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: June 2025

Information	<Local Authority Name> Details
Local Authority Officer	Anjana Papnai, Gary Durrant
Department	Regulatory Services
Address	Guildford Borough Council Millmead House Millmead GU2 4BB
Telephone	01483 505050
E-mail	regulatoryservices@guildford.gov.uk
Report Reference Number	ASR GBC 2025
Date	June 2025, Revised October 2025

Local Responsibilities and Commitment

This ASR was prepared by the Regulatory Services, Environmental Protection Team of Guildford Borough Council with the support and agreement of the following officers and departments:

Anjana Papnai, Environmental Health Officer, Regulatory Services
Gary Durrant, Lead Environmental Protection Specialist, Regulatory Services
Martin Knowles, Programme Lead (Transport and Infrastructure), Strategic Services
Lisa Harvey-Vince, Health Protection Team Manager, Public Health, Adult Wellbeing and Health Partnerships Directorate, Surrey County Council

The other services who have assisted in this report are Guildford Planning Policy – Transport; Commercial Services, Climate Change – Organisational Development, Surrey Highways and Transport.

The ASR has been approved by the Joint Assistant Regulatory Services, the Joint Strategic Director Economy Planning and Place and Councillor Merel Rehorst-Smith Portfolio Holder for Democracy and Regulatory Services. The Public Health Team at Surrey County Council under the Director of Public Health, work closely with Surrey Air Alliance including District and Borough Council as partners responsible for submitting Annual Statement Reports (ASR) on air quality within

their area; to develop initiatives, air quality action plans, and implement actions to improve air quality across the county of Surrey.

This ASR has been approved by:

This ASR has not been formally approved by a Director of Public Health, but the completed report has been reviewed in consultation with the Public Health Representative.

If you have any comments on this ASR please send them to Gary Durrant, Lead Environmental Protection Specialist at:

Guildford Borough Council, Millmead House, Millmead Guildford, Surrey, GU2 4BB

Tel: 01483 505050;

Email: regulatoryservices@guildford.gov.uk

Executive Summary: Air Quality in Our Area

In 2024–25, Guildford Borough Council reaffirmed its commitment to improving air quality, safeguarding public health, and advancing sustainable transport. Through enhanced monitoring, strategic interventions, and strong partnerships, the Council continued to address air pollution across the borough.

Key achievements include the expansion of the air quality monitoring network, enabling more precise identification of pollution hotspots and evidence-based resource allocation. Nitrogen dioxide (NO_2) levels remained well below the annual air quality objective in the Compton and Shalford AQMAs for the two consecutive years. However, exceedances persist at Park Street (site TC6) in the Guildford Town Centre AQMA, highlighting the need for continued focus.

Phase one of the Guildford Town Centre and Shalford Economic Feasibility Study for Air Quality Improvement concluded in September 2024, with phase two now underway. Notable infrastructure improvements included the completion of the Ash Road Bridge, the successful rollout of the Beryl e-bike hire scheme, and the expansion of on-street EV charging points.

The planning system played a pivotal role, with the Council requiring air quality assessments, sustainable transport plans, EV infrastructure, and design with due consideration of air quality issues, for major developments. Ongoing collaboration with developers ensured effective integration of mitigation measures.

A revised Air Quality Strategy was approved in draft form by the Executive Committee and is pending final adoption following stakeholder consultation. Additionally, the first draft of the Air Quality Chapter for the Joint Strategic Needs Assessment, developed jointly by the Surrey Air Alliance, aims to align air quality, transport, health, and demographic data for improved strategic planning.

Public engagement was a core focus, with the Council supporting national campaigns such as Clean Air Night and hosting Guildford Cleaner Air Day to raise awareness and promote behavioural change.

While significant progress has been made, challenges remain—particularly in securing sustainable funding and resources to maintain momentum.

Air Quality in Guildford Borough Council

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

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

The key pollutant of concern in Guildford Borough Council is NO_2 emissions from road transport, particularly the observed exceedances of annual average objective levels in certain hotspots in our existing air quality management areas.

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. The key pollutant of concern in Guildford Borough Council is NO_2 emissions from road transport, particularly the observed exceedances of annual average objective levels in certain hotspots in our existing air quality management areas.

Table ES 1 - Description of Key Pollutants

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

Guildford Borough and Existing infrastructure

Population and Health Context

As of mid-2023, the estimated population of Guildford Borough stands at 149,176, based on data from the 2021 Census. According to Surrey's Health and Wellbeing Strategy[1] (2022 update), several areas within the borough—specifically Westborough, Bellfields and Slyfield Ward, and Ash Wharf Ward—have been identified as 'Key Neighbourhoods' experiencing some of the poorest health outcomes in Surrey. Of these, Westborough and Bellfields and Slyfield are among the top five initial priority areas. Despite these health disparities, nitrogen dioxide (NO_2) levels in these locations are not expected to exceed national air quality objective thresholds.

Transport Infrastructure

Guildford benefits from a diverse and extensive transport infrastructure. Rail services form a vital component of the borough's connectivity, with 12 stations serving the area. Guildford railway station functions as a major interchange, linking the Portsmouth Direct Line, the New Guildford Line, the North Downs Line, and the Ascot to Guildford Line. In 2011, 12.6% of commuting residents used rail to travel to work.

However, a 2013 assessment[2] highlighted several shortcomings in the rail network, including overcapacity, weak interconnectivity with other Surrey hubs, and insufficient access between new developments and existing stations. In response, two new stations have been proposed: Guildford West (Park Barn, Scheme NR2) and Guildford East (Merrow, Scheme NR3). Guildford West, in particular, is strategically located to serve high-density and economically significant areas such as the Royal Surrey County Hospital, the University of Surrey's Manor Park campus, Surrey Sports Park, and the Surrey Research Park.

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[1] https://www.healthysurrey.org.uk/about/strategy/surrey-health-and-well-being-strategy-update-2022#section-3

[2] Infrastructure Delivery Plan - Guildford Borough Council

Road Network

Guildford is traversed by key Strategic Road Network (SRN) routes, including:

- The **M25 motorway**, which enters the borough at the Wisley interchange (Junction 10 with the A3).
- The **A3 trunk road**, linking London to Portsmouth and bisecting the borough from the northeast to the southwest.

To mitigate poor air quality along the A3 corridor through Guildford, Guildford Borough Council has collaborated with National Highways. Measures implemented include grant schemes for replacing diesel vans with electric vehicles and active travel initiatives for local businesses. National Highways has also explored larger-scale solutions, such as installing air quality barriers. Recent monitoring[3] indicates air quality has improved along most sections of the A3, with only one stretch of footway (from Egerton Road to the A31 junction) exceeding legal pollution limits. Their current proposed action is therefore, to close this non-compliant section of the footway until air quality improves, redirecting people to alternative routes.

The local road network is anchored by several major 'A' roads radiating from Guildford:

- **A320** to Woking
- **A322** to the M3
- **A323** to Ash, Tongham, and Aldershot
- **A25** to Dorking
- **A246** to Leatherhead and Epsom
- **A3100** to Godalming
- **A281** to Cranleigh
- **A31** to the A331

Within Guildford town centre, four of these major roads—A31 Farnham Road, A322 Onslow Street, A281 Millbrook, and A3100 Portsmouth Road—converge at the central one-way gyratory system. Additional key urban roads include the A246 York Road and

[3] A3 Guildford air quality - National Highways

A3100 High Street. This convergence point is also the location of the town centre Air Quality Management Area (AQMA).

