition (% using LEV).	Continued discussions with KCC following the national bus strategy.	Working with KCC to consider how we can work together to bring forward low Emission schemes. Cost likely to be significant for bus operators. SDC unlikely to be able to fund initiatives without CIL/ developer contributions or Grants. AQPO to promote benefits to bus operators of sustainable Technologies. Reduce emissions of Busses 4.7% within AQMAs
14	Transitioning the Council's fleet to low emission vehicles	Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	2021	On-going to 2030	Fleet manufacturers	Capital programme – Vehicle replacement Programme	Funded	>£5 million	Ongoing	NO_2. Scenario Testing to be undertaken to assess the impact of the measure on NO_2depending on fleet composition	Change in fleet composition to less polluting vehicles	Vehicle replacement programme 2024-2029 – On track	Cost of 100% electric heavy goods vehicles.
15	Improving and developing the EV infrastructure within the district	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022	2026	Kent County Council	Government LEVI funding	Funded	>£1 million	Implementation	NO_2. Small impact upon NO_2 concentrations from measure individually, estimated to be less than 1µg/m^3 based upon a low to medium uptake.	Undertake a study to identify suitable locations (demand and infrastructure) for the installation of EV Charging Points. Number of EV charging points.	KCC Currently out to tender for delivery partner. Due to start in 2026	Supplier availability due to demand.
16	Installing EV charging points within all Council owned carparks	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022	2027	SDC/ KCC	Internal	Funded	£10k - 50k	Completed	NO_2. Small impact upon NO_2concentrations from measure individually, estimated to be less than 1µg/m^3 based upon a low to medium uptake.	Number of EV charging points within District Area	A further 12 EVCP being commissioned with Connected Curb, as park of the Kent & Medway 600 in off-street car parks in 2024.	UKPN and grid reinforcement

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17	Improving public transport infrastructure	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	2022	2027	SDC/ KCC	External	Not funded	£1 million - £10 million	Planning	NO_2. Small impact upon NO_2 concentrations from measure individually, estimated to be less than 1µg/m3 based upon a low to medium uptake.	Increased use of public transport. Additional routes public transport facilities.	The Regulation 18 consultation in Autumn 2025 will include policies on sustainable movement to encourage active first and last mile trips.	We will continue to engage with KCC and public transport providers as the Local Plan progresses.
18	Promote the use of public transport	Promoting Travel Alternatives	Promote use of rail and inland waterways	2022	2027	SDC/ KCC/ Rail Operators	Internal/ External	Partially Funded	£100k £500k-	Implementation	NO_2. Measure is more an awareness raising tool to encourage uptake and use of available infrastructure	Number of promotional events. Number of passengers on public transport	Developed 17 popular trails through the Darent Valley Landscape Partnership Scheme, with online and leaflet versions. Cofinanced signage at rural stations (£3000) to aid onward travel. Engaged in negotiations to improve footpath access to and from Eynsford station. Collaborated with volunteer groups, received accreditation, and promoted rail travel through exhibitions, posters, and social media.	Obtaining approvals from Network Rail. Ongoing discussions needed for policy improvements. Understanding passenger preferences and experiences. Ensuring sustainable funding for initiatives. Parish Councils, Sevenoaks Town Council and Swanley Town Council are funders of the Darent Valley Community Rail Partnership. Rail, the Railway Heritage Trust, the Darent Valley Landscape Partnership Scheme (Heritage Lottery Funds) and Kent Downs National Landscape have also co - funded the work.
19	On and off-street parking charges linked to vehicle emissions standards	Promoting Low Emission Transport	Priority parking for LEV's	2021	On-going	SDC	Internal	Funded	£100k - £500k	Implementation	NO_2. Small impact upon NO_2 concentrations from measure individually, estimated to be less than 1µg/m^3 based upon a low to medium uptake.	Number of discounted permits	Review in place on permits. Completed yearly	Growing number of EVs.

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20	Car Club / Sharing schemes	Alternatives to private vehicle use	Car Clubs	2022	2027	SDC	External funding/ CIL	Not Funded	£100k - £500k	Planning	NO_2. Small impact upon NO_2 concentrations from measure individually, estimated to be less than 1µg/m^3 based upon a low to medium uptake	Number of car sharing individuals	The Regulation 18 consultation in Autumn 2025 will include policy on car clubs. Car clubs included within the Movement Strategy.	Car club schemes will be included in the Regulation 18 consultation in Autumn 2025.
21	Exploring flexible working and home working	Promoting Travel Alternatives	Encourage / Facilitate home-working	2022	2022	SDC/ KCC	Internal	Funded	< £10k	Completed	NO_2. Measure to increase public awareness	Levels of home working/ number of vehicle journeys removed from road network	Local Plan to facilitate flexible working options. Working with businesses to explore how flexible working can contribute to reducing emissions. Hybrid working policy developed implemented for SDC staff.	Reduce % NO_2 emissions from private vehicles (38%) by reducing number within AQMAs.
22	Walking to school incentives/ encouragement	Promoting Travel Alternatives	School Travel Plans	2022	2027	SDC	Internal/ Existing Budgets + External funding	Partially Funded	< £10k	Planning	NO_2. Measure to increase public awareness	Reduction in school vehicle drop-offs / pick- ups. Reduced congestion around school opening and closing times	Initiatives in discussion. Potentially to interlink with wider scale national projects and regionally projects such as Pollution Patrol.	Could have a big impact and is supported by Councillors. Reduce % NO_2 emissions from private vehicles (38%) by reducing number within AQMAs. Engagement from schools have been minimal with previous projects, improvements needed for greater reach and uptake.

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23	Complete a detailed modelling assessment of the Swanley Area to quantify the local air quality	Traffic Management	Other	2022	2023	SDC	Interal/ Existing Budgets	Funded	< £10k	Completed	TBC	Completion of the report	Report completed in 2022.	Several developments are due to take place in and near to Swanley, therefore understanding the existing air quality will help inform planning decision making. Survey to be funded from existing budgets within Environmental Health.
24	Hire an Air Quality Promotions Officer	Public Information	Other	2022	2022	SDC	Interal/ Existing Budgets	Funded	£10k - 50k	Completed	N/A	Recruitment of AQPO	Officer was successfully appointed in Jan 2022.	Increasing demand on EH workloads result in AQPO being deployed on other statutory duties
25	To provide information and education in respect of personal emissions and how they may be reduced	Public Information	Other	2022	2027	SDC	Internal Budgets / Existing	Funded	< £10k	Implementation	$PM_{2.5}$ / NO_2	Number of educational campaigns	Two articles within district wide magazine on air quality, reducing emissions and vehicle idling. Planning of future project based on domestic burning, possibly due 25-26.	Action to form part of the AQPO duties and role. Initiatives may include reducing emissions from home heating etc.
26	To work with businesses to identify ways to reduce emissions from their activities	Public Information	Other	2022	2027	SDC	Internal / existing budgets	Funded	< £10k	Implementation	N/A	Number of educational campaigns	Discussions held with businesses as part of business forums run by Climate Change Team. Identified as a wider priority in the pending Sevenoaks District Council Climate Change Strategy.	Action to form part of the AQPO duties and role. Part of the Climate Change work. Promote Laccase funding and training to businesses in SDC which will enable businesses in SDC to move to lower carbon and low pollution activities.

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27	To discourage the use of bonfires as a means of waste disposal.	Public Information	Other	2022	2027	SDC	Internal Budgets / Existing	Funded	< £10k	Planning	PM_{10}/ $PM_{2.5}$	Number of interventions to provide advice and information to residents. Total number of enforcement actions undertaken	Forms part of current statutory duties. Advice provided via social media. Discussions being held regarding possible projects and mitigation strategies.	Environmental Health has an enforcement role for bonfires that constitute a statutory nuisance and offences under s2 Clean Air Act.
28	To reduce emissions from activities with Environmental Permits	Environmental Permits	Measures to reduce pollution through IPPC Permits going beyond BAT	2022	2027	SDC	Internal/ Existing Budgets	Funded	< £10k	Implementation	NO_2, PM_{10}/ $PM_{2.5}$	Increased compliance with Environmental Permitting Regulations. Number of premises identified as 'low risk; (%)	All relevant activities hold relevant permits. Worked to permit several businesses identified as not holding correct permits.	EH regulate activities that pollute to air. Risk based regime
29	To work with Highways England to identify measures which will reduce the need for HGV and LGV vehicles to use the A25	Traffic Management	UTC, Congestion management, traffic reduction	2024	2040	SDC/ KCC/ Highways England	External	Funded	£1 million - £10 million	Implementation	NO_2, PM_{10}/ $PM_{2.5}$	Identification of schemes that may have AQ benefit along the A25 (AQMA 13)	Previous discussions held. To be considered as part of the transport improvements proposed in the Local Plan. Measure 1 can provide further update on the Local Plan.	Focus on reducing emissions from LGV/ HGV along A25.
30	To review the effectiveness of introducing 20mph zones within areas where AQS objective levels are highest (Sevenoaks High Street, A25 Seal, Bat & Ball Junction, Riverhead, Westerham)	Traffic Management	Reduction of speed limits, 20mph zones	2023	2025	SDC/ KCC	Internal	Funded	< £10k	Implementation	NO_2, PM_{10}/ $PM_{2.5}$	Undertake scenario testing to assess impact of measure	Sevenoaks Town and Westerham both have implemented these schemes, which are being monitored by KCC for speeds and crashes and reporting back to the Joint Transportation Board. Riverheads existing 20mph zone is planning on being extended in 2025 to cover Witches Lane/ Chipstead Lane.	There is no KCC funding currently identified to progress these proposals. Full funding is required to cover further detailed design work and eventual construction. Tube results will be reviewed within areas of 20mph zones.

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31	To work with business operators to increase the % composition of LEV within private fleets	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	2023	2027	SDC/ KCC	Internal	Funded	£10k - 50k	Planning	NO_2	Number of businesses approached by AQPO. Update of LEVs by businesses	Publicly available EV charging delivered, aligning with EV Infrastructure study. Continue to work on this following development of the local EV Infrastructure.	Reduction of emissions from HGV and LGV within AQMA 13. Promotion of the Kent REVs scheme and the buying of the Kent REVs electric vehicles
32	To increase the number of Taxi operators using LEV and EV vehicles	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	2023	2030	SDC	Internal/ External	Not Funded	£10k/£10k	Planning	NO_2	Number of vehicles within the taxi fleet changing to LEV/EV alternatives	Policy changed allowing LEV/EV vehicles up to 15 years licencing (rather than 10 years-current for Petrol and Diesel). Implemented removal of expiry dates on vehicle plates reducing waste.	Initial Cost of EV/LEV vehicles in comparison to Petrol/Diesel is greater. Insufficient charging points. Cost of charging is like Petrol/Diesel Charging vehicles takes hours (rather than refuelling diesel & petrol which takes a matter of minutes). This time takes these vehicles off the road – drivers unable to earn during these periods.

2.3. PM2.5 – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy[1], local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter ($PM_{2.5}$)). There is clear evidence that $PM_{2.5}$ (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

No monitoring of $PM_{2.5}$ is currently conducted within the Sevenoaks District. Additionally, the decommissioning of the two automatic monitoring sites located at Greatness and Bat & Ball has also meant there is currently no PM_{10} monitoring either; therefore, we cannot calculate $PM_{2.5}$ concentrations as has been done previously.

Following a lengthy and costly decommissioning process of both automatic monitoring stations, Sevenoaks District Council have been able to explore real time monitors and have purchased one within 2024 and will look to purchase a further three within early 2025 to be deployed across the district.

It should be noted that the absence of PM2.5 monitoring in 2024 has resulted in a temporary gap in data collection. The deployment of new sensors in 2025 will help address this, with priority given to areas most vulnerable to PM2.5 exposure, such as schools and high-traffic corridors.

Reviewing our annual mean PM_{10} concentrations from previous years showed a continuous decline from 2021 to 2023, indicating that background levels in the Sevenoaks District are well below the annual mean limit for $PM_{2.5}$. Unfortunately, no monitoring was conducted for both PM_{10} and $PM_{2.5}$, although past data does not raise any concerns. However, we are investing in new technology using the budget savings from the decommissioning of stations.

