Stratford-on-Avon District Council

2026 Air Quality Annual Status Report

September 2026



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2026 Air Quality Annual Status Report (ASR)

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

Date: September 2026

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Report Reference Number	AIR32800191
Date	September 2026

Local Responsibilities and Commitment

This Annual Status Report (ASR) was prepared by Bureau Veritas on behalf of Stratford-on-Avon District Council with the support and agreement of the following officers and departments:

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Executive Summary: Air Quality in Our Area

Air Quality in Stratford-on-Avon

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.

Stratford-on-Avon is a predominantly rural District in Warwickshire, located within England's West Midlands region and bordered by authorities including Bromsgrove, West Oxfordshire and South Northamptonshire. The District covers approximately 378 square miles, with a population of approximately 134,700. Stratford-upon-Avon is the largest settlement, with around 30,500 residents, followed by Wellesbourne with approximately 11,000 residents. Other notable population centres include Alcester, Bishop's Itchington

and Southam. The District is the fourth least densely populated of the West Midland's 30 local authority areas, and is England's 171st most densely populated area of the 309 local authority areas, as per the Office for National Statistics (ONS).

Road traffic is the principal source of air pollution within the District, particularly along key transport corridors such as the M40, A46, A3400, A422 and A439. These routes form part of the strategic highway network, carrying substantial volumes of both local and through traffic. Given the District's central location and popularity as a visitor destination, many journeys pass through the area rather than originating or ending within it. Traffic volumes are further influenced by tourism, particularly during peak visitor seasons, resulting in periodic congestion and increased stop-start driving conditions that can elevate pollutant concentrations. Car ownership in households in Stratford-on-Avon is higher than the national average, 87.2% compared to 78% respectively, as reported in the 2021 census presented in the RAC Foundation and National Centre for Social Research - DfT Car Ownership: Evidence Review. Vehicles as the major contributor to air pollution in Stratford-on-Avon is reiterated by the Stratford-on-Avon District Core Strategy 2011-2031 and Stratford upon Avon Area Transport Strategy May 2018.

Other pollution sources including commercial, industrial, agricultural and domestic sources also contribute to pollutant concentrations in the District.

Actions to Improve Air Quality

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

The Council has published a local Air Quality Strategy to prevent and reduce polluting activities. The Local Air Quality Strategy is available at https://democracy.stratford.gov.uk/documents/s76620/Appendix%201%20-%20AQS%202026%20Final_.pdf. The strategy outlines measures and actions that will continually improve air quality.

In 2025, Stratford-on-Avon District Council maintained its network of three AQMesh air quality sensors within the Studley and Stratford-on-Avon AQMAs. The monitors are solar powered units that measure Nitrogen Dioxide (NO_2), humidity, temperature and Particulate Matter (PM), with aims of assessing expected areas of high air pollution due to increased traffic. Data is publicly available to review on Stratford-on-Avon District Council: Air Quality Monitors Website, thus providing an interface for community involvement and awareness

of air quality issues in the local area whilst seeking to promote further positive uptake of actions to benefit local air quality (e.g. active travel).

Throughout 2025 Stratford-on-Avon District Council maintained its collaborative partnership with Energy Saving Trust and local company, Pashley Cycles, for the E-Cargo Bikes Scheme. It was implemented in 2022 for five years and adopted to facilitate short (hop-on hop-off) and long-term rental whilst supporting the Council's commitment to tackling the declared climate emergency. There are five EP2 model e-Cargo bikes and five Articulating Lightweight Electrically-assisted Cargo Solution (ALECS) e-Cargo trikes available for use free of charge. The scheme, supported through £60,000 UK Government Funding and £60,000 District funding, for offers Stratford-on-Avon businesses, organisations, community, and voluntary groups a carbon-neutral, flexible and cost-effective alternative to other modes of transport (i.e. cars and vans), more convenient for point-to-point journeys delivering local goods. The initiative has sought to lower the District's environmental footprint, with improvements to air quality and reduction in carbon footprints through the sustainable solution to transport challenges in Stratford-on-Avon.

Conclusions and Priorities

Stratford-on-Avon District Council undertook non-automatic (i.e. passive) monitoring of NO_2 at 18 sites during 2025. The council did not undertake automatic monitoring during 2025.

During 2025 there have been no measured exceedances of the annual mean NO_2 objective. Furthermore, no diffusion tube monitoring site in 2025 measured an NO_2 annual mean concentration within 10% of the objective. Furthermore, no annual mean NO_2 concentrations >60 µg/m^3 (the proxy for the 1-hour mean) have been measured during this period.

Over a 5-year period all monitoring sites recorded a decreasing trend in NO_2 concentrations with the exception of DT14 which showed increases in concentrations but remained below the annual mean objective.

Stratford-on-Avon District Council currently does not have any declared AQMAs. During 2025, the revocation procedure was initiated by Stratford, and the revocation order was granted in 2026 for both of the previous AQMAs ('Studley AQMA' and 'Stratford upon Avon District Council no. 1 2010').

The Council has published a local Air Quality Strategy to prevent and reduce polluting activities. The Local Air Quality Strategy is available at: https://democracy.stratford.gov.uk/documents/s76620/Appendix%201%20-

%20AQS%202026%20Final_.pdf. The strategy outlines measures and actions that will continually improve air quality.

Four major ongoing developments have been identified as having scope to impact air quality concentrations reported across the District in 2025 and onwards. Further details regarding the developments can be found in Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC.

Stratford-on-Avon District Council will continue to implement measures to improve air quality within the district. The Top 3 Measures this year are:

1. E-cargo Bike Scheme;
2. Enhancement of council webpage on AQ to include additional information for public on wood burners and clean burning etc; and
3. Implementation of Air Quality Strategy measures to support a District wide approach to reducing exposure to air pollution.

The following actions are considered to be key priorities in Stratford-on-Avon throughout 2025 to continue to improve air quality:

- Continue to work with Warwickshire County Council (WCC) in connection with the implementation of the Transport Strategy;
- Continue to support WCC in the review the current monitoring programme, exploring the need to re-distribute existing resources or deploy new monitoring locations in areas where monitoring has not previously been undertaken and where it is believed that there may be elevated concentrations of NO_2 in areas of relevant public exposure;
- Raise awareness of the impacts of wood burners on indoor air quality through website-based initiatives;
- Review and enhance the air quality supplementary planning guidance to provide a robust framework for developers to assess, manage, and mitigate air quality impacts throughout the planning and development lifecycle;
- Implementation of planned EV charging points across the District aligned with Warwickshire County Council Electric Vehicle Charging Infrastructure Strategy 2017-2026 (November 2017) and in collaboration with Warwickshire County Council and providers BP Pulse, Pod Point, RAW Charging, and InstaVolt;
- Greater progression and completion of actions in the Stratford-upon-Avon Area Transport Strategy May 2018 to improve rail and road infrastructure that will provide

an integrated transport network which facilitates the efficient movement of pedestrian and vehicular traffic, goods, and services across the District;

- Continue to reduce the volume of traffic on the District's roads by encouraging effective active transport methods (e.g. public transport, cycling, and walking) – for example: maintain Parking outside schools: What can we do? - Warwickshire County Council, upgrade A439 Warwick Road active transport routes, promote actions aligned with the Part 2 – Network Plans: Stratford-on-Avon District LCWIP and Warwickshire Local Cycling and Walking Infrastructure Plan (LCWIP);
- Continue to support WCC to improve the existing walking and cycling network through progressing development funded by recent acquisition; and
- Implement measures to support the Climate Plan and mitigate against the declared July 2019 Climate Emergency to further reduce concentrations of NO_2 and PM.

How to get Involved

Given the main source of air pollution across Stratford-on-Avon is from transport sources, the public can support the reduction in air pollutant(s) release and improve air quality within the District by participating in active travel.