The urban road network, particularly the principal radial routes into the town centre, experiences significant congestion. These roads handle an average daily flow of 15,630 vehicles, with around 18% of that traffic occurring during peak hours (08:00–09:00 and 17:00–18:00, Surrey County Council, 2011). The one-way gyratory and its approaches remain the most heavily congested segments.

To address these challenges, a need for a comprehensive strategy was identified[4] to reduce congestion, support sustainable mobility, and improve air quality across Guildford Borough. This must include:

- Demand management
- Integrated land use and transport planning
- Network and traffic management
- Freight and goods regulation
- Behavioural change initiatives
- Strategic road capacity enhancements, where justified by robust business cases

Air quality in Guildford and comparison with national trends

Nationally in 2022[5], the vast majority of nitrogen oxides (NOx) emissions originated from fuel combustion, with road transport accounting for 30%, other transport 20%, and power stations and industry contributing 10% and 8% respectively—primarily from diesel vehicles. Particulate matter (PM_{10} and $PM_{2.5}$) emissions also remain heavily traffic-related, with diesel engines producing significantly more particulates per kilometre than petrol. Industrial PM emissions are dominated by construction and quarrying (over 70%), while residential emissions have risen due to increased wood burning, offsetting declines from reduced coal use.

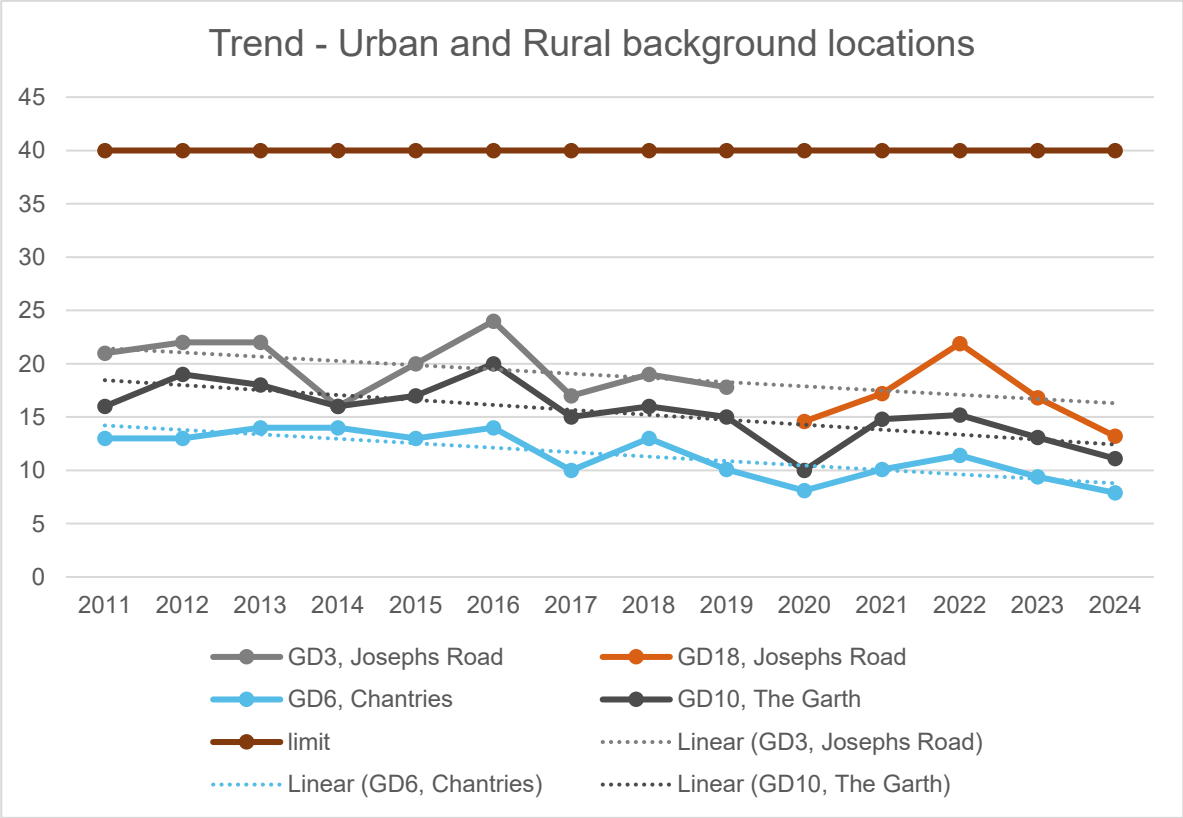
In Guildford, road traffic is the primary source of NO_2 emissions, consistent with national patterns. The borough has 32 permitted industrial processes, including vehicle respraying,

[4] Infrastructure Delivery Plan - Guildford Borough Council

[5] Air pollutants | National Atmospheric Emissions Inventory

cement batching, and small-scale waste incineration at the Pirbright Institute and Guildford Crematorium. While exact figures are unavailable, wood burner use has risen in recent years, reflected in growing complaints about smoke and odour.

Guildford's air quality monitoring network includes nitrogen dioxide diffusion tube sites but lacks real-time particulate monitoring; however, a borough-wide modelling study was completed in 2019[6] and is scheduled for an update in 2026. Long-term background monitoring indicates a steady decline in NO_2 levels, aligning with national trends[7].



A contributing factor is likely to be the shift in vehicle fuel types: in Guildford and Waverley, diesel car registrations peaked at 34.4% in 2017 and have since declined, while hybrid and electric vehicle registrations have steadily increased, supporting improvements in local air quality.

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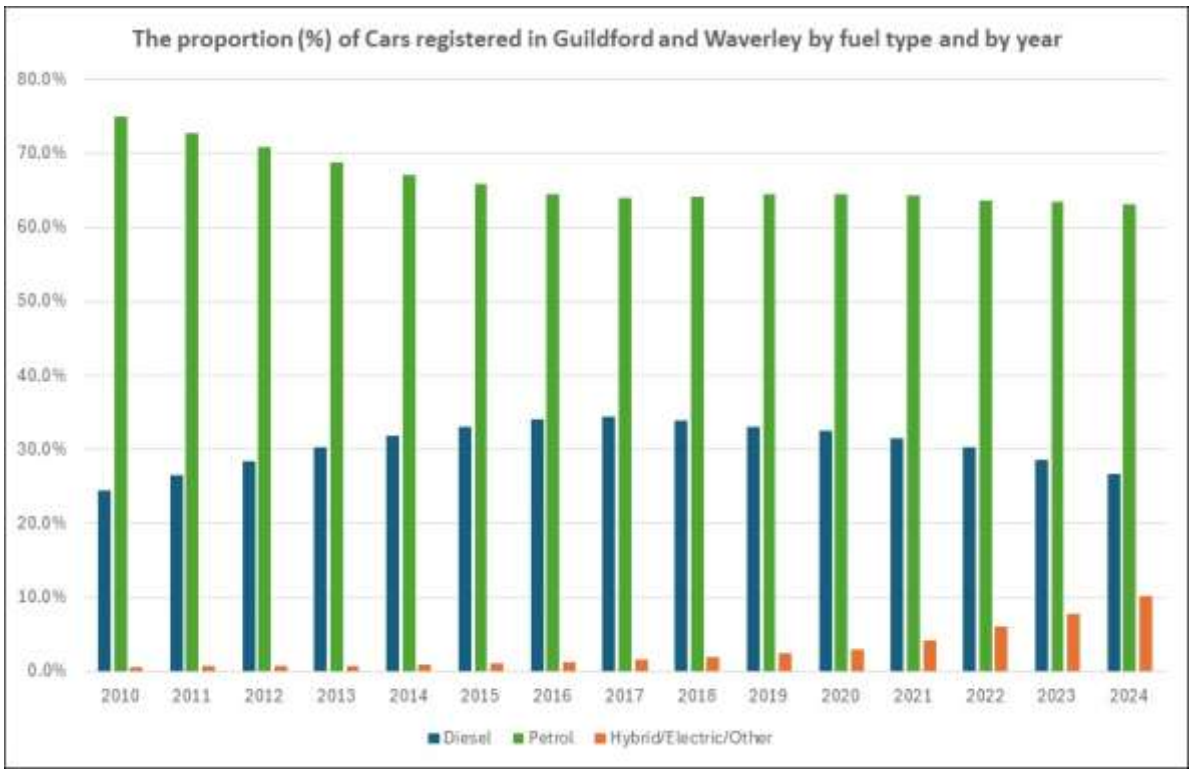
6 https://surreycc.maps.arcgis.com/apps/webappviewer/index.html?id=43910ffb100248ed972115b7a9b49d20

