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# Stratford on Avon District Council

## 2025 Air Quality Annual Status Report

July 2025

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# 2025 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: July 2025

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<b>Report Reference Number</b>	AIR27044345
<b>Date</b>	July 2025

## Local Responsibilities and Commitment

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

- Jacqueline Dicker, Environmental Protection Officer, Environmental Protection

This ASR has been approved by:

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This ASR has been signed off by a Director of Public Health at Warwickshire County Council, with details below:

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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 National Health Service (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 <sub>2</sub> )	Nitrogen dioxide is a gas which is generally emitted from high-temperature combustion processes such as road transport or energy generation.
Sulphur Dioxide (SO <sub>2</sub> )	Sulphur dioxide (SO <sub>2</sub> ) is a corrosive gas which is predominantly produced from the combustion of coal or crude oil.
Particulate Matter (PM <sub>10</sub> and PM <sub>2.5</sub> )	<p>Particulate matter is everything in the air that is not a gas.</p> <p>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.</p> <p>PM<sub>10</sub> refers to particles under 10 micrometres. Fine particulate matter or PM<sub>2.5</sub> are particles under 2.5 micrometres.</p>

Stratford on Avon is a predominantly rural District in Warwickshire, situated in West Midlands of England with neighbouring District's inclusive of but not limited to Bromsgrove, West Oxfordshire, and South Northamptonshire. The district is one of Britain's established visitor destinations with over 800-years of English culture and history through being William Shakespeare's birthplace, making the area a medieval attraction that supports

increasing tourism for the area. The district is popular for historical attractions, such as Royal Shakespeare Theatre, Anne Hathaway's (Shakespeare's wife) Cottage, and Tudor World, and seeks to encourage countryside tourism through its established areas of geographical interest such as Welcombe Hills, River Avon, and Bancroft Gardens. The location also seeks to encourage tourism by hosting several music events and festivals, for example Avonstock Festival, and promotes active travel through its Stratford Greenway which involves various integrated walking and cycling routes that connect to the broader Warwickshire region.

The area occupies a key strategic position in the West Midlands, with a variety of national railway stations and facilitating access to the M40 motorway system through A46, thus supporting a strong transport and logistics sector. As such, the district also acts as a gateway for many to visit the East and West English coastline due to its central geographical positioning, as well as alternate areas of interest within the West Midlands of England. Stratford on Avon District is also approximately 16 miles south from Birmingham Airport, offering flights for passengers to continental Europe destinations such as Spain and France, international locations such as Dubai, Mexico and USA, and wider United Kingdom destinations such as Dublin, Edinburgh and Glasgow.

Stratford on Avon District is approximately 378 square miles and boasts a rich variety of charming landscape, whilst providing access to local Areas of Outstanding Natural Beauty (AONB) such as Cotswolds AONB, alternatively referred to as [Cotswolds National Landscape \(CNL\)](#), covering 790 square miles and approximately 9 miles south-west from the District's largest settlement, Stratford upon Avon. There are 37 Sites of Special Scientific Interest (SSSI) in the District, inclusive of Snitterfield Bushes SSSI and Camp Down SSSI, with 118 designated Local Wildlife Sites (LWS) which is 24% of all LWS in the Warwickshire, Coventry and Solihull sub-region, confirmed by [Stratford on Avon District Council Part N: Biodiversity and Green Infrastructure December Report](#).

The district is predominantly a rural environment, with approximately 134,700 people residing there. The largest urban area is the town of Stratford upon Avon where approximately 30,500 people live, followed by Wellesbourne with approximately 11,000 people residing there. Other population centres across the district are Alcester, Bishop's Itchington and Southam. The district is the fourth least densely populated of the West Midlands' 30 local authority areas, and is England's 171<sup>st</sup> most densely populated area of the 309 local authority areas, as per the [Office for National Statistics \(ONS\)](#).

Air pollution within the district is predominantly caused by road traffic emissions originating

from major roads including the M40, A46, A3400, A422, and A4390 that pass through and around the area. [Department for Transport \(DfT\)](#) reported approximately 6.08 billion vehicle miles travelled on roads in Warwickshire, inclusive of Stratford on Avon, in 2023, with 2024 data not released at the time of ASR production. Due to the strategic nature of the road links, the majority of the vehicles are throughflow traffic, they do not start nor end their journeys within Stratford on Avon. However, these roads do experience high volumes of traffic as they form the main part of the arterial highway network within Stratford on Avon, connecting the district to wider regions in England. Examples are the A46 and A429, used as gateways to the Cotswolds AONB (Cotswolds CNL), Snitterfield Bushes SSSI and Camp Down SSSI, with seasonal traffic flows in the area significantly changing with the influx of tourist-related through-flow traffic, reiterated in the [Warwickshire Local Cycling and Walking Infrastructure Plan \(LCWIP\)](#). Roads within Stratford on Avon can become heavily congested on a periodic basis due to seasonal traffic flows. This congestion results in stopping and starting of vehicles, which in turns leads to elevated 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 [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](#), which highlights that there is a dire need to minimise the requirement to travel by private car to employment, education and services due to the lack of provision of convenient public transport and sustainable travel modes in the District. Although it is acknowledged that reducing vehicular traffic within the district is a challenge due to the district's internationally significant historic attractions, thus visitor vehicle trip rates are high.

The district is centred around the River Avon as such it has functioning dry ports, which support marine activities for small vessels as well as operating as a tourist destination with frequent activities hosted such as live band/ music sessions and historical events. The areas popularity attracts increasing vehicle congestion, contributing to air pollutant emissions. Other pollution sources including commercial, industrial, agricultural and domestic sources also contribute to pollutant concentrations in the district.

Stratford on Avon District Council has two AQMAs. The Studley AQMA was declared in March 2006 and the Stratford upon Avon District Council No.1 2010 AQMA in January

2010, both for exceedances of the NO<sub>2</sub> annual mean objective. AQMAs encompass part of Alcester Road, Studley, the town of Stratford upon Avon and some surrounding areas. Both AQMAs have achieved compliance with the NO<sub>2</sub> annual mean objective of 40µg/m<sup>3</sup> for eight (Studley) and seven (Stratford on Avon town) years respectively as of 2024.

The monitoring evidence supports long term compliance trends in both AQMAs. The local authority has been progressing revocation throughout 2024 as recommended by the Department for Environment, Food and Rural Affairs (Defra) in the 2024 ASR appraisal commentary.

During 2024, concentrations of NO<sub>2</sub> were monitored passively via a diffusion tube (DT) network of 18 sites. Of the 18 DT sites, only one location (DT 1) was located outside of the two AQMAs declared within Stratford on Avon District. All others were located within the Studley AQMA and the No.1 2010 AQMA. When compared to 2023 data, the NO<sub>2</sub> annual mean concentration decreased at 12 locations, increased at five locations and did not change at one location (DT 12). This shows a reduction in pollutant concentrations at 66% of sites in 2024 compared to 2023.

In 2024, no site recorded an NO<sub>2</sub> annual mean concentration above the air quality objective of 40µg/m<sup>3</sup>, with the maximum concentration reported as 25.6µg/m<sup>3</sup> (DT 7). This location (DT 7) also reported the maximum NO<sub>2</sub> annual mean concentrations between 2021-2023, 29.5µg/m<sup>3</sup>, 28.1µg/m<sup>3</sup>, and 26.5µg/m<sup>3</sup> respectively.

Concentrations of Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>) were not monitored in Stratford on Avon during 2024.

It is acknowledged that the Council are developing an Air Quality Strategy with progress in moderate to latter stages, and an expectation to issue the draft document for consultation in Q4 2025, allowing six weeks for consultation feedback. The authority intends to publish the Air Quality Strategy as final version by end of Q4 2025. The Council acknowledge there is no formal deadline for submission of the Air Quality Strategy to Defra, but it is a recommended document the Council should provide.

## **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.

As part of Stratford on Avon District Council's commitment to reduce the impacts of climate change, and specifically air pollution, the Council declared a climate emergency in July 2019 and continued throughout 2024 to progress and aim to hit carbon neutrality by 2030 for Council activities and across the District, as reported on the [Climate Emergency](#) website. The [Climate Plan](#) sets out various actions to reduce Carbon Dioxide (CO<sub>2</sub>) emissions, of which also have shared benefits in improving air quality through reducing both NO<sub>2</sub> and Particulate Matter (PM) emissions.

The Council is developing and has implemented the following measures as part of the strategy in 2024, with more information available on Stratford on Avon District Council website in [Climate Emergency](#):

- Enhanced community bike rental schemes across the district to encourage uptake of active transportation methods;
- Further improved public transportation infrastructure across the district to encourage reduction in single person vehicle journeys;
- Local cycling and walking improvements across the district;
- Ongoing works for [A3400 Birmingham Road](#) with Phases 2 and 3 and completion of [A439 Warwick Road](#) works in August 2024 to provide higher standard of walking, wheeling and cycling provisions for the district to encourage active transport uptake comparative to private vehicle use thus reducing vehicle pollutant emissions;
- Approved use of [Hydrotreated Vegetable Oil \(HVO\) in Refuse Collection Fleet](#), with existing fuel used in the refuse collection vehicles accounting for 1,147 tonnes of CO<sub>2</sub> - 35% of the Council's overall carbon footprint. Therefore, to achieve the climate change ambitions, carbon emissions released from fleet refuse collection vehicles need to be reduced; and
- Collaborated with [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 such as smart meters to electricity consumers, renewable energy sources to power buildings, and adopt Light Emitting Diode (LED) lighting in buildings.

The Council continued to improve the districts social housing stock as well as broader accommodation in Stratford on Avon throughout 2024, with works to reduce fuel poverty funded through the [UK Government Help to Heat](#) schemes with Grants of the [Social Housing Decarbonisation Fund \(SHDF\)](#), [Local Authority Delivery \(LAD\) Grant](#), and [Home](#)

[Upgrade Grant Phase 2 \(HUG2\)](#). Works delivered through partnerships with [Act on Energy](#), [Orbit](#), [Warm and Well in Warwickshire](#), are aligned with the [Sustainable Homes, Sustainable Communities Stratford on Avon District Housing Strategy 2021-2026](#), which seeks under 'Aim 2' to "improve existing housing". In October 2024, the Council Cabinet reviewed the updated [Action Plan](#) for scheme delivery and confirmed as of July 2024 circa 100 grants and advice had been issued to circa 100 households in all tenures to improve the energy efficiency of their homes, with subsequent benefits to air quality and carbon emissions.

Improvement works funded through grants have included internally insulating and rendering the buildings, installing Light Emitting Diode (LED) bulbs, replacing kitchens, loft and floor voids insulation, and installing renewable heating technologies such as Air Source Heat Pumps (ASHPs) and Solar Photovoltaics (PV), to replace the existing electric heating systems. Thus, reducing carbon footprint by enhancing property thermal efficiency with Energy Performance Certificate (EPC) ratings updated to Band C, whilst also improving air quality across the district by generating electricity without emitting pollutants, unlike fossil fuel-based power.

It is acknowledged that HUG2 is underway until March 2025, with a further 137 homes set for energy efficient improvements, totalling approximately 228 homes that will have benefitted from the HUG2 scheme, costing approximately £4.5 million between 2023-2025. An additional [66 Stratford on Avon Orbit Properties](#) have been upgraded in partnership with the West Midlands Combined Authority, with works concluded by Q4 2024 from initiation in 2022. Furthermore, Act on Energy by end of Q4 2024 have provided [295 EcoFlex Grants](#) to district residents, with the grant scheme operational until March 2026.

Aforementioned home improvements seek to educate individuals in development of a cleaner and more environmentally sustainable district through facilitating carbon reducing measures and methods of limiting air pollutant emissions. The Council's commitment to works funded alongside [Act on Energy](#), [SHDF](#), [LAD](#), and [HUG2](#) demonstrates its focus to meet the target of carbon neutrality in the district by 2030, targeting air quality emissions across the district by local scale grassroots improvements with longevity of environmental actions secured through education.

The Council, on behalf of its established collaborative relationship with [Places for People](#) social enterprise that provides housing and support for individuals and families, including those in need, commissioned [Fortem](#) in May 2024 to improve social housing

conditions in four, high-rise resident blocks at Lancaster Court. The programme of works to conclude in July 2025 will cost approximately £3.3 million and is an affordable warmth initiative that includes removing combustible external wall insulation (EWI), installing new non-combustible EWI, new windows and fire doors. Thus, seeking to reduce fuel poverty across the district by making properties more thermal and energy efficient whilst reducing broader carbon footprint aligned with the climate emergency declared. It is acknowledged [Places for People](#) and [Act on Energy](#) also offer Stratford on Avon residents free energy service which assists with economic stability whilst seeking to educate individuals in development of a cleaner and more environmentally sustainable district through facilitating carbon reducing measures and methods of limiting air pollutant emissions. The Council's commitment to onboarding [Fortem](#) on behalf of Stratford's [Places for People](#) demonstrates its focus to targeting air quality emissions across the district by local scale grassroots improvements with longevity of environmental actions secured through education.

During 2024 the Council continued to be a member of the Coventry and Warwickshire Air Quality Alliance (CWAQA), established in December 2015. The Alliance's intention is to take collaborative and collective action against poor air quality, whereby officers from Environmental Health, Transport, Planning and Public Health departments meet with representatives from Public Health England (PHE) to develop a shared document repository and forum for exchange of information and ideas. The Alliance's work programme includes joint support for active travel/healthy travel choice campaigns linked with national initiatives; joint work on transport projects (e.g. cycle network bids) and the sharing of planning guidance related to air quality. The aim is to create a common approach to planning across Coventry and Warwickshire which will benefit air quality through actions of longevity, targeting construction sector to ensure compliance and appropriate mitigation is implemented where necessary. Thus, seeking to educate and protect future generations on and from poor air quality.

In 2024, 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<sub>2</sub>), 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 2024, Stratford on Avon District Council maintained its collaborative relationship with the bicycle mechanic and hire businesses [Stratford Cycle Repair](#) and [Mercia Cycles](#) as well as the bicycle club, [Stratford Cycling Club](#). The two former organisations host sessions for locals to check that their bikes are safe and make minor adjustments to get them on the road, as well as offering bicycle hire. The latter body offers cycling activities such as club rides, touring, time trials, road racing, track racing, sportives, cyclo-cross, mountain biking, and charity events. These relationships continue to promote the use and benefits of active transport on air quality and health whilst highlighting the Council's commitment to educating the next generation to reduce vehicle uptake.

Stratford on Avon District Council continued to promote active travel in 2024 with the reduction in vehicle usage and subsequent emissions through established [Core Walking Zones \(CWZs\)](#). The CWZs have been assessed and audited to ensure safety and identify any required interventions along the pedestrian corridors within each CWZ. Interventions proposed include improving existing infrastructure as well as introducing new pedestrian facilities such as wayfinding, new pedestrian crossings and benches to improve the public realm.

The District, alongside neighbouring and far-reach Council jurisdictions, remained to be host to the [National Cycle Network \(NCN\)](#) in 2024, as well as having a Local Cycle Network (LCN) that forms the connections between the NCN and destinations such as small town centres and villages. Three core routes within Stratford-on-Avon are:

- NCN5 (Birmingham - Oxford) – Connecting Redditch to Stratford via Studley and Wilmcote, and Stratford to Banbury via Long Marston and Shipston-on-Stour;
- NCN41 (Bristol – Rugby) – Connecting Leamington and Warwick to Stratford and Rugby; and
- NCN48 (Stow-on-the-Wold – Shipston-on-Stour) – Connecting the Gloucestershire towns of Stow-on-the-Wold and Moreton-in-Marsh with Shipston-on-Stour and Bishop's Itchington.