Stratford-on-Avon District Council have progressed additional public engagement work in 2025 through the below schemes, although the engagement schemes in 2024 are still active:

- The collaborative relationship with Warwickshire County Council EV providers BP Pulse, Pod Point, RAW Charging, and InstaVolt to roll out a programme of charging points for EVs across the District through Warwickshire County Council Electric Vehicle Charging Infrastructure Strategy 2017-2026 (November 2017), seeking to improve public uptake of Low Emission Vehicles (LEVs)/ULEVs across the District;
- Commissioned Places for People and Act on Energy to provide a home energy advice service, prioritising vulnerable and low-income households with cost effective and efficient ways to support reduction in pollutant emissions across the District and empower communities to take action and control their energy and environmental future;
- Improved housing conditions on behalf of the Warm and Well in Warwickshire affordable warmth initiative funded through the UK Government Help to Heat schemes SHDF, LAD, and HUG2 to encourage development of a cleaner and more

environmentally sustainable District through facilitating carbon reducing measures and methods of limiting air pollutant emissions;

- Completed development of A3400 Birmingham Road supported via investment by DfT National Productivity Investment Fund (NPIF), Safer Routes to Schools (SRtS) and two contributions from Warwickshire County Council's Capital Investment Fund (WCCCIF) to further enhance adoption and utilisation of the public transport network;
- Continued promotion of active transport uptake and sustainable travel through the 'Parking outside schools: What can we do? - Warwickshire County Council.' initiative that operates alike the 'Park and Ride' public bus service in Stratford-upon-Avon;
- Maintained collaborative relationships with bicycle mechanic and hire businesses Stratford Cycle Repair and Mercia Cycles as well as the bicycle club, Stratford Cycling Club to improve cyclists riding ability, bike safety and overall confidence, thus encouraging greater active transportation uptake through road safety assurance;
- Promoted existing NCN routes and CWZs to enable safer access for walkers and cyclists and improved signage for oncoming vehicles to reduce speeds;
- Enhancement and further endorsement of the cycling initiative 'Bikeability', as well as E-Cargo Bikes Scheme and Cycle Stratford innovative bike sharing services; and
- Adoption of Part 2 – Network Plans: Stratford-on-Avon District LCWIP and collaboration in producing the Warwickshire Local Cycling and Walking Infrastructure Plan (LCWIP) to facilitate and encourage greater active transportation uptake through improving cycling and walking infrastructure within Stratford-on-Avon in parallel with reducing pollutant concentrations across the area.

The following measures are possible alternatives to private travel and actions that everyone can complete that would contribute to improving air quality across the District:

- Use public transport where available – This reduces the number of private vehicles in operation reducing pollutant concentration through the volume of vehicles and limits congestion;

- Walk or cycle if your journey allows – From choosing to walk or cycle for your journey the number of vehicles is reduced and also there is the added health benefits through exercise;
- Car/lift sharing – Where a number of individuals are making similar journeys, such as travelling to work or to school car sharing reduces the volume of vehicles on the road and therefore the amount of emissions being released. This can be promoted via travel plans through the workplace and within schools;
- Alternative fuel / more efficient vehicles – Choosing a vehicle that meets the specific needs of the owner, fully electric, hybrid fuel and more fuel-efficient cars are available, and all have different levels benefits by reducing the amount of emissions being released; and
- Asking your employer, school or college about the possibility of developing a green travel plan.

Stratford-on-Avon District Council are continuously working with local businesses, charities, developers, tourism bodies, schools, local transport operators and more organisations to develop measures to improve air quality across the District.

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1 Local Air Quality Management

This report provides an overview of air quality in Stratford-on-Avon District Council during 2025. 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 Stratford-on-Avon 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.

Stratford-on-Avon District Council had two declared AQMAs 2025. During 2025, the revocation procedure was initiated by Stratford, and the revocation order was granted in 2026 for both of the previous AQMAs ('Studley AQMA' and 'Stratford upon Avon District Council no. 1 2010'). Due to the AQMAs being in place during 2025, they have been presented below.

A local Air Quality Strategy is in place to prevent and reduce polluting activities. The Local Air Quality Strategy is available at https://democracy.stratford.gov.uk/documents/s76620/Appendix%201%20-%20AQS%202026%20Final_.pdf

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
Studley AQMA	08/03/2006	NO_2 Annual Mean	An area encompassing part of Alcester Road, Studley.	No	62.0µg/m^3	24.1µg/m^3	9 years	Air Quality Action Plan for Alcester Road, Studley - Stratford on Avon District Council (September 2008)	N/A
Stratford upon Avon District Council No.1 2010	22/01/2010	NO_2 Annual Mean	The whole town of Stratford upon Avon and some surrounding areas.	No	45.0µg/m^3	24.0µg/m^3	8 years	Not currently published	N/A

☒ **Stratford on Avon District Council confirm the information on UK-Air regarding their AQMA is up to date.**

☒ **Stratford on Avon District Council confirm that all current AQAPs have been submitted to Defra.**

Notes:

The AQMAs were revoked during the writing of this annual report. They have been presented above due them being active during 2025.

2.2 Progress and Impact of Measures to address Air Quality in Stratford-on-Avon District Council

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

1. A screen capture has been provided to highlight that the correct national bias adjustment factor was used. This is commended.

   The 2026 ASR has continued to include this element.

2. The level of exceedance: current level for both AQMAs in Table 2.1 do not match those in Table A.2. It appears that the rounded concentrations have been provided. This should be amended.

   This has been amended for the current reporting period.

3. Excellent maps have been provided to clearly show the locations of monitoring sites. The maps are easy to read and provide a good overview of the network. The inclusion of maps which are colour-coded based on the monitored concentrations are particularly useful.

   The 2026 ASR has continued to include this element.

4. A discussion on measures to improve $PM_{2.5}$ emissions has been included. As no $PM_{2.5}$ monitoring is currently undertaken within the District, the Council have estimated $PM_{2.5}$ levels using Defra background concentrations. These indicate that the maximum $PM_{2.5}$ concentration within the District is 7.6 $\mu g/m^3$ which is below the current AQO and also meets the target of 10 $\mu g/m^3$ to be achieved by 2040. The Public Health Outcomes Framework D01 indicator was also discussed, which highlights that the fraction for the District (4.6%) is lower than the regional (5.1%) and national averages (5.2%)

   The 2026 ASR has continued to include this element.

5. Four background sites have been chosen for annualisation purposes. This is commended as the use of more sites provides better accuracy for annualisation. The Council are encouraged to continue to use four sites for annualisation where possible in the future.

The council has continued to include this element where necessary.

6. SoADC have outlined new or changed sources of air pollution. It is noted that several road infrastructure projects have been completed which have the potential to create potential pollution hotspots elsewhere in the District. The Council should review these areas and add monitoring locations nearby to ensure any pollution hotspots are identified.

   The council has not increased the monitoring in this reporting year as the council is in the process of reviewing the monitoring locations in the wider district area.

7. An excellent discussion on trends has been provided, particularly surrounding those sites where increases in concentrations were recorded. These increases were justified. This shows a good understanding of air quality. The Council are commended.

   The 2026 ASR has continued to include this element.

Stratford-on-Avon District Council has taken forward a number of direct measures during the current reporting year of 2025 in pursuit of improving local air quality. Details of key measures completed, in progress or planned are set out in Table 2.2. Three measures are included within Table 2.2, with the type of measure and the progress Stratford-on-Avon District Council have made during the reporting year of 2025 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 measures to be progressed can be found in the Local Air Quality Strategy.

Key completed measures and ongoing in 2025 is the E-Cargo Bikes Scheme trial for businesses, organisations, community, and voluntary groups to enable a carbon-neutral, flexible and cost-effective alternative to other modes of transport (i.e. cars and vans), more convenient for point-to-point journeys delivering local goods.

The implementation of the measures within the air quality strategy to support a District wide approach to reducing exposure to air pollution.