https://www.guildford.gov.uk/media/32331/Detailed-air-quality-report/pdf/FM1183_Surrey_CERC_Guildford_19Nov19.pdf?m=1594033112567

7 Nitrogen dioxide (NO2) - GOV.UK



Source: Department for Transport, Table VEH0105

Note: The data is for Quarter 2 in each year.

Actions to Improve Air Quality

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

The key actions in 2024-25 were:

1. Our 2024 diffusion tube monitoring network comprised of 51 locations, 2 of which were in triplicates, collocated with the A3 and Godalming automated monitoring system (AMS).
2. The first stage of economic feasibility of Guildford Town centre's draft Air Quality Action Plan is now completed. It comprised of desktop review of lessons from Clean Air Zones (CAZs) and Low Emission Zones (LEZs) across UK cities, examining their relevance to Guildford. It evaluated benefits such as improved air quality and increased sustainable transport uptake, as well as challenges including public perception, social equity, and the design of exemptions.

The study also reviewed Guildford's Park and Ride (P&R) usage at key sites including Artington and Merrow. Phase 2 of the study is currently underway, with findings to be presented in the next annual report.

3. easitGuildford Network: This membership offers all staff access to various schemes that promote active and sustainable transportation. Some of the benefits include discounted public transport tickets, Enterprise Car Club, bike loans, access to additional grant schemes and easitSHARE, an online portal to enable shared car journeys.
   Currently, 134 staff members have registered on the website, using discounts and initiatives. Additionally, 9 staff members have registered for easitSHARE program.

4. ETCI Guildford scheme (Electric Town and Cities Initiative): Funded by the National Highways, the scheme began with three parts:

   i) Funding to the businesses for swapping diesel vans with electric vans if they undertake 150 trips through the A3 Guildford stretch. This grant scheme did not run for the two years as was planned and closed on 24 September 2025. 73 grants were issued under the scheme.

   ii) Fully funded Active travel and salary sacrifice schemes to the businesses whose employees travel to work on the A3 as it passes through Guildford. As of June 2025, 25 members have joined the network, with total number of employees estimated to be over 8500. As part of this Easit network, 677 users have registered on the bespoke car share portal, easitShare and 1204 users are benefitting from travel incentives

   iii) Charging infrastructure for electric vans: Existing rapid charge facilities at Midleton Road Industrial Estate have been upgraded in order to accommodate electric vans under the Electric Towns and Cities Initiative.

5. The **Ash Road Bridge**, now officially named *Chester Bridge*, was completed and opened, easing congestion and improving air quality by rerouting traffic away from sensitive receptors. It was an important infrastructure project to improve connectivity for the new homes in Ash. Following its completion, the level crossing is now permanently closed for vehicles reducing traffic congestion in the area.

Figure 1 Level crossing at Ash Railway Station

Figure 2 New Ash Bridge, removing the need of level crossing for vehicles

6. Works on the new Guildford town centre bus facility and North Street redevelopment, has initiated. The development will deliver, in addition to new homes, 2.2 acres of public realms featuring a wellness garden and a new town square; pedestrianisation of North Street, projected to improve air quality in the area.

7. A borough-wide **e-bike hire scheme** was launched, encouraging low-emission travel alternatives. The map below shows the location of Beryl bike bays. The scheme has introduced 200 ebikes as well as pedal bikes to hire, spread into 40 Beryl parking bays across Guildford. Teaming up with the University of Surrey, Beryl is offering a discount of 25% to all students.