The new monitoring devices have significant technical advancements, including real-time monitoring of a range of pollutants such as PM_1, $PM_{2.5}$, and PM_{10}. These monitors measure

[1] Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

samples at 5-minute intervals, with hourly averages for PM_1, $PM_{2.5}$, PM_{10}, ozone, NO_2, noise, temperature, and humidity. They are also portable, allowing us to move them to locations of concern or associated projects.

Please note that these low-cost sensors are intended for indicative purposes only and are not suitable for compliance monitoring, in line with LAQM technical guidance.

More information will be provided on this in next year's ASR.

The Public Health Outcomes Framework data tool compiled by UKHSA and The Department of Health and Social Care has a number of public health indicators that are used to focus public health action, identify areas of health inequality and concern and monitor the differences in health impacts across regions in the UK. This framework includes an indicator "*D01- Fraction of Mortality Attributable to Particulate Air Pollution*" which is calculated using background annual average PM2.5 concentrations, modelled at a 1km2 resolution based on measured concentrations from the AURN. As such, this quantifies the mortality burden of $PM_{2.5}$ within England on a county and local authority scale. The 2023 fraction of mortality attributable to $PM_{2.5}$ pollution across England is 5.2%, and the fraction within the Southeast region is lower than this at 5.1%. The fraction reported within Sevenoaks specifically is in line with the national average, at 5.2%, however shows a slight increase on the reginal average.

Several of the measures set out in the new AQAP aim to reduce vehicular travel frequency and time via means such as encouraging active travel and reducing single occupancy journeys. In addition, some of the measures are specifically targeted at reducing $PM_{2.5}$ concentrations, such as controlling the use of bonfires as a means of waste disposal and reducing emissions from activities with environmental permits. These are all expected to have a positive impact on reducing $PM_{2.5}$ concentrations.

Sevenoaks District Council currently has a smoke control area that encompasses the Swanley urban area and land to the west of Crockenhill. Within this area, emissions of smoke from a chimney are forbidden unless authorised fuels or exempt appliances are being used.

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

This section sets out the monitoring undertaken within 2024 by Sevenoaks District Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2020 and 2024 to allow monitoring trends to be identified and discussed.

3.1. Summary of Monitoring Undertaken

3.1.1. Automatic Monitoring Sites

Sevenoaks District decommissioned both monitoring sites during 2024, so no automatic monitoring was conducted. Although we aimed to purchase and install new monitoring devices within a shorter timeframe, the costly and time-consuming decommissioning process delayed this.

We are now investing in advanced portable monitoring technology, which will allow us to monitor a range of pollutants in real-time and deploy the devices to areas of concern and air quality projects. More information will be provided in next year's ASR.

3.1.2. Non-Automatic Monitoring Sites

Sevenoaks District Council undertook non- automatic (i.e. passive) monitoring of NO_2 at 54 sites during 2024. Table A.2 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.

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)

For diffusion tubes, the full 2024 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.

We are excluding the December 2024 diffusion tube data from our averages due to concerns raised about its accuracy. This decision is based on guidance from the LAQM helpdesk and aims to ensure the reliability of our annual report.

No exceedances of the annual mean NO_2 Air Quality Strategy (AQS) objective (40µg/m^3) have been reported at any monitoring location operated by Sevenoaks District Council in 2024.

The maximum reported concentration is 30.5µg/m^3, reported at DT99 located on Seal Road, Bat and Ball on the A25.

No other site reported an annual mean concentration >30.0µg/m^3.

Annual mean NO_2 concentrations have shown a trending decrease at all monitoring locations from 2023 to 2024, except for the following diffusion tubes:

- AQMA 10:
    - DT81: Increased from 15.6µg/m^3 in 2023 to 16.4µg/m^3 in 2024. Resulting in a percentage difference of 5% between 2023 and 2024.
- AQMA 13:
    - BC04, BC05, BC06 (Triplicated at the former Bat and Ball Automatic Monitoring Station): Increased from 16.6µg/m^3 in 2023 to 17.1µg/m^3 in 2024. Resulting in a percentage difference of 3% between 2023 and 2024.
- Outside AQMA:
    - BC01, BC02, BC03 (Triplicated at the former Greatness Automatic Monitoring Station): Increased from 9.1µg/m^3 in 2023 to 9.4µg/m^3 in 2024. Resulting in a percentage difference of 3% between 2023 and 2024.

Despite the slight increases in annual mean NO_2 concentrations at certain diffusion tubes between 2023 and 2024, there is no cause for concern as these rises are minimal, and all values remain significantly below the annual mean NO_2 Air Quality Strategy (AQS) objective of 40µg/m^3.

Although there is no clear reason as to why NO_2 is decreasing throughout Sevenoaks District, it is believed this is due to the increase in electric vehicles and the expansion of the London ULEZ in August 2023 within neighbouring London Boroughs of Bromley and Bexley, which led to a wider proportion of the population changing their vehicles to comply with the emissions standards.

Sevenoaks District Council will continue to monitor the annual data for the designated AQMA's, particularly AQMA 8 and AQMA 13 due to the large, proposed developments within these areas, which may result in an increase in NO_2 for these areas, however at the time of writing, Sevenoaks District Council are considering revoking the remaining four AQMAs in 2025 due to compliance with more than the minimum number of required years.

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)
DT02	Sevenoaks, High St South 1	Roadside	553157	154416	NO_2	Y - AQMA No.10	0.0	2.0	No	2.0
DT03	Sevenoaks, Garvock Drive	Urban Background	552465	154165	NO_2	N	0.0	2.0	No	2.0
DT05	Riverhead, Riverhead 2	Roadside	551414	156196	NO_2	Y - AQMA No.13	0.0	2.5	No	2.5
DT06	Riverhead, Riverhead 3	Kerbside	551442	156159	NO_2	Y - AQMA No.13	2.0	2.5	No	2.5
DT07	Seal, High St East 1	Roadside	555096	156692	NO_2	Y - AQMA No.13	3.0	2.5	No	2.5
DT08	Seal, High St West 1	Roadside	554991	156728	NO_2	Y - AQMA No.13	0.0	2.0	No	2.0
DT12	Brasted, Station Rd	Roadside	546813	155850	NO_2	N	0.0	2.0	No	2.0
DT13	Swanley, London Rd /Wested Lane	Kerbside	552510	167704	NO_2	N	3.0	2.5	No	2.5
DT14	Swanley, Wadard Terrace (Button St)	Roadside	553107	167868	NO_2	N	6.0	2.5	No	2.5
DT23	Sevenoaks, Bat & Ball 1	Roadside	553050	156625	NO_2	Y - AQMA No.13	4.0	2.5	No	2.5
DT24	Westerham, High St	Roadside	544418	153918	NO_2	Y - AQMA No.13	10.0	2.5	No	2.5

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)
DT25	Westerham, Vicarage Hill	Roadside	544638	154041	NO_2	Y - AQMA No.13	20.0	2.5	No	2.5
DT26	Farningham, Farningham Hill	Roadside	554218	167252	NO_2	N	4.0	2.5	No	2.5
DT27	Sevenoaks, High St South 2	Roadside	553138	154260	NO_2	Y - AQMA No.10	0.0	2.5	No	2.5
DT28	Sevenoaks, High St North 2	Roadside	553044	154889	NO_2	Y - AQMA No.10	7.0	2.5	No	2.5
DT29	Sevenoaks, High St North 3	Roadside	553073	155030	NO_2	Y - AQMA No.10	1.5	2.5	No	2.5
DT30	Sevenoaks, Bat & Ball 2	Roadside	553019	156692	NO_2	Y - AQMA No.13	0.0	2.5	No	2.5
DT31	Sevenoaks, Bat & Ball 3	Kerbside	553165	156686	NO_2	Y - AQMA No.13	1.5	2.5	No	2.5
DT32	Sevenoaks, Bat & Ball 4	Roadside	553147	156563	NO_2	Y - AQMA No.13	6.0	2.5	No	2.5
DT33	Seal, High St East 2	Roadside	555069	156709	NO_2	Y - AQMA No.13	2.0	2.5	No	2.5
DT34	16 Main Road, Sundridge Dunbrik	Roadside	544802	154895	NO_2	N	36.0	2.5	No	2.5
DT35	Sevenoaks, Seal Hollow Rd	Roadside	554092	156797	NO_2	Y - AQMA No.13	0.0	2.5	No	2.5
DT36	Westerham, Market Sq.	Roadside	544598	154021	NO_2	Y - AQMA No.13	3.0	2.5	No	2.5
DT39	Swanley, Bartholomew Way2, opposite ASDA delivery	Roadside	551492	168695	NO_2	Y - AQMA No.8	0.0	2.0	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)
DT40	Swanley, London Rd 1	Roadside	551579	168507	NO_2	Y - AQMA No.8	0.0	0.0	No	2.5
DT41	Swanley, London Rd 2	Roadside	552175	168162	NO_2	Y - AQMA No.8	18.0	2.5	No	2.5
DT42	Riverhead, London Rd	Roadside	551383	156064	NO_2	Y - AQMA No.13	2.5	2.5	No	2.5
DT43	Dunton Green, London Rd	Roadside	551315	156381	NO_2	Y - AQMA No.13	8.0	2.5	No	2.5
DT48	Sevenoaks, 73 London Rd	Roadside	552867	154858	NO_2	Y - AQMA No.10	8.0	2.5	No	2.5
DT49	Sevenoaks, 20 London Rd	Roadside	553018	154655	NO_2	Y - AQMA No.10	0.0	2.0	No	2.0
DT51	Sevenoaks, 130 London Rd	Roadside	552761	155050	NO_2	Y - AQMA No.10	1.5	2.5	No	2.5
DT52	Sevenoaks, 142 London Rd	Roadside	552504	155271	NO_2	N	42.0	2.0	No	2.0
DT54	Dunton Green, 57 London Rd	Roadside	551224	156975	NO_2	Y - AQMA No.13	0.0	2.5	No	2.5
DT71	Sundridge, 204 Main Rd	Roadside	548239	155355	NO_2	Y - AQMA No.13	0.0	2.5	No	2.5
DT74	Bessels Green, (A25) Westerham Rd	Roadside	550768	155584	NO_2	Y - AQMA No.13	3.0	2.5	No	2.5
DT76	Worships Hill, Witches Lane	Roadside	551019	155714	NO_2	Y - AQMA No.13	3.0	2.5	No	2.5
DT77	Sevenoaks, London Rd/Montreal Av	Kerbside	551528	155967	NO_2	Y - AQMA No.13	3.0	2.5	No	2.5
DT81	Swanley, Farningham Hill Rd	Urban Background	553419	167614	NO_2	Y - AQMA No.10	14.0	2.5	No	2.5

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)
DT83	Swanley, Birchwood Rd, Jessamine Terrace	Roadside	550298	169627	NO_2	Y - AQMA No.14	15.0	2.5	No	2.5
DT84	Brasted, West End	Roadside	546803	154999	NO_2	Y - AQMA No.13	13.0	2.5	No	2.5
DT85	Brasted, Chart Lane	Kerbside	547094	155099	NO_2	Y - AQMA No.13	2.0	2.5	No	2.5
DT86	Bessels Green, (A25) 59, Westerham Rd	Roadside	550306	155595	NO_2	Y - AQMA No.13	6.0	2.5	No	2.5
DT87	Sevenoaks, Bradbourne Vale Rd South	Roadside	551639	156334	NO_2	Y - AQMA No.13	17.0	2.5	No	2.5
DT88	Sevenoaks, Bradbourne Vale Rd North	Roadside	552950	156578	NO_2	Y - AQMA No.13	0.5	2.5	No	2.5
DT90	Sevenoaks St Johns, A4 St Johns Hill	Roadside	553053	154708	NO_2	Y - AQMA No.10	10.0	2.5	No	2.5
DT93	Swanley, Birchwood Rd, end of Pucknells Close	Roadside	550284	169743	NO_2	N	10.0	2.0	No	2.0
DT94	Swanley, Birchwood Rd, Beefeater Restaurant	Roadside	550249	169573	NO_2	Y - AQMA No.14	20.0	2.5	No	2.5
DT95	Swanley, Birchwood Rd, London Rd opposite Malvern	Roadside	550351	169490	NO_2	Y - AQMA No.14	0.0	2.0	No	2.0
DT96	Sevenoaks STN 1	Roadside	552371	155346	NO_2	N	1.8	2.5	No	2.5