Stratford-on-Avon District Council worked to implement these measures in partnership with the following stakeholders during 2025:

- Act on Energy (i.e. Social Housing Upgrades);
- Bikeability;

- BP Pulse (i.e. EV Charging Infrastructure);
- Canal and Rivers Trust (i.e. Active Transport);
- Coventry and Warwickshire Air Quality Alliance (CWAQA) (e.g. Active Travel/ Healthy Travel Choice);
- Coventry and Warwickshire Local Enterprise Partnership (i.e. Getting Building Fund - Active Transport);
- Cycle Stratford (i.e. Active Transport);
- Department for Transport (i.e. National Productivity Investment Fund - Active Transport);
- Fortem (i.e. Social Housing Upgrades);
- InstaVolt (i.e. EV Charging Infrastructure);
- Local Neighbouring Authorities (e.g. Nuneaton and Bedworth Borough Council – Warwickshire LCWIP);
- Mercia Cycles (i.e. Active Transport);
- Obit (i.e. Social Housing Upgrades);
- Pashley Cycles (i.e. E-Cargo Bikes Scheme);
- Places for People (i.e. Social Housing Upgrades);
- Pod Point (i.e. EV Charging Infrastructure);
- RAW Charging (i.e. EV Charging Infrastructure);
- Restoring Your Railway Steering Group (i.e. Transport Upgrades);
- Safer Routes to Schools (i.e. Active Transport);
- Stantec (i.e. Stratford-Long Marston-Honeybourne Railway);
- Stratford Cycle Repairs (i.e. Active Transport);
- Stratford Cycling Club (i.e. Active Transport);
- Sustrans (i.e. National Cycle Network);
- UK Government (e.g. Social Housing Decarbonisation Fund (SHDF), Local Authority Delivery (LAD) Grant, Home Upgrade Grant Phase 2 (HUG2)); and

- Warwickshire County Council (e.g. Active Travel (Capital Investment Fund), Countywide LCWIP, EV Charging Infrastructure);
- Zap-Map (i.e. EV Charging Infrastructure).

The principal challenges and barriers that Stratford-on-Avon District Council anticipates facing are that implementing air quality measures is dependent on staff resources and working partnerships with stakeholders.

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

- Funding Application Processes – Implementation of upgrades to existing walking and cycling routes, as well as development of new walkways and cycleways have been slower than anticipated due to the onerous funding application process Stratford-on-Avon District Council had to support Warwickshire County Council with as well as subsequent application review processes the UK Government had to undertake before publicly announcing decisions. Further delays to the schemes have been experienced with regards to implementation of necessary processes for an appropriate supplier being appointed to deliver the works across the district and county;
- Electric Vehicle Infrastructure - The availability of power connection and procurement of charge point operators impede on the volume of EV charge points that can be implemented across the district; Fleet Efficiency and Recognition Scheme – Budget constraints within the Council and an awareness of reduced large size EV availability (i.e. vans) to replace existing combustion fleet vehicles across the Council have slowed the acquisition and transition.

The measures described above, outlined by Table 2.2 and set out in the Local Air Quality Strategy will contribute to maintaining compliance throughout the District.

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
Priority Air Quality Actions														
1	E-cargo Bike Scheme	Promoting Travel Alternatives	Promotion of cycling	2022	2027	Stratford-on-Avon District Council	N/A	Funded	-	Ongoing	N/A	N/A	Implementation on going	Scheme is in place and open to local business to access
2	Enhancement of council webpage on AQ to include additional information for public on wood burners and clean burning etc	Public Information	Via the Internet	2023	2025	Stratford-on-Avon District Council	N/A	Not Funded	-	Implementation/Ongoing	N/A	N/A	Implementation on-going	-
3	Implementation of Air Quality Strategy measures to support a District wide approach to reducing exposure to air pollution	Policy Guidance and Development Control	Other policy	2023	2026	Stratford-on-Avon District Council	N/A	Not Funded	< £10k	Ongoing	N/A	N/A	Implementation on-going	-

2.3 $PM_{2.5}$ – 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.

$PM_{2.5}$ Monitoring:

There is not currently any monitoring of PM_{10} or $PM_{2.5}$ within Stratford on Avon. As such, no concentration values can be reported or estimated using the method described in Box 7.7 of LAQM.TG(22), which provides a for estimating $PM_{2.5}$ concentrations from PM_{10} measurements.

$PM_{2.5}$ Background Concentrations:

The current Defra 2025 background maps for Stratford-on-Avon District Council (2021 based)[2] show that all background concentrations of $PM_{2.5}$ are significantly below the current annual mean target of 20 µg/m^3. The average predicted background concentration for the District is 6.1 µg/m^3 and the highest background concentration is predicted to be 7.5 µg/m^3 within the grid square (1 km x 1 km) with the centroid grid reference 424500, 250500. The maximum predicted $PM_{2.5}$ background concentration in 2025 (7.5µg/m^3) was well below the current annual mean target of 20 µg/m^3.

Smoke Control Areas:

Smoke control areas (SCAs) are designated zones in which it is an offence to emit smoke from a chimney of a building, from a furnace or from any fixed boiler. It is also an offence to acquire an unauthorised fuel for use within a SCA unless it is used within an exempt appliance (exempted from the controls which generally apply in SCAs). There are currently no SCAs declared within Stratford on Avon. However, the Council have outlined if they

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

2 Defra Background Mapping (2021 Based). Available at: https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021

determine an increase in smoke reports causing a statutory nuisance, they will enforce an SCA with accompanying fines for those who do not comply to the guidelines.

Stratford-on-Avon District Council confirm that any smoke complaints are actioned following the local authority's nuisance procedures (see Nuisance | Stratford-on-Avon District Council), or in conjunction with the Environment Agency if complaints involve burning of trade waste.

Impact on Human Health:

The Public Health Outcomes Framework (PHOF) data tool[3], compiled by Public Health England (PHE) quantifies the mortality burden of $PM_{2.5}$ within England on a county and local authority scale. The 2024[4] fraction of mortality attributable to $PM_{2.5}$ emissions across Stratford on Avon is 4.8%, which is lower than the average for the West Midlands (5.3%) and England as a whole (5.3%) for this period (2025 data are not currently available).

Measures to Improve $PM_{2.5}$ Concentrations:

Stratford-on-Avon District Council is taking the following measures to address $PM_{2.5}$:

- Publishing of a Local Air Quality Strategy during 2025;
- Actively encouraging large developers at the planning stage to install EV charging points or the consideration of suitable infrastructure to allow for future cost-efficient installations;
- Implementation of the Part 2 – Network Plans: Stratford-on-Avon District LCWIP to reduce the number of vehicle trips generated by Stratford on Avon District and subsequent pollutant emission release, due to its moderate population concentration and related hierarchical position in the West Midlands settlements as well as its associated tourism appeal;
- Campaign for the reinstatement of Stratford-upon-Avon and Honeybourne railway stations on the North Cotswold line by 'Restoring Your Railway' Steering Group with Strategic Outline Business Case (SOBC) Refresh Report (October 2024) produced as a business case to support more well-connected and frequent services of public transport, whilst highlighting the benefits on air quality comparative to private vehicle use to commute;

[3] Public Health England – Public Health Outcomes Framework. Available at: https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/1/gid/1000043/pat/6/ati/501/are/E06000046/iid/93861/age/230/sex/4/cat/-1/ctp/-1/yrr/1/cid/4/tbm/1/fip/0

[4] 2025 data are not currently available.