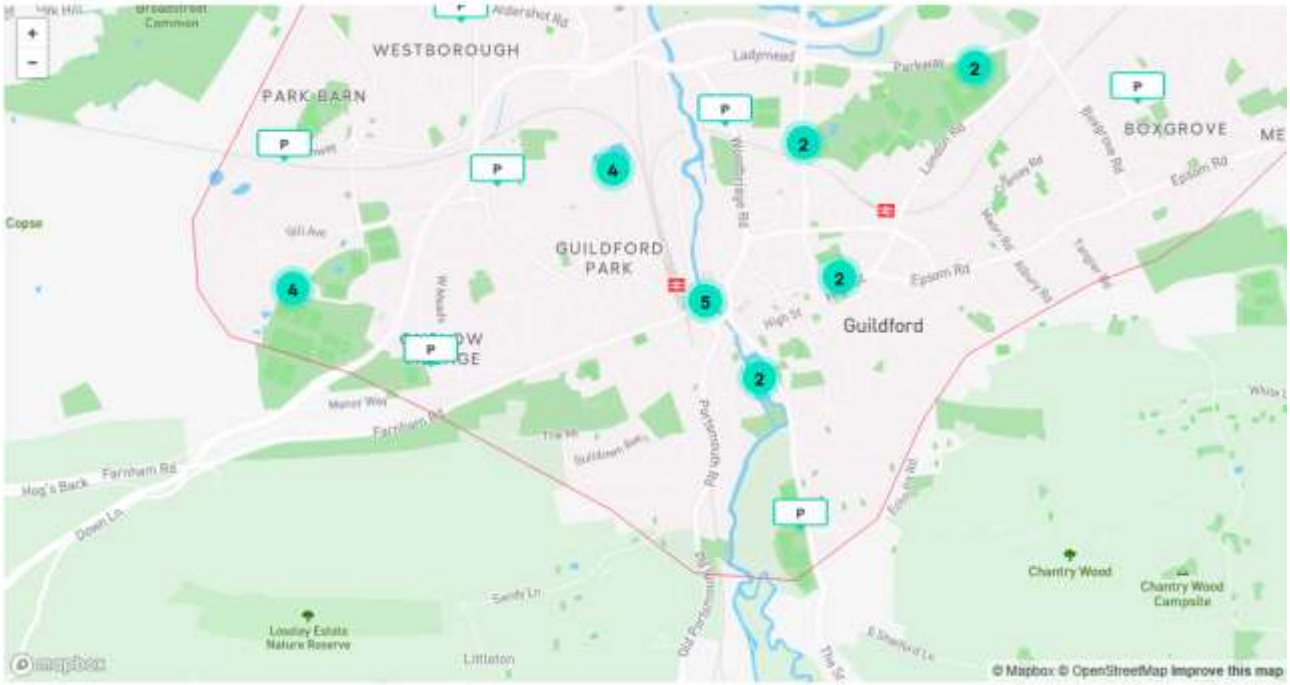
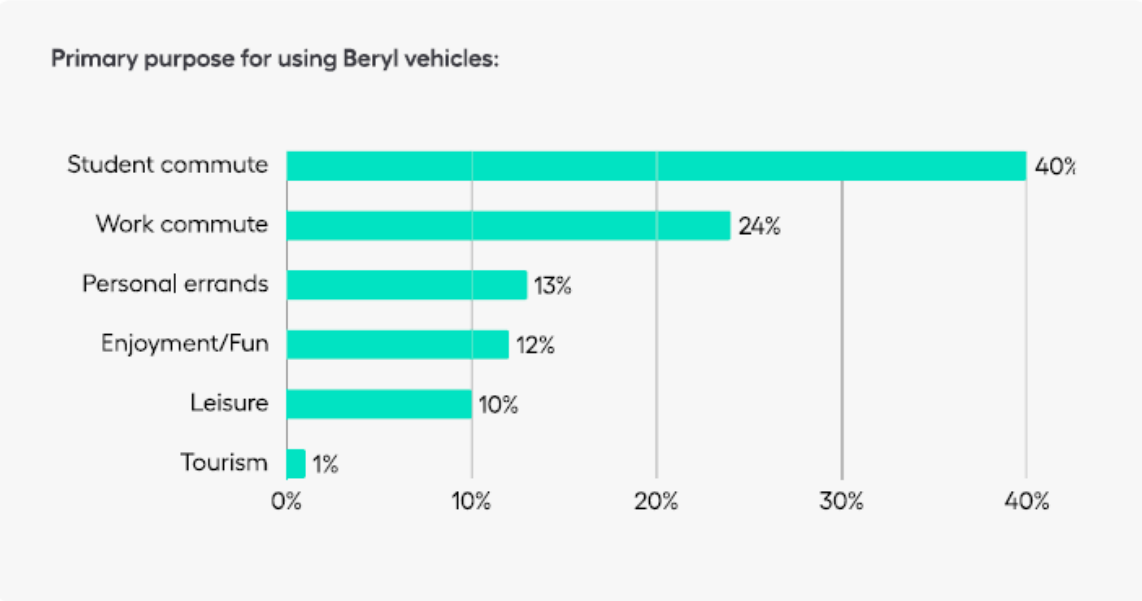


Figure 3 map showing Beryl parking bays

The 2024 Guildford Rider Report found that Guildford has one of the highest student usages than any Beryl scheme. The top two purpose of the bike hire were cited as university and work commute.



8. Surrey County Council expanded its on-street EV charging infrastructure, now totalling 250 charging points countywide.

9. As a member of the **Surrey Air Alliance**, the Council has progressed several collaborative initiatives, including:
   (i) Preparing for an updated **Surrey-wide air quality model** (due in 2026),
   (ii) Developing an Air Quality chapter for the Joint Strategic Needs Assessment (JSNA), integrating environmental and health data on asthma, COPD, and cardiovascular conditions. The first draft of the chapter has been prepared using the air quality information provided by all the Surrey's districts and boroughs. Health data on asthma, COPD, and cardiovascular rates, available at the primary care level, is being analysed for plotting. Also, efforts are being made to correlate the transport chapter with the air quality and health data.

10. Guildford Borough Council reviewed and updated its **Air Quality Strategy 2025–2030**[8], which was approved by the Council's Executive on 19 June. The strategy aligns with national policy and the borough's Climate Change Strategy.

11. Surrey County Council's Travel Planning Team continued to promote sustainable travel in schools, with a growing number producing Travel Plans. The Annual Eco-

[8] https://democracy.guildford.gov.uk/ieDecisionDetails.aspx?ID=4505

Summit engaged 24 delegates and 100 schools, highlighting strong educational outreach and increasing awareness of air quality issues among young people.

12. 20mph zones in Shalford and Compton are likely to be put in place from Summer of 2025, either within the AQMA or in proximity. The council will closely monitor any impact on the existing air quality as a result.

13. Working with the planning services and developers to ensure that air quality is an important consideration in any development. Medium and large scale developments are required to complete an Air Quality Assessment and proposed mitigation measures. A notable example is the **demolition of the former Debenhams building** on the A281, where construction traffic was diverted to protect the Shalford AQMA, demonstrating proactive planning to safeguard air quality.

Following are the pictures/screenshots of the Clean Air Night Campaign and the Guildford Cleaner Air Day 2024.

Guildford Borough Council supports Clean Air Night

Clean Air Night will take place on Wednesday 22 January 2025. We're taking this opportunity to raise awareness of the environmental and health risks associated with wood burning.

There was a 40% increase in purchases of wood burners between 2021-22. The Stove Industry Alliance expects sales to rise even further this winter. Many people might turn to wood burning in the face of rising energy bills. But research states that wood burning is a more expensive way to heat your home than central heating. (1)

It's also reported that air pollution results in over 36,000 people in the UK dying each year. (2) Breathing clean air is vital for our health. Cleaner air measures provide benefits for our wellbeing as well as that of the planet.

There is new and mounting evidence that shows wood burning has a negative effect on your wallet, your health and our environment.

Lead Councillor for Regulatory Services, Cllr Merel Rehorst-Smith said:

"We're committed to building a community that values environmental responsibility. Clean Air Night is a great opportunity for all of us to learn how we can collectively make a difference.

"The quality of our air affects everyone, that's why we all have a part to play in improving it. One thing we can do is cut down on wood burning and this is why it's so important to raise awareness of the impact it has on our environment."

Cllr George Potter, Lead Councillor for Environment and Climate Change, said:

"There are many myths out there about wood burning. That's why Clean Air Night is so vital in raising awareness of the facts and allow residents to make informed decisions about how to heat their homes.

Council Announces 'Cleaner Air Day'

Published on: *7 Sep, 2024*
Updated on: *9 Sep, 2024*

Today (September 7) is International Day of Clean Air for Blue Skies. The day, it is intended, raises awareness of and motivates behaviour to counter the threat of air pollution and its negative impact.

In Guildford, Guildford Borough Council is hosting its first-ever Cleaner Air Day on Sunday, September 29. Taking place in the town centre, it's will be a free family fun day to celebrate and learn ways that can all help improve air quality.