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)
DT97	Ellis Close	Urban Background	550555	168253	NO_2	N	35.0	14.0	No	2.5
DT98	Dunton Green M26	Roadside	550962	157662	NO_2	N	16.0	2.0	No	2.5
DT99	Sevenoaks, Bat & Ball 5	Roadside	553104	156676	NO_2	Y - AQMA No.13	6.0	2.0	No	2.5
BC01, BC02, BC03	Sevenoaks, Greatness 3	Urban Background	553607	156776	NO_2	N	39.0	2.0	Yes	1.8
BC04, BC05, BC06	Sevenoaks, Bat & Ball AQ Station	Roadside	553045	156690	NO_2	Y - AQMA No.13	30.0	2.0	Yes	1.8

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 NO_2 Monitoring Results: Non-Automatic Monitoring (µg/m^3)

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 2024 (%) (2)	2020	2021	2022	2023	2024
DT02	553157	154416	Roadside	75.0	75.0	29.6	31.8	30.9	27.5	26.5
DT03	552465	154165	Urban Background	83.0	83.0	8.0	8.0	8.4	6.1	5.6
DT05	551414	156196	Roadside	92.0	90.6	30.3	30.6	29.8	26.0	23.2
DT06	551442	156159	Kerbside	92.0	90.6	27.3	30.0	29.2	25.3	24.3
DT07	555096	156692	Roadside	92.0	90.6	26.2	29.3	28.6	25.4	23.7
DT08	554991	156728	Roadside	83.0	81.1	19.2	20.3	18.4	15.7	15.3
DT12	546813	155850	Roadside	83.0	81.1	26.6	25.5	24.2	21.6	16.3
DT13	552510	167704	Kerbside	83.0	83.0	21.7	23.1	19.5	18.5	17.2
DT14	553107	167868	Roadside	92.0	90.6	20.9	20.7	18.7	17.3	13.9
DT23	553050	156625	Roadside	83.0	81.1	26.6	28.9	26.0	22.9	21.3
DT24	544418	153918	Roadside	83.0	81.1	23.0	24.9	22.3	21.2	19.7
DT25	544638	154041	Roadside	92.0	90.6	18.4	30.6	27.6	24.6	22.7
DT26	554218	167252	Roadside	92.0	90.6	29.6	28.9	28.3	24.4	21.1
DT27	553138	154260	Roadside	83.0	83.0	21.6	24.3	23.0	20.3	18.6
DT28	553044	154889	Roadside	83.0	81.1	23.5	23.6	25.2	21.1	18.3
DT29	553073	155030	Roadside	92.0	90.6	17.6	19.9	19.0	16.6	14.6
DT30	553019	156692	Roadside	92.0	90.6	24.2	25.4	24.3	22.1	21.1

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 2024 (%) (2)	2020	2021	2022	2023	2024
DT31	553165	156686	Kerbside	83.0	83.0	35.0	36.3	32.6	31.6	28.8
DT32	553147	156563	Roadside	83.0	81.1	32.5	34.1	30.6	28.8	28.4
DT33	555069	156709	Roadside	92.0	90.6	26.3	29.8	26.8	25.6	22.5
DT34	544802	154895	Roadside	67.0	64.2	18.3	18.6	18.3	16.0	14.7
DT35	554092	156797	Roadside	83.0	83.0	24.3	26.5	24.5	22.9	21.5
DT36	544598	154021	Roadside	83.0	81.1	28.2	28.1	30.0	23.5	21.9
DT39	551492	168695	Roadside	75.0	75.0	28.1	29.4	26.8	22.2	19.8
DT40	551579	168507	Roadside	92.0	90.6	28.4	34.1	32.4	30.6	26.2
DT41	552175	168162	Roadside	92.0	90.6	27.2	29.5	27.2	26.0	23.6
DT42	551383	156064	Roadside	92.0	90.6	23.6	37.5	35.2	34.0	28.7
DT43	551315	156381	Roadside	92.0	90.6	19.3	24.9	22.2	20.1	17.4
DT48	552867	154858	Roadside	75.0	75.0	13.6	15.9	14.7	13.6	11.7
DT49	553018	154655	Roadside	92.0	90.6	17.2	18.6	18.1	15.5	14.1
DT51	552761	155050	Roadside	92.0	90.6	22.3	18.1	20.7	14.3	13.6
DT52	552504	155271	Roadside	92.0	90.6	21.8	21.8	20.8	19.4	18.4
DT54	551224	156975	Roadside	92.0	90.6	24.8	24.1	23.5	20.8	19.4
DT71	548239	155355	Roadside	83.0	81.1	22.5	23.6	22.8	17.3	15.3
DT74	550768	155584	Roadside	92.0	90.6	22.2	25.5	21.9	19.8	16.9

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 2024 (%) (2)	2020	2021	2022	2023	2024
DT76	551019	155714	Roadside	92.0	90.6	27.4	29.0	26.3	22.7	21.8
DT77	551528	155967	Kerbside	92.0	90.6	25.0	26.5	26.4	23.3	20.4
DT81	553419	167614	Urban Background	75.0	75.0	20.7	19.6	21.4	15.6	16.4
DT83	550298	169627	Roadside	83.0	81.1	33.3	33.1	31.7	26.5	24.6
DT84	546803	154999	Roadside	92.0	90.6	23.0	25.1	21.8	18.2	17.3
DT85	547094	155099	Kerbside	92.0	90.6	31.5	30.1	28.0	24.3	22.2
DT86	550306	155595	Roadside	75.0	75.0	21.1	24.3	23.3	19.0	16.8
DT87	551639	156334	Roadside	75.0	75.0	35.7	37.5	34.2	30.6	27.0
DT88	552950	156578	Roadside	83.0	81.1	20.7	21.5	20.2	17.5	16.0
DT90	553053	154708	Roadside	83.0	83.0	21.1	21.4	23.0	19.3	18.8
DT93	550284	169743	Roadside	83.0	83.0	19.5	20.2	17.4	15.1	14.2
DT94	550249	169573	Roadside	92.0	90.6	22.8	22.7	21.4	16.2	15.9
DT95	550351	169490	Roadside	83.0	83.0	25.0	25.3	23.3	20.1	18.4
DT96	552371	155346	Roadside	83.0	81.1	21.2	22.4	22.4	20.4	18.9
DT97	550555	168253	Urban Background	83.0	81.1	17.7	16.9	15.1	14.0	11.8
DT98	550962	157662	Roadside	75.0	75.0	22.8	24.7	21.9	20.0	17.2
DT99	553104	156676	Roadside	83.0	81.1				33.7	30.5
BC01	553607	156776	Urban Background	83.0	83.0	10.8	11.0	9.6	9.2	9.4

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 2024 (%) (2)	2020	2021	2022	2023	2024
BC02	553045	156690	Urban Background	83.0	83.0	10.8	11.0	10.0	9.1	9.6
BC03	553157	154416	Urban Background	83.0	83.0	10.8	11.0	9.8	8.9	9.2
BC04	552465	154165	Roadside	83.0	83.0	19.6	20.3	19.3	16.1	16.3
BC05	551414	156196	Roadside	83.0	83.0	19.6	20.3	19.7	16.8	17.3
BC06	551442	156159	Roadside	83.0	83.0	19.6	20.3	19.7	16.9	17.6

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.**

☒ **Diffusion tube data has been bias adjusted.**

☒ **Reported concentrations are those at the location of the monitoring site (bias adjusted and annualised, as required), i.e. prior to any fall-off with distance correction.**

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 **bold and underlined**.