- Work collaboratively with Act on Energy and Orbit on behalf of the 'Warm and Well in Warwickshire' affordable warmth initiative funded through Local Authority Delivery (LAD) Grant, and Home Upgrade Grant Phase 2 (HUG2), to improve properties by installing energy saving measures. Thus, empowering communities to take action and control their energy and environmental future, reducing energy demands and pollutant concentrations, improving air quality;
- Implementation of EV charging points across Stratford-upon-Avon, Alcester and Southam from partnerships with BP Pulse, Pod Point, RAW Charging, and InstaVolt to encourage uptake of cleaner vehicles comparative to combustion vehicles;
- Acquisition of new EVs to the Council owned fleet to progress the transition from the existing combustion fleet vehicles to EVs that are cleaner and more efficient, reducing pollutant emissions, benefitting the District air quality and workers/ public well-being;
- Greater implementation of EV charge points across the District aligned Warwickshire County Council Electric Vehicle Charging Infrastructure Strategy 2017-2026 (November 2017) where practicable; and
- Introduction of strategies within the Climate Plan and as reported on the Climate Emergency website to assist achievement of hitting carbon neutrality by 2030 for Council activities and across the District with many of the measures addressing local air quality including $PM_{2.5}$.

The Council acknowledge that the move to electric vehicles is not the only solution for air quality and associated heath concerns due to particulate matter, including $PM_{2.5}$, being sourced from brake and tyre wear. As such, the Council have also implemented alternate initiatives with active travel at the forefront:

- Continued promotion of the Mercia Cycles and Cycle Stratford innovative bike sharing services, cycling initiatives 'Bikeability' and Stratford Cycling Club, and businesses Stratford Cycle Repair, to encourage the uptake of cycling across the District. Therefore, seeking to reduce pollutant concentrations imminently and through actions of longevity by also targeting future generations;
- Continued promotion of active transport uptake and sustainable travel through the 'Parking outside schools: What can we do? - Warwickshire County Council.' initiative that operates alike the 'Park and Ride' public bus service in Stratford-upon-Avon;

- Maintenance of the E-Cargo Bikes Scheme trial for businesses, organisations, community, and voluntary groups to enable a carbon-neutral, flexible and cost-effective alternative to other modes of transport (i.e. cars and vans), more convenient for point-to-point journeys delivering local goods;
- Continual implementation of the Part 2 – Network Plans: Stratford-on-Avon District LCWIP to reduce the number of vehicle trips generated by Stratford-upon-Avon, Alcester and Southam areas and subsequent pollutant emission release, due to the high population concentrations and hierarchical positions in the District's settlements; and
- Final issue and subsequent adoption of the Warwickshire Local Cycling and Walking Infrastructure Plan (LCWIP) in February 2024.

The Environmental Protection Team of Stratford-on-Avon District Council continues to work collaboratively alongside industrialised organisations in the District with activities permitted by the Council, subject to regular inspections. Inspections are undertaken to establish where combustion and non-combustion processes could lead to anthropogenic emissions of $PM_{2.5}$, thus worsening air quality. The Council seeks to reduce, if not eliminate, additional anthropogenic $PM_{2.5}$ emissions by ensuring that they inspect and review industrialised activities and implement appropriate mitigation where necessary.

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

This section sets out the monitoring undertaken within 2025 by Stratford-on-Avon District Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2021 and 2025 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Stratford-on-Avon District Council did not undertake any automatic (continuous) monitoring during 2025.

3.1.2 Non-Automatic Monitoring Sites

Stratford-on-Avon District Council undertook non-automatic (i.e. passive) monitoring of NO_2 at 18 sites during 2025.

All sites achieved a data capture of 75% or greater with the exception of DT6 (30.8%).

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 (NO_2)

Table A.1 and Table A.2 in Appendix A compare the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40 µg/m^3. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

For diffusion tubes, the full 2025 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.

Between 2021-2025 there have been no measured exceedances of the annual mean NO_2 objective. Furthermore, no diffusion tube monitoring site in 2025 measured an NO_2 annual mean concentration within 10% of the objective. Additionally, no annual mean NO_2 concentrations >60 µg/m^3 have been measured during this period, indicating that exceedances of the 1-hour mean NO_2 objective is not likely.

Figure A.1 - Figure A.1 highlight an overall decreasing trend in measured NO_2 concentrations reported at most monitoring sites across Stratford on Avon between 2021-

2025. There was one exception (DT14) where measured concentrations increased by 5.3 µg/m^3 during this period (though still remaining well below the annual mean objective).

Over a 5-year period all monitoring sites recorded a decreasing trend in NO_2 concentrations with the exception of DT14 which showed increases in concentrations but remained below the annual mean objective.

3.2.2 Particulate Matter (PM_{10})

Particulate Matter (PM_{10}) is not monitored in Stratford on Avon.

3.2.3 Particulate Matter ($PM_{2.5}$)

Particulate Matter ($PM_{2.5}$) is not monitored in Stratford on Avon.

3.2.4 Sulphur Dioxide (SO_2)

Sulphur Dioxide (SO_2) is not monitored in Stratford on Avon.

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)
1	Studley Background	Roadside	407270	263025	NO_2	No	5.0	2.3	No	2.2
2	Studley 1	Roadside	407300	263989	NO_2	No	0.0	2.5	No	2.5
3	Studley 2	Roadside	407301	263914	NO_2	No	0.0	1.4	No	2.5
4	Studley 4	Roadside	407297	263850	NO_2	No	0.0	1.5	No	2.5
5	Studley 11	Roadside	407297	263864	NO_2	No	2.8	0.0	No	2.3
6	Studley 12	Roadside	407297	263838	NO_2	No	1.5	2.0	No	1.8
7	Alcester Road 2	Roadside	419705	255022	NO_2	No	4.6	3.0	No	2.5
8	Tiddington Rd	Roadside	420727	254826	NO_2	No	0.0	1.7	No	2.2
9	Montague House	Roadside	420202	255101	NO_2	No	3.8	2.5	No	2.0
10	Greenhill St 2	Roadside	419794	255014	NO_2	No	2.0	3.0	No	2.2
11	Grove Road 2	Roadside	419757	254918	NO_2	No	0.0	1.4	No	2.5
12	Evesham Place	Roadside	419685	254604	NO_2	No	0.0	3.0	No	1.8
13	Arden Street 2	Roadside	419797	255178	NO_2	No	2.0	2.2	No	2.0
14	Windsor Street	Roadside	419923	255076	NO_2	No	0.0	5.0	No	1.8
15	Stratford Background	Roadside	418820	255117	NO_2	No	3.0	2.0	No	2.2
16	Birmingham Road 3	Roadside	419816	255601	NO_2	No	3.0	1.5	No	2.2
17	Birmingham Road 7	Roadside	419828	255576	NO_2	No	0.0	7.0	No	1.7
18	Birmingham Road 8	Roadside	419813	255611	NO_2	No	0.0	7.0	No	1.7

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)

Site 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)	2021	2022	2023	2024	2025
1	407270	263025	Roadside	90.9	90.9	9.4	9.4	8.5	6.9	8.6
2	407300	263989	Roadside	100.0	100.0	24.2	22.5	20.3	20.1	19.6
3	407301	263914	Roadside	100.0	100.0	24.9	23.2	21.1	20.2	20.4
4	407297	263850	Roadside	100.0	100.0	27.6	26.6	25.2	24.0	24.1
5	407297	263864	Roadside	100.0	100.0	29.2	26.7	26.0	24.9	25.0
6	407297	263838	Roadside	30.8	30.8	29.0	27.7	25.5	25.4	20.5
7	419705	255022	Roadside	100.0	100.0	29.5	28.1	26.5	25.6	24.0
8	420727	254826	Roadside	100.0	100.0	23.8	22.1	21.6	22.4	20.6
9	420202	255101	Roadside	100.0	100.0	19.1	19.3	16.7	16.4	16.0
10	419794	255014	Roadside	100.0	100.0	23.4	22.3	23.5	24.3	21.7
11	419757	254918	Roadside	100.0	100.0	24.2	22.9	22.1	22.0	20.2
12	419685	254604	Roadside	100.0	100.0	18.9	18.2	16.6	16.6	16.0
13	419797	255178	Roadside	100.0	100.0	22.0	20.1	18.8	18.1	17.2
14	419923	255076	Roadside	100.0	100.0	14.6	14.9	14.1	20.5	19.9
15	418820	255117	Roadside	100.0	100.0	9.3	11.0	8.0	8.1	7.5
16	419816	255601	Roadside	100.0	100.0	28.4	28.0	24.5	25.0	22.5
17	419828	255576	Roadside	92.0	92.0	22.1	21.3	21.0	19.1	18.6
18	419813	255611	Roadside	100.0	100.0	22.5	20.3	19.8	18.7	19.3