It is acknowledged that a section of on-road signed route near Southam has recently been downgraded by Sustrans, leaving a gap between Bishop's Itchington, Southam and Long Itchington, where the former NCN48 connected with NCN41. The NCN provides a strategic network for the county with connections to key destinations, towns, villages, transport hubs, employment and housing areas with long distance trails and loops that support the visitor economy in the District whilst encouraging active transportation

methods as alternatives to vehicle trips, seeking to limit pollutant emission release across the District.

During 2024 Stratford on Avon District Council promoted the [Cycle Stratford](#) bike sharing service. The scheme replicates notable cycle sharing schemes found in large metropolitan areas (e.g., Santander Cycles, Mobike, Lime) and compliments the rural and suburban cycling routes. The scheme promotes alternative and accessible forms of travel between neighbouring towns and villages across the West Midlands region, to help its residents lead active lifestyles and limit vehicular emissions.

In 2024 improvements funded 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 the [A3400 Birmingham Road](#) in Stratford-upon-Avon were partially completed, with Phase 2 actions set for completion in February 2025 and Phase 3 upgrades due in 2025 and onwards. The phases of works are detailed below:

- Phase 1 – The section between the junctions of Windsor Street and Arden Street. This has now been completed.
- Phase 2 – The section from the A46 to St Peter's Way and will entail improving pedestrian and cycling provision coupled with improving driver convenience.
- Phase 3 – The section from St Peter's Way to Arden Street and will provide for enhanced pedestrian and cycling provision coupled with enhancing the road capacity through the reallocation of road space.

With upgrades as follows:

- Managing the flow of traffic along the corridor;
- Improving conditions for pedestrians, cyclists and enhancing the overall public realm;
- Improving connectivity to the corridor from within Stratford; and
- Supporting growth and the tourist economy.

In August 2024 upgrade infrastructure works were completed on [A439 Warwick Road](#) to create a safer, more accessible environment for all road users and pedestrians encouraging active transportation uptake. Improvements include road widening by Ingon Lane, footway reconstruction and new signage along the cycleway to create a more user-friendly environment for pedestrians and motorists alike. Additional supplementary works through pruning existing short-term overgrown vegetation and implementing a planting

program will be completed along the route, when conditions allow, due to nesting bird seasons providing restrictions. The vegetation seeks to reduce air pollution by absorbing gaseous pollutants and capturing particulate matter on leaves, with trees and plants acting as natural filters, improving air quality in the urban area and contributing to a healthier environment. Thus, an action of longevity for Stratford on Avon District by reducing exposure of current and future generations to poor air quality during active transport use and more broadly.

The road network upgrades on A3400 and A439 will offer a higher standard alternative to the existing active transport infrastructure whilst improving the safety of walkers and cyclists alongside oncoming vehicles. Actions to remove pedestrians and cyclists from the fast flowing and heavily trafficked A3400 and A439 through new segregation zones, signs and road markings to make drivers more aware of the possibility of people and to reduce speeds. Such improvements are in line with the [Part 2 – Network Plans: Stratford-on-Avon District LCWIP](#), showcasing the wider commitment from Stratford on Avon District Council to improve air quality conditions by enhancing walking and cycling provisions, thus, reducing vehicular pollutant emissions. It is acknowledged that completing A3400 Birmingham Road and A439 Warwick Road works are priorities identified in the [Stratford on Avon District Core Strategy 2011-2031](#), and [Stratford-upon-Avon Area Transport Strategy May 2018](#), with infrastructure development work for A439 concluded (August 2024) and A3400 Phase 2 and 3 ongoing.

Throughout 2024 Stratford on Avon District Council worked collaboratively with Warwickshire County Council (WCC), and neighbouring local authorities to secure funding from organisations inclusive of but not limited to Sustrans, Canal and Rivers Trust (CRT), Getting Building Fund (GBF) through the Coventry and Warwickshire Local Enterprise Partnership (CWLEP) for improvements in walking, wheeling and cycling provisions across the district. Seeking to improve air quality conditions by reducing vehicular pollutant emissions and encouraging active transportation uptake through greater resource provision and higher standards in safety. The various ongoing and proposed development schemes, available [here](#) to review and are summarised below:

- [Stratford Road / Shakespeare Avenue Cycling Scheme](#)
  - Extension of the existing shared use footway / cycleway on Stratford Road a further 300 metres to the north, to the puffin crossing near Shakespeare Avenue. The puffin will be converted to a ‘toucan’ crossing, which can be

used by both cyclists and pedestrians, to provide a safe crossing over Stratford Road to Shakespeare Avenue.

- On Shakespeare Avenue, the proposal will involve widening the footway on the southern side of the road to a minimum of 3 metres, to provide an unsegregated shared use footway / cycleway.
- [Radford Road Walking and Cycling Connections](#)
  - Radford Road forms NCN41 and in 2024 works completed included:
    - A new signal-controlled crossing with central refuge (Toucan crossing for pedestrians and cyclists) to replace the existing crossing refuge;
    - Resurfacing and widening of existing shared use footway/cycle track on both sides of the crossing;
    - Tree planting; and
    - Measures to prevent parking on the footway/cycle track.

The schemes completed and designated for construction will improve transport infrastructure in the area through provision of more sustainable travel methods, increasing access to safer walking and cycling routes alongside enhancements in physical safety for pedestrians and cyclists, whilst contributing to local environmental goals through pollutant emission reduction. As such, making the district and Warwickshire region more accessible and attractive for residents and visitors.

In February 2024 the Council Cabinet approved the [Part 2 – Network Plans: Stratford-on-Avon District LCWIP](#) in partnership with Warwickshire County Council, with identification of three key areas across the Council jurisdiction with high propensity for walking and cycling: Stratford-upon-Avon, Alcester and Southam. Identified routes experience high commuting levels due to key destinations including the population centres as well as existing routes, geographical and historical attractions such as the River Avon, Cotswolds AONB (Cotswolds CNL), and Royal Shakespeare Theatre. It is proposed that greater active travel infrastructure is established to support the adoption of the LCWIP comparative to vehicle commuting to these areas, therefore reducing emissions released. The completed and proposed development schemes aforementioned align with the [Stratford on Avon District Core Strategy 2011-2031](#), and [Stratford-upon-Avon Area Transport Strategy May 2018](#) as such seek to facilitate uptake of the LCWIP actions.

Stratford on Avon District Council worked collaboratively with Warwickshire County Council and neighbouring local authorities in 2024 on the [Warwickshire Local Cycling and Walking Infrastructure Plan \(LCWIP\)](#), with the final LCWIP document approved by Cabinet

and adopted in February 2024. The document seeks to showcase the county's response to climate change, inclusive of air quality, as well as create a prioritised programme of infrastructure interventions and improvements for future investment, considering existing plans, strategies, and priorities across the county. The Council's cooperation in producing the countywide LCWIP highlights its commitment to improving cycling and walking infrastructure within its jurisdiction as well as the wider Warwickshire region in parallel with reducing pollutant concentrations across the area.

Throughout 2024 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.

Stratford on Avon District Council in conjunction with Warwickshire County Council continued to promote the free permitted '[Park and Stride](#)' initiative during 2024, which operates alike the 'Park and Ride' public bus service in Stratford on Avon as well as broader Warwickshire areas, to further encourage sustainable transport uptake. It is noted the typical route via the canal towpath is currently unavailable whilst repair works are being carried out, but users are able to access town via alternate directions.

The district continued to promote the cycling initiative '[Bikeability](#)' in 2024, partnered with Warwickshire County Council. The scheme focussed on school children and adults, involves frequent cycling proficiency courses and has educated circa 100,000 people since its launch in 2006/2007. The initiative has centred on three core stages, Bikeability: Level 1, Level 2 and Level 3, with individuals required to meet specific criteria to enable being accredited the awards. There is also 'Bikeability Balance' and 'Bikeability Learn to Ride' levels which bode a suite of courses to meet needs and specifically to complement and support the core training delivered. The scheme also offers 'Bikeability Families' and

'Cycle Confidence' courses which provide parents/carers skills to cycle safely with children whilst improving participants riding ability and overall confidence, thus encouraging greater active transportation uptake through road safety assurance. This programme seeks 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.

In September and October 2024 Stratford on Avon District Council alongside Warwickshire County Council promoted and facilitated the '[World Car Free Day](#)' and '[Cycle to School Week](#)' respectively. The 'World Car Free Day' highlights numerous benefits of going car-free to citizens, including reduced air pollution and the promotion of walking and cycling in a safer environment. 'Cycle to School Week' aims to promote and celebrate cycling as a healthier and greener mode of transport, encouraging active transportation uptake across all generations with families swapping car pedals for cycle pedals on school visits, as well as engaging in general cycle rides, and discovering new areas to cycle. The Council's promotion of the 'World Car Free Day' and 'Cycle to School Week' reiterates its focus to reduce pollutant concentrations imminently across the district whilst facilitating this through actions of longevity by targeting future generations.

The Council maintained its membership of the 'Restoring Your Railway' Steering Group throughout 2024, which seeks to safeguard the route of the former railway between Stratford-upon-Avon and Honeybourne on the North Cotswold line with potential for reinstatement. The Steering Group has previously received financial support from [UK Government Restoring Your Railway \(RYR\) Ideas Fund](#) to explore the potential restoration of the railway link between Stratford-upon-Avon and Honeybourne. In March 2024, transport consultants Stantec were appointed by the Steering Group to produce a [Strategic Outline Business Case \(SOBC\) Refresh Report \(October 2024\)](#). This focused on refreshing the previous SOBC undertaken in May 2021, to account for the evolving policy, land-use development and transport context since 2021. The re-opening of the railway line would enable more well-connected and frequent services of public transport, whilst highlighting the benefits on air quality comparative to private vehicle use to commute.

Throughout 2024 the local authority continued to promote its well-established main rail network with the branch line London Paddington from Stratford-upon-Avon Railway Station one of the area's core railway routes and a frequent commuter line. Thus, the well interconnected line with the capital promotes alternative transport uptake for ease and

convenience, whilst reducing air quality emission release through alternative transport comparative to single person private vehicle use.

Stratford on Avon District Council in conjunction with Warwickshire County Council continued to promote the free permitted '[Park and Ride](#)' initiative during 2024, which operates public bus service with circa 700 free parking spaces including designated Electric Vehicle (EV) bays to further encourage sustainable transport uptake.

Stratford on Avon District Council actively encourages developers at the planning stage to install electric charging points or consider suitable infrastructure to allow for future cost-efficient installations.

Throughout 2024 Stratford on Avon District Council maintained its adoption of [Warwickshire County Council Electric Vehicle Charging Infrastructure Strategy 2017-2026 \(November 2017\)](#) which recommends that in collaboration with Warwickshire County Council, Electric Vehicle (EV) charging provisions are enhanced. There will be a particular focus on charging points on residential streets in rural and remote areas with electric grid constraints, where higher uptakes of EVs are forecast and communities without or with limited access to off-street parking. The strategy seeks to significantly expand on an already growing network of on and off-street EV charging points in Stratford on Avon District and neighbouring Councils.

The Council have benefitted in 2024 from an established collaborative partnership with Warwickshire County Council (WCC) to roll out a programme of charging points for EVs across the District, with EV development prevalent in Arden Street car park (Stratford-upon-Avon), Bridgeway Multi-Storey Car Park (Stratford-upon-Avon), Church Street car park (Stratford-upon-Avon), Bulls Head Yard car park (Alcester) and Wood Street car park (Southam). The commitment from WCC in 2024 to develop enhancement plans of the EV charging network throughout Stratford on Avon demonstrates on a local scale that the districts authority has continually evidenced the necessity to improve air quality for residents and visitors in the area, with prioritisation on reducing pollutant concentrations coinciding with improvements in individuals' health. Therefore, promoting environmental quality, limiting future resource strain on healthcare provisions, and enhancing lifespan longevity.

During 2024, the Council developed its collaborative relationships with EV providers [BP Pulse](#), [Pod Point](#), [RAW Charging](#), and [InstaVolt](#). The joint programmes will deliver over double the current number of rapid EV chargers in the district, significantly improving access to EV charging for residents, businesses and the >5 million tourists who visit

annually. The charge points have been installed to assist vehicle owners in Stratford on Avon convert from internal combustion vehicles to EVs. As more residents use electric vehicles, communities will benefit from improved air quality and lower their carbon footprint. EV users can view the current charging points across Stratford on Avon District at [zap-map.com](http://zap-map.com).

Stratford on Avon District Council has also encouraged Ultra Low Emission Vehicle (ULEV) adoption across the district during the 2024 monitoring year, with infrastructure to support the uptake of ULEVs being implemented as aforementioned with a wider extent planned for implementation.

## Conclusions and Priorities

During 2024, the NO<sub>2</sub> annual mean objective was not exceeded at any monitoring location within Stratford on Avon. This is a continuing trend that has been observed across the district since 2020, as shown in this ASR. The Council will use the passive monitoring network to monitor air quality within the district and ensure compliance is maintained with the annual and 1-Hour NO<sub>2</sub> objectives, following proposed revocation of the two existing AQMAs (Stratford upon Avon District Council No.1 2010 and Studley AQMA), during the 2025 monitoring year.

The maximum predicted PM<sub>2.5</sub> background concentration in 2024 is well below the current annual mean target of 20µg/m<sup>3</sup> at 7.6µg/m<sup>3</sup>, a decrease of 3.2µg/m<sup>3</sup> from predicted PM<sub>2.5</sub> background concentration of 10.8µg/m<sup>3</sup> in 2023. Whereby in 2023 it was above the annual mean target of 10µg/m<sup>3</sup> that is not to be exceeded at any monitoring station by 31<sup>st</sup> December 2040, it is now recognised in 2024 as being below this target. Stratford on Avon District Council will consider further actions as good practice to reduce PM<sub>2.5</sub> pollutant emissions as well as continuing those implemented already to reduce PM<sub>2.5</sub> across the district. The Council are working positively towards improving and maintaining good air quality for the population.

Six major ongoing developments have been identified as having scope to impact air quality concentrations reported across the district in 2024 and onwards. Further details regarding the developments can be found in [Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC](#).

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

- Continue to 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<sub>2</sub> in areas of relevant public exposure;
- Work collaboratively with [Act on Energy](#), [Orbit](#), and [Fortem](#) 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 continually improve properties within the district, thus making them more energy efficient whilst educating individuals in development of a cleaner and more environmentally sustainable district through facilitating carbon reducing measures and methods of limiting air pollutant emissions;
- Actively engage with developers at planning application stages to promote the installation of electric vehicle charging or alternatively, provide suitable infrastructure to allow for future cost-efficient installations;
- 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 [Park and Stride](#), upgrade [A3400 Birmingham Road](#) and [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 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<sub>2</sub> 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 2024 through the below schemes, although the engagement schemes in 2023 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 and progressed 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;
- Completion of [A439 Warwick Road](#) infrastructure works in August 2024 to create a safer, more accessible environment for all road users and pedestrians encouraging active transportation uptake;
- Continued promotion of active transport uptake and sustainable travel through the '[Park and Stride](#)' 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;
- Promotion of active transport uptake through the '[World Car Free Day](#)' and '[Cycle to School Week](#)';
- 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 across Stratford on Avon 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 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 have two AQMAs declared for exceedances of the NO<sub>2</sub> annual mean objective:

- Studley AQMA – Implemented on 08/03/2006 and described as:
  - *“An area encompassing part of Alcester Road, Studley”*.
- Stratford upon Avon District Council No.1 2010 AQMA – Implemented on 22/01/2010 and described as:
  - *“The whole town of Stratford upon Avon and some surrounding areas”*

Details of the AQMAs are described in Table 2.1 with Appendix D: Maps of Monitoring Locations and AQMA showing the extent of both AQMAs as well as air quality monitoring locations in relation to the two AQMAs.