Ways GBC suggest could help improve air quality are:

- Active travel – Instead of taking the car out, use an active means of transport such as walking or cycling.
- Don't idle – If you do need to drive, don't leave the engine running when you're parked up. Vehicle idling is bad for the environment and human health.
- Public transport – For longer journeys, take the bus or train rather than driving


Live Air Pollution Data
GOOD
ZERO


GUILDFORD
Today


Your
Suggestions


ACTIVE


GUILDFORD
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Conclusions and Priorities

Priorities for 2025-2026:

1. The completion of a feasibility study for the implementation of a low emission zone or equivalent along with a study on efficient operation of the existing Park and Ride facilities in Guildford remains the Council's priority.
2. Finalising AQAP for Town Centre and Shalford AQMA following completion of the economic feasibility study and publishing following DEFRA approval.
3. Monitoring and review of Compton AQAP - The Compton AQMA was declared in January 2018, and the AQAP was adopted in July 2019. Only one measure was identified as potentially capable of improving air quality within the AQMA – right turn ban to Down Lane. The designation covers three properties, with the façade of one property located less than 2m from the kerb of B3000, a narrow but heavily trafficked route linking to the Guildford A281, A3100, and the A3.
   In recent years, NO_2 levels in Compton have fallen significantly and have remained below the AQO threshold during the monitoring periods for 2023 and 2024. Similar to Shalford, Surrey County Council has proposed traffic-calming measures along The Street, Compton, primarily as a road safety initiative. These works are scheduled for implementation between 2025 and 2026.
   At the time of redrafting this report, eight months of raw monitoring data are available. While indicative only at this stage, the data suggest that average levels remain well below the objective. Monitoring will continue in Compton, and the AQAP will be reviewed by April 2026.
4. Adopt a Motor Vehicle No Idling policy for staff, contractors and visitors on Council premises, and staff using a vehicle for conducting Council business.
5. Improve the Council's communications on air quality, particularly the air pollution concentrations in the Borough and the benefits of clean air.
6. Continued collaboration with National Highways and Surrey County Council on implementation of ETCI (Electric Towns and Cities Initiatives) schemes.
7. As part of Surrey Air Alliance (SAA), continue to work on priority projects such as: Clean Air Night campaign, school projects (Eco schools, promotion of school travel plans, air quality campaigns such as anti-idling, run interactive education programs for raising awareness on health risks of air quality), progress the implementation of DEFRA funded EV taxi project, and set up a Solid Fuel Working Group.

8. Finalise the Council's Air Quality Strategy 2025-2030 following the stakeholder's consultation and implementation of the actions identified.

There are challenges expected which will affect the shape and form in which Guildford Town Centre AQAP can be implemented:

1. The vibrancy of the town centre is important for Guildford's economic growth and the AQAP should therefore not have negative impact on the economy.
2. The increased cost of living will have impact on various national and local initiatives such as heating homes by burning solid fuels, delay in fleet renewal, etc.
3. There are capacity and air quality issues on A3 in Guildford. The delivery of new Guildford West Station which will serve the residential area of Park Barn and economically active area of Guildford (including Royal Surrey Hospital, University of Surrey campuses including Surrey Sports Park and Surrey Research Park) will relieve some pressure off the A3. However, this is a long-term project.
4. Council has a priority to meet the need and welfare demands of its residents and often the resources must be matched to meet those demands.
5. Funding and resources constraints
6. To get more people to use sustainable mode of transport, there is a need for improved cycle network and safe cycling infrastructure, adequate bus transport and economical park and ride facility etc. However, a lot of investment in walking and cycling infrastructure has taken place in the recent years.

How to get Involved

Communicating air quality progress and challenges in Guildford through this ASR is essential for informing residents, businesses, experts, and other interested parties. From choosing sustainable modes of transport to using cleaner fuel sources, everyone can contribute to reducing air pollution. Residents and interested parties are encouraged to share their concerns, suggestions, or valuable feedback on air quality initiatives through the online webform[9].

[9] https://www.guildford.gov.uk/article/18932/Report-an-issue-with-air-quality

Everyone has a role and can contribute to air quality improvement in many of the following ways:

1. Are there alternatives to use of personal car? Consider alternatives to using the car. There are now several car free cycle routes, and you can use a journey planner to plan your journey. Google maps are very handy to plan journeys by train, on foot or bike.
2. Can you avoid taking car for short journeys and instead walk or cycle?
3. Are you aware of Guildford car club? Guildford has 7 cars and 1 van in the club with designated parking bays in a convenient location. Club cars are accessible to members 24 hours a day, 365 days a year. You can book them online, via a smart phone app or over the phone. The club cars comprise either low or ultra-low emission vehicles. The residents in Guildford can benefit from the promotional offer of first year membership fee of £10 (https://www.guildford.gov.uk/carclubs
4. Turn off the car engine when stationary. Leaving an engine idling causes unnecessary emission into the air. The children and parents walking along the path near parked cars are the recipient to any emission from cars idling near schools.
5. By choosing using woodburning stoves less frequently, using seasoned woods, smokeless fuels or those certified as 'Ready to Burn'[10].
6. Explore other heating alternatives in place of using a wood stove.

[10] https://www.hetas.co.uk/ready-to-burn-a-look-at-the-regulations-in-more-detail/

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Figures

Tables

1 Local Air Quality Management

This report provides an overview of air quality in Guildford Borough 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 Guildford Borough Council to improve air quality and any progress that has been made.

The statutory air quality objectives applicable to LAQM in England are presented in Table E.1.

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 18 months. The AQAP should specify how air quality targets will be achieved and maintained and provide dates by which measures will be carried out.

A summary of AQMAs declared by Guildford Borough Council can be found in Table 2.1. The table presents a description of the three AQMAs that are currently designated within Guildford Borough.

Appendix D: Map(s) of Monitoring Locations and AQMAs provides maps of AQMAs and also the air quality monitoring locations in relation to the AQMAs. The air quality objectives pertinent to the current AQMA designations are as follows:

- NO_2 annual mean

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
The Street, Compton, Surrey	01/02/2018	NO_2 Annual Mean	Incorporates a section of B3000, The Street, Compton.	NO	43.8 µg/m3	28.8	2 years	Guildford Borough Council Air Quality Action Plan - Compton Village, 05/07/2019	https://www.guildford.gov.uk/article/21335/Guildford-air-quality-management-areas
A281, The Street, Shalford, Guildford, Surrey	05/07/2019	NO_2 Annual Mean	A281, The Street, Shalford, Guildford, Surrey The designated area incorporates a section of the A281, The Street, Shalford between grid references X499955, Y147737 and X499984,Y147691.	NO	50 µg/m3	27.6	2 years	Guildford Borough Council Shalford Air Quality Action Plan, 01/09/2019	https://www.guildford.gov.uk/media/30621/Shalford-Draft-Air-Quality-Consultation/pdf/Draft_Air_Quality_Report_for_consultation_-_19.9.2019.pdf?m=637044877947270000
Guildford Town Centre	22/10/2021	NO_2 Annual Mean	Guildford Town Centre including parts of the following roads 1. A281, Millbrook, Guildford 2. A31 Farnham Road, Guildford 3. A3100 Portsmouth Road, Guildford, 4. Onslow Street, Guildford 5. Park Street, Guildford 6. North	YES	41.3 µg/m3	36.8	0 years	Draft AQAP approved in December 2022; The AQAP will be finalised following completion of economic feasibility study	https://www.guildford.gov.uk/media/34555/Draft-Air-Quality-Action-Plan/doc/Draft_Air_Quality_Action_Plan.docx?m=637921975406600000

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
			Street, Guildford 7. Commercial Road, Guildford 8. Guildford Park Road, Guildford 9. Woodbridge Road, Guildford						

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

☒ Guildford Borough Council confirm that all current AQAPs have been submitted to Defra.