☒ **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 NO_2 Concentrations – Diffusion Tubes (Studley)

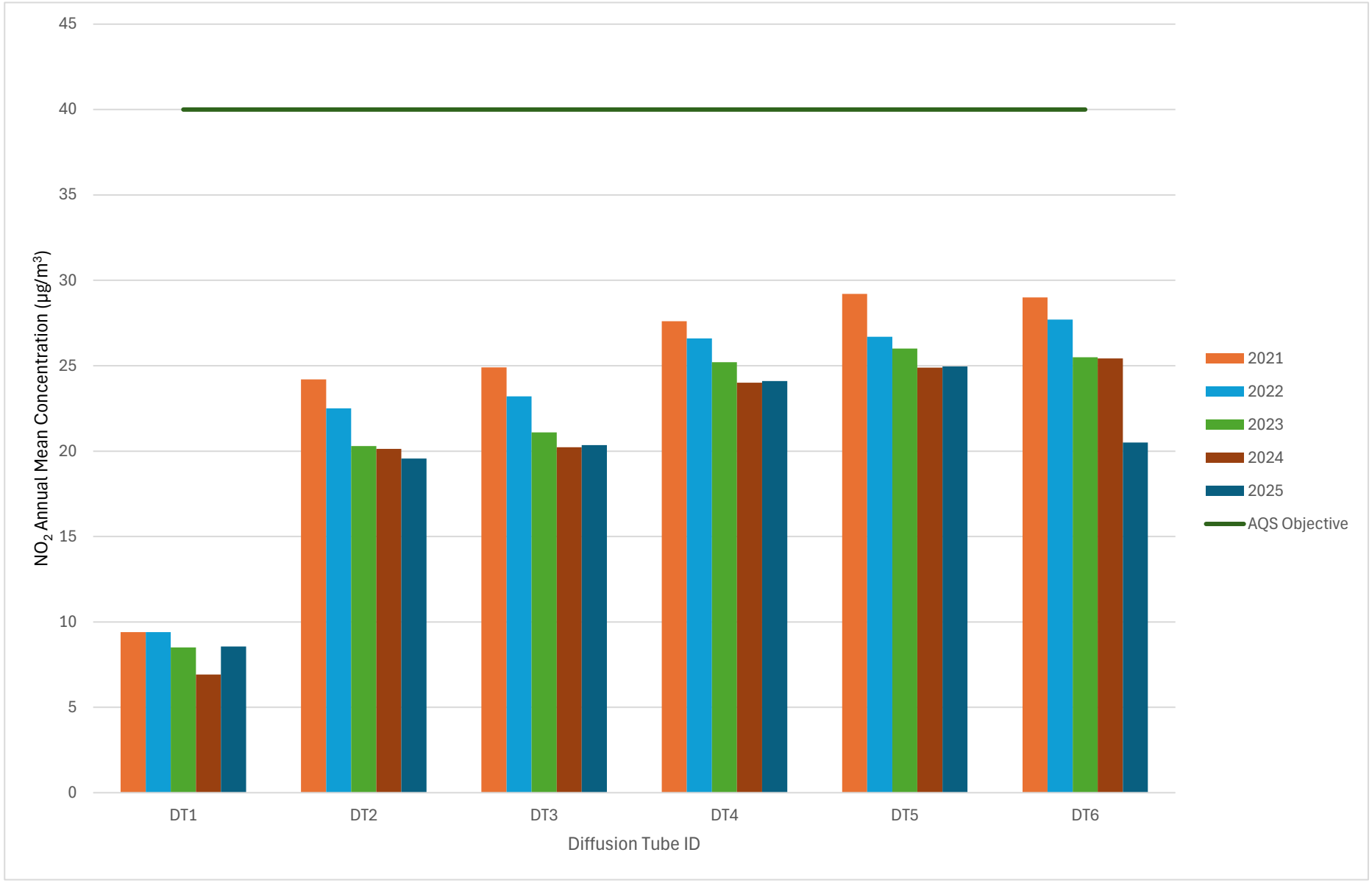
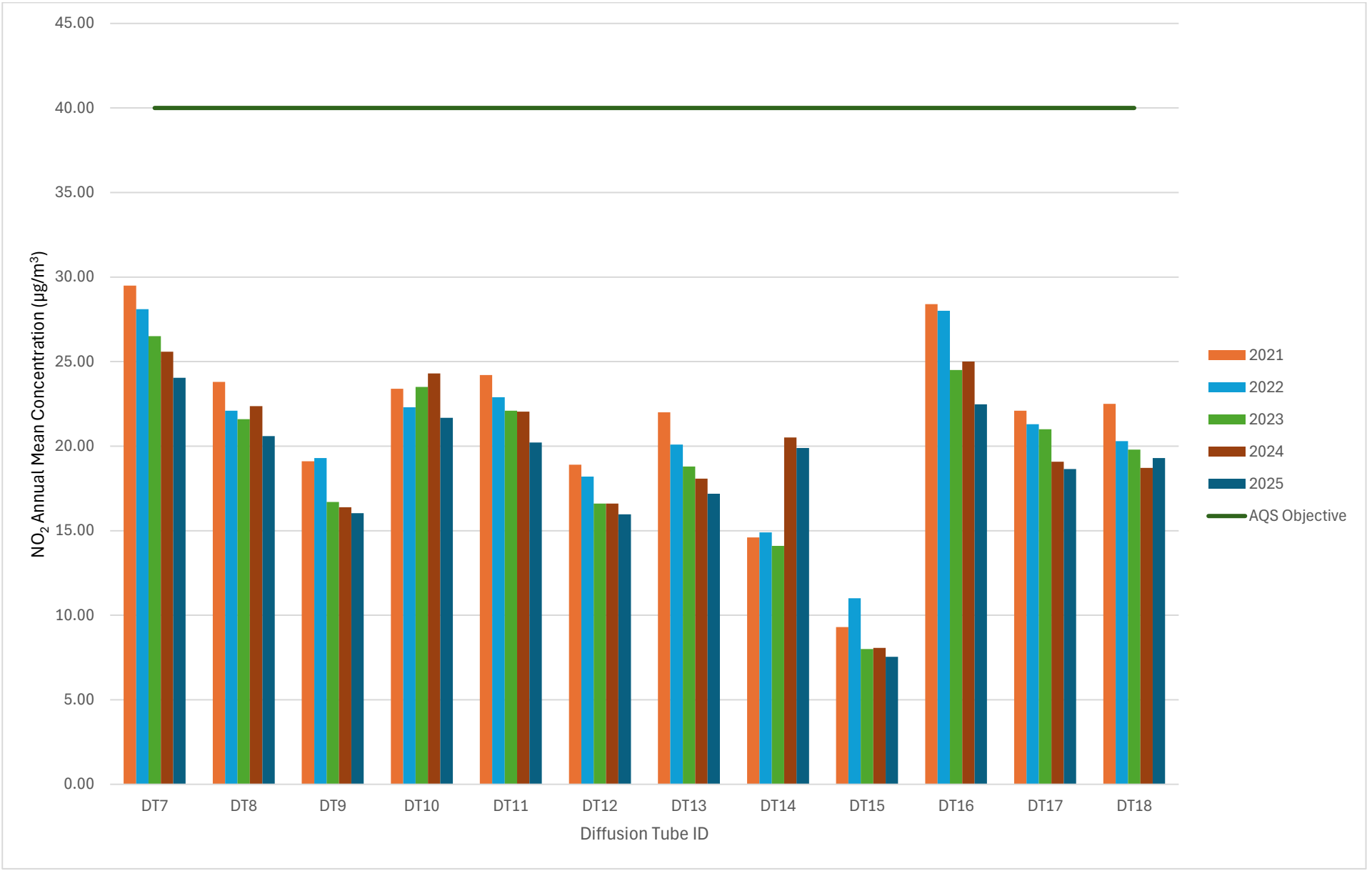