The district and specifically both AQMAs have achieved compliance with the NO<sub>2</sub> annual mean objective of 40µg/m<sup>3</sup> for eight (Studley) and seven (Stratford on Avon town) years respectively as of 2024 monitoring year. The monitoring trends demonstrate compliance with the relevant objectives, therefore supporting the revocation of both AQMAs. The local authority has been progressing revocation of both AQMAs throughout the 2024 monitoring year as recommended by Defra.

Alongside progressing revocation of both AQMAs the Council have been developing a local Air Quality Strategy for the district to prevent and reduce polluting activities.

Stratford on Avon District Council acknowledge that progress towards the Air Quality Strategy is in the final stages, with an expectation to issue the draft document for consultation in Q4 2025 and allowing 6 weeks for consultation feedback. The authority intends to publish the Air Quality Strategy as final version by end of Q4 2025. However,

the Council acknowledge there is no formal deadline for submission of the Air Quality Strategy to Defra, but it is a recommended document for the Council to provide.

**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 <sub>2</sub> Annual Mean	An area encompassing part of Alcester Road, Studley.	No	62.0µg/m <sup>3</sup>	26.0µg/m <sup>3</sup>	8 years	Air Quality Action Plan for Alcester Road, Studley - Stratford on Avon District Council (September 2008)	<a href="#">AQAP for Alcester Road, Studley</a>
Stratford upon Avon District Council No.1 2010	22/01/2010	NO <sub>2</sub> Annual Mean	The whole town of Stratford upon Avon and some surrounding areas.	No	45.0µg/m <sup>3</sup>	26.0µg/m <sup>3</sup>	7 years	Not currently published	See notes below

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:**

(1) The most recent and subsequently current Stratford on Avon District Council AQAP is September 2008, applicable only for Studley AQMA. The Council are aware this is outdated and missing for No.1 2010 AQMA but as aforementioned, the local authority declared intention to revoke both AQMAs in ASR 2024, with revocation progress during monitoring year 2024. As such the document does not

need updating. The local authority is producing an Air Quality Strategy set for consultation Q4 2025 for 6 weeks, with aims to release the final version by end of Q4 2025.

## 2.2 Progress and Impact of Measures to address Air Quality in Stratford on Avon

Defra's appraisal (document reference: ASR24-2430) of last year's ASR concluded that:

*"The report is well structured, detailed, and provides the information specified in the Guidance."*

The following comments were designed to help inform Stratford on Avon District Council 2025 ASR:

1. The following minor formatting errors should be corrected prior to publication:
  - a. The 06/24 National Bias Adjustment Factor spreadsheet should have been used to find the national bias adjustment factor given the submission date of this ASR. In this instance, the 06/24 spreadsheet shows the same adjustment factor as the 03/24 spreadsheet which has been used therefore only the text and screenshot of the spreadsheet need to be updated to reflect this correction.
    - i. The latest version of the National Bias Adjustment Factor spreadsheet has been used for the 2025 ASR, with evidence to confirm.*
  - b. In the notes below Table B.1, the year has not been updated from 2022 to 2023.
    - i. The 2025 ASR Table B.1 reports correctly for monitoring year 2024.*
2. SADC have included comments from the previous ASR and responded to one of them. This is encouraging and SADC should continue to do this in future ASRs.
  - a. In 2025 ASR, SADC have responded to Defra's appraisal comments from the 2024 ASR.*
3. No progress against the Air Quality Action Plan measures is included in Table 2.2. This was highlighted in the commentary on last year's appraisal, which was included in the ASR, however, has still not been included.
  - a. Progress against AQAP actions has been included in Table 2.2 in ASR 2025.*
  - b. It is acknowledged that the local authority has progressed actions to revoke both AQMAs throughout monitoring year 2024 and are currently developing an Air Quality Strategy, as recommended by Defra in line with LAQM.TG(22),*

*for publication by end of Q4 2025. As such, the AQAP is void, but the Council acknowledges the benefit of enhancing the AQAP actions implemented or scheduled for implementation.*

4. It is encouraging to see SADC planning to revoke their AQMAs and the inclusion of the revocation report in Appendix F. SADC should continue the revocation process and provide an update in the 2025 ASR.
  - a. *The Council have continued to progress revocation processes for both AQMAs throughout the 2024 monitoring year and estimate revocation of each AQMA to be complete by end of Q4 2025.*
5. Only one of the 18 diffusion tube monitoring sites is located outside of a current AQMA, SADC should consider expanding this monitoring network to cover wider areas of their jurisdiction.
  - a. *SADC are in the process of revoking both AQMAs, following completion of this, the local authority will determine where they can re-use resources to expand the monitoring network and/or implement additional resources.*
6. SADC have included clear actions in the Executive Summary that the public can read and undertake in order to reduce their usage of private vehicles.
  - a. *In the 2025 ASR, the local authority have maintained to include clear actions for the public to implement, thus assisting in reducing their private vehicle use and encourage uptake of active transport methods.*

Stratford on Avon District Council has taken forward a number of 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. 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 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.

It is noted that the top three air quality measures presented in Table 2.2 are highlighted as the priority measures for the Council to continue delivering into 2025 and onwards.

The existing AQAP is significantly outdated, produced in 2008 for Studley AQMA, and missing for No.1 2010 AQMA as well as being void following revocation processes throughout 2024 being initiated. In addition, the district's Air Quality Strategy is not yet

publicly available, as such further detail regarding existing and new measures can be found in [Stratford on Avon District Core Strategy 2011-2031](#), [Part 2 – Network Plans: Stratford-on-Avon District LCWIP](#), [Warwickshire Local Cycling and Walking Infrastructure Plan \(LCWIP\)](#), [Climate Plan](#), [Stratford-upon-Avon Area Transport Strategy May 2018](#), and via the hyperlinks provided for measures referenced throughout the 2025 ASR.

Key completed measures during 2024 are:

- Transport Network Upgrades
  - Road improvements to the [A3400 Birmingham Road](#) partially completed in 2024, thus providing greater reliability of journeys, enhancing connections with local communities, and improving safety at junctions and roundabouts whilst future proofing a main arterial road in Stratford on Avon;
  - Completion of [A439 Warwick Road](#) infrastructure works in August 2024 to create a safer, more accessible environment for all road users and pedestrians encouraging active transportation uptake; and
  - Appointment of transport consultants Stantec in March 2024 by the ‘Restoring Your Railway’ Steering Group, inclusive of Stratford on Avon District Council, to produce a [Strategic Outline Business Case \(SOBC\) Refresh Report \(October 2024\)](#) for the potential restoration of the railway link between Stratford-upon-Avon and Honeybourne.
- Local Walking and Cycling Initiatives
  - In February 2024 the Council Cabinet approved the [Part 2 – Network Plans: Stratford-on-Avon District LCWIP](#) with recommendations for greater active travel infrastructure across three key areas with high propensity for walking and cycling. Seeking to support the adoption of the LCWIP comparative to vehicle commuting, therefore reducing pollutant emissions released;
  - Collaborated with Warwickshire County Council and neighbouring local authorities on the [Warwickshire Local Cycling and Walking Infrastructure Plan \(LCWIP\)](#), with the final LCWIP document approved by Cabinet and adopted in February 2024;
  - Collaboration with Warwickshire County Council and neighbouring local authorities to produce and release the [Warwickshire Local Cycling and Walking Infrastructure Plan \(LCWIP\)](#) with adoption in February 2024;
  - In September 2024 the Council promoted and supported the [‘World Car Free Day’](#) aiming to highlight numerous benefits of going car-free to citizens,

including reduced air pollution and the promotion of walking and cycling in a safer environment; and

- During October 2024 the Council supported and facilitated the '[Cycle to School Week](#)' which aimed to promote and celebrate cycling as a healthier and greener mode of transport, encouraging active transportation uptake across all generations with families swapping car pedals for cycle pedals on school visits, as well as engaging in general cycle rides, and discovering new areas to cycle. The scheme sought to also improve participants riding ability and overall confidence, thus encouraging greater active transportation uptake through road safety assurance.
- Carbon and Pollutant Emission Reduction
  - Completed social housing upgrade works on at least 91 properties funded through [Home Upgrade Grant Phase 2 \(HUG2\)](#), with HUG2 works underway until March 2025 and a further 137 homes set for energy efficient improvements, totalling approximately 228 homes that will have benefitted from the HUG2 scheme, costing approximately £4.5 million between 2023-2025;
  - In October 2024 the Council Cabinet reviewed the updated [Action Plan](#) for delivery of schemes to improve district housing conditions with circa 100 grants and advice issued to circa 100 households in all tenures by July 2024. Thus, improving the energy efficiency of their homes, with subsequent benefits to air quality and carbon emissions;
  - Approved use of alternative fuel for Council fleet vehicles ([Hydrotreated Vegetable Oil \(HVO\) in Refuse Collection Fleet](#)), with existing fuel used in the refuse collection vehicles accounting for 1,147 tonnes of CO<sub>2</sub> - 35% of the Council's overall carbon footprint. Thus, reducing carbon emissions released from fleet refuse collection vehicles to achieve the Council climate change ambitions; and
  - Commissioned [Fortem](#) in May 2024 on behalf of [Places for People](#) social enterprise to improve social housing conditions in four, high-rise resident blocks at Lancaster Court. Therefore, seeking to reduce fuel poverty across the district by making properties more thermal and energy efficient whilst reducing broader carbon footprint aligned with the climate emergency declared; and

- Promoted [Places for People](#) and [Act on Energy](#) services for free home energy advice, prioritising vulnerable and low-income households by informing of cost effective and efficient ways to support reduction in carbon and pollutant emissions across the district in alignment with reducing carbon emissions for the declared climate emergency.
- Electrical Vehicle (EV) Infrastructure
  - Implementation of EV charging points in Arden Street Car Park (Stratford-upon-Avon), Bridgeway Multi-Storey Car Park (Stratford-upon-Avon), Church Street Car Park (Stratford-upon-Avon), Bulls Head Yard Car Park (Alcester) and Wood Street Car Park (Southam) through collaborative relationship with Warwickshire County Council; and
  - Developed established collaborative relationships with EV providers [BP Pulse](#), [Pod Point](#), [RAW Charging](#), and [InstaVolt](#) to deliver over double the current number of rapid EV chargers in the district, significantly improving access to EV charging for residents, businesses and the >5 million tourists who visit annually. Charge points have been installed to assist vehicle owners convert from internal combustion vehicles to EVs, with more residents using electric vehicles, communities will benefit from improved air quality and lower their carbon footprint.
- Fleet Efficiency and Recognition Scheme
  - Approved use of [Hydrotreated Vegetable Oil \(HVO\) in Refuse Collection Fleet](#) to reduce carbon emissions released from vehicles with existing fleet refuse vehicle fuel responsible for 35% of Council's overall carbon footprint. Thus, replacement fuel supports achievement of the local authority climate change ambitions.

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

- Final issue and adoption of the Air Quality Strategy for the district in Q4 2025;
- Phase 2 improvements to the [A3400 Birmingham Road](#) expected by February 2025 to increase capacity on the A3400 with reallocation of road space and improve pedestrian and cycle links, including a signal-controlled pedestrian crossing. Thus, aiming to reduce pollutant emission contributions from the dominant alternate transport method, private vehicles, by increased active transport infrastructure;

- Pruning of short-term overgrown vegetation and implementation of a planting program along [A439 Warwick Road](#), when conditions allow, due to nesting bird seasons providing restrictions. Vegetation reduces air pollution by absorbing gaseous pollutants and capturing particulate matter on leaves, acting as natural filters. Thus, improving air quality in the urban area and contributing to a healthier environment by reducing exposure of current and future generations to poor air quality during active transport use and more broadly;
- Construction works delivered by [Fortem](#) on behalf of [Places for People](#) social enterprise to complete in July 2025, with carbon emission reducing measures implemented to upgrade to four, high-rise resident blocks at Lancaster Court. Therefore, seeking to reduce fuel poverty across the district by making properties more thermal and energy efficient whilst reducing broader carbon footprint aligned with the climate emergency declared;
- Reinstatement of the former railway between Stratford-upon-Avon and Honeybourne on the North Cotswold line following the [Strategic Outline Business Case \(SOBC\) Refresh Report \(October 2024\)](#);
- Continue social housing stock improvements funded through [Home Upgrade Grant Phase 2 \(HUG2\)](#) with completion aimed for March 2025; a further 137 homes set for energy efficient upgrades, totalling approximately 228 homes that will have benefitted from the HUG2 scheme, costing approximately £4.5 million between 2023-2025; and
- Complete upgrades to the '[Park and Stride](#)' canal towpath route to enable safe access for pedestrians and cyclists.

Stratford on Avon District Council's priorities for the coming year are:

- Conduct 6-week public consultation period week commencing Q4 2025 on the Air Quality Strategy, with delivery of the final version in Q4 2025;
- Complete Phase 2 improvements to [A3400 Birmingham Road](#) by February 2025 and progress Phase 3 upgrades to increase capacity on the A3400 and improve accessibility and safety of active transportation links. Thus, seeking a reduction in pollutant emission contributions from the dominant alternate transportation method, private vehicles, by increased active transport infrastructure aligned with [Stratford-upon-Avon Area Transport Strategy May 2018](#);

- Continue collaborative partnership with Pashley Cycles, for the [E-Cargo Bikes Scheme](#) 5-year trial, adopted to facilitate short (hop-on hop-off) and long term rental and support the Council's commitment to tackling the declared climate emergency;
- Complete upgrades to the '[Park and Stride](#)' canal towpath route to enable safe access for pedestrians and cyclists;
- Expand adoption of the [Hydrotreated Vegetable Oil \(HVO\)](#) in alternate Council owned fleet vehicles to accelerate Council carbon emission reduction;
- Maintain the three AQMesh sensors across the district as well as the [Stratford on Avon District Council: Air Quality Monitors Website](#) despite proposed revocation of Studley and Stratford-on-Avon AQMA. 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);
- Continue to be a member of Coventry and Warwickshire Air Quality Alliance (CWAQA) to ensure collaborative and collective action against poor air quality with a common approach to planning through actions of longevity, targeting construction sector to ensure compliance and appropriate mitigation is implemented where necessary. Thus, seeking to educate and protect future generations on and from poor air quality;
- Progress actions that align with the [Part 2 – Network Plans: Stratford-on-Avon District LCWIP](#) and [Warwickshire Local Cycling and Walking Infrastructure Plan \(LCWIP\)](#), thus improving walking, wheeling and cycling experiences for users as well as safety through enhancement of the public realm;
- Prune short-term overgrown vegetation and implement the planting program along [A439 Warwick Road](#) post restrictive nesting bird seasons with vegetation reducing air pollution by absorbing gaseous pollutants and capturing particulate matter on leaves, acting as natural filters. Thus, improving air quality across the district by reducing exposure of current and future generations to poor air quality during active transport use and more broadly instead contributing to a healthier environment;
- Continue collaborating with [Act on Energy](#) and [Orbit](#) on behalf of the '[Warm and Well in Warwickshire](#)' affordable warmth initiative delivered by funds through [Social Housing Decarbonisation Fund \(SHDF\)](#), [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;

- Continue collaborating with [Places for People](#) and [Act on Energy](#) to provide home energy advice services, prioritising vulnerable and low-income households with cost effective and efficient ways to support reduction in pollutant emissions across the district;
- To facilitate the '[Cycle to School Week](#)' and '[World Car Free Day](#)' events again throughout 2025, promoting and celebrating cycling as a healthier and greener mode of transport, as well as improving participants riding ability and overall confidence, thus encouraging greater active transportation uptake across all generations through road safety assurance;
- Continued promotion in 2025 of the [Mercia Cycles](#) and the [Cycle Stratford](#) innovative bike sharing services, cycling initiatives '[Bikeability](#)' and [Stratford Cycling Club](#), and business [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;
- 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;
- Support delivery of existing and proposed development of [Stratford Road / Shakespeare Avenue Cycling Scheme](#) and [Radford Road Walking and Cycling Connections](#) to enhance the public realm by offering higher standard walking and cycling alternative routes from heavily trafficked commuter roads;
- Progress actions to reinstate the Stratford-upon-Avon and Honeybourne railway stations on the North Cotswold line following a [Strategic Outline Business Case \(SOBC\) Refresh Report \(October 2024\)](#) to enable more well-connected and frequent services of public transport, thus benefiting air quality comparative to private vehicle use to commute;
- Continuation of acquisition and transition from the existing Council owned combustion fleet vehicles to EVs that are cleaner and more efficient, thus reducing pollutant emissions, benefitting the districts air quality and workers/public well-being; and
- Enhancement of the collaborative relationships with with EV providers [BP Pulse](#), [Pod Point](#), [RAW Charging](#), and [InstaVolt](#) to deliver more EV charging points across

the district aligned with [Warwickshire County Council Electric Vehicle Charging Infrastructure Strategy 2017-2026 \(November 2017\)](#) where practicable.