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

Defra's appraisal of last year's ASR accepted the conclusions drawn in the report and concluded that the report was well structured, detailed, and provided the information specified in the Guidance. The following comments were provided to help inform future reports:

1. The Council have correctly applied QA/QC protocols for annualisation and have selected an appropriate bias adjustment factor using a national factor.
2. The Council have demonstrated consistency between the ASR submission and the supplementary Excel ASR Table – The DEFRA has this year made changes to the ASR reporting and Excel counterpart is not required to be submitted. This is a welcomed decision for table 2.2 specifically, which often get updated as the ASR drafting progresses, resulting in inconsistency between the excel table and ASR document.
3. The graphical trends showing the changes in annual mean NO_2 concentrations from non-automatic monitoring are well presented and accurately demonstrate the annual mean concentrations compared against the corresponding air quality objective for NO_2.
4. 1 Exceedance has been identified within the Local Authority Area. This site, TC6 is located within the Guildford Town Centre AQMA.
5. It may be useful for the reader to have Map D.1 labelled with the diffusion tube IDs, adjusting the zoom ratio of the image may help in this regard to allowing the labels to be visible if introduced – suggestion implemented in this years map; maximum possible zoom has been applied to ensure that all the diffusion tubes in the network are included, while the site labels remain legible.

Guildford Borough 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. 29 measures are included within Table 2.2, with the type of measure and the progress Guildford Borough 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. The top 3 measures are priorities for the year 2025-2026 and are highlighted in yellow.

Guildford Borough Council expects the following measures to be completed over the course of the next reporting year:

- Completion of the Economic Feasibility Study for Towncentre and Shalford AQAP;
- Updating Compton AQAP
- Guildford Borough Council's 'Motor Vehicle No Idling policy for staff, contractors and visitors on Council premises, and staff using a vehicle for conducting Council business'.
- Adoption of Guildford's Air Quality Strategy 2025-2030
- Updated Surrey wide CERC modelling for key pollutants
- A3 Active travel plan for businesses using the National Highways funding. It is expected that the businesses will continue to self-fund the scheme after that.

Guildford Borough Council worked to implement these measures in partnership with the following stakeholders during 2024:

- Surrey County Council – Highways
- Surrey County Council – Travel Planning Team
- Guildford Borough Council's Planning Policy
- Guildford Borough Council's Web and Communications Team
- Neighbouring Local Authorities, in particular Waverley Borough Council
- Other Surrey Local Authorities through Surrey Air Alliance (SAA)
- National Highways

The principal challenges and barriers to implementation that Guildford Borough Council anticipates facing are: Insufficient staffing and financial commitment, lengthy council's procurement procedure, reliance on third parties for completion of studies, other council's priorities to meet the welfare demand and reactive statutory duties are identified as challenges.

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

- Progress in Economic Feasibility Study for the Towncentre and Shalford AQMA due to delays in procurement.

- Defra funded EV project granted to Surrey Air Alliance due to procurement procedures of participating Surrey Authorities and changes in the project specifications since it was first approved for grant.

Guildford Borough Council anticipates that the measures stated above and in Table 2.2 will help to contribute towards compliance, however, it is acknowledged that further additional measures not yet prescribed may be required in subsequent years to achieve compliance and enable the revocation of Town Centre AQMA.

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	Completion of an economic feasibility study in Guildford Town Centre AQMA for - A Clean Air Zones (CAZ) and/or Low Emission Zone (LEZ) for buses + HGVs, including an assessment of existing park and ride facilities to identify potential for improvements	Policy Guidance and Development Control	Low Emission Strategies	2023	2026	SCC/GBC	unknown	Not Funded	£10k-50k	implementation		A finalised Guildford TC and Shalford AQAP	Awaiting feasibility study outcome	Guildford Town Centre and Shalford AQAP measures; subject to the outcome of feasibility study
2.	Review of air quality monitoring data for Compton AQMA and review/update AQAP	Policy Guidance and Development Control	Low Emission Strategies	2025	2026	GBC	GBC	Not funded	<£10k	Planning		Reviewed Compton AQAP		Monitoring within AQMA continues and has shown improvement. 20mph zone planned for The Street, Compton; The impact on AQMA following implementation to be reviewed.
3.	adopt a Motor Vehicle No Idling policy for staff, contractors and visitors on Council premises, and staff using a vehicle for conducting Council business	Policy Guidance and Development Control	Low Emission Strategies	2025	2026	GBC	GBC	Not funded	<£10k	Planning		Implementation/monitoring and enforcement of the Policy		Monitoring and enforcement is likely to require additional resources.

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
4.	Air quality is a consideration at pre-application and application stage to allow effective use of planning conditions	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2018	ongoing	GBC; SCC Highways	GBC	Not Funded	< £10k	Implementation	Reduced vehicle emissions	Number of developments where air quality has been assessed and actioned	Service Level Agreement between Planning Development and Regulatory Services with quarterly monitoring meetings.	For medium and large scale development, the Council recommends air quality assessment as pre-requisite emphasising on consideration of good design practices, mitigation measures and travel plan; Developers are made aware of the Institute of Air Quality Management Guidance: https://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf; Standard condition for EV charging facility is attached to all relevant planning permissions; Condition for low emission NRMM also recommended to relevant planning applications
5.	Green scheme parking fees for electric vehicles in GBC car parks	Promoting Low Emission Transport	Priority parking for LEV's	2018	Scheme in place	GBC	GBC	Funded	£10k - 50k	Implementation	Reduction in Emission	uptake of Green Parking Scheme	Implementation on-going	Green parking scheme continues to operate at 13 car parks in Guildford: https://www.guildford.gov.uk/article/25380/Where-can-I-park.
6.	Education in communities and businesses to change behaviours	Promoting Travel Alternatives	Promotion of cycling	2017	ongoing	GBC	GBC/SCC	Not Funded	£100k - £500k	Implementation	reduction of emissions	reduction in cars on road and increase in uptake of bikes/scooters	Implementation on-going	Guildford Cleaner Air Day 2024 was successfully concluded on 29th September 2024;The next event is scheduled for 28th September 2025.
7.	Electric buses for all Park and Ride	Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	2019	2025	GBC and SCC	SCC	Partially Funded	£500k - £1 million	Study currently progressing	Less emissions	Number of buses	Assessment of improvements currently in process	Since the pandemic, the service from the Spectrum Leisure Centre has remained suspended. As part of the Town Centre AQAP /economic feasibility study, assessment of P&R is included.