Figure A.1 – Trends in Annual Mean NO_2 Concentrations – Diffusion Tubes (Stratford on Avon)



Appendix B: Full Monthly Diffusion Tube Results for 2025

Table B.1 – NO_2 2025 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 (0.88)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT1	407270	263025	16.3	14.6	14.5	8.6	8.0	5.3	6.4	6.1	9.4	8.9	11.4	9.1	9.7	8.6		
DT2	407300	263989	27.6	26.9	18.8	27.2	22.1	18.8	20.1	21.2	19.6	20.8	24.5	20.8	22.2	19.6		
DT3	407301	263914	29.6	29.6	27.7	25.8	20.0	17.7	17.5	20.5	22.0	23.2	23.8	22.6	23.1	20.4		
DT4	407297	263850	33.9	31.7	35.1	30.9	28.4	20.8	21.2	26.4	24.2	25.7	30.0	23.8	27.4	24.1		
DT5	407297	263864	36.5	33.7	36.9	34.7	25.1		18.9	25.9	24.1	27.0	29.4	24.1	28.4	25.0		
DT6	407297	263838	31.0	33.8	35.5	31.7									32.8	20.5		
DT7	419705	255022	33.7	35.2	33.8	29.9	24.8	21.6	25.1	22.7	22.9	27.2	30.1	23.8	27.3	24.0		
DT8	420727	254826	32.0	29.0	28.3	22.9	19.6	21.9	18.4	23.6	21.8	21.6	25.3	19.9	23.4	20.6		
DT9	420202	255101	22.2	24.0	23.0	19.2	14.8	14.0	15.5	16.2	17.0	17.7	19.9	17.7	18.2	16.0		
DT10	419794	255014	31.9	29.5	25.6	22.6	18.3	27.3	21.8	22.7	20.9	25.2	25.0	26.1	24.6	21.7		
DT11	419757	254918	31.1	28.7	20.2	20.6	17.7	19.7	21.9	21.5	25.4	23.2	30.2	18.4	23.0	20.2		
DT12	419685	254604	23.0	22.8	21.3	14.0	14.5	15.2	17.9	15.0	16.8	18.2	19.0	20.5	18.1	16.0		
DT13	419797	255178	25.5	24.5	26.0	19.9	17.8	14.5	15.2	17.9	16.8	18.5	21.3	18.8	19.5	17.2		
DT14	419923	255076	28.6	28.0	23.5	18.7	14.7	21.6	19.9	20.1	22.4	24.0	24.2	26.6	22.6	19.9		
DT15	418820	255117		14.5	13.6	9.7	5.3	4.7	5.8	5.5	7.6	8.1	12.1	10.2	8.6	7.5		
DT16	419816	255601	28.9	33.1	32.8	30.1	23.6	21.0	21.3	22.3	23.0	24.5	30.9	19.9	25.5	22.5		
DT17	419828	255576	27.7	25.5	23.4	21.7	18.9	16.6	17.4	19.6	18.6	21.6	23.5	21.2	21.2	18.6		
DT18	419813	255611	25.9	27.4	25.9	25.5	20.2	21.0	18.4	20.0	18.9	21.2	20.4	20.4	21.9	19.3		

☒ **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.**

☒ **Where applicable, data has been distance corrected for relevant exposure in the final column.**

☒ **Stratford on Avon confirm that all 2025 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 Stratford-on-Avon District Council During 2025

A summary of the publicly available information regarding planned development has been provided in Table C.1.

Table C.1 – 2025 New or Ongoing Planned Developments in Stratford on Avon

Application Number	Location	Proposal	Status
19/02827/REM	Land West Of Stratford Land South Of Alcester Road North Of Evesham Road Stratford-upon-Avon	Application for approval of reserved matters relating to appearance, landscaping, layout and scale (pursuant to outline planning permission 15/03785/VARY) for North Western and Central Development Area Phase 2 for 391 dwellings along with associated landscaping and drainage/highway infrastructure (Phase 2a duplicate application).	Approved - Ongoing
15/00976/OUT	Land At Gaydon/Lighthorne Heath	Outline application (with all matters reserved except for principal means of access to the highway) for construction of a residential development (up to 2000 houses, including extra care housing), village centre (including primary school, community hub, health centre, retail and other services (Use Classes A1, A2, A3, A4, A5, B1, D1 and D2)), managed ecological reserve, public open space, recreation areas (including sports pavilion), play areas, acoustic bunding and associated infrastructure including roads, primary substation, sewers and attenuation ponds and demolition of identified buildings and structures. APPLICANTS: CEG Land Promotions Limited, The Bird Group of Companies Limited, Richard Peter Mann, Frank Richard David Webster White, Richard David White, Isaac Fletcher Watson, Mr and Mrs D F Burn.	Approved - Ongoing
19/02585/OUT	Land At Timothys Bridge Road Stratford-upon-Avon CV37 9YL	Hybrid planning application comprising a) outline with all matters reserved except for means of access for the erection of up to 500 dwellings (Use Class C2/C3), up to 1,625sqm	Approved - Ongoing

Application Number	Location	Proposal	Status
		(GEA) flexible floorspace (Use Classes A1, A2, A3, A4, A5, B1a, B1b, B1c, D1, D2 and Sui Generis (marketing suite)); landscaping, and creation of new public and private open space; associated infrastructure and ancillary works, including demolition of buildings and ancillary structures; and b) full details of 56 new dwellings (of the 500), 752sqm (GEA) (Use Classes B1a, B1b, B1c, D1, D2 and Sui Generis (marketing suite)) and 217sqm (GEA) (Use Classes A1, A2, A3, A4, A5, B1a, B1b, B1c, D1, D2 and Sui Generis (marketing suite)) flexible floorspace (of the 1,625sqm (GEA)), associated access from Timothy's Bridge Road, basement parking, landscaping, infrastructure and ancillary works.	
21/03502/REM	Swans Landing Phase 2 Formerly Known As Unipart/DCS Timothys Bridge Road Stratford-upon-Avon CV37 9YL	Application for the approval of reserved matters relating to layout, appearance, scale and landscaping (pursuant to outline planning permission 19/02585/OUT) for the development of dwellings (Use Class C3), public open space and associated works on Phase 2.	Approved - Ongoing

Additional Air Quality Works Undertaken by Stratford-on-Avon District Council During 2025

Stratford-on-Avon District Council has developed a Local Air Quality Strategy in 2025.

QA/QC of Diffusion Tube Monitoring

Stratford-on-Avon District Council's diffusion tubes in 2025 were supplied and analysed by Gradko International, using the 20% Triethanolamine (TEA) in water preparation method. Gradko International, a UKAS accredited laboratory, participate in the Air and Stack Emissions Proficiency Testing Scheme (AIR-PT Scheme) 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 AIR PT intercomparison scheme for comparing spiked Nitrogen Dioxide diffusion tubes, Gradko International currently holds the highest rank of a 'Satisfactory' laboratory.

There were 30 local authority co-location studies which used tubes supplied by Gradko International with the 20% TEA in water preparation method in 2025, 30 were rated as 'good' (100% acknowledging the single tube precision result is excluded), 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 duplicate or triplicate diffusion tubes for eight or more monitoring periods during a year is less than 20%.

Monitoring in 2025 throughout the District was completed in adherence with the 2025 Diffusion Tube Monitoring Calendar, whereby all changeovers throughout the monitoring year were completed in line with Defra guidance.

The processing of the diffusion tube monitoring results was undertaken using the Diffusion Tube Processing Tool v6.1.

Diffusion Tube Annualisation

LAQM.TG(22) states that annualisation is required for any site which has a data capture of less than 75%, but greater than 25%.