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 AQMA 8

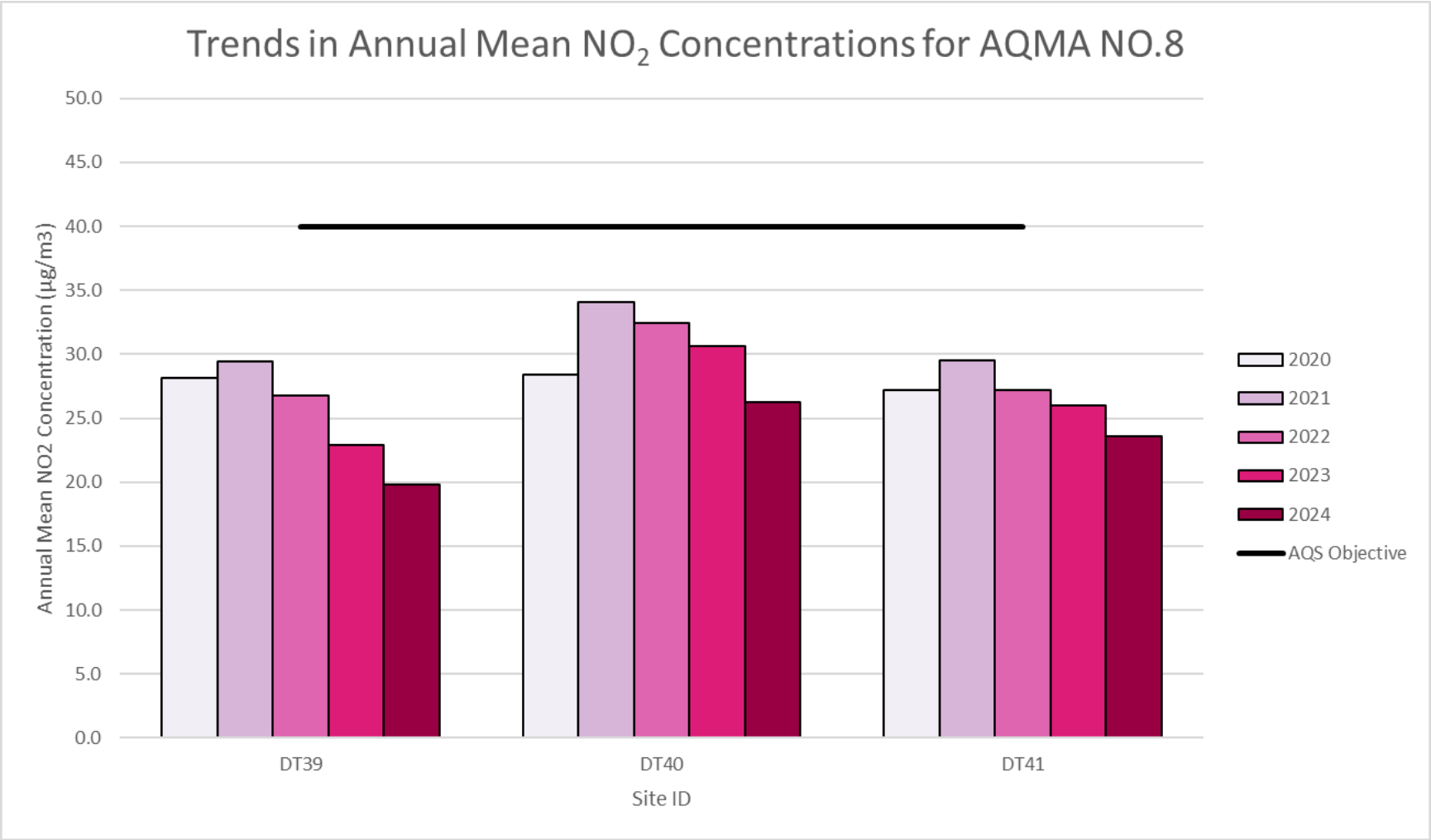


Figure A.2 – Trends in Annual Mean NO2 Concentrations AQMA 10

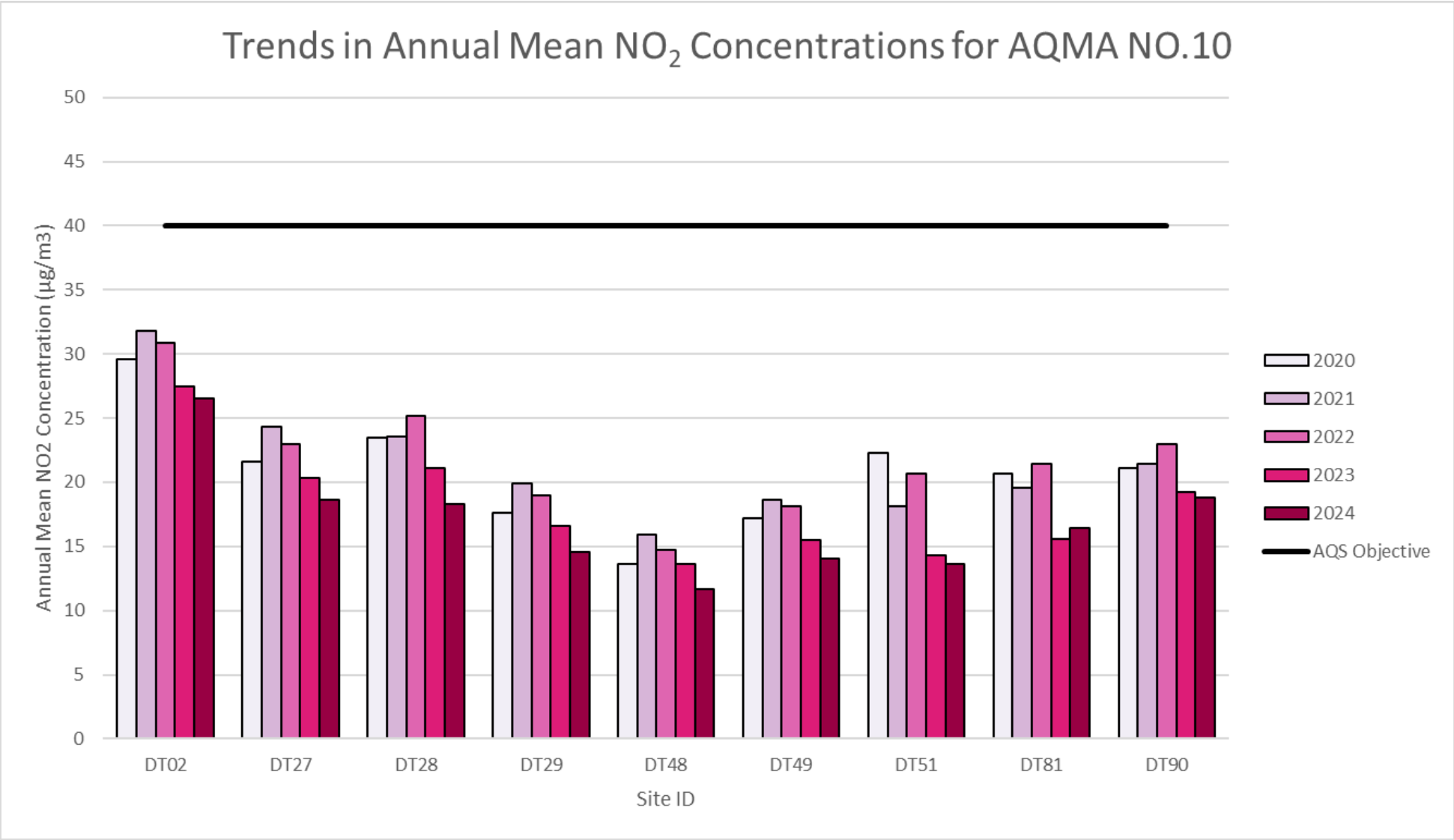


Figure A.3 – Trends in Annual Mean NO2 Concentrations AQMA 13

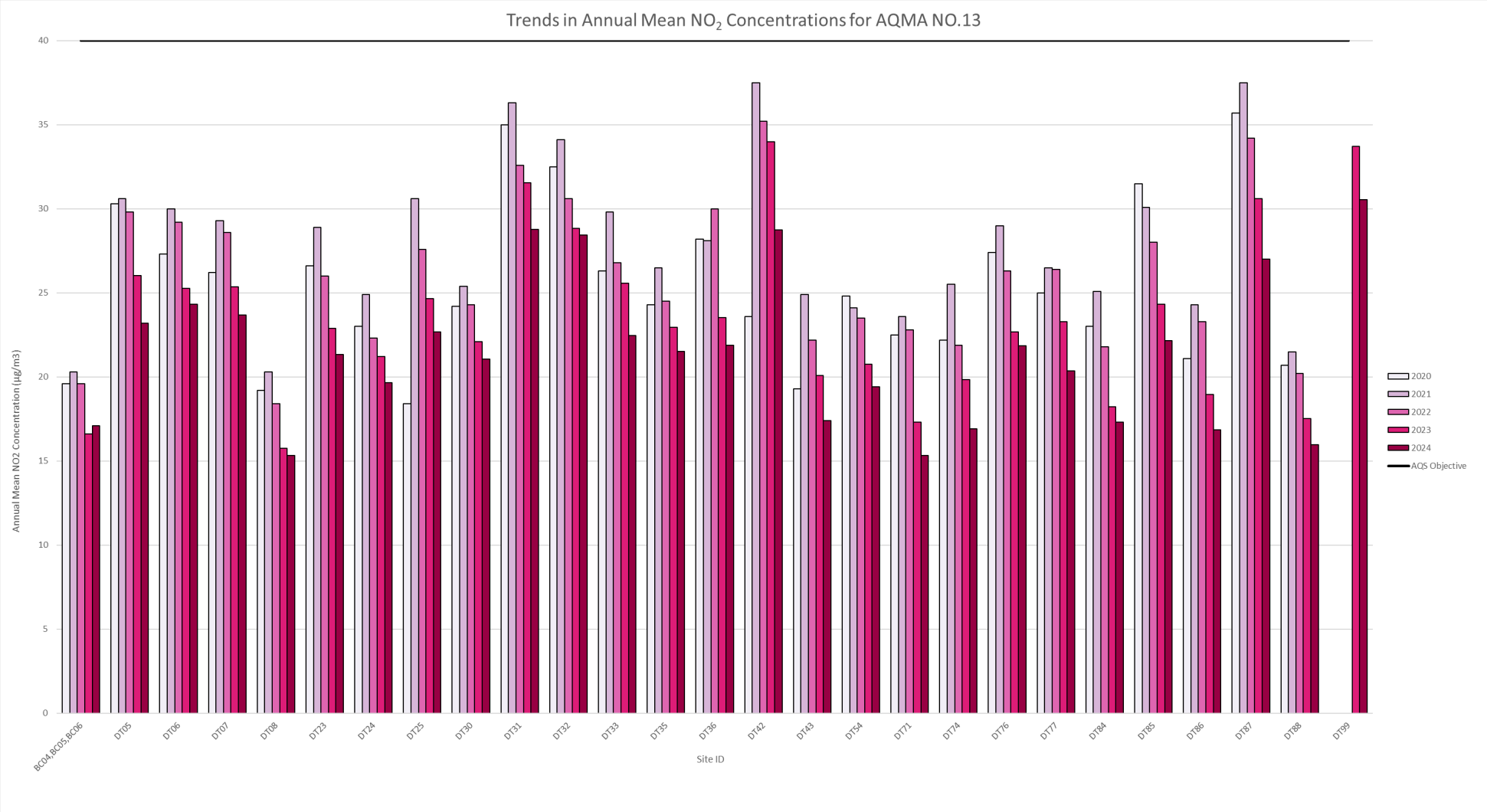


Figure A.4 – Trends in Annual Mean NO2 Concentrations AQMA 14

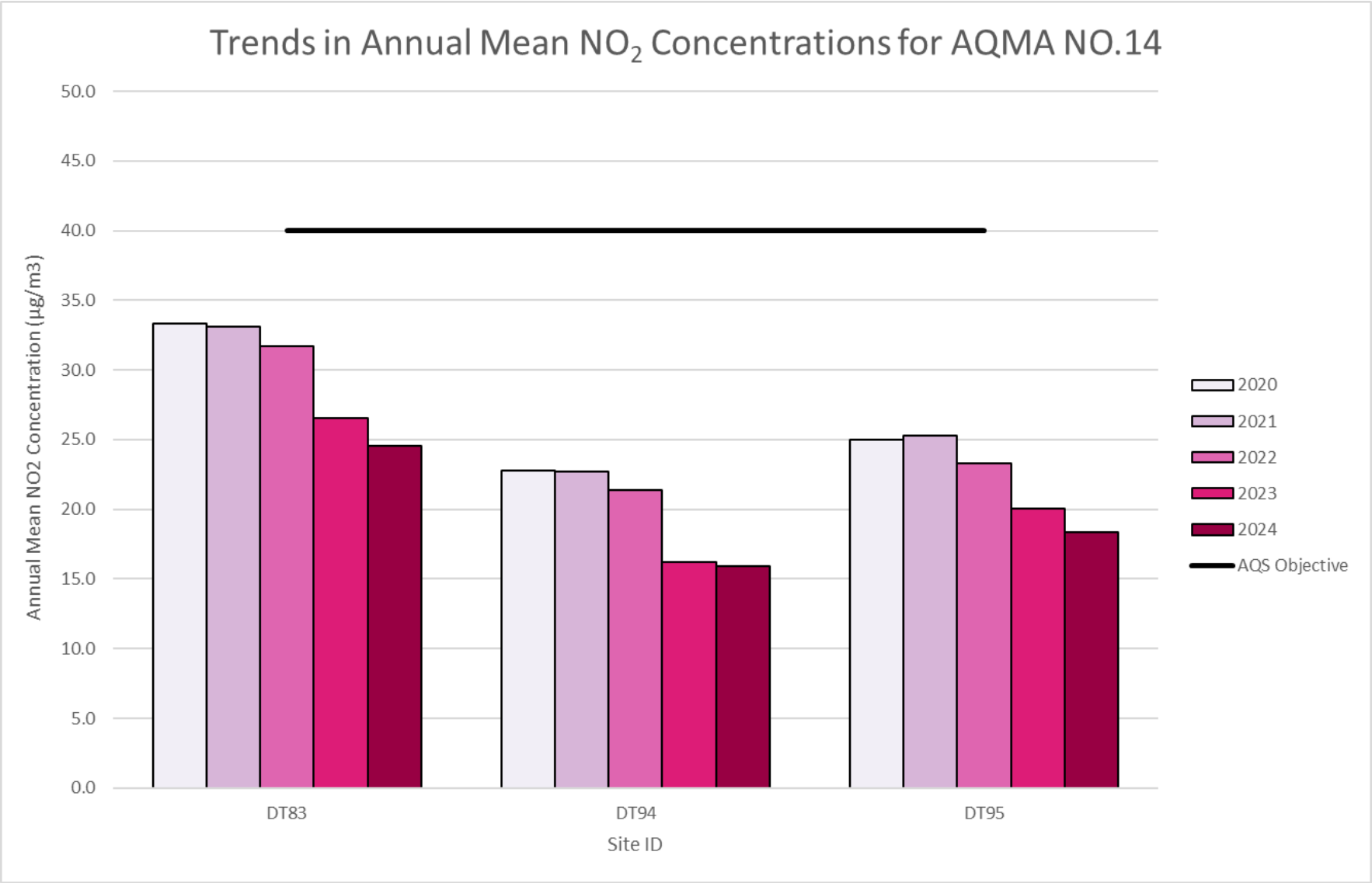
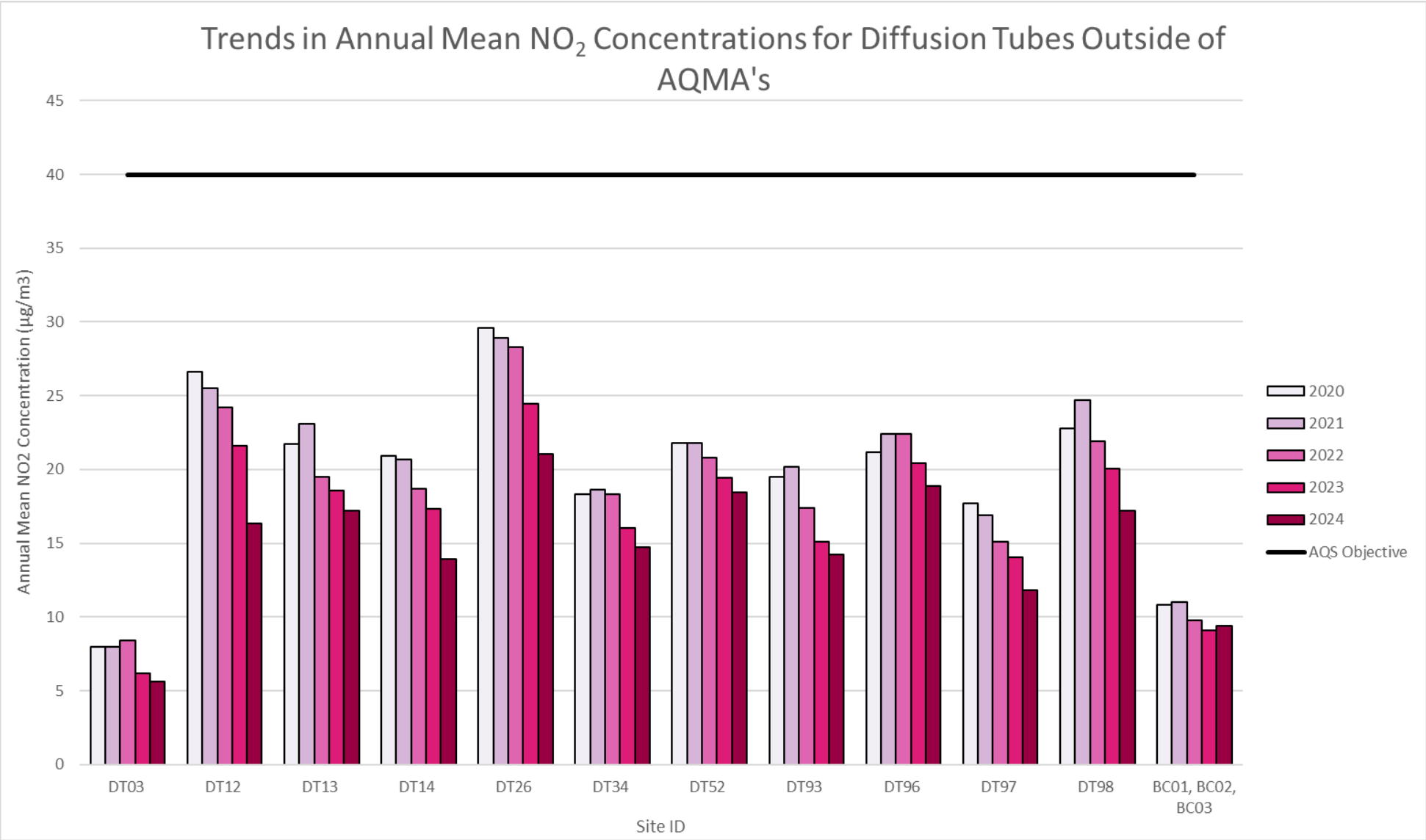