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
8.	Active Travel incentives for GBC staff	Promoting Travel Alternatives	Workplace Travel Planning	2018	2024	GBC	GBC and SCC	Funded	< £10k	Implementation	Reduced vehicle emissions	numbers of staff uptake of sustainable travel initiative.	Council employees have the opportunity to avail discounted travel initiatives from Easit Guildford: https://www.easit.org.uk/network/easitGUILDFORD-23; The scheme is regularly publicised via the Council's fortnightly newsletter	Uptake of the initiatives
9.	Schools Initiative	Promoting Travel Alternatives	School Travel Plans	2017	ongoing	GBC and SCC	GBC and SCC	Partially Funded	£10k - 50k	Implementation	Reduced vehicle emissions	Take up by schools	Implementation on-going	Detailed in section 2.2 of the ASR
10.	Promote alternative travel to work at the Council	Promoting Travel Alternatives	Workplace Travel Planning	2018	2024	GBC and SCC	GBC and SCC	Funded	£10k - 50k	Completed	Reduced vehicle emissions	Working from home	Fully implemented; Issue of mobiles and laptops has enabled GBC employees to work flexibly and remotely, reducing the unnecessary car journeys to the Council offices.	With the merger of the management of Guildford and Waverley Councils, they may be additional challenges including relocation of offices and the Woking Road Depot to Slyfield Industrial Estate.
11.	Car Clubs in Guildford Town Centre	Alternatives to private vehicle use	Car Clubs	2015	2024	GBC, SCC and Enterprise	SCC	Partially Funded	£10k - 50k	Implementation	Reduced vehicle emissions	Car clubs increase	The Enterprise Car Club membership is available to Guildford residents at reduced price. There are 7 club cars and 1 van available, some of which fully electric. Some of the new locations have been introduced as part of planning process at new development locations.	Resident's awareness and usage of the scheme; Limitation - limited car clubs outside Guildford Town Centre; new locations are likely to be associated with planning developments.
12.	Smoke control order compliance	Promoting Low Emission Plant	Regulations for fuel quality for low emission fuels for stationary and mobile sources	2021	2024	GBC	DEFRA, New burdens funding	funded	< £10k	Implementation	Reduce household emissions	number of complaints of smoke	Implementation on-going; A map of the Guildford Smoke Control Areas is available on the website for information of the residents. No proactive monitoring takes place; only reactive; recently seen a rise in complaints of smoke due to woodburners.	With the introduction of new framework for implementation on the AQ strategy including $PM_{2.5}$ targets, officer resource needs reallocation. DEFRA has issued £11,710 funding via the section 31 grant and payment scheme.

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
13.	Service delivery review to reduce public journeys to Council premises where appropriate	Promoting Travel Alternatives	Personalised Travel Planning	2020	2025	GBC and SCC	GBC and SCC	Not Funded	< £10k	Implementation	Reduced vehicle emissions	Less car mileage claimed	Implementation on-going	Guildford BC's website has up and running online access to all the council services through MyGuildford Account for residents. Meetings are available virtually through Microsoft Teams.
14	Improve sustainable transport opportunities	Policy Guidance and Development Control	Other policy	2018	2024	GBC	GBC; SCC	Funded	> £10 million	Implementation	Reduced vehicle emissions	Use of alternative travel modes	Implementation on-going	Discussed in detail in section 2.2 of this ASR
15	Electric charging points in public areas and residential streets	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2019	2024	GBC and SCC	SCC	Not Funded	£50k - £100k	Implementation	Reduced vehicle emissions	number installed	Implementation on-going	The number of public chargepoints is growing and has increase to 40 locations in Guildford. The details are available here: https://www.surreycc.gov.uk/roads-and-transport/sustainable-driving/electric-vehicles#section-2
16	Adopt SCC Electric Vehicle Charging Policy	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2019	2024	GBC and SCC	GBC and SCC	Partially Funded	£10k - 50k	Implementation	Reduced vehicle emissions	Infrastructure detail	Implementation on-going	Every development has a condition for EV charging facility as per the SCC's Electric Vehicle Strategy and planning guidance,

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
17	New Railway station at Park Barn Guildford	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	2021	2030	Network Rail,	unknown	Not Funded	> £10 million	Planning	Reduced vehicle emissions	use of train instead of car	Guildford West Station is a new station promoted by GBC, which will provide improved access to the Royal Surrey County Hospital, Surrey Research Park, Surrey Sports Park and Park Barn residential area; It is one of the priority Highway and Transport Scheme, critical for the delivery of Guildford Local Plan; A site has been allocated for the station in the Local Plan	This project is currently on hold
18	Shaping Guildford's Future	Traffic Management	UTC, Congestion management, traffic reduction	2021	2030	GBC	GBC	Funded	£1 million - £10 million	Planning	Reduced vehicle emissions	Traffic flow	The stage 1(Preparation of detailed scope & briefs); Procurement of Consultant team, High Level Strategic Appraisal including constraint analysis, Planning Strategy) and Stage 2 (Development of concept Master Plan, Stakeholder consultation, Data collection, Preparation of Strategic Outline Case, Preparation of Grant applications) of the Shaping Guildford's Future are completed and the council is ready to move to stage 3.	Lengthy Timescale;
19	Junction 10	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	2021	2025	NH, SCC and GBC	NH	Funded	> £10 million	Implementation	Reduced vehicle emissions	Traffic flow	The work to upgrade the junction with the A3 Wisley Interchange to reduce congestion is currently underway	The project end date is Summer 2025
20	Ash Railway Bridge	Traffic Management	Other	2020	2025	GBC	Homes England and GBC	Funded	> £10 million	completed	Reduced vehicle emissions	monitoring after construction	Implementation on-going	The bridge is now open for vehicles; NO_2 diffusion tube monitoring has been set up to measure any changes as a result.
21	Sustainable Movement Corridor	Transport Planning and Infrastructure	Cycle network	2019	2024	GBC and SCC	GBC and SCC	Partially Funded	£1 million - £10 million	Implementation	Reduced vehicle emissions	Improved infrastructure and increased usage of cycle path	Implementation on-going	Partly implemented; discussed in detail in section 2.2