One passive monitoring sites recorded data capture between 25% and 75%; DT6 (30.8%). As such, annualisation was completed for this site using three continuous background monitoring locations:

- West Bromwich Kenrick Park;
- Leamington Spa.
- Coventry Allesley: and
- Birmingham Hall Green.

Each continuous background monitoring location had >85% data capture and therefore could be used for annualisation. The results are presented below.

Table C.2 – Annualisation Summary (concentrations presented in µg/m^3)

Site ID	Annualisation Factor West Bromwich	Annualisation Factor Leamington Spa	Annualisation Factor Coventry Allesley	Annualisation Factor Birmingham Hall Green	Average Annualisation Factor	Raw Data Simple Annual Mean (µg/m^3)	Annualised Data Simple Annual Mean (µg/m3)	Annualised and Bias Adjusted (0.89)
6	0.7497	0.7082	0.6999	0.6816	0.7098	32.8	23.3	0.7497

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2026 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG22 provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO_x/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

Stratford-on-Avon District Council have applied a national bias adjustment factor of 0.88 to the 2025 monitoring data. Stratford-on-Avon District Council contains no co-location sites to derive local bias adjustment factors, therefore, the national factor was applied.

A summary of bias adjustment factors used by Stratford-on-Avon District Council over the past five years is presented in Table C.3. The National Bias Adjustment Spreadsheet is presented in Figure C.1

Table C.3 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2025	National	06/26	0.88
2024	National	06/25	0.84
2023	National	03/24	0.81
2022	National	09/23	0.85
2021	National	03/22	0.84

Figure C.1 - National Bias Adjustment Factor Spreadsheet (06/26)

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 06/26

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 September 2026

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 (To undo your selection, choose (All) from the pop-up list)	Year[2] (To undo your selection, choose (All))	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[4]	Bias Adjustment Factor (A) (Cm/Dm)
Gradko	20% TEA in water	2025	R	Blackburn With Darwen Bc	11	22	17	25.0%	G	**0.80**
Gradko	20% TEA in water	2025	R	Bath & North East Somerset	12	23	20	13.4%	G	**0.88**
Gradko	20% TEA in Water	2025	R	Monmouthshire County Council	12	26	22	13.8%	G	**0.88**
Gradko	20% TEA in water	2025	R	Gateshead Council	12	20	19	4.5%	G	**0.96**
Gradko	20% TEA in water	2025	R	Gateshead Council	12	20	18	9.3%	G	**0.92**
Gradko	20% TEA in water	2025	R	Gateshead Council	12	22	19	13.1%	G	**0.88**
Gradko	20% TEA in water	2025	R	Gateshead Council	11	22	19	18.8%	G	**0.84**
Gradko	20% TEA in water	2025	R	Gateshead Council	11	27	24	9.8%	G	**0.91**
Gradko	20% TEA in water	2025	R	Gedling Borough Council	12	27	24	11.3%	G	**0.90**
Gradko	20% TEA in water	2025	R	City Of Lincoln Council	12	29	20	42.3%	G	**0.70**
Gradko	20% TEA in water	2025	KS	Marylebone Road Intercomparison	12	37	31	17.4%	G	**0.85**
Gradko	20% TEA in water	2025	UB	Dudley Mbc	12	18	15	24.1%	G	**0.81**
Gradko	20% TEA in water	2025	R	Dudley Mbc	12	35	34	4.5%	G	**0.96**
Gradko	20% TEA in water	2025	R	Belfast City Council	10	22	22	0.6%	G	**0.99**
Gradko	20% TEA in water	2025	R	The Highland Council	11	15	12	22.9%	G	**0.81**
Gradko	20% TEA in water	2025	R	Eastleigh Borough Council	12	29	25	17.1%	G	**0.85**
Gradko	20% TEA in water	2025	UB	Eastleigh Borough Council	12	19	18	1.1%	G	**0.99**
Gradko	20% TEA in water	2025	R	Eastleigh Borough Council	12	20	19	8.5%	G	**0.92**
Gradko	20% TEA in water	2025	R	Cheshire West And Chester	12	28	28	-0.5%	G	**1.00**
Gradko	20% TEA in water	2025	R	Cheshire West And Chester	12	27	25	8.4%	G	**0.92**
Gradko	20% TEA in water	2025	R	Liverpool City Council	11	32	26	24.0%	G	**0.81**
Gradko	20% TEA in water	2025	KS	Liverpool City Council	10	46	40	15.9%	G	**0.86**
Gradko	20% TEA in water	2025	R	Nottingham City Council	10	25	24	3.3%	G	**0.97**
Gradko	20% TEA in water	2025	R	Belfast City Council	12	40	34	17.2%	G	**0.85**
Gradko	20% TEA in water	2025	R	Belfast City Council	12	33	31	6.5%	G	**0.94**
Gradko	20% TEA in water	2025	R	Wychavon District Council	12	27	26	5.5%	G	**0.95**
Gradko	20% TEA in water	2025	R	Worcestershire	12	12	13	-6.6%	G	**1.07**
Gradko	20% TEA in water	2025	KS	Brighton & Hove City Council	10	37	29	28.0%	G	**0.78**
Gradko	20% TEA in water	2025	R	Ards And North Down Borough Council	12	28	19	47.1%	G	**0.68**
Gradko	20% TEA in water	2025	R	Lisburn & Castlereagh City Council	12	21	19	10.8%	G	**0.90**
Gradko	20% TEA in water	2025		**Overall Factor[3] (30 studies)**				Use		**0.88**

NO_2 Fall-off with Distance from the Road

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

No diffusion tube monitoring location within the District of Stratford on Avon required distance correction during 2025.