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;
- Rail Improvements – Reinstatement of the Stratford-upon-Avon and Honeybourne railway stations on the North Cotswold line has required a [Strategic Outline Business Case \(SOBC\) Refresh Report \(October 2024\)](#) to account for the evolving policy, land-use development and transport context since the previous SOBC in 2021 before further actions occur;
- Transport Infrastructure –
  - Development work on [A3400 Birmingham Road](#) is ongoing due to resources and budget constraints at year end for the financial year 2023/2024 with Phase 2 set for completion in February 2025 and Phase 3 unknown;
  - Nesting bird seasons have meant restrictions on supplementary works along the [A439 Warwick Road](#) to prune the existing short-term overgrown vegetation and implement an improved planting program; and
- Air Quality Strategy – Engagement with stakeholders and accommodating for associated input has delayed timescales in delivering the document for public consultation, ahead of final version release.

The principal challenges and barriers to implementation of air quality improvement measures that Stratford on Avon District Council anticipates facing in 2025 and onwards are:

- Increased budget constraints to deliver major scale infrastructure improvements to railways and roads, dependent on outcomes of the [UK Government's Spending Review](#);
- Air Quality Strategy 6-week public consultation period is proposed Q4 2025, however works to the document may be delayed due to stakeholder input, which is beyond the Council's control. As such, it may impede on planned consultation timescales and subsequently push delivery of the final Air Quality Strategy from Q4 2025;
- Reduced large size EV availability (i.e. vans) to replace existing combustion fleet vehicles within the Council;
- Lack of engagement from public with [Places for People](#) and [Act on Energy](#) and the home energy advice services, meaning the volume of cost effective and efficient methods implemented to support reduction in pollutant emissions across the district are limited;
- Potential resource and budget constraints for works involved with [Fortem](#) to improve social housing conditions in four, high-rise resident blocks at Lancaster Court by July 2025 on behalf of [Places for People](#) social enterprise;
- Processes involved in business case production and following any successful campaign by Restoring Your Railway' Steering Group for reinstatement of the former railway between Stratford-upon-Avon and Honeybourne on the North Cotswold line; and
- The availability of power connection and procurement of charge point operators will impede on the volume of EV charge points that can be implemented across the district.

Stratford on Avon District Council worked to implement these measures in partnership with the following stakeholders during 2024:

- Act on Energy (i.e. Social Housing Upgrades);
- Bikeability (e.g. Cycle to School Week);
- 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).

Stratford on Avon District Council anticipates that the measures stated above and in Table 2.2 will continue to support the area achieving compliance in the Studley AQMA and No.1 2010 AQMA post revocation as they have done between 2020-2024, evidenced in this 2025 ASR.

**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	E-cargo Bike Scheme	Promoting Travel Alternatives	Promotion of cycling	2022	2022	Stratford on Avon District Council	N/A	Funded	-	Completed	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	N/A	N/A	Implementation on-going	-
3	Production of Air Quality Strategy 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	Implementation	N/A	N/A	Ongoing production of AQS	-
4	Improvements to cycling infrastructure	Promoting Travel Alternatives	Promotion of cycling	2023	2024	WCC	-	-	-	Completed	N/A	N/A	Installation of cycle path on Warwick Road (A439) out of Stratford upon Avon	-
5	Promotion of active travel within the town centre	Alternatives to private vehicle use	Other	-	2025	WCC/SDC	-	-	-	-	N/A	N/A	Commencement of project to promote active transport as an alternative to vehicle use within the town centre.	-

## 2.3 PM<sub>2.5</sub> – Local Authority Approach to Reducing Emissions and/or Concentrations

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

### **PM<sub>2.5</sub> Monitoring:**

There is not currently any monitoring of PM<sub>10</sub> or PM<sub>2.5</sub> 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<sub>2.5</sub> concentrations from PM<sub>10</sub> measurements.

### **PM<sub>2.5</sub> Background Concentrations:**

The current Defra 2024 background maps for Stratford on Avon District Council (2021 based)<sup>2</sup> show that all background concentrations of PM<sub>2.5</sub> are significantly below the current annual mean target of 20 µg/m<sup>3</sup>. The average predicted background concentration for the district is 6.2µg/m<sup>3</sup> and the highest background concentration is predicted to be 7.6µg/m<sup>3</sup> within the grid square (1 km x 1 km) with the centroid grid reference 424500, 250500. This grid square encompasses a predominantly rural area South of the Stratford on Avon district, between Goldicote, Ettington, and Alderminster. The area also includes Goldicote Business Park, a commercial estate, and the A422 which is a key arterial route into and through Stratford on Avon. Therefore it is likely that all transportation methods and routes in this area are key contributors to PM<sub>2.5</sub> concentrations.

The maximum predicted PM<sub>2.5</sub> background concentration in 2024 (7.6µg/m<sup>3</sup>) was well below the current annual mean target of 20µg/m<sup>3</sup>. This is a decrease of 3.2µg/m<sup>3</sup> when compared to the predicted 2023 PM<sub>2.5</sub> background concentration of 10.8µg/m<sup>3</sup>. Whilst PM<sub>2.5</sub> background concentrations in 2023 were above the annual mean target of 10µg/m<sup>3</sup>

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<sup>1</sup> Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

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

that is not to be exceeded at any monitoring station by 31<sup>st</sup> December 2040, it is now recognised as being below this target in 2024. To further reduce PM<sub>2.5</sub> pollutant emissions, Stratford on Avon District Council will consider additional actions to reduce PM<sub>2.5</sub> across the district. As such, the Council are working positively towards improving and maintaining good air quality for the population.

### **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 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.

During 2024, the Council received 60 smoke related complaints of which:

- 26 related to industrial/commercial burning;
- 24 were categorised as domestic bonfires; and
- 10 were in relation to domestic chimneys (e.g. open fires or log burners).

There were no formal notices served for smoke across Stratford on Avon in 2024.

### **Impact on Human Health:**

The Public Health Outcomes Framework (PHOF) data tool<sup>3</sup>, compiled by Public Health England (PHE) quantifies the mortality burden of PM<sub>2.5</sub> within England on a county and local authority scale. The 2023 fraction of mortality attributable to PM<sub>2.5</sub> emissions across Stratford on Avon is 4.6%, which is lower than the average for the West Midlands (5.1%) and England as a whole (5.2%).

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<sup>3</sup> 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/yr/1/cid/4/tbm/1/fip/0>

### **Measures to Improve PM<sub>2.5</sub> Concentrations:**

Stratford on Avon District Council is taking the following measures to address PM<sub>2.5</sub>:

- Development of an Air Quality Strategy with expectation to issue the draft document for consultation in Q4 2025, allowing 6 weeks for consultation feedback. The authority intend to publish the Air Quality Strategy as final version in Q4 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;
- Completion of [A439 Warwick Road](#) infrastructure works in August 2024 to create a safer, more accessible environment for all road users and pedestrians encouraging active transportation uptake;
- Improvements to the [A3400 Birmingham Road](#) aligned with [Stratford-upon-Avon Area Transport Strategy May 2018](#) to increase capacity on the A3400 with additional lanes, develop pedestrian and cycle links, and enhance the public realm. Thus, aiming to reduce pollutant emission contributions from the dominant alternate transport method, private vehicles, by increased active transport infrastructure;
- Final issue and subsequent adoption of the [Warwickshire Local Cycling and Walking Infrastructure Plan \(LCWIP\)](#) in February 2024;
- Work collaboratively with [Act on Energy](#) and [Orbit](#) on behalf of the '[Warm and Well in Warwickshire](#)' affordable warmth initiative funded through [Social Housing Decarbonisation Fund \(SHDF\)](#), [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;
- Approved use of [Hydrotreated Vegetable Oil \(HVO\) in Refuse Collection Fleet](#) to reduce carbon emissions released from vehicles with existing fleet refuse vehicle fuel responsible for 35% of Council's overall carbon footprint. Thus, replacement fuel supports achievement of the local authority climate change ambitions;
- 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<sub>2.5</sub>.

The Council acknowledge that the move to electric vehicles is not the only solution for air quality and associated health concerns due to particulate matter, including PM<sub>2.5</sub>, 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 '[Park and Stride](#)' 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;

- Support delivery of existing and proposed development along [A3400 Birmingham Road](#) to align with [Stratford-upon-Avon Area Transport Strategy May 2018](#) and enhance the public realm by offering higher standard walking and cycling alternative routes from heavily trafficked commuter roads;
- Facilitating '[Cycle to School Week](#)' which celebrates cycling as a healthier and greener mode of transport, as well as improving participants riding ability and overall confidence, thus encouraging greater active transportation uptake across all generations through road safety assurance;
- Promoting '[World Car Free Day](#)' which promotes an inclusive community and future collaboration between the Council, schools, local businesses, charities and people by working together to identify opportunities to improve air quality by limiting emission source(s) use whilst encouraging mortality longevity and promoting the area as an enabler of active travel;
- Continual implementation of the [Part 2 – Network Plans: Stratford-on-Avon District LCWIP](#) since February 2024 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<sub>2.5</sub>, thus worsening air quality. The Council seeks to reduce, if not eliminate, additional anthropogenic PM<sub>2.5</sub> 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 2024 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 2020 and 2024 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 2024.

#### 3.1.2 Non-Automatic Monitoring Sites

Stratford on Avon District Council undertook non-automatic (i.e. passive) monitoring of NO<sub>2</sub> at 18 sites during 2024. Of the 18 passive monitoring sites, five (DTs 2-6) were located within the Studley AQMA, and 12 (DTs 7-18) were located in the No.1 2010 AQMA. Table A.1 in Appendix A presents the details of the non-automatic sites.

During 2024, there were no changes to the diffusion tube network. Tubes were deployed and collected in line with the Defra LAQM calendar dates ( $\pm 2$  days), excluding May 2024. In May 2024 diffusion tubes were not ordered and/or delivered in time, so no tubes were deployed in May 2024.

All sites achieved a data capture of 75% or greater with the exception of DT 14 (66%), due to missing tubes in collection periods January, February, and April and missing data in May. As such DT 14 required annualisation.

No site achieved 100% data capture throughout 2024 monitoring period due to the missing data in May. Further reduced data capture throughout the year was due to missing tubes (i.e. stolen from site or lost in transit to the laboratory). Following consideration of missing data, there is an average data capture of approximately 86.4% across all sites in 2024.

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<sub>2</sub>)

Table A.2 and Figure A.1 - Figure A.2 in Appendix A compare the ratified and adjusted monitored NO<sub>2</sub> annual mean concentrations for the past five years with the air quality objective of 40µg/m<sup>3</sup>. 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).

Figure A.1 - Figure A.2 highlight a decreasing trend in NO<sub>2</sub> concentrations reported across Stratford on Avon between 2020-2024, albeit in 2021 and 2022 there are slight increases shown. These could be attributable to a return to normalised traffic conditions post COVID-19 lockdown where UK Government advice was given to stay at home where possible, resulting in decreased levels of traffic observed across the UK, and as such, reduced annual mean NO<sub>2</sub> concentrations recorded.

Of the 18 sites that made up the diffusion tube monitoring network in 2024, the NO<sub>2</sub> annual mean concentration decreased at 12 locations. This represents reduction in pollutant concentrations at 66% of sites from 2023.

The maximum decrease in NO<sub>2</sub> concentration between 2023 and 2024 was 1.9µg/m<sup>3</sup> at DT 17. This is located on Birmingham Road (A3400) in Stratford-upon-Avon, within the extent of the No.1 2010 AQMA boundary. The maximum increase in NO<sub>2</sub> concentration between 2023 and 2024 was 6.4µg/m<sup>3</sup> at DT 14. This is located on Windsor Street in Stratford-upon-Avon, which is within the extent of the No.1 2010 AQMA boundary.

**Stratford upon Avon District Council No.1 2010 AQMA:**

Across the 12 diffusion tubes (DTs 7-18) located within the No.1 2010 AQMA, all sites recorded an NO<sub>2</sub> annual mean concentration below 36µg/m<sup>3</sup>. The maximum concentration recorded within the AQMA was at DT 7, 25.6µg/m<sup>3</sup>. This site also recorded the highest annual mean NO<sub>2</sub> concentration across the overall monitoring network during 2024.

Of the tubes deployed in No.1 2010 AQMA, 50% reported decreased concentrations in 2024. Decreases range from 0.1µg/m<sup>3</sup> to 1.9µg/m<sup>3</sup> when compared to 2023 concentrations.

Of the locations which monitored a decrease in the AQMA, the average decrease in the AQMA was 0.8µg/m<sup>3</sup>. The decreases reported at DTs 7, 17, and 18, 0.9µg/m<sup>3</sup>, 1.9µg/m<sup>3</sup> and 1.1µg/m<sup>3</sup> respectively, are higher than this average decrease. These decreases are also greater than the average decrease across the entire diffusion tube network within Stratford on Avon (0.8µg/m<sup>3</sup>).

DT 12 reported an identical annual mean NO<sub>2</sub> concentration between 2023 and 2024 of 16.6µg/m<sup>3</sup>, suggesting no major emission source changes in the area surrounding the tube. DTs 8, 10 and 14-16 reported increases between 2023 and 2024 of 0.8µg/m<sup>3</sup>, 0.8µg/m<sup>3</sup>, 6.4µg/m<sup>3</sup>, 0.1µg/m<sup>3</sup> and 0.5µg/m<sup>3</sup> respectively. These increases highlight potential emission source changes between the two monitoring years meaning data does not align with the long-term trend of declining concentrations in Stratford.

The increase of 0.8µg/m<sup>3</sup> at DTs 8 and 10 between 2023 and 2024 is potentially attributable to roadside tube positioning near to or on A422 and B4086, both key roads into and through central Stratford on Avon with variable pollutant emission sources nearby. Examples include Stratford Hospital and Stratford-upon-Avon Railway Station. As such, the A422 and B4086 routes are potentially busy meaning increased vehicular traffic and subsequent road emissions, with additional emissions from nearby trains a potential cause for increased concentrations. DT 8 may also report increased annual NO<sub>2</sub> concentrations through contribution from boat emissions due to tube location near the Boat House, and boat use along the River Avon although this is not confirmed.

The small increased annual mean NO<sub>2</sub> concentration (0.1µg/m<sup>3</sup>) reported at DT 15 in 2024 is potentially attributable to its background location on a residential road, Emmerson Avenue, although it is not confirmed. Given the nearby Stratford upon Avon School and Jubilee Athletics Track at Stratford upon Avon High School, the area where the tube is located is susceptible to a consistent volume of vehicular traffic from residential receptors.

Therefore, greater emission release is assumed from vehicles heading to and from nearby services frequently, as well as potential idling vehicles.