Figure A.5 – Trends in Annual Mean NO2 Concentrations Outside Of Any AQMA



Appendix B: Full Monthly Diffusion Tube Results for 2024

Table B.1 – NO_2 2024 Diffusion Tube Results ($\mu g/m^3$)

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 <(x.x)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT02	553157	154416	**41.1**	35.4	29.9	29.2	31.8		<0.7	27.5	34.3	34.5	42.3		34.0	26.5	_	
DT03	552465	154165	9.1	7.2	12.8	6.8	6.3	5.8	4.6	5.5	5.4	8.9			7.2	5.6	_	
DT05	551414	156196	36.5	30.3	30.4	24.2	28.4	29.1	28.8	30.0	28.6	30.5	30.3		29.7	23.2	_	
DT06	551442	156159	31.8	31.6	36.6	28.3	33.0	27.1	26.7	27.8	30.5	33.6	35.9		31.2	24.3	_	
DT07	555096	156692	36.0	35.4	31.6	26.0	26.3	29.7	27.6	27.7	28.2	29.6	36.0		30.4	23.7	_	
DT08	554991	156728	24.9		19.3	18.2	17.7	16.5	15.5	15.8	20.8	20.5	27.4		19.7	15.3	_	
DT12	546813	155850	31.7		17.5	22.1	20.3	17.8	24.1	15.2	21.2	14.9	24.7		21.0	16.3	_	
DT13	552510	167704	29.8	19.0	24.1	16.9	20.0	20.5	18.1	17.7		24.0	30.1		22.0	17.2	_	
DT14	553107	167868	22.3	23.0	21.5	17.2	17.2	18.0	17.0	19.4	16.8	21.2	2.3		17.8	13.9	_	
DT23	553050	156625	39.1	24.7	25.9	24.0	28.8	22.9	23.2	22.8	28.0		34.1		27.4	21.3	_	
DT24	544418	153918	28.3	24.6	26.3	22.7	24.9	22.9	20.4		27.2	25.6	29.3		25.2	19.7	_	
DT25	544638	154041	33.7	29.1	30.4	27.0	28.7	24.1	22.8	24.5	26.7	32.7	**40.0**		29.1	22.7	_	
DT26	554218	167252	25.7	26.7	24.4	26.7	18.4	24.7	26.6	25.7	30.1	31.4	36.5		27.0	21.1	_	
DT27	553138	154260		27.6	25.2	23.9	20.1	23.6	19.1	21.2	26.6	24.1	27.1		23.9	18.6	_	
DT28	553044	154889	10.5		24.7	24.3	25.7	25.2	21.5	23.5	24.5	21.2	33.8		23.5	18.3	_	
DT29	553073	155030	24.6	20.4	19.2	16.9	10.6	16.4	17.3	16.7	18.4	18.9	26.1		18.7	14.6	_	
DT30	553019	156692	31.6	29.7	25.6	25.7	24.8	26.3	23.8	23.4	28.7	24.8	32.8		27.0	21.1	_	
DT31	553165	156686	**49.3**	**40.4**	31.3		36.6	36.4	33.1	33.3	38.2	37.8	32.6		36.9	28.8	_	
DT32	553147	156563	**41.0**		32.8	32.4	38.9	35.5	32.3	29.0	**40.2**	37.6	**44.9**		36.5	28.4	_	
DT33	555069	156709	33.0	30.1	26.9	24.1	28.6	27.5	24.4	24.1	29.9	29.8	38.6		28.8	22.5	_	
DT34	544802	154895	24.9		17.4	14.0		7.1		14.8	16.8	17.4	**42.5**		19.4	14.7	_	
DT35	554092	156797	31.4	25.6	27.7		29.8	25.6	26.0	25.6	24.4	28.8	31.0		27.6	21.5	_	
DT36	544598	154021	31.0		33.0	26.7	29.4	25.8	26.7	29.7	26.6	18.3	33.2		28.0	21.9	_	
DT39	551492	168695			24.2	22.1	27.6	26.4	25.8	20.8	22.9	29.8	29.3		25.4	19.8	_	
DT40	551579	168507	33.4	31.8	32.9	28.5	36.1	32.3	32.2	28.4	35.4	36.0	43.1		33.6	26.2	_	
DT41	552175	168162	36.9	32.8	30.3	25.5	27.9	26.5	27.3	23.6	31.5	32.2	38.3		30.3	23.6	_	
DT42	551383	156064	**40.4**	35.7	39.2	34.7	33.0	39.3	38.1	39.2	39.4	29.0	37.3		36.8	28.7	_	

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 <(x.x)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT43	551315	156381	6.6	27.0	25.7	20.0	21.5	22.8	22.8	18.9	23.2	25.3	31.6		22.3	17.4	_	
DT48	552867	154858		18.1	17.0	12.9	13.9	12.5	13.4	13.4	15.7	17.7			15.0	11.7	_	
DT49	553018	154655	22.4	17.7	19.5	10.8	18.0	15.7	14.3	14.4	22.2	20.6	22.9		18.0	14.1	_	
DT51	552761	155050	22.6	15.5	17.7	15.5	17.4	14.4	12.8	13.2	17.6	20.3	24.9		17.4	13.6	_	
DT52	552504	155271	29.9	23.5	23.2	21.4	21.3	21.1	17.9	18.9	28.5	25.5	28.6		23.6	18.4	_	
DT54	551224	156975	31.5	29.5	25.3	18.3	21.4	21.9	23.3	20.8	25.6	25.7	30.3		24.9	19.4	_	
DT71	548239	155355	29.7	25.4	19.8	19.3	17.9	17.2	14.7		5.0	20.3	27.4		19.7	15.3	_	
DT74	550768	155584	25.8	25.0	23.3	20.4	20.4	17.8	15.1	18.5	18.9	24.0	29.2		21.7	16.9	_	
DT76	551019	155714	34.2	25.3	22.8	25.5	29.0	30.0	24.9	26.8	31.7	25.7	32.1		28.0	21.8	_	
DT77	551528	155967	32.4	27.1	27.2	21.9	28.8	24.4	21.9	22.1	19.1	28.5	33.6		26.1	20.4	_	
DT81	553419	167614	24.6	19.2	22.9	16.2	17.0	18.7	18.8		25.0		26.7		21.0	16.4	_	
DT83	550298	169627	36.1	32.4	30.1	30.1		32.9	28.3	30.9	29.5	29.5	35.0		31.5	24.6	_	
DT84	546803	154999	24.8	19.0	21.7	19.9	23.1	22.3	20.1	21.8	23.5	23.8	24.2		22.2	17.3	_	
DT85	547094	155099	39.4	25.9	25.6	27.4	28.5	27.5	14.1	25.0	31.5	29.7	38.0		28.4	22.2	_	
DT86	550306	155595			17.0	20.2	18.4	19.6	20.4	20.3	23.7	20.8	34.0		21.6	16.8	_	
DT87	551639	156334		**40.1**	37.8	32.5	28.7	35.0	33.8	32.5	34.1	37.1			34.6	27.0	_	
DT88	552950	156578	27.1		20.7	18.0	18.5	18.4	19.8	17.8	20.0	22.9	21.4		20.5	16.0	_	
DT90	553053	154708	27.4	19.7	22.2	23.0	23.4	21.1	19.3	19.5	20.9	**45.0**	<0.7		24.2	18.8	_	
DT93	550284	169743	21.2	17.2	19.2	14.9	17.6	14.3		14.5	17.4	21.0	24.8		18.2	14.2	_	
DT94	550249	169573	19.4	20.3	22.3	16.4	17.9	18.5	18.6	20.4	21.0	23.8	25.4		20.4	15.9	_	
DT95	550351	169490	29.8	24.6	19.8	19.1	24.2	22.4	21.6	20.5	24.5	29.1			23.6	18.4	_	
DT96	552371	155346	27.8	26.4	27.5	22.5		22.4	20.1	22.2	17.2	26.9	29.4		24.2	18.9	_	
DT97	550555	168253	17.6	14.3	15.2	12.9		13.4	12.7	12.1	14.7	18.4	19.8		15.1	11.8	_	
DT98	550962	157662	25.4		21.2	19.2		19.9	20.4	19.0	21.2	21.3	30.7		22.0	17.2	_	
DT99	553104	156676	**48.2**	**40.3**	36.4	39.2		38.2	35.8	34.2	31.7	**40.3**	**47.2**		39.2	30.5	_	
BC01	553607	156776	16.0	12.7	18.0	<0.6	9.0	8.1	7.4	8.3	10.6	12.8	18.0		12.1	9.4	_	
BC02	553045	156690	16.3	12.3	18.5	<0.6	8.6	8.2	7.7	8.5	12.3	13.3	17.5		12.3	9.6	_	
BC03	553157	154416	14.9	12.0	18.5	<0.6	8.3	7.7	7.7	8.2	10.9	12.2	17.4		11.8	9.2	_	
BC04	552465	154165	21.6	21.0	35.0	<0.6	17.4	18.6	14.2	18.0	19.2	16.9	27.6		21.0	16.3	_	
BC05	551414	156196	24.5	23.6	35.2	<0.6	17.4	18.0	18.4	17.8	18.8	22.5	25.8		22.2	17.3	_	
BC06	551442	156159	25.7	22.3	39.1	<0.6	18.8	16.7	17.6	18.1	18.2	23.2	26.3		22.6	17.6	_	

☒ **All erroneous data has been removed from the NO_2 diffusion tube dataset presented in Table B.1.**

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.**

☒ **National bias adjustment factor used.**

☒ **Sevenoaks District Council confirm that all 2024 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.**

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**.