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

Figure D.1 – Monitoring Locations 1

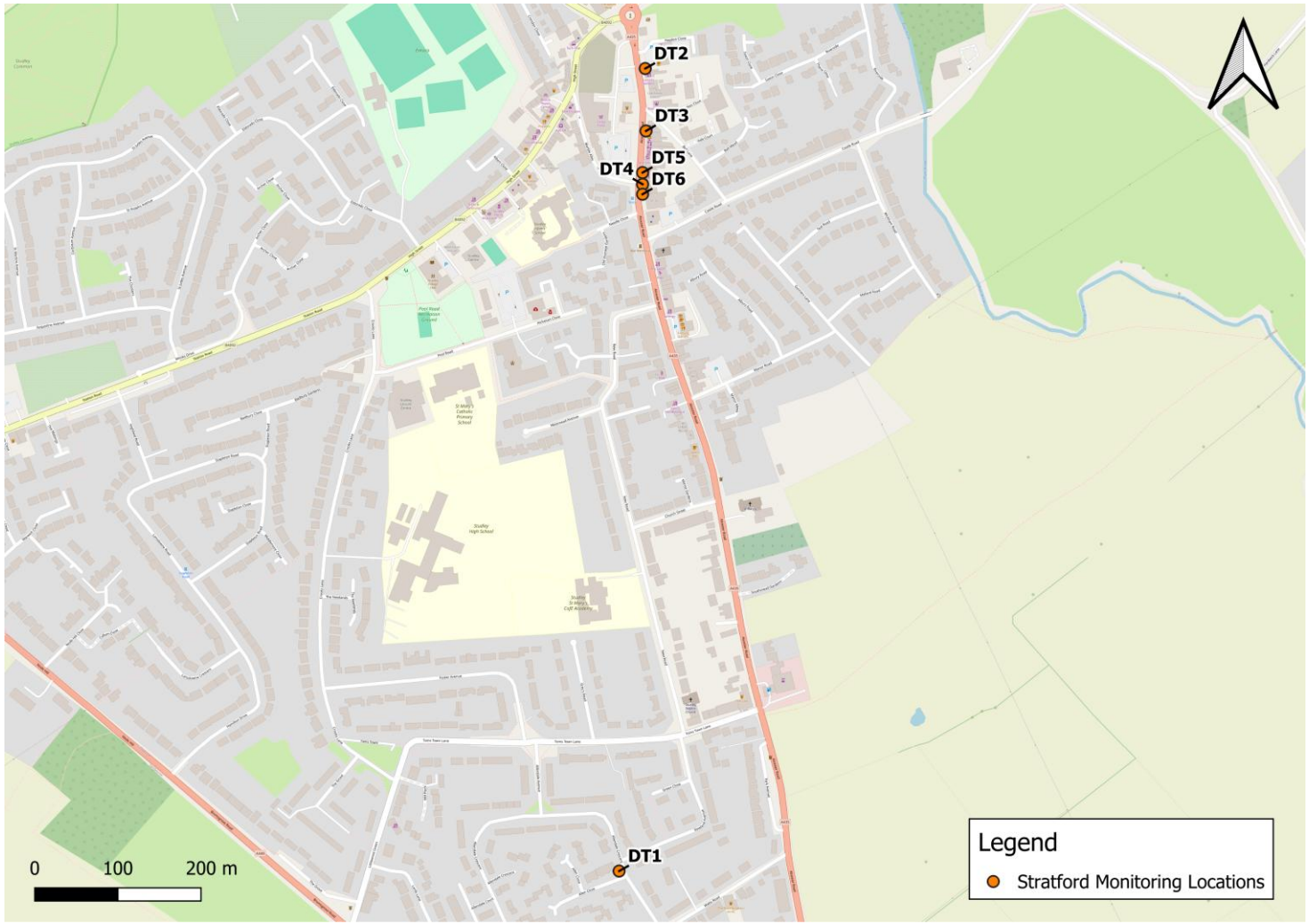
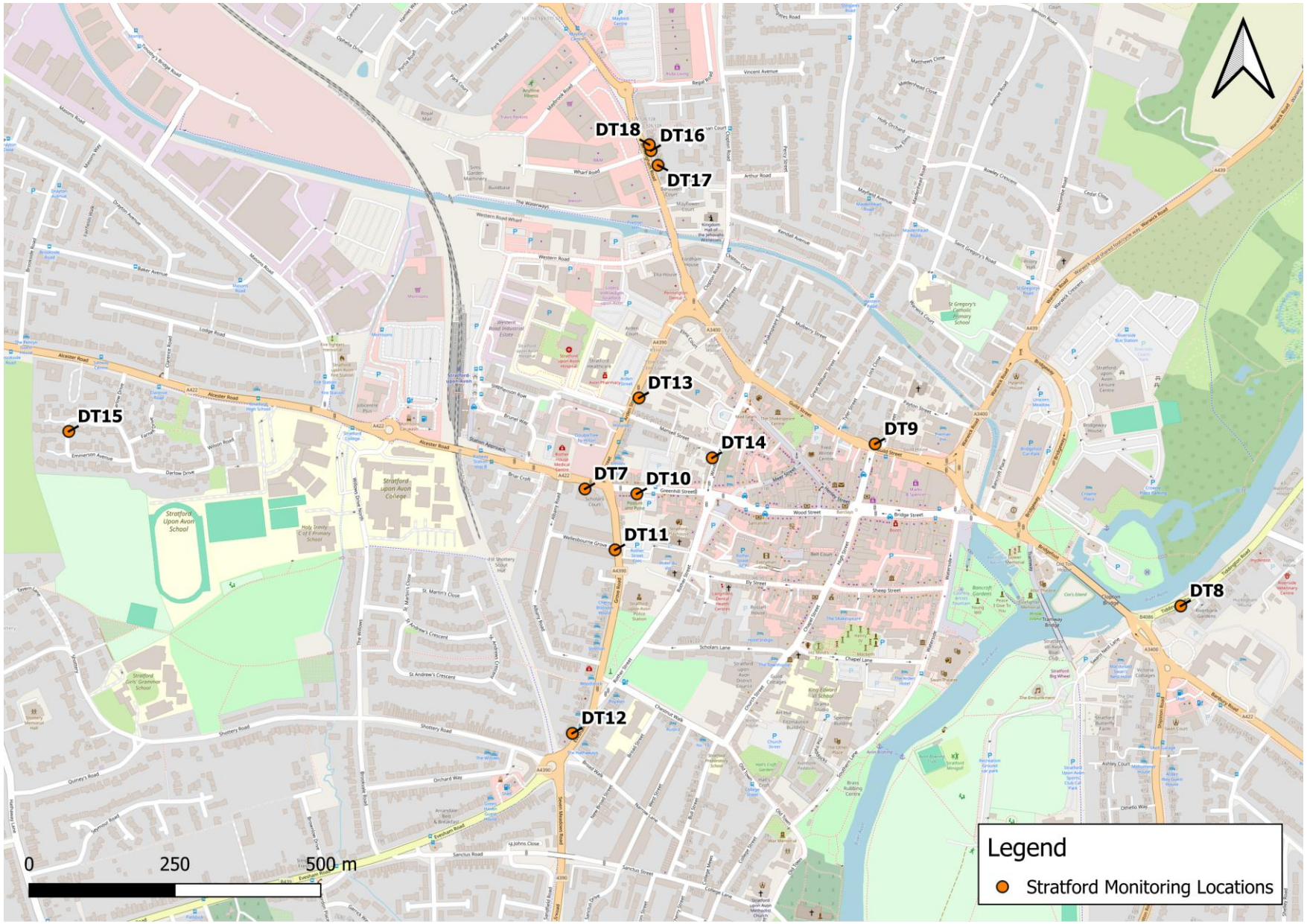


Figure D.2 – Monitoring Locations 2



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[5]

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

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

Glossary of Terms

Abbreviation	Description
AIR-PT	Air and Stack Emissions Proficiency Testing Scheme
ALECS	Articulating Lightweight Electrically-assisted Cargo Solution
AONB	Areas of Outstanding Natural Beauty
AQA	Air Quality Assessment
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
AQS	Air Quality Standard
ASHP	Air Source Heat Pump
ASR	Annual Status Report
AURN	Automatic Urban and Rural Network
CMP	Construction Management Plan
CO_2	Carbon Dioxide
CRT	Canal and Rivers Trust
CWAQA	Coventry and Warwickshire Air Quality Alliance
CWLEP	Coventry and Warwickshire Local Enterprise Partnership
CWZ	Core Walking Zone
Defra	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
DT	Diffusion Tube
DTDPT	Diffusion Tube Data Processing Tool
EA	Environmental Assessment
EPC	Energy Performance Certificate
EV	Electric(al) Vehicle
EWI	External Wall Insultation
GBF	Getting Building Fund

HGV	Heavy Goods Vehicle
HUG2	Home Upgrade Grant Phase 2
HVO	Hydrotreated Vegetable Oil
LAD	Local Authority Delivery
LAQM	Local Air Quality Management
LAQM.TG(22) *(a.k.a. TG(22))*	LAQM Technical Guidance 2022 (Updated May 2025)
LCN	Local Cycle Network
LCWIP	Local Cycling and Walking Infrastructure Plan
LEAP	Local Energy Advice Partnership
LED	Light Emitting Diode
LEV	Low Emission Vehicle
LWS	Local Wildlife Site
N/A	Not Applicable
NCN	National Cycle Network
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
NPIF	DfT National Productivity Investment Fund
ONS	Office for National Statistics
PHE	Public Health England
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
PV	Photovoltaic
Q4	4th Quarter of the year (October – December)
QA/QC	Quality Assurance and Quality Control
RYR	Restoring Your Railway
SAC	Special Areas of Conservation
SCA	Smoke Control Area
SHDF	Social Housing Decarbonisation Fund

SO_2	Sulphur Dioxide
SOBC	Strategic Outline Business Case
SRtS	Safer Routes to Schools
SSSI	Sites of Special Scientific Interest
TEA	Triethanolamine
UK	United Kingdom
UKAS	United Kingdom Accreditation Service
ULEV	Ultra Low Emission Vehicle
WCC	Warwickshire County Council
WCCCIF	Warwickshire County Council's Capital Investment Fund

References

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