The  $0.5\mu\text{g}/\text{m}^3$  increase at DT 16 is potentially attributable to its position on Birmingham Road (A3400) a core A-road serving the Stratford on Avon area which leads into A4390, A422, and A46. Therefore, the area lends itself to increased pollutant emissions from potential high frequency vehicular traffic and subsequent pollutant emission release. It is acknowledged that the 2024 [Birmingham Road \(A3400\) Highway Improvements](#) continued throughout 2024, as such the increase in concentration reported at DT 16 between 2023 and 2024 is potentially due to construction works and presence of additional traffic from works vehicles near site. The increase at DT 16 supports the long-term trend of increasing concentrations at this location, which opposes the overall district trend of declining concentrations.

DT 14 reported the largest concentration increase ( $6.4\mu\text{g}/\text{m}^3$ ) in 2024 across No.1 2010 AQMA and across the entire diffusion tube network. This supports the increasing long-term concentration trend at DT 14 since 2019 with the exception of 2023. The 2024 increase could be attributable to its positioning on Windsor Street, a narrow one-way road in Stratford on Avon, utilised as a route that would avoid [Birmingham Road \(A3400\) Highway Improvements](#) and associated vehicular congestion. The highway works have resulted in additional traffic through the town centre with vehicles seeking alternative routes inclusive of Windsor Street, meaning it is likely the road had a tendency to become heavily congested. Consequently, resulting in the stopping and starting of vehicles, which leads to elevated pollutant concentrations. Thus, justifying the maximum increase in  $\text{NO}_2$  pollutant concentrations reported between 2023 and 2024 at DT 14.

### **Studley AQMA:**

The maximum 2024 diffusion tube concentration within Studley AQMA was  $25.4\mu\text{g}/\text{m}^3$  at DT 6, significantly below the  $40\mu\text{g}/\text{m}^3$  annual mean objective for  $\text{NO}_2$  by  $14.6\mu\text{g}/\text{m}^3$ . The diffusion tubes within Studley AQMA all reported decreased concentrations in 2024, with differences of  $0.1\mu\text{g}/\text{m}^3$  (DTs 2 and 6),  $0.9\mu\text{g}/\text{m}^3$  (DT 3),  $1.1\mu\text{g}/\text{m}^3$  (DT 5) and  $1.2\mu\text{g}/\text{m}^3$  (DT 4) when compared to 2023 concentrations.

The decreases reported at DTs 3-5 are higher than the average decrease observed across tube network within Studley AQMA ( $0.7\mu\text{g}/\text{m}^3$ ), and across the entire diffusion tube network in 2024 ( $0.8\mu\text{g}/\text{m}^3$ ).

It is acknowledged that the consistent decline in concentrations across Studley AQMA could be attributable to potential actions implemented from the [A435 Studley Heavy Goods Vehicles \(HGVs\) Routing Study \(October 2017\)](#). Therefore, reducing the volume of HGVs through Studley AQMA with alternative A435 bypass routes and potentially more efficient and cleaner HGV operations. Thus, relieving traffic through Studley and upgrading vehicle specifications to benefit air quality concentrations reported in the AQMA.

The concentration reductions reported in 2024 at monitoring sites within the Studley AQMA support the long-term declining trend identified for concentrations across the district.

### **Summary:**

The district and both AQMAs have achieved compliance within 10% of the NO<sub>2</sub> annual mean objective (36µg/m<sup>3</sup>) and within the annual mean NO<sub>2</sub> objective of 40µg/m<sup>3</sup>. This has been achieved for eight (Studley) and seven (Stratford on Avon town) years respectively as of 2024 monitoring year (see Stratford on Avon District Council ASR24-2430 Appraisal Document and [Stratford on Avon District Council ASR 2024](#)). Therefore, clear monitoring trends of compliance support the revocation of both AQMAs. Revocation intentions were declared in Stratford's ASR 2024. The council has been progressing both AQMAs revocation throughout 2024 monitoring year, recommended and reinforced by Defra in the 2024 ASR appraisal document. Revocation will complete by the end of Q4 2025 with updated UK-AIR details. There is no requirement to declare a new AQMA in the district as reported annual mean NO<sub>2</sub> concentrations remain below 10% of the annual mean NO<sub>2</sub> objective (36µg/m<sup>3</sup>).

The Council is developing an Air Quality Strategy, with an expectation to issue the draft document for consultation in Q4 2025, allowing 6 weeks for consultation feedback, with intention to publish the final version in Q4 2025.

Reduced data capture for specific months (see Section 3.1.2) supports a decreased overall data capture for 2024 which is lower than reported in 2023, 86.4% compared to 91.0% respectively. Thus, identifying that the decrease in concentrations observed across Stratford on Avon in 2024 could be associated with the referenced poor data capture.

However, a continuous declining trend in annual NO<sub>2</sub> concentrations reported, with the exception of DT 14, is identifiable between 2020-2024 irrespective of missing 2024 data due to issues with diffusion tubes. Therefore, it can be deduced that decreased reported

concentrations across Stratford on Avon are indicative of successful air quality measures and actions implemented, instead of poor data capture.

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. It is noted that the monitoring dates coincide with the Defra calendar dates, with the exception of May 2024 which did not report any data due to tube order and/or delivery issue. As such, there is a degree of certainty surrounding the monitoring results provided.

It is possible to infer the risk of exceedances of the 1-hour mean NO<sub>2</sub> air quality objective at diffusion tube monitoring sites. LAQM.TG(22) provides an empirical relationship that states exceedances of the 1-hour objective are unlikely when the annual mean concentration is below 60µg/m<sup>3</sup>. Given that the highest recorded annual mean concentration at any of the diffusion tube monitoring sites is 25.6µg/m<sup>3</sup> in 2024, and the highest in the last five years is 29.5µg/m<sup>3</sup> in 2021, it is possible to conclude that there have been no exceedances of the hourly mean NO<sub>2</sub> objective at all monitoring locations in the last five years.

### **3.2.2 Particulate Matter (PM<sub>10</sub>)**

Particulate Matter (PM<sub>10</sub>) is not monitored in Stratford on Avon.

### **3.2.3 Particulate Matter (PM<sub>2.5</sub>)**

Particulate Matter (PM<sub>2.5</sub>) is not monitored in Stratford on Avon.

### **3.2.4 Sulphur Dioxide (SO<sub>2</sub>)**

Sulphur Dioxide (SO<sub>2</sub>) 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co-located with a Continuous Analyser?	Tube Height (m)
1	Studley Background	Roadside	407270	263025	NO <sub>2</sub>	No	5.0	2.3	No	2.2
2	Studley 1	Roadside	407300	263989	NO <sub>2</sub>	Yes – Studley AQMA	0.0	2.5	No	2.5
3	Studley 2	Roadside	407301	263914	NO <sub>2</sub>	Yes – Studley AQMA	0.0	1.4	No	2.5
4	Studley 4	Roadside	407297	263850	NO <sub>2</sub>	Yes – Studley AQMA	0.0	1.5	No	2.5
5	Studley 11	Roadside	407297	263864	NO <sub>2</sub>	Yes – Studley AQMA	2.8	0.0	No	2.3
6	Studley 12	Roadside	407297	263838	NO <sub>2</sub>	Yes – Studley AQMA	1.5	2.0	No	1.8
7	Alcester Road 2	Roadside	419705	255022	NO <sub>2</sub>	Yes – Stratford upon Avon No.1 2010 AQMA	4.6	3.0	No	2.5
8	Tiddington Rd	Roadside	420727	254826	NO <sub>2</sub>	Yes – Stratford upon Avon No.1 2010 AQMA	0.0	1.7	No	2.2
9	Montague House	Roadside	420202	255101	NO <sub>2</sub>	Yes – Stratford upon Avon No.1 2010 AQMA	3.8	2.5	No	2.0
10	Greenhill St 2	Roadside	419794	255014	NO <sub>2</sub>	Yes – Stratford upon Avon No.1 2010 AQMA	2.0	3.0	No	2.2

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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co-located with a Continuous Analyser?	Tube Height (m)
11	Grove Road 2	Roadside	419757	254918	NO <sub>2</sub>	Yes – Stratford upon Avon No.1 2010 AQMA	0.0	1.4	No	2.5
12	Evesham Place	Roadside	419685	254604	NO <sub>2</sub>	Yes – Stratford upon Avon No.1 2010 AQMA	0.0	3.0	No	1.8
13	Arden Street 2	Roadside	419797	255178	NO <sub>2</sub>	Yes – Stratford upon Avon No.1 2010 AQMA	2.0	2.2	No	2.0
14	Windsor Street	Roadside	419923	255076	NO <sub>2</sub>	Yes – Stratford upon Avon No.1 2010 AQMA	0.0	5.0	No	1.8
15	Stratford Background	Roadside	418820	255117	NO <sub>2</sub>	Yes – Stratford upon Avon No.1 2010 AQMA	3.0	2.0	No	2.2
16	Birmingham Road 3	Roadside	419816	255601	NO <sub>2</sub>	Yes – Stratford upon Avon No.1 2010 AQMA	3.0	1.5	No	2.2
17	Birmingham Road 7	Roadside	419828	255576	NO <sub>2</sub>	Yes – Stratford upon Avon No.1 2010 AQMA	0.0	7.0	No	1.7
18	Birmingham Road 8	Roadside	419813	255611	NO <sub>2</sub>	Yes – Stratford upon Avon No.1 2010 AQMA	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<sub>2</sub> Monitoring Results: Non-Automatic Monitoring (µg/m<sup>3</sup>)**

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2024 (%) <sup>(2)</sup>	2020	2021	2022	2023	2024
1	407270	263025	Roadside	83.0	83.0	9.3	9.4	9.4	8.5	6.9
2	407300	263989	Roadside	90.8	90.8	22.9	24.2	22.5	20.3	20.1
3	407301	263914	Roadside	90.8	90.8	22.4	24.9	23.2	21.1	20.2
4	407297	263850	Roadside	90.8	90.8	26.7	27.6	26.6	25.2	24.0
5	407297	263864	Roadside	90.8	90.8	25.1	29.2	26.7	26.0	24.9
6	407297	263838	Roadside	75.0	75.0	27.0	29.0	27.7	25.5	25.4
7	419705	255022	Roadside	90.8	90.8	26.1	29.5	28.1	26.5	25.6
8	420727	254826	Roadside	83.0	83.0	22.5	23.8	22.1	21.6	22.4
9	420202	255101	Roadside	90.8	90.8	16.9	19.1	19.3	16.7	16.4
10	419794	255014	Roadside	90.8	90.8	21.4	23.4	22.3	23.5	24.3
11	419757	254918	Roadside	90.8	90.8	23.6	24.2	22.9	22.1	22.0
12	419685	254604	Roadside	90.8	90.8	17.7	18.9	18.2	16.6	16.6
13	419797	255178	Roadside	90.8	90.8	20.3	22.0	20.1	18.8	18.1
14	419923	255076	Roadside	66.0	66.0	13.1	14.6	14.9	14.1	20.5
15	418820	255117	Roadside	90.8	90.8	8.7	9.3	11.0	8.0	8.1
16	419816	255601	Roadside	75.0	75.0	26.0	28.4	28.0	24.5	25.0
17	419828	255576	Roadside	83.0	83.0	19.7	22.1	21.3	21.0	19.1
18	419813	255611	Roadside	90.8	90.8	19.9	22.5	20.3	19.8	18.7

- ☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG(22).**
- ☒ **Reported concentrations are those at the location of the monitoring site (annualised, as required), i.e. prior to any fall-off with distance correction.**
- ☒ **Where exceedances of the NO<sub>2</sub> annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2024.**

**Notes:**

The annual mean concentrations are presented as µg/m<sup>3</sup>.

Exceedances of the NO<sub>2</sub> annual mean objective of 40µg/m<sup>3</sup> are shown in **bold**.

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%).

(3) N/A = Not Applicable (the site was removed).

Figure A.1 – Trends in Annual Mean NO<sub>2</sub> Concentrations – Diffusion Tubes (Studley)

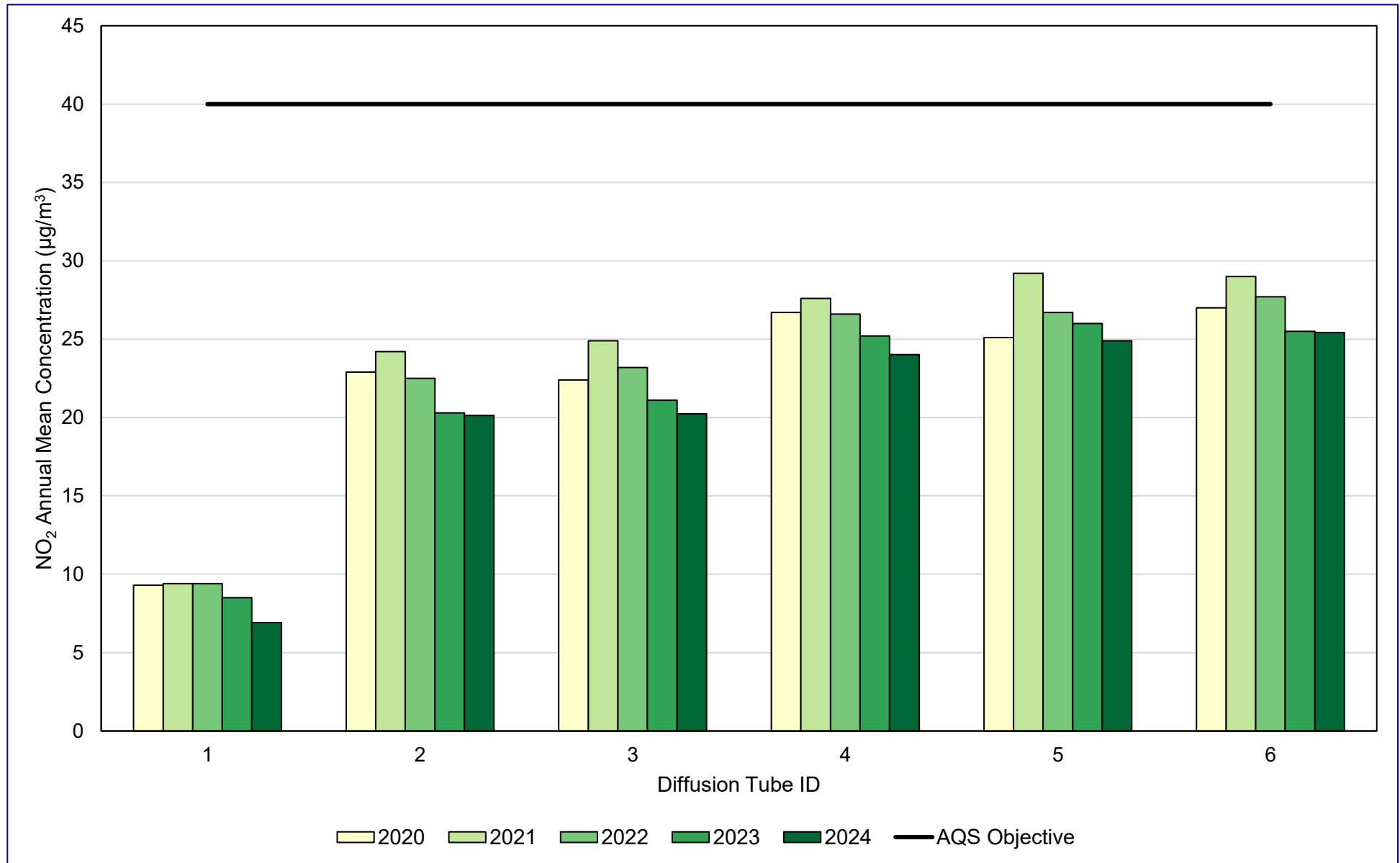
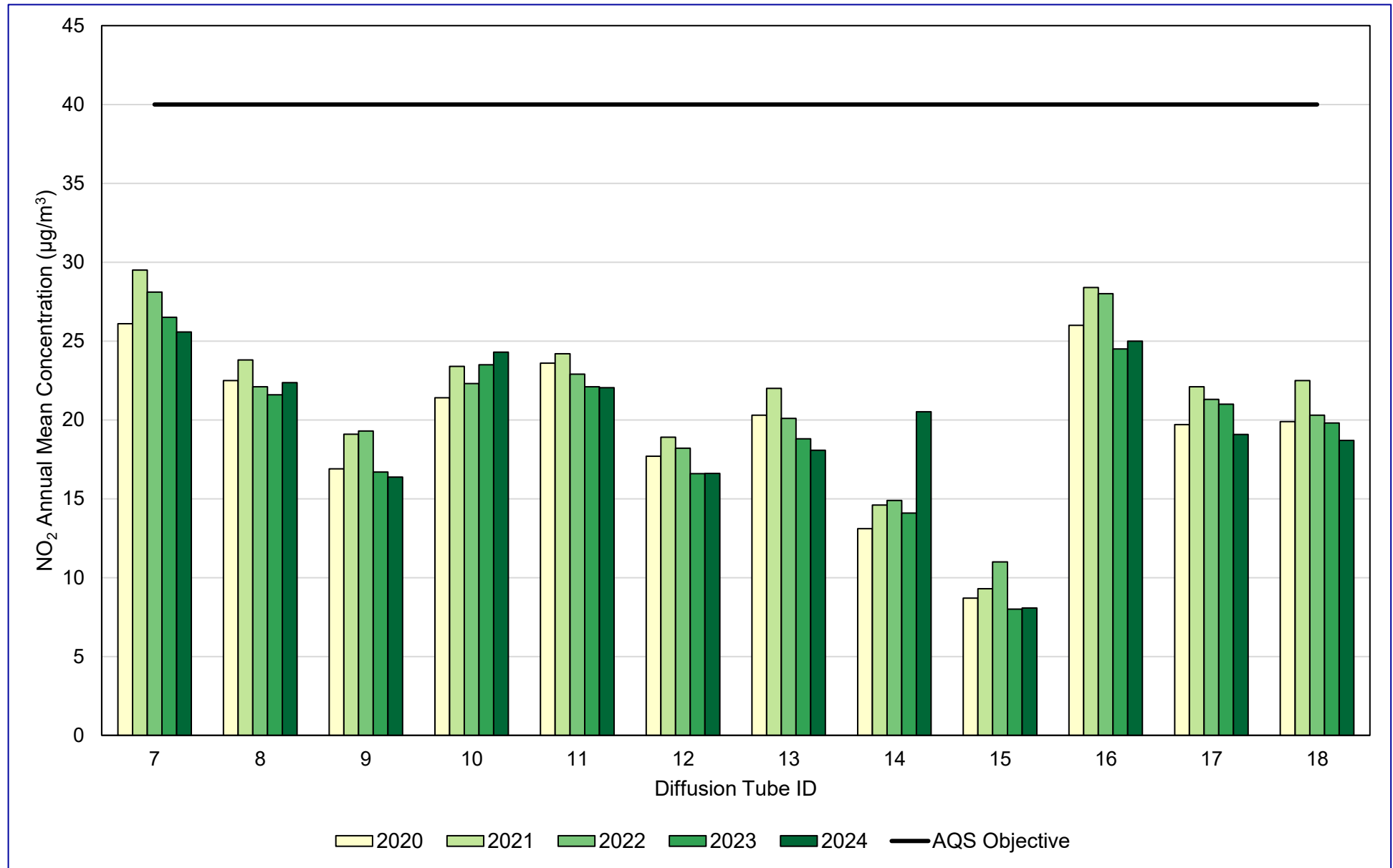