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 Sevenoaks District During 2024

Sevenoaks District Council has identified three proposed developments from the previous ASR that are progressing and may potentially impact air quality within the district.
These are:

- Development of Sevenoaks Quarry; including 800 residential dwellings, 150 residential institutional units, business, retail, leisure and sports uses, as well as a new primary school.
- Development of a new roundabout at Bat & Ball, which will include replacing existing junction and requiring the removal of the decommissioned automatic monitoring station.
- Development of a Lidl store including a new roundabout at the Broomhill site in Swanley.

Sevenoaks District Council has identified three new developments that are progressing and may potentially impact air quality within the district.
These are:

- Development of Fort Halstead; including up to 635 homes and installation of a new roundabout and access points to the site.
- Development of two new solar farms, which may begin construction within the year pending updates:
    - Horton Wood Solar Farm, Horton kirby
    - Chimmens Solar Farm, Horton Kirby and Fawkham

Additional Air Quality Works Undertaken by Sevenoaks District During 2024

Within 2024, Sevenoaks District Council addressed the impact of a new development north of AQMA 8, which is expected to increase traffic in the area.

Funding for Monitoring:

- As part of the planning permission, the applicant provided £5000 for air pollution monitoring within a 3 km radius of the development site, secured through an agreement under section 106 of the Town and Country Planning Act 1990.

Acquisition of Monitoring Equipment:

- This funding was used to purchase a Bettair Node, a cost-effective, real-time air pollution and noise monitoring instrument capable of measuring and recording PM_{10}, $PM_{2.5}$, PM_1, NO_2, O_3, noise levels (dB(A)), atmospheric pressure, temperature, and relative humidity.

Placement and Purpose:

- The Bettair Node will be installed within AQMA 8 to monitor and understand the potential impact of the new development on local air quality.

QA/QC of Diffusion Tube Monitoring

Sevenoaks District Council's diffusion tubes were supplied and analysed by SOCOTEC Didcot during 2024, using the 50% Triethanolamine (TEA) in acetone preparation method.

SOCOTEC's laboratory is UKAS accredited, participating in the AIR-PT Scheme (a continuation of the Workplace Analysis Scheme for Proficiency (WASP)) for NO_2 tube analysis and the Annual Field Inter-Comparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO_2 concentrations reported are of a high calibre. The lab follows the procedures set out in the Harmonisation Practical Guidance.

In the latest available AIR-PT results, AIR-PT results, AIR PT AR066 (Sept - Dec 2024), SOCOTEC scored 100%. For 2024 SOCOTEC scored 100% for all rounds.

The percentage score reflects the results deemed to be satisfactory based upon the z-score of < ± 2. 20 of the 23 local authority co-location studies which use tubes supplied by SOCOTEC Didcot with the 50% TEA in acetone preparation method in 2024 had an overall rating of 'good', with all 12 months being rated as 'good', as shown by the precision summary results.

This precision reflects the laboratory's performance and consistency in preparing and analysing the tubes, as well as the subsequent handling of the tubes in the field.

Tubes are considered to have a "good" precision where the coefficient of variation of triplicate diffusion tubes is less than 20% is any given month, and less than 10% when averaged for the year.

Monitoring in 2024 had been completed in adherence with the 2024 Diffusion Tube Monitoring Calendar, whereby all changeovers were completed within ±2 days of the specified date.

Diffusion Tube Annualisation

We are excluding the December 2024 diffusion tube data from our averages due to concerns raised about its accuracy. This decision is based on guidance from the LAQM helpdesk and aims to ensure the reliability of our annual report.

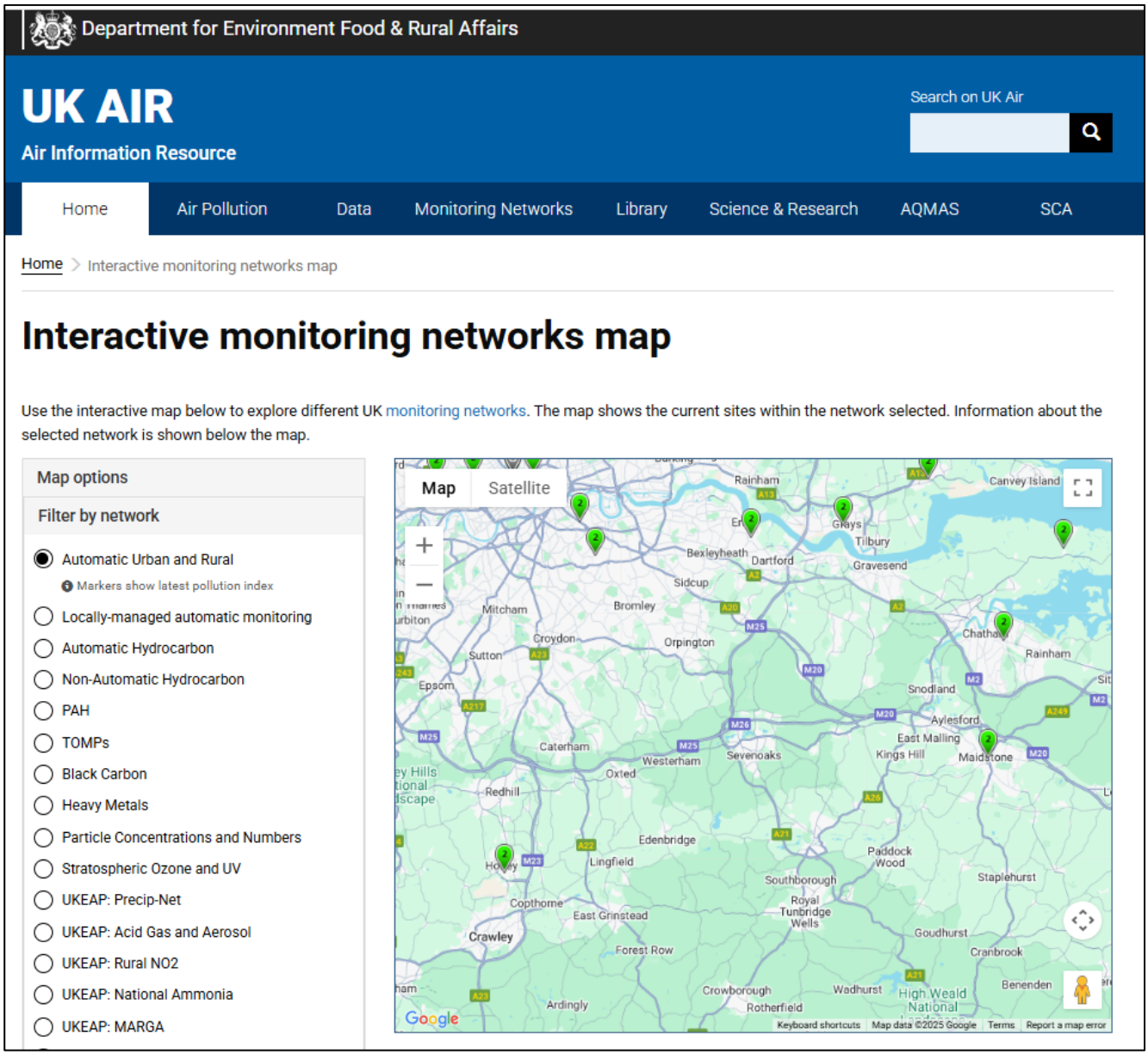
Annualisation is necessary for any site with data capture between 25% and 75%. Consequently, annualisation was performed for one diffusion tube monitoring site. This was DT34, located in Main Road, Sundridge and had a data capture of 67% for 2024.

Due to the decommissioning of the two nearest continuous monitoring stations within Sevenoaks, the DEFRA UK Air Interactive monitoring networks map was used to find the suitable background locations near Sevenoaks.

The following were chosen:

- Chatham Roadside - UK-AIR ID: UKA00553
- Horley - UK-AIR ID: UKA00511
- Thurrock - UK-AIR ID: UKA00272
- Eastbourne - UK-AIR ID: UKA00546

Figure C.1 –Screenshot showing the DEFRA UK Air Interactive monitoring networks map



These sites were chosen for annualisation because they geographically cover a wide area, representing all compass points around Sevenoaks. However, only three of the four sites have sufficient data capture exceeding 85% and are suitable for this purpose, therefore Eastbourne was not used for annualisation.

Table C.1 – Annualisation Summary (concentrations presented in µg/m^3)

Site ID	Annualisation Factor Chatham Roadside	Annualisation Factor Horley	Annualisation Factor Thurrock	Annualisation Factor	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
DT34	0.9740	0.9714	0.9782	-	0.9746	19.4	18.9

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2025 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 NOx/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

Sevenoaks District Council have applied a national bias adjustment factor of 0.78 to the 2024 monitoring data. A summary of bias adjustment factors used by Sevenoaks District Council over the past five years is presented in Table C.2.

Figure C.2 – National Diffusion Tube Bias Adjustment Factor Spreadsheet - Partial Image

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 04/25

Follow the steps below **in the correct order** to show the results of **relevant** co-location studies
Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods
Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet
This spreadsheet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.

This spreadsheet will be updated at the end of June 2025
LAQM Helpdesk Website

The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.

Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.

Step 1: Select the Laboratory that Analyses Your Tubes from the Drop-Down List — If a laboratory is not shown, we have no data for this laboratory.

Step 2: Select a Preparation Method from the Drop-Down List — If a preparation method is not shown, we have no data for this method at this laboratory.

Step 3: Select a Year from the Drop-Down List — If a year is not shown, we have no data[2]

Step 4: Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.

If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953

Analysed By[1]	Method	Year	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m3)	Automatic Monitor Mean Conc. (Cm) (µg/m3)	Bias (B)	Tube Precision[5]	Bias Adjustment Factor (A) (Cm/Dm)
SOCOTEC Didcot	50% TEA in acetone	2024	R	Slough Borough Council	11	30	23	33.7%	G	0.75
SOCOTEC Didcot	50% TEA in acetone	2024	R	Thanet Distric Council	10	19	15	24.3%	G	0.80
SOCOTEC Didcot	50% TEA in acetone	2024	UB	Wirral Council	9	14	12	19.9%	G	0.83
SOCOTEC Didcot	50% TEA in acetone	2024	R	Derry City And Strabane District Council	11	28	32	-11.8%	G	1.13
SOCOTEC Didcot	50% TEA in acetone	2024	UB	Derry City And Strabane District Council	11	11	7	58.1%	G	0.63
SOCOTEC Didcot	50% TEA in Acetone	2024	R	Horsham District Council	11	22	17	31.1%	G	0.76
SOCOTEC Didcot	50% TEA in Acetone	2024	R	Leeds City Council	10	36	28	32.5%	G	0.75
SOCOTEC Didcot	50% TEA in Acetone	2024	KS	Leeds City Council	11	29	20	42.7%	G	0.70
SOCOTEC Didcot	50% TEA in Acetone	2024	R	Leeds City Council	11	24	18	36.4%	G	0.73
SOCOTEC Didcot	50% TEA in Acetone	2024	UC	Leeds City Council	10	25	19	31.2%	G	0.76
SOCOTEC Didcot	50% TEA in Acetone	2024	R	Huntingdonshire District Council	10	28	23	21.1%	G	0.83
SOCOTEC Didcot	50% TEA in Acetone	2024	R	North East Lincolnshire Council	11	39	21	84.1%	G	0.54
SOCOTEC Didcot	50% TEA in Acetone	2024	UB	North East Lincolnshire Council	10	12	10	20.0%	G	0.83
SOCOTEC Didcot	50% TEA in Acetone	2024	R	North East Lincolnshire Council	11	21	18	15.7%	G	0.86
SOCOTEC Didcot	50% TEA in acetone	2024		Overall Factor[3] (33 studies)				Use		0.78

[1] For Casella Stanger/Bureau Veritas (NOT Bureau Veritas Labs) use Gradko 50% TEA in Acetone.
From 2024 use Staffordshire County Council instead of Staffordshire Scientific Services
For Staffordshire CC SS/Staffordshire County Analyst use Staffordshire Scientific Services.
For Casella Seal/GMSS/Casella CRE/Bureau Veritas Labs/Eurofins/ use Environmental Scientific Groups

Table C.2 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	**2024**	National	04/25
2023	2023	National	03/24
2022	2022	National	03/23
2021	2021	National	03/22
2020	2020	Local	-

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 NO_2 fall-off with distance calculator available on the LAQM Support website.