Figure A.2 – Trends in Annual Mean NO<sub>2</sub> Concentrations – Diffusion Tubes (Stratford on Avon)



## Appendix B: Full Monthly Diffusion Tube Results for 2024

Table B.1 – NO<sub>2</sub> 2024 Diffusion Tube Results (µg/m<sup>3</sup>)

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 (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
1	407270	263025	14.1	11.1	8.4	7.2	-	5.4	6.4	5.7	-	6.8	7.5	9.6	8.2	6.9	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes. Missing data in Sep due to lost/ stolen tube.
2	407300	263989	25.2	25.5	24.8	22.3	-	21.0	24.0	19.1	26.8	27.5	29.5	19.1	24.0	20.1	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes.
3	407301	263914	26.3	26.0	27.1	23.5	-	18.7	23.5	17.4	24.5	28.8	29.5	20.5	24.1	20.2	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes.
4	407297	263850	33.4	31.2	30.0	27.3	-	22.8	26.9	20.5	28.4	34.1	35.2	25.5	28.6	24.0	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes.
5	407297	263864	32.6	28.5	31.5	28.0	-	23.2	28.1	22.9	31.5	35.0	<b>40.2</b>	26.0	29.6	24.9	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes.
6	407297	263838	34.1	32.2	31.0	27.7	-	-	-	21.7	34.2	31.3	35.0	27.1	30.3	25.4	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes. Missing data in Jun, Jul due to lost/ stolen tube.
7	419705	255022	30.5	30.4	34.4	30.4	-	32.4	31.8	25.7	29.2	32.4	34.2	25.6	30.5	25.6	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes.
8	420727	254826	26.5	28.0	25.9	23.9	-	26.5	-	23.0	27.6	30.5	32.0	23.0	26.6	22.4	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes. Missing data in Jul due to lost/ stolen tube.
9	420202	255101	24.1	21.0	18.6	16.5	-	14.7	14.7	13.8	17.9	24.6	28.7	20.1	19.5	16.4	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes.
10	419794	255014	29.5	32.5	28.7	27.2	-	27.5	27.9	26.6	26.5	30.4	33.2	27.8	28.9	24.3	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes.
11	419757	254918	28.6	30.3	26.1	25.6	-	23.6	23.3	21.4	23.1	28.3	32.4	25.7	26.2	22.0	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes.
12	419685	254604	23.2	22.3	17.9	18.4	-	18.2	17.2	16.9	20.4	20.6	22.8	19.4	19.8	16.6	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes.
13	419797	255178	26.8	23.1	21.2	18.6	-	16.1	18.1	16.8	24.3	23.4	25.7	22.7	21.5	18.1	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes.

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 (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
14	419923	255076	-	-	23.8	-	-	20.7	20.7	22.5	22.0	27.3	29.5	21.7	23.5	20.5	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes. Missing data in Jan, Feb, Apr due to lost/ stolen tube.
15	418820	255117	14.9	12.3	8.8	6.3	-	4.9	5.7	5.2	8.2	11.3	17.5	10.6	9.6	8.1	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes.
16	419816	255601	24.2	33.8	30.3	27.5	-	24.3	28.2	-	-	37.3	36.0	24.7	29.8	25.0	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes. Missing data in Aug, Sep due to lost/ stolen tube.
17	419828	255576	26.6	24.3	21.5	-	-	19.4	20.7	18.7	22.8	24.3	27.4	21.9	22.7	19.1	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes. Missing data in Apr due to lost/ stolen tube.
18	419813	255611	24.2	25.3	22.8	19.4	-	18.7	20.9	17.4	21.4	28.0	27.3	19.4	22.3	18.7	-	Data not reported for May 2024 due to issues with tube order and/or delivery of tubes.

All erroneous data has been removed from the NO<sub>2</sub> diffusion tube dataset presented in Table B.1.

Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG(22).

Local bias adjustment factor used.

National bias adjustment factor used.

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

Stratford on Avon District Council confirm that all 2024 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.

**Notes:**

Exceedances of the NO<sub>2</sub> annual mean objective of 40µg/m<sup>3</sup> are shown in **bold**.

NO<sub>2</sub> annual means exceeding 60µg/m<sup>3</sup>, indicating a potential exceedance of the NO<sub>2</sub> 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 During 2024

Stratford on Avon District Council identified six ongoing developments that required an Air Quality Assessment (AQA) or equivalent Environmental Assessments (EAs) / Construction Management Plans (CMPs) within the monitoring year of 2024. Further investigation between the Council's Planning Department and Environmental Protection Department has identified that they are not expected to significantly impact the air quality objectives within the area as development progresses into the 2025 monitoring year and onwards. It is acknowledged that certain information for the applications is confidential, therefore it cannot be disclosed in the ASR. More detail regarding the specific applications can be obtained by contacting the Council.

It is also acknowledged that the [A3400 Birmingham Road](#) underwent major infrastructure development during 2024, alongside completion of [A439 Warwick Road](#) infrastructure works in August 2024. In addition, re-configuration works on the Evesham Road and Luddington Road connected with the ongoing South Western Relief Road have been completed. All schemes have had the potential to increase idling traffic throughout the District whilst leading to traffic detours, creating potential pollution hotspots elsewhere in the District.

A summary of the publicly available information regarding planned development has been provided in [Table C.1](#).

**Table C.1 – 2024 New or Ongoing Planned Developments in Stratford on Avon**

Application Number	Location	Proposal	Status
18/01061/REM	Land to the North and West of Bishopton Lane, Stratford upon Avon	Reserved Matters application for the erection of 500 dwellings and associated public open space, landscaping and infrastructure in pursuance of Outline Planning Permission Ref. No. 15/04499/OUT and Conditions 1, 2, 4, 6, 7, 9, 10, 12, 15 and 19 of that consent.	Approved - Ongoing
19/02827/REM	Land West Of Stratford Land South Of Alcester	Application for approval of reserved matters relating to appearance,	Approved - Ongoing

Application Number	Location	Proposal	Status
	Road North Of Evesham Road Stratford-upon-Avon	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).	
18/01892/OUT	Long Marston Airfield Campden Road Lower Quinton Stratford-upon-Avon CV37 8LL	Outline application (with all matters reserved) for a phased development comprising up to 3,100 new homes (Class C2/C3), employment (Use Classes B1(a)-(c)) including a business park of approximately 5.7ha (gross) and further employment space/land within mixed-use areas, village centre comprising a range of uses (Use Classes A1-A5/B1(a)/D1/D2), plus two primary schools and one secondary school. Provision of new open space including parks and amenity space. Provision of a new access junction from Campden Road. Associated infrastructure, utilities, engineering and landscaping works including sustainable drainage systems. The proposal incorporates the demolition/removal of the runways and other hardstanding and identified existing structures.	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	Approved - Ongoing

Application Number	Location	Proposal	Status
		(Use Class C2/C3), up to 1,625sqm (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 During 2024

During 2024, Stratford on Avon District Council continued to progress revocation of the two existing AQMAs with completion estimated by end of Q4 2025. The local authority also began to develop an Air Quality Strategy in 2024 with scheduled public consultation in Q4 2025 for six weeks, and final issue by end of Q4 2025. The Council acknowledge the requirement to expand the passive monitoring network and are currently reviewing resources to re-use and re-distribute existing monitoring locations and the likely implementation of new resources following Defra's 2024 ASR appraisal.

## QA/QC of Diffusion Tube Monitoring

Stratford on Avon District Council's diffusion tubes in 2024 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<sub>2</sub> tube analysis and the Annual Field Inter-Comparison Exercise. These provide strict performance criteria for

participating laboratories to meet, thereby ensuring NO<sub>2</sub> 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 31 local authority co-location studies which used tubes supplied by Gradko International with the 20% TEA in water preparation method in 2024, 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 2024 was completed in adherence with the 2024 Defra Diffusion Tube Monitoring Calendar with the exception of May 2024, whereby diffusion tubes were not ordered and/or delivered in time for the changeover. Therefore, data is missing for this month. All other changeovers completed throughout the year were within  $\pm 2$  days of the specified dates each month, in line with Defra guidance.

### **Diffusion Tube Annualisation**

For any site where data capture is below 75%, annualisation is to be performed. This is because section 7.196 of LAQM.TG(22) states that:

*"If data capture is below 75% for the year, then it is necessary to annualise the data... [as] the concentration varies throughout the year, and the instrument may have been operational for a period of above or below average concentrations".*

In 2024, only DT 14 required annualisation, owing to the fact that the tubes were not returned to Gradko International for four monitoring periods (January, February, April and May 2024). This was due to tubes being stolen and not deployed in May 2024 due to issues with the tube order and/or delivery. As such, there was insufficient data capture at the location (66.0%).

In order to complete the annualisation process, data has been taken from a number of background monitoring stations that are part of the Automatic Urban and Rural Network (AURN) – West Bromwich Kenrick Park, Leamington Spa, Coventry Allesley and

Birmingham Ladybrook. This is in line with Box T-9 of TG(22), which states to annualise data:

*“Identify two to four nearby, long-term, continuous monitoring sites, ideally those forming part of the national network. The data capture for each of these sites should be at least 85%. These sites should be background (Urban Background, Suburban or Rural) sites to avoid any very local effects that may occur at Urban Centre, Roadside or Kerbside sites, and should, wherever possible lie within a radius of about 50 miles”.*

It is noted that the automatic monitor AURN West Bromwich Kenrick Park did not achieve  $\geq 85\%$  data capture in 2024, a condition required for annualisation of data, therefore this site was rejected for annualisation.

**Table C.2 – Annualisation Summary (concentrations presented in  $\mu\text{g}/\text{m}^3$ )**

Site ID	Annualisation Factor AURN Leamington Spa	Annualisation Factor AURN Coventry Allesley	Annualisation Factor AURN Birmingham Ladywood	Average Annualisation Factor	Raw Data Simple Annual Mean ( $\mu\text{g}/\text{m}^3$ )	Annualised Data Simple Annual Mean ( $\mu\text{g}/\text{m}^3$ )
14	1.0504	1.0503	1.0144	1.0383	23.5	24.4

### Diffusion Tube Bias Adjustment Factors

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  $\text{NO}_x/\text{NO}_2$  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 0.84 to the 2024 monitoring data. A summary of bias adjustment factors used by Stratford on Avon District Council over the past five years is presented in Table C.3.

No co-location studies are carried out by Stratford on Avon District Council therefore only a national factor can be applied. The national factor for Gradko 20% TEA in water, as presented in the Diffusion Tube Bias Factors Spreadsheet v06/25, was 0.84 based on 31 studies. 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
2024	National	06/25	0.84
2023	National	03/24	0.81
2022	National	09/23	0.85
2021	National	03/22	0.84
2020	National	03/21	0.81

**NO<sub>2</sub> Fall-off with Distance from the Road**

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO<sub>2</sub> concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool (DTDPT)/NO<sub>2</sub> fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO<sub>2</sub> 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 2024.

Figure C.1 - National Bias Adjustment Factor Spreadsheet (06/25)

National Diffusion Tube Bias Adjustment Factor Spreadsheet							Spreadsheet Version Number: 06/25				
<p>Follow the steps below <b>in the correct order</b> to show the results of <b>relevant</b> co-location studies</p> <p>Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods</p> <p>Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet</p> <p>This spreadsheet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.</p>										<p>This spreadsheet will be updated at the end of September 2025</p> <p><a href="#">LAQM Helpdesk Website</a></p>	
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:	Step 2:	Step 3:	Step 4:								
Select the Laboratory that Analyses Your Tubes from the Drop-Down List	Select a Preparation Method from the Drop-Down List	Select a Year from the Drop-Down List	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 <sup>3</sup> shown in blue at the foot of the final column.								
If a laboratory is not shown, we have no data for this laboratory.	If a preparation method is not shown, we have no data for this method at this laboratory.	If a year is not shown, we have no data <sup>2</sup>	If you have your own co-location study then see footnote <sup>4</sup> . If uncertain what to do then contact the Local Air Quality Management Helpdesk at <a href="mailto:LAQMHelpdesk@bureauveritas.com">LAQMHelpdesk@bureauveritas.com</a> or 0800 0327953								
Analysed By <sup>1</sup>	Method <small>To undo your selection, choose (All) from the popup list</small>	Year <sup>5</sup> <small>To undo your selection, choose (All)</small>	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m <sup>3</sup> )	Automatic Monitor Mean Conc. (Cm) (µg/m <sup>3</sup> )	Bias (B)	Tube Precision <sup>6</sup>	Bias Adjustment Factor (A) (Cm/Dm)	
Gradko	20% TEA in water	2024	R	Eastleigh Borough Council	12	19	17	12.0%	G	0.89	
Gradko	20% TEA in water	2024	R	Gateshead Council	12	20	18	13.9%	G	0.88	
Gradko	20% TEA in water	2024	R	Gateshead Council	11	20	17	19.7%	G	0.84	
Gradko	20% TEA in water	2024	R	Gateshead Council	12	24	20	21.7%	G	0.82	
Gradko	20% TEA in water	2024	R	Gateshead Council	12	27	23	19.0%	G	0.84	
Gradko	20% TEA in water	2024	R	Gateshead Council	12	28	30	-6.0%	G	1.06	
Gradko	20% TEA in water	2024	R	Brighton & Hove City Council	11	34	27	26.3%	G	0.79	
Gradko	20% TEA in water	2024	R	Liverpool City Council	12	34	25	35.7%	G	0.74	
Gradko	20% TEA in water	2024	KS	Liverpool City Council	10	52	47	10.2%	G	0.91	
Gradko	20% TEA in water	2024	R	Nottingham City Council	10	29	26	12.2%	G	0.89	
Gradko	20% TEA in water	2024	R	Wychavon District Council	10	29	26	14.7%	G	0.87	
Gradko	20% TEA in water	2024	R	Worcestershire	12	12	12	-3.4%	G	1.04	
Gradko	20% TEA in water	2024	R	Cheshire West And Chester	12	33	27	21.7%	G	0.82	
Gradko	20% TEA in water	2024	R	Cheshire West And Chester	11	30	27	12.9%	G	0.89	
Gradko	20% TEA in water	2024	R	The Highland Council	12	19	18	6.9%	G	0.94	
Gradko	20% TEA in water	2024	R	The Highland Council	11	15	11	35.3%	G	0.74	
Gradko	20% TEA in water	2024		<b>Overall Factor<sup>3</sup> (31 studies)</b>					<b>Use</b>	<b>0.84</b>	

## Appendix D: Maps of Monitoring Locations and AQMAs

Figure D.1 – Stratford on Avon District Council – Studley AQMA

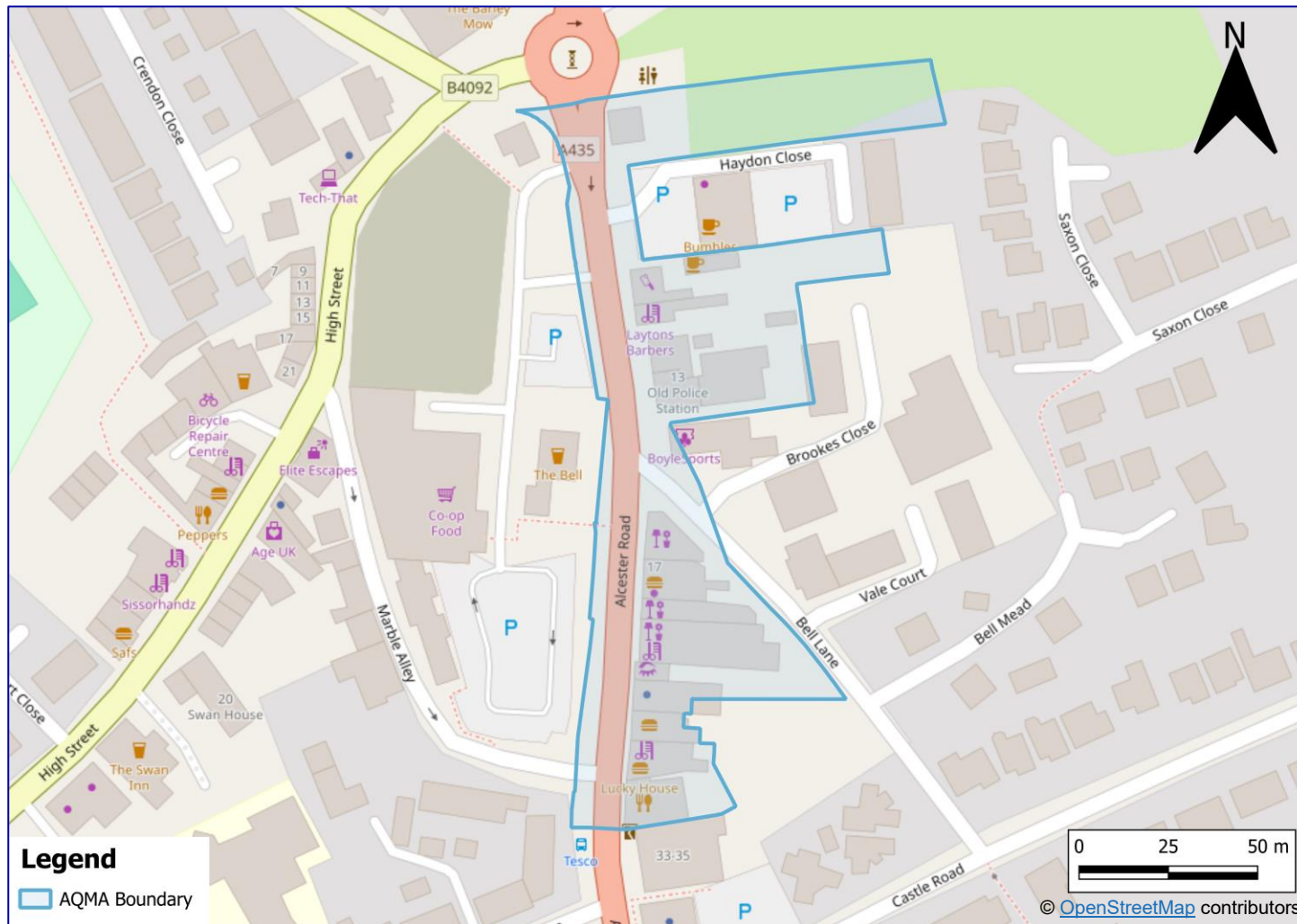


Figure D.2 – Stratford on Avon District Council – Stratford AQMA

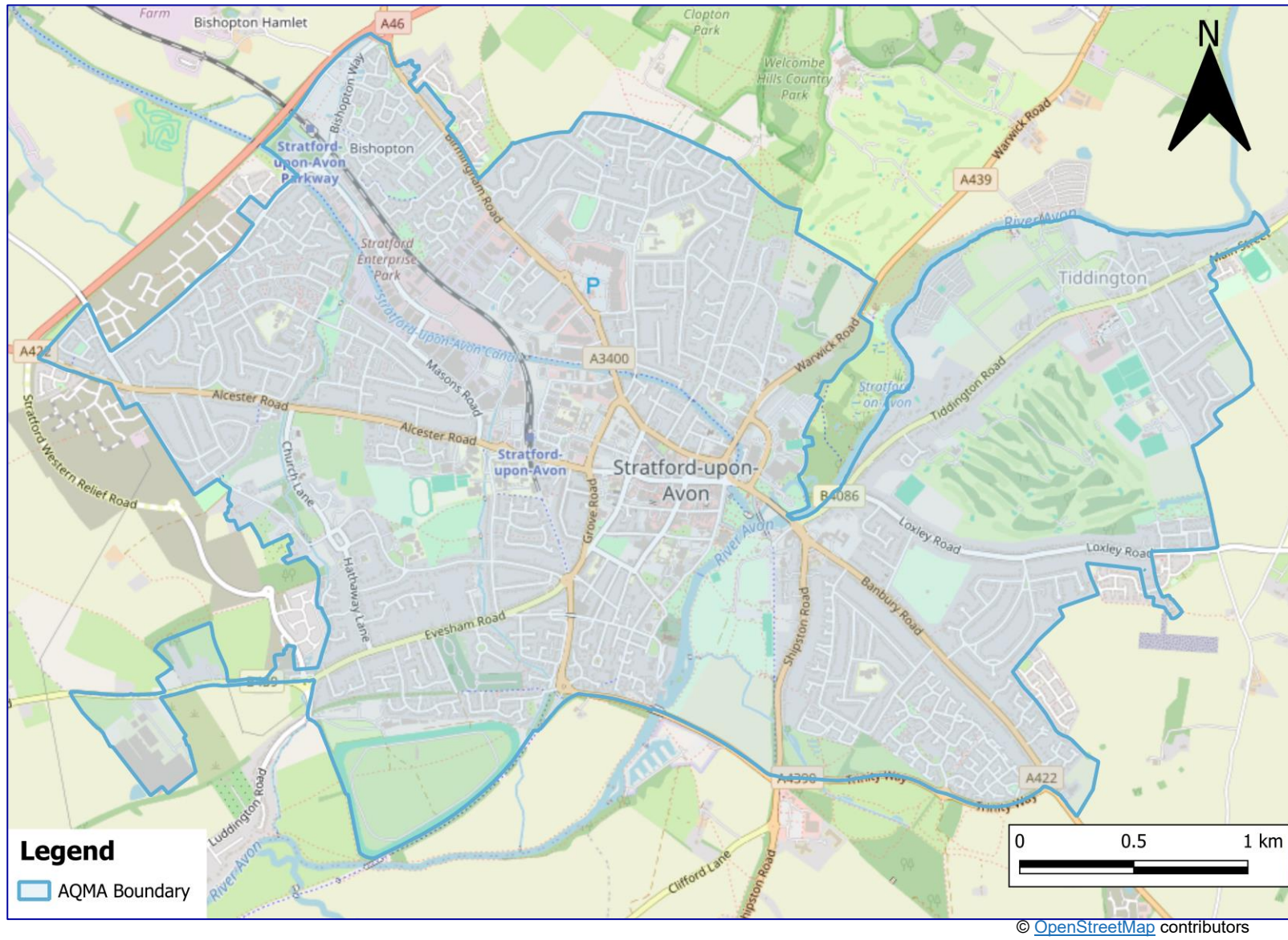


Figure D.3 – Map of All Non-Automatic Monitoring Locations in Stratford on Avon District Council