No diffusion tube NO_2 monitoring locations within Sevenoaks District Council required distance correction during 2024.

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

Figure D.3 – Map of Non-Automatic Monitoring Site

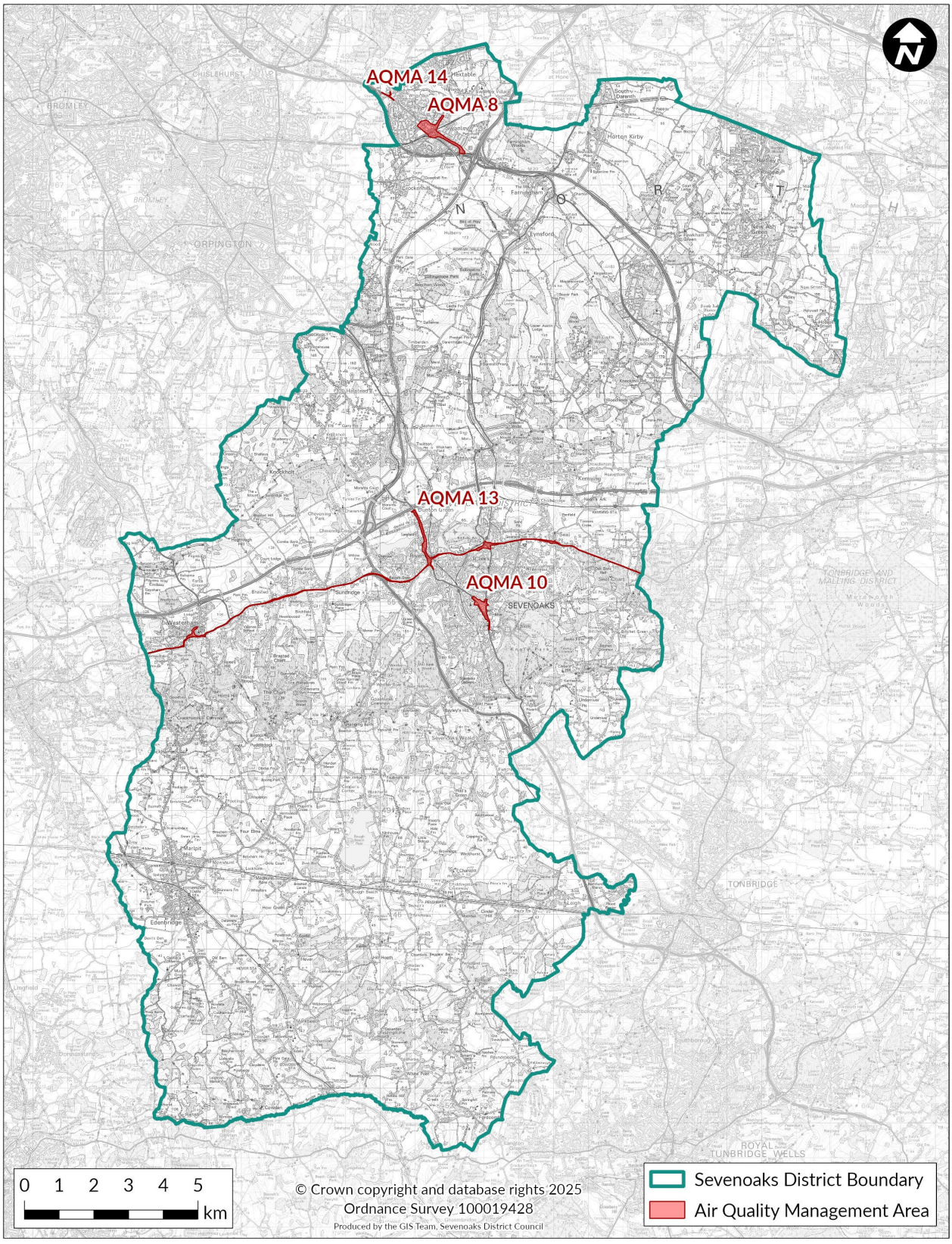


Figure D.4 –Map of Monitoring Locations and AQMAs near Swanley

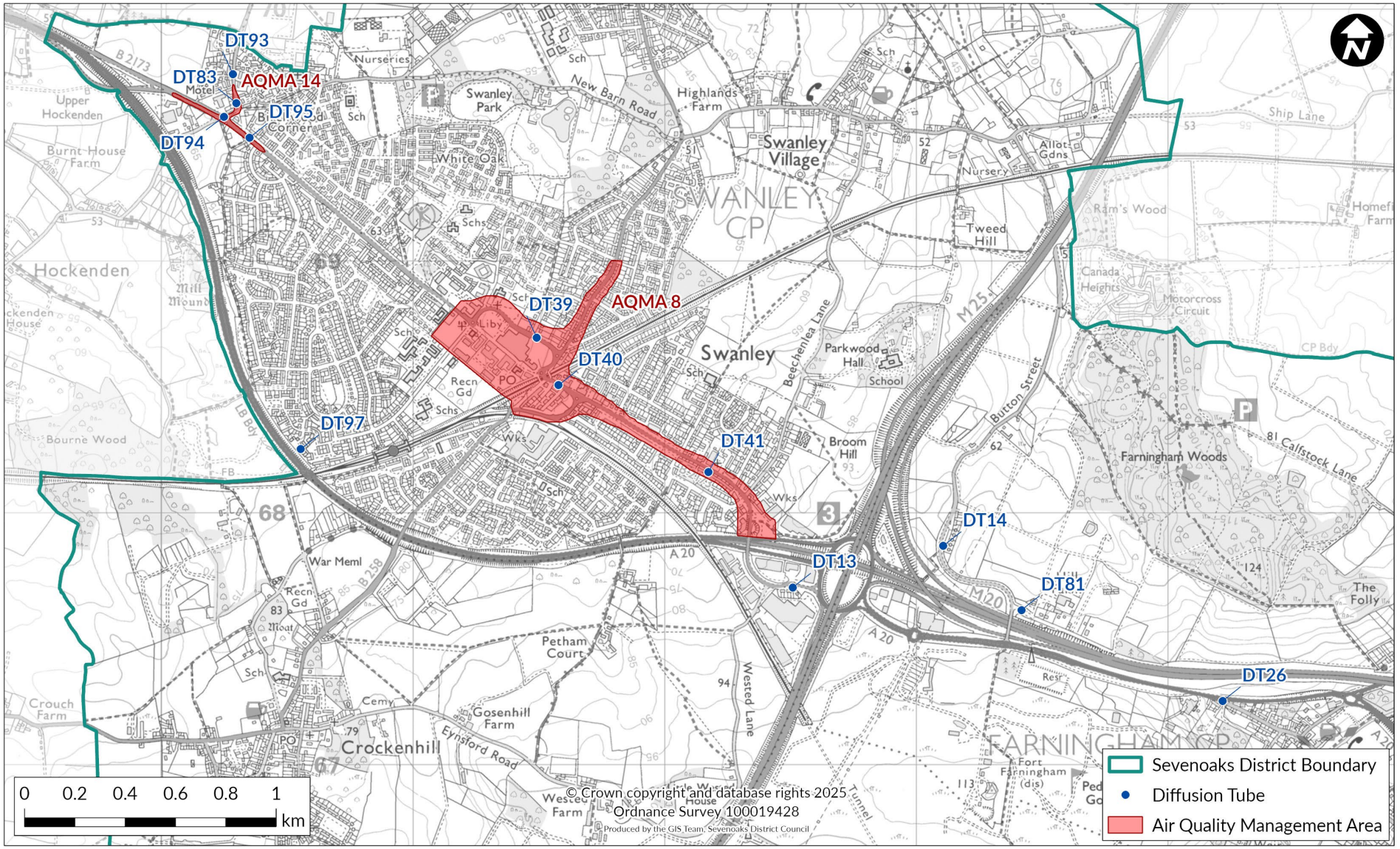


Figure D.5 –Map of Monitoring Locations and AQMAs near Sevenoaks

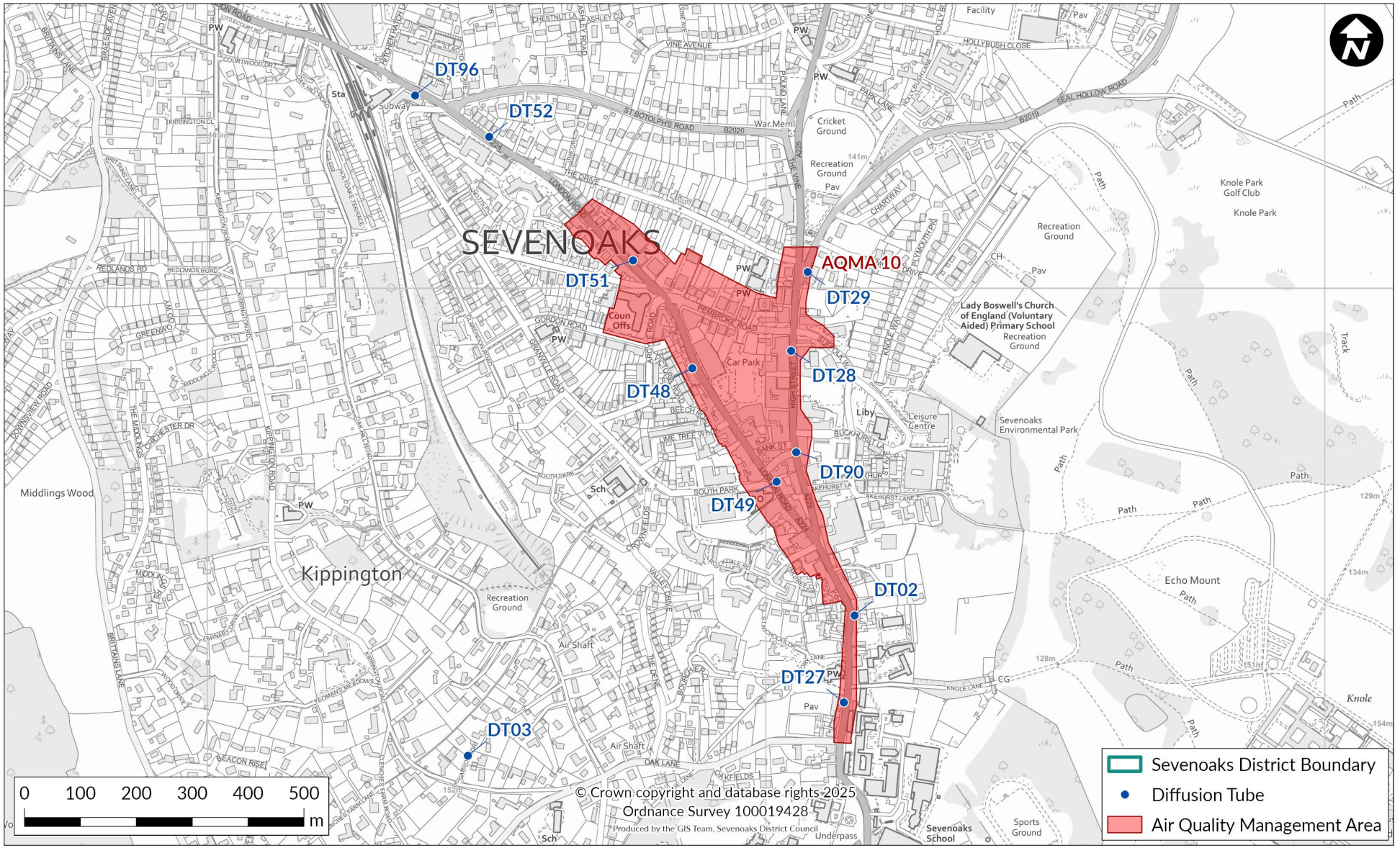


Figure D.6 –Map of Monitoring Locations and AQMAs near Seal

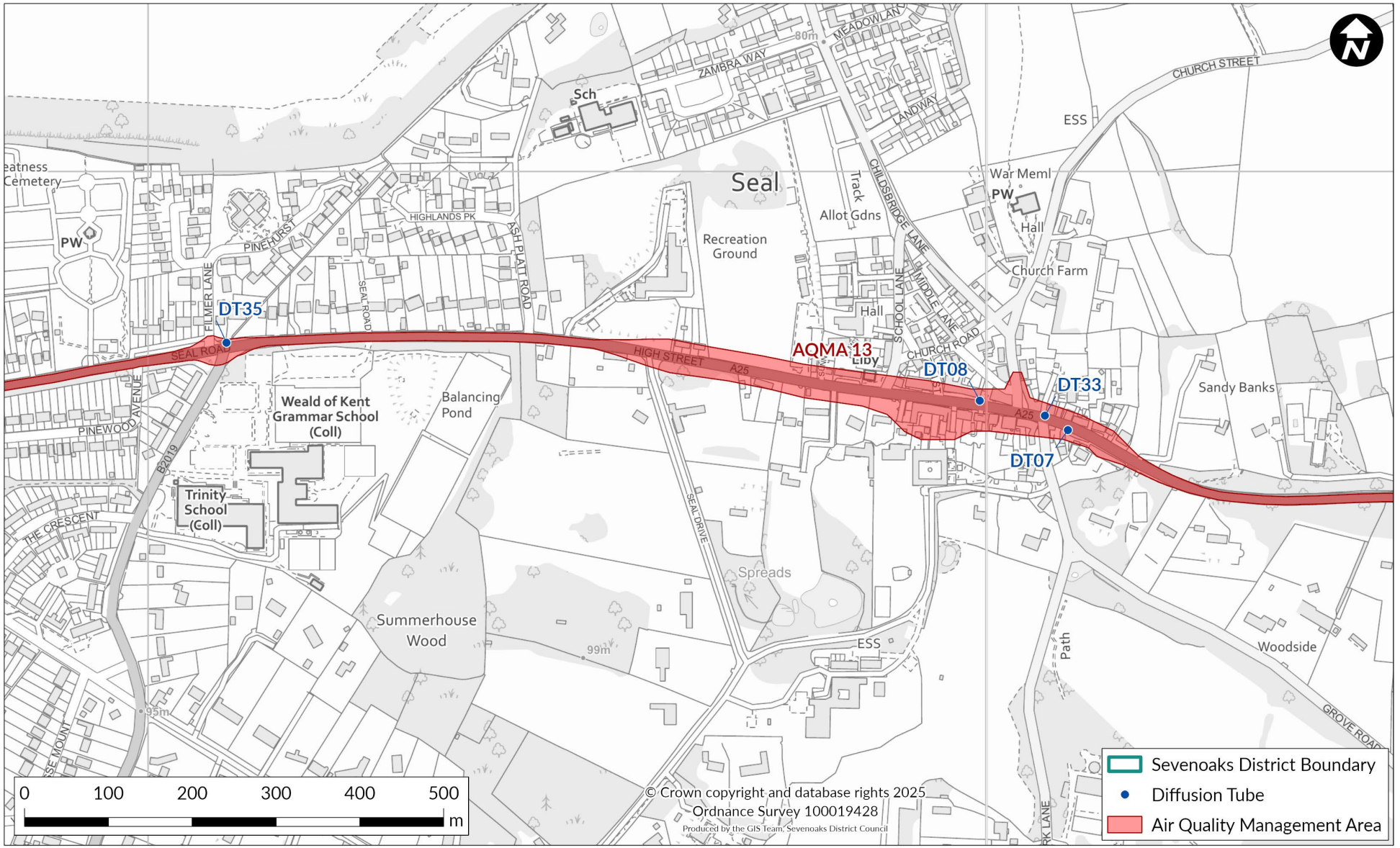


Figure D.7 –Map of Monitoring Locations and AQMAs near Riverhead and Bat & Ball

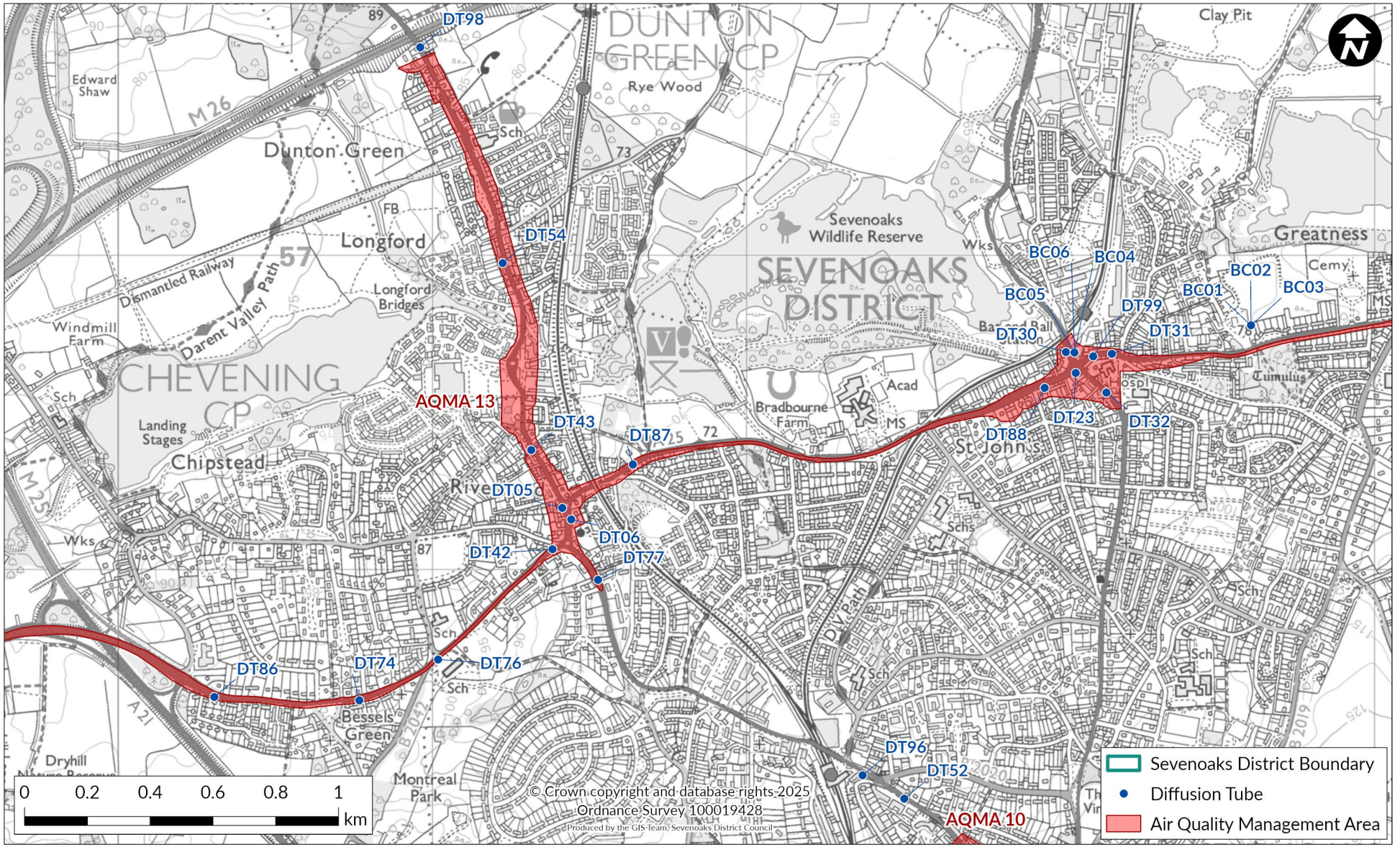
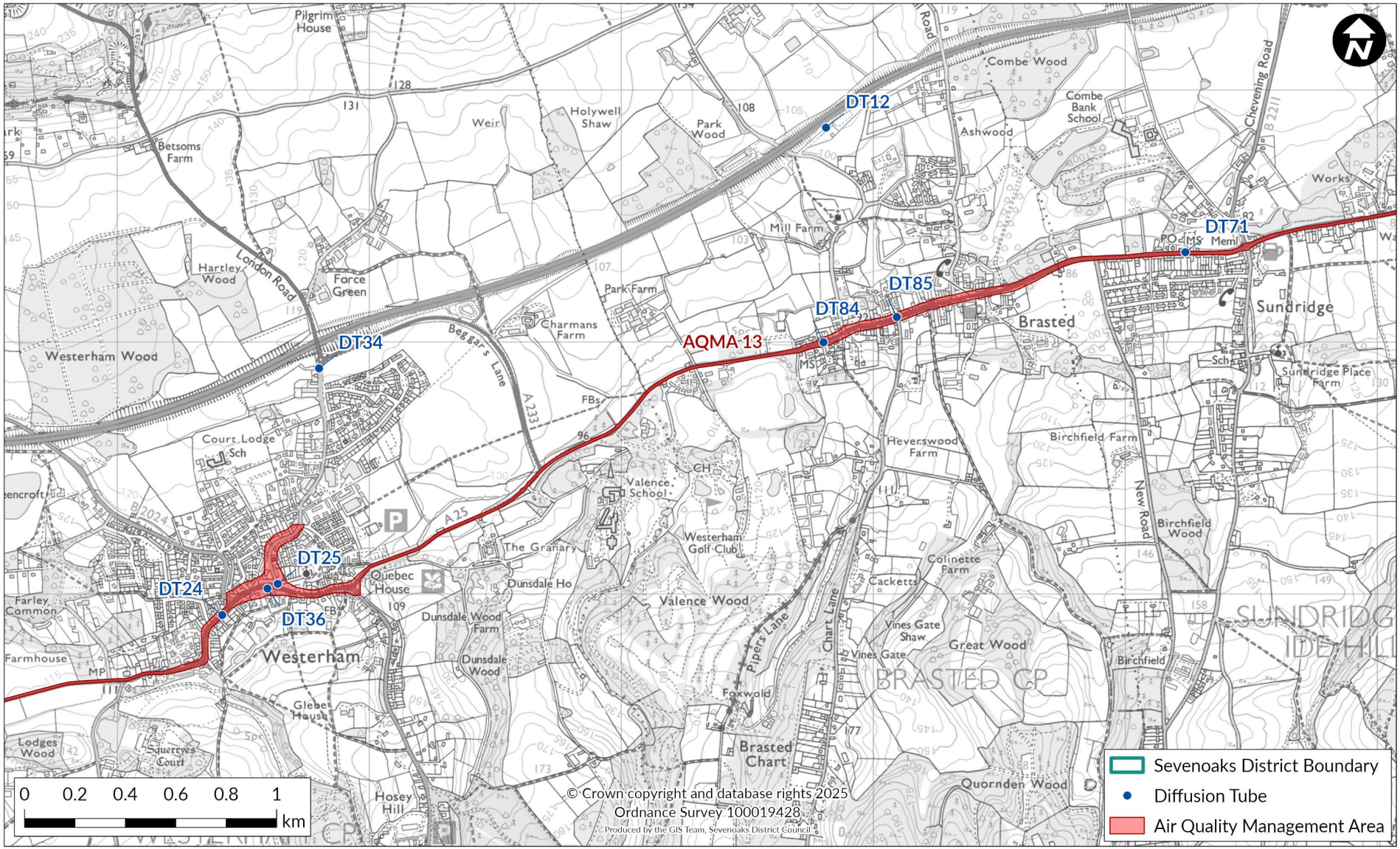


Figure D.8 –Map of Monitoring Locations and AQMAs near Westerham and Brasted



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[2]

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

[2] 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	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
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
$\mu g/m^3$	Micrograms per cubic meter

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.
- Chemical hazards and poisons report: Issue 28. June 2022. Published by UK Health Security Agency
- Air Quality Strategy – Framework for Local Authority Delivery. August 2023. Published by Defra.
- Sevenoaks District Council Air Quality Action Plan 2022
- Sevenoaks District Council 2024 Annual Status Report

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