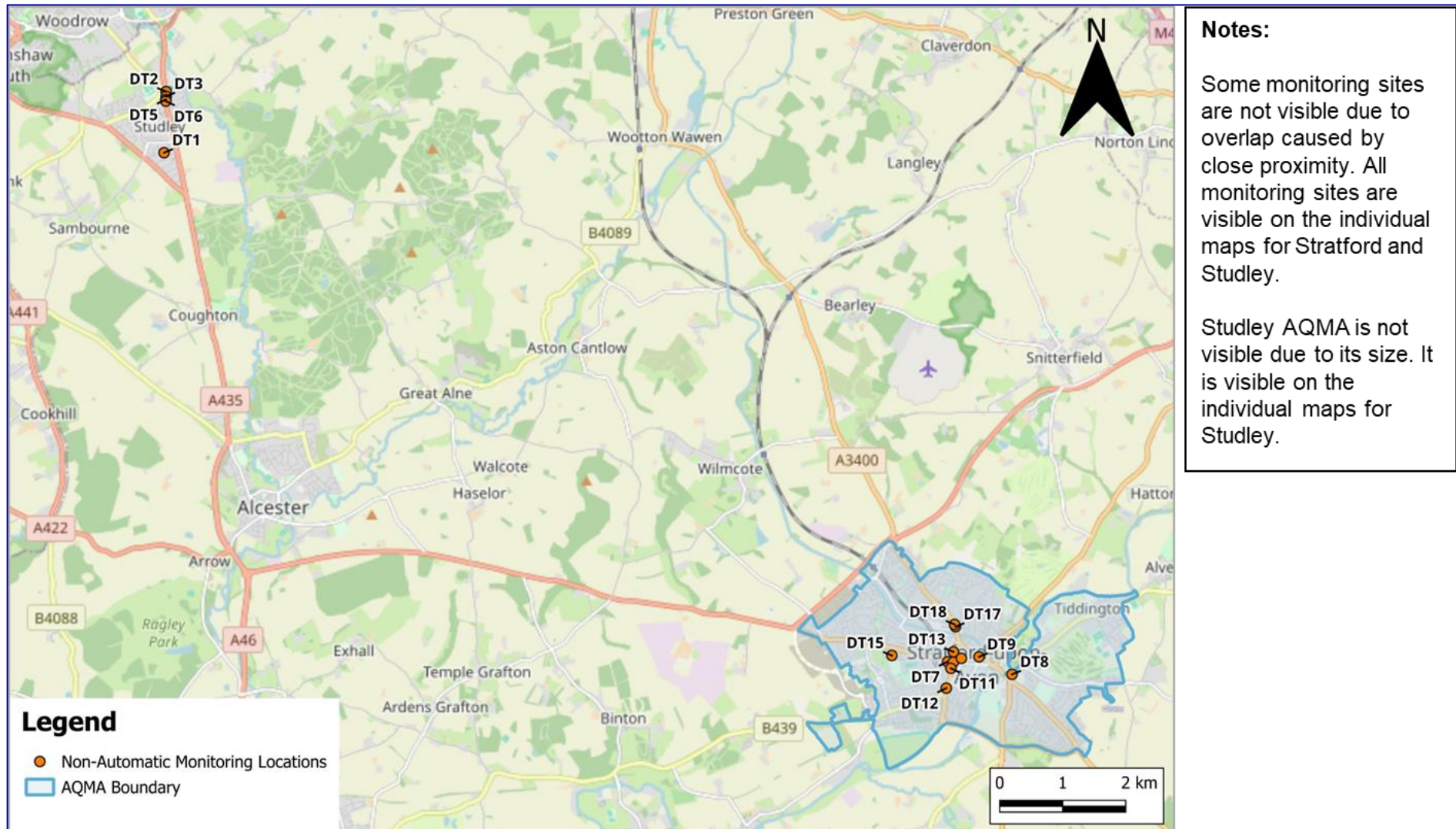


Figure D.4 – Map of all Non-Automatic Monitoring Locations: Stratford

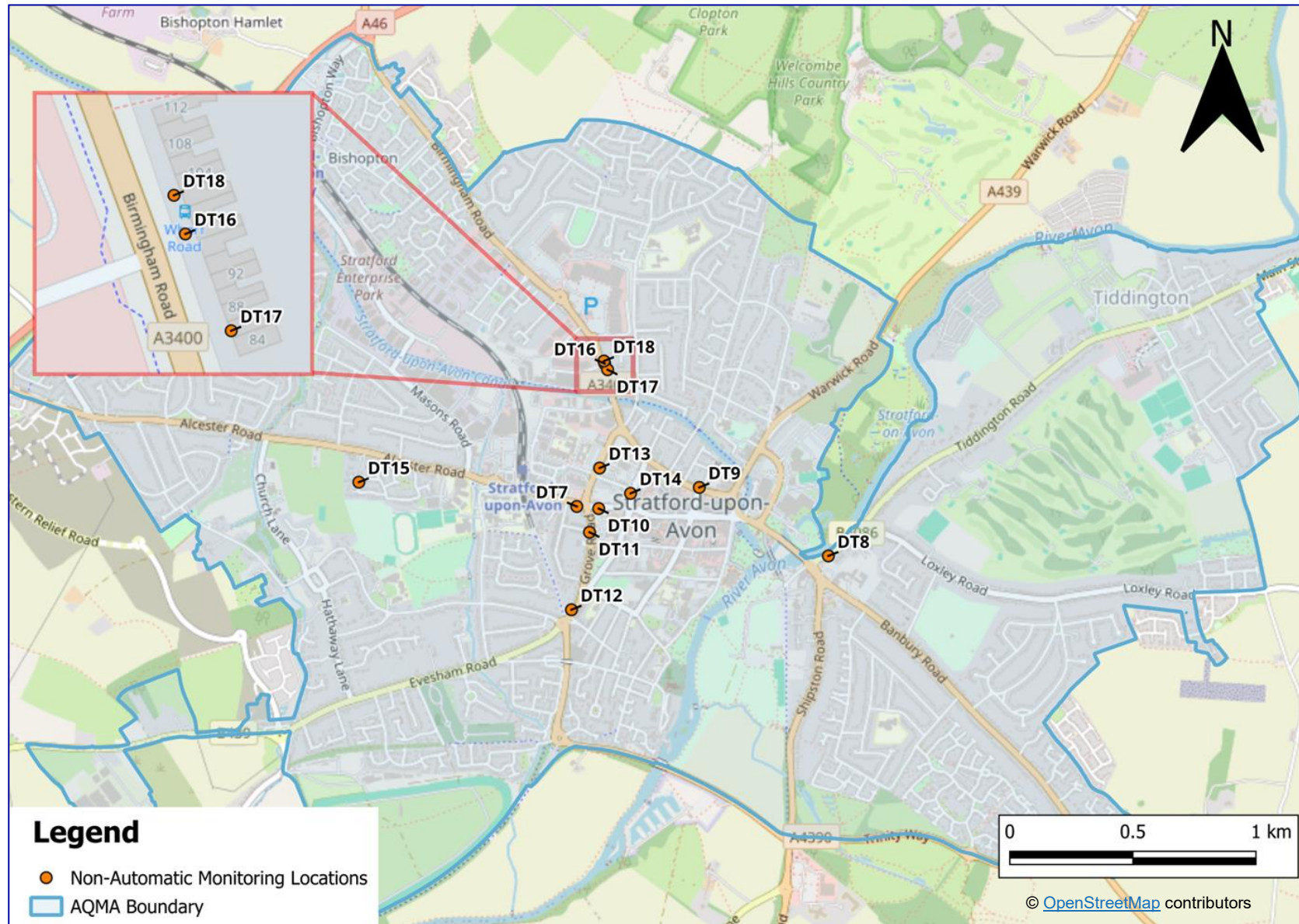


Figure D.5 – Map of Non-Automatic Monitoring Locations: Studley

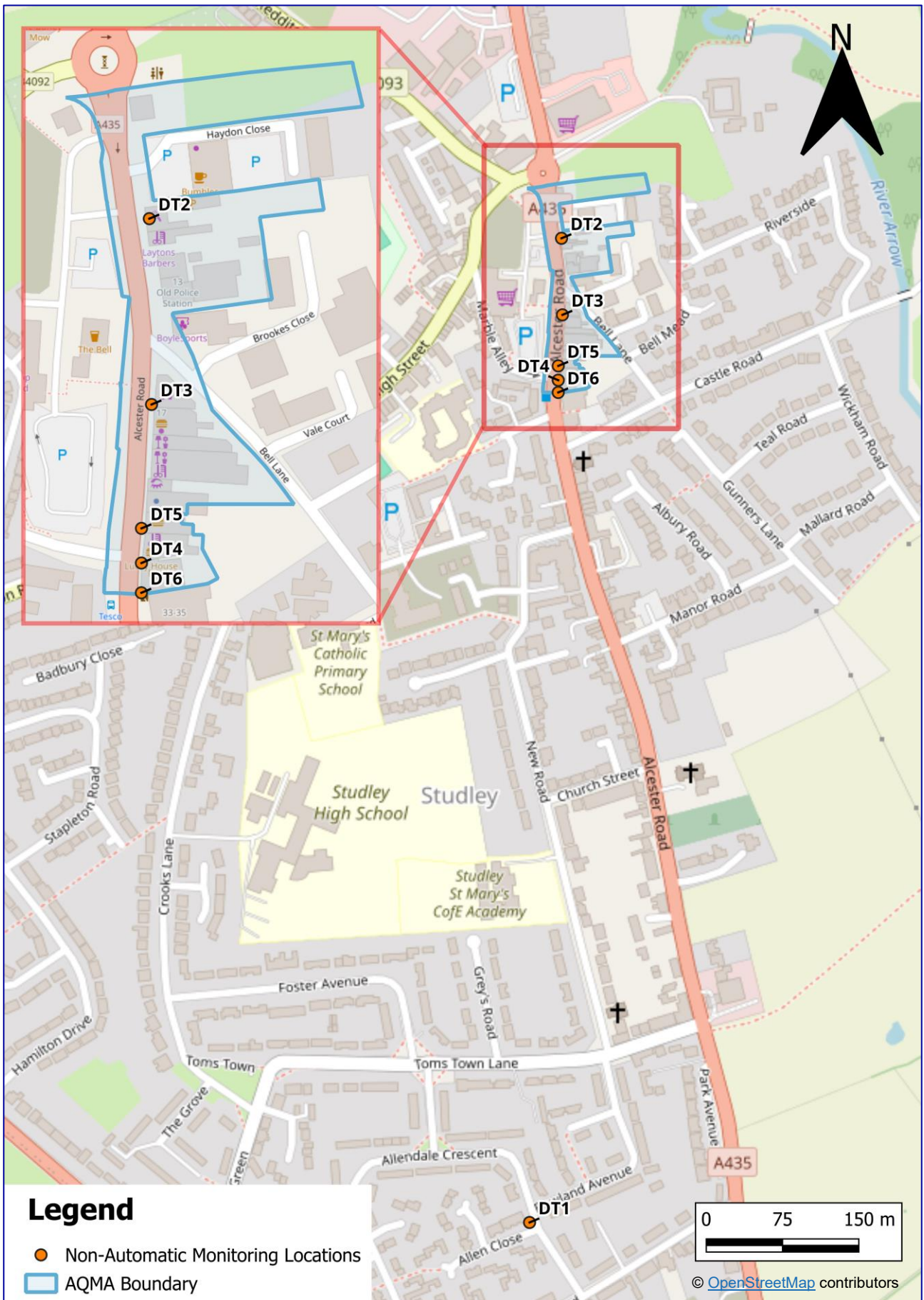
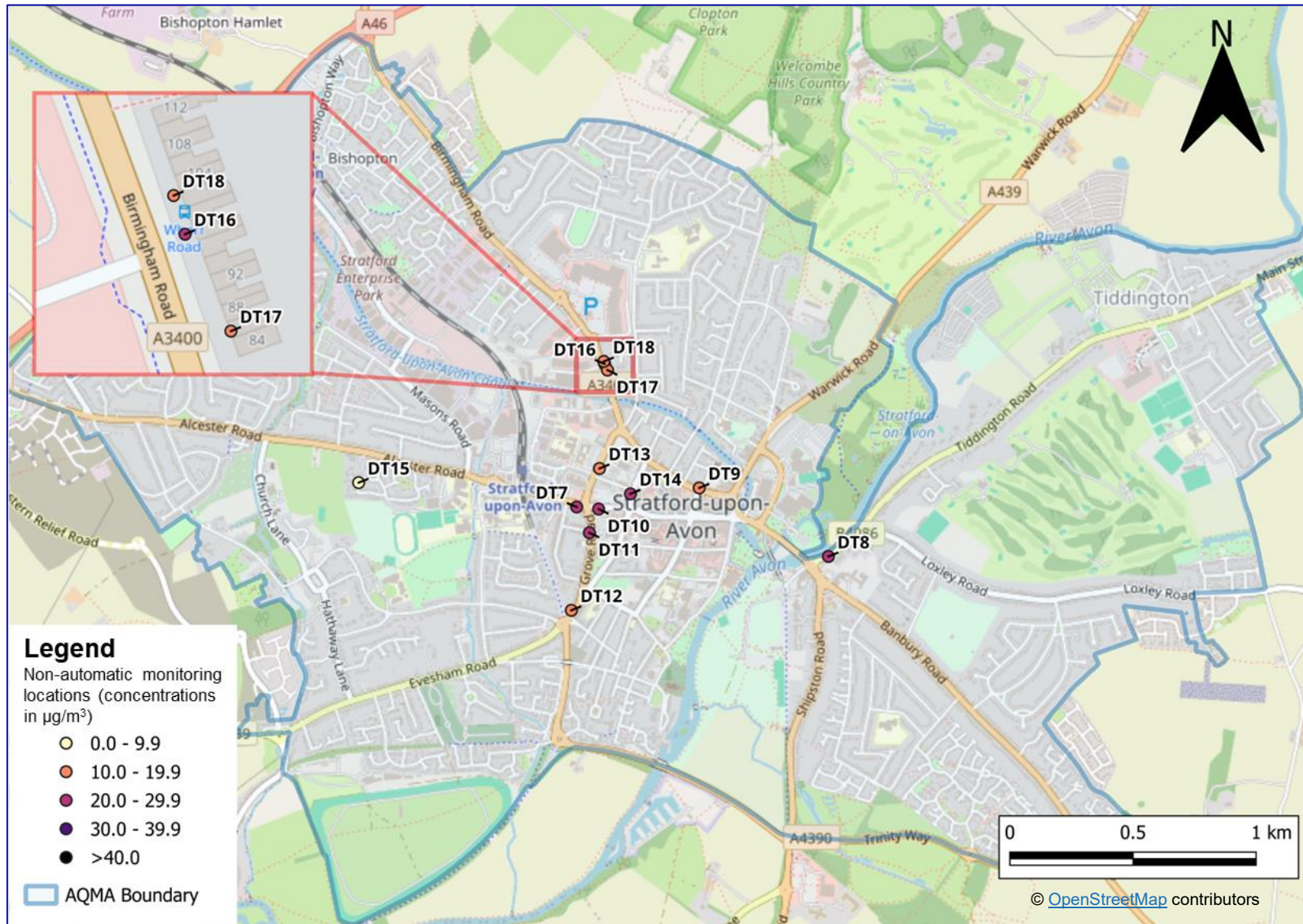
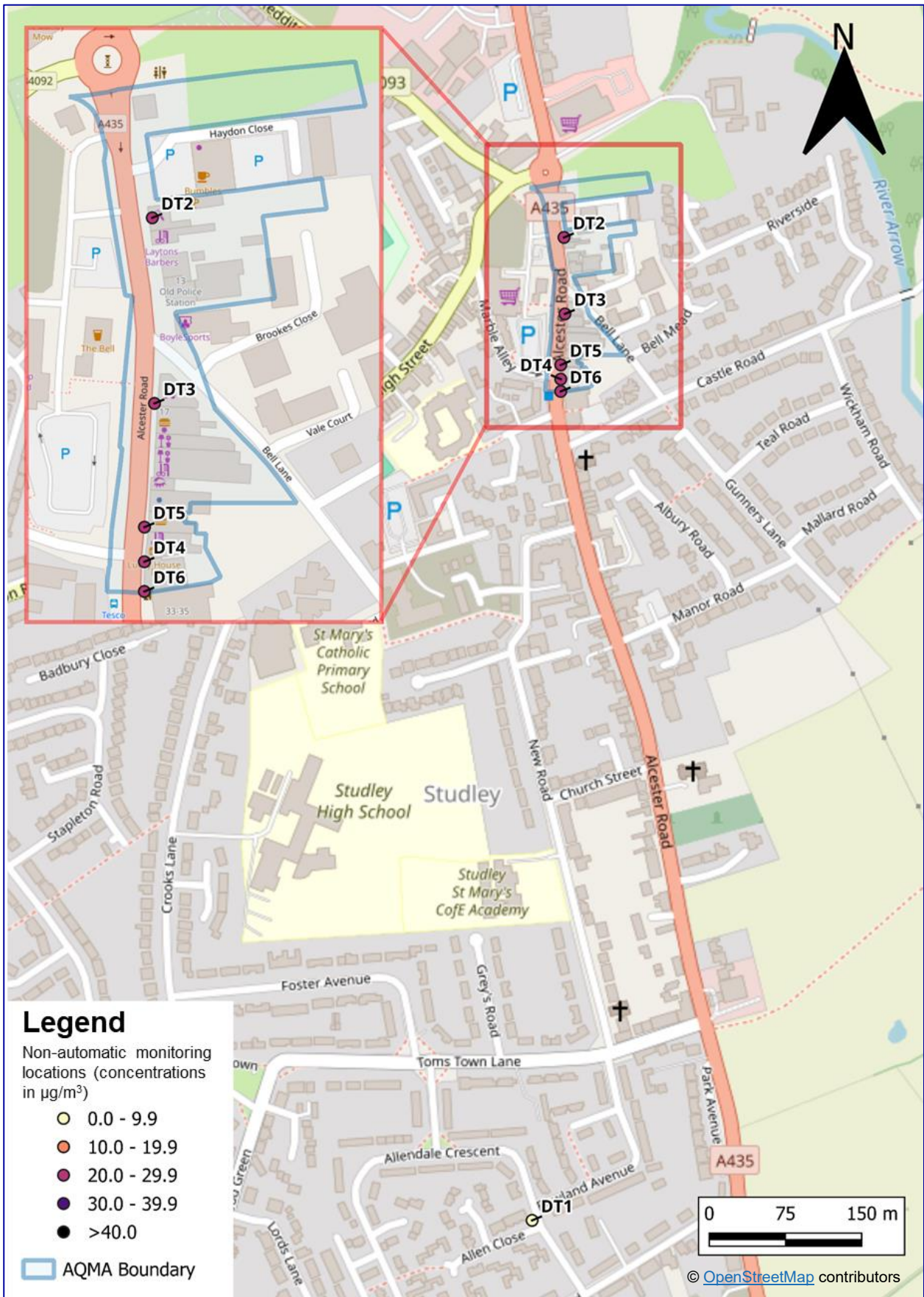


Figure D.6 – Map of 2024 NO<sub>2</sub> Concentrations at Non-Automatic Monitoring Locations: Stratford



**Figure D.7 – Map of 2024 NO<sub>2</sub> Concentrations at Non-Automatic Monitoring Locations: Studley**



## Appendix E: Summary of Air Quality Objectives in England

**Table E.1 – Air Quality Objectives in England<sup>4</sup>**

Pollutant	Air Quality Objective: Concentration	Air Quality Objective: Measured as
Nitrogen Dioxide (NO <sub>2</sub> )	200µg/m <sup>3</sup> not to be exceeded more than 18 times a year	1-hour mean
Nitrogen Dioxide (NO <sub>2</sub> )	40µg/m <sup>3</sup>	Annual mean
Particulate Matter (PM <sub>10</sub> )	50µg/m <sup>3</sup> , not to be exceeded more than 35 times a year	24-hour mean
Particulate Matter (PM <sub>10</sub> )	40µg/m <sup>3</sup>	Annual mean
Sulphur Dioxide (SO <sub>2</sub> )	350µg/m <sup>3</sup> , not to be exceeded more than 24 times a year	1-hour mean
Sulphur Dioxide (SO <sub>2</sub> )	125µg/m <sup>3</sup> , not to be exceeded more than 3 times a year	24-hour mean
Sulphur Dioxide (SO <sub>2</sub> )	266µg/m <sup>3</sup> , not to be exceeded more than 35 times a year	15-minute mean

<sup>4</sup> The units are in microgrammes of pollutant per cubic metre of air (µg/m<sup>3</sup>).

## 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
COVID-19	Coronavirus-19
CO <sub>2</sub>	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 Insulation

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 <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides
NPIF	DfT National Productivity Investment Fund
ONS	Office for National Statistics
PHE	Public Health England
PM <sub>10</sub>	Airborne particulate matter with an aerodynamic diameter of 10µm or less
PM <sub>2.5</sub>	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
PV	Photovoltaic
Q4	4 <sup>th</sup> 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 <sub>2</sub>	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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- 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.
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