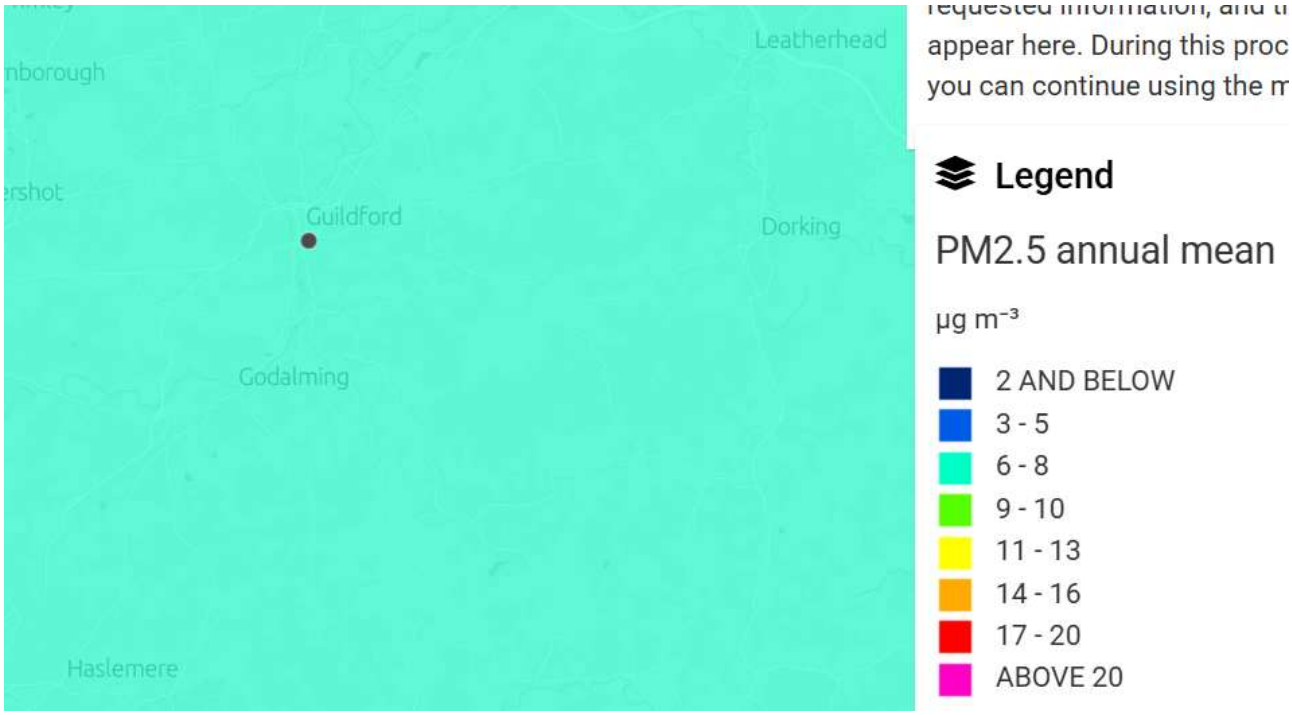
Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
22	LCWIP	Promoting Travel Alternatives	Promotion of cycling and Walking	2019	2024	GBC and SCC	GBC and SCC	Funded	£500k - £1 million	Planning	increase in walking/cycling	Cycle counts	Completed and accepted in August 2024	Guildford Borough Council will use this LCWIP as a basis to seek contributions from developments where appropriate. Surrey CC will use it for investments in walking and cycling in the borough.
23	Electric vehicle trial project for taxis	Promoting Low Emission Transport	Taxi emission incentives	2021	2025	GBC and SAA	DEFRA	Funded	£50k - £100k	Planning	Reduced vehicle emissions	take up by taxis	SAA bid of amount £256k was successful to be implemented in 2021 facilitating EV taxi trials. Currently in procurement of the supplier. **As of 2nd of October 2025, a preliminary decision has been made to approach DEFRA regarding the feasibility of this project. This matter will be addressed by Spelthorne BC on behalf of the 7 local authorities.**	Project has been delayed and may be postponed due to difficulties procuring a suitable product.
24	GBC Air Quality Strategy	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2017	2024	GBC	GBC	Not Funded	< £10k	Implementation	Reduction in vehicle emissions	measures adopted	Implementation on-going	Draft Air Quality Strategy prepared which will be published following a full stakeholder's consultation.
25	TC Clean Air Zone Feasibility Study	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2022	2024	GBC	GBC	Funded	£50k - £100k	implementation	to be estimated in the feasibility study	completion of feasibility study	Phase 1 desktop study was completed in 2024. Currently, in Phase 2 of the Economic Feasibility Study.	Due to be completed by September 2025. Implementation of the identified measures will require collaboration with SCC Highway partners and financial commitment.
26	E Bike hire scheme	Promoting Travel Alternatives	Promotion of cycling	2021	2024	GBC, SCC, University of Surrey	GBC, UKSPF	Funded	£500k - £1 million	Planning	Alternative Transport	usage	Implemented and Beryl bikes are in use.	Cycling infrastructure for wider uptake; hiring cost; currently available at discounted rates for the University of Surrey students.

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
27	A3 Guildford - ETCI	Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	2023	2025	GBC, SCC, NH	NH	Funded	> £10 million	Implementation	EV vehicle transformation; sustainable travel planning and car sacrifice schemes for businesses	uptake of ETCI scheme	The Electric van grant scheme was stopped in September 2024 due to poor uptake. 73 grants were awarded under the scheme. The Active Travel scheme for business in progress.	Poor uptake of the EV grant scheme
28	Incident management and effective contingency planning to minimise traffic disruption and unnecessary congestion	Traffic Management	UTC, Congestion management, traffic reduction	2023	2025	GBC, SCC	unknown	Not Funded					Awaiting feasibility study outcome	TC AQAP measure
29	HGV ban around the gyratory during peak and interpeak hours	Freight and Delivery Management	Quiet & out of hours delivery	2023	2025	GBC, SCC	unknown	Not Funded					Awaiting feasibility study outcome	TC AQAP measure; subject to feasibility study
30	Electric vehicle (EV) deliveries, local delivery hubs	Promoting Low Emission Transport	Other	2023	2026	GBC	unknown	Not Funded					Awaiting feasibility study outcome	TC AQAP measure, will require appropriate site, planning process; subject to feasibility study

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

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy[11], local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter ($PM_{2.5}$)). There is clear evidence that $PM_{2.5}$ (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

Guildford currently has no monitoring program for $PM_{2.5}$. The background annual mean for most of the Guildford Borough as per the DEFRA background maps[12], for 2023 was modelled to be 6-8µg/m^3.



Guildford Borough Council is taking the following measures to address $PM_{2.5}$:

- Incorporating the Air Quality Strategy: Framework for Local Authority Delivery[13] into our air quality strategy. A draft Air Quality Strategy 2025-2030, has been produced,

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

[12] UK Ambient Air Quality Interactive Map (defra.gov.uk)

[13] https://www.gov.uk/government/publications/the-air-quality-strategy-for-england/air-quality-strategy-framework-for-local-authority-delivery

which has yet to undergo stakeholder consultation. The draft AQS has actions to address smoke control areas, indoor air quality and domestic woodburning, emissions from non-road mobile machineries at the construction sites.

- CERC modelling: The Surrey wide modelling study for particulate matters and Nitrogen dioxide is planned to be updated using the 2024 traffic data. The study will be delivered in 2025-26.

- Guildford Borough has five Smoke Control Areas (SCA) which were declared in the 1960s and 1970s covering approximately 12 square kilometres of the urban area. An indicative map is shown as Figure 1 on page iv on the ASR Appendix 1. These smoke control areas are still relevant to the areas of highest modelled $PM_{2.5}$ concentrations. The plans to review the boundary of existing SCA is still a priority although work on this has not progressed yet due to resource constraint.

- Guildford Borough Council (GBC) supported the Clean Air Night for the second year, which was celebrated on 22nd January 2025 (Clean Air Night).
  The campaign was well publicised and following is a rundown of actions to promote the campaign:
  - News release sent to local media and published on our website[14].
  - Cllr George Potter, the Lead Councillor for Environment and Climate Change was interviewed by That's TV off the back of our news release.
  - We ran a series of social media posts on Facebook to support the campaign.
  - The campaign was featured in our staff briefings, staff newsletters and Councillor updates

- [14] Guildford Borough Council supports Clean Air Night - Guildford Borough Council

Guildford Borough Council
January 17 at 11:00 AM

Clean Air Night 2025 takes place on January 22. It's a chance to talk about wood burning across Guildford and ensure that we all take informed decisions on how to heat our homes.

Did you know that lighting fires in our homes is the largest source of harmful fine particle air pollution in the UK?

Find out more by visiting the Clean Air Hub: https://cleanairhub.org.uk/clean-air-night

#CleanAirNight

26 15 comments 10 shares

Guildford Borough Council
January 20 at 10:15 AM

It's Clean Air Night on Wednesday and we're raising awareness of the environmental and health risks associated with wood burning.

People might be tempted to turn to wood burning in the face of rising energy bills, but it has been shown that wood burning is a more expensive way to heat your home than central heating.

Find out more by visiting the Clean Air hub: https://cleanairhub.org.uk/clean-air-night

#CleanAirNight

7 7 comments 3 shares

Guildford Borough Council
January 21 at 10:20 AM

It's Clean Air Night on Wednesday January 22. Wood burning harms our health and the environment, but most people are unaware that it is a major source of air pollution.

Find out more about how we manage air quality in Guildford https://www.guildford.gov.uk/pollutioncontrol #CleanAirNight

#CleanAirNight

8 11 comments

Guildford Borough Council
Yesterday at 11:20 AM

Tonight is Clean Air Night! It's a chance to learn more about the negative effects of wood burning.

Wood burning releases more harmful carbon emissions than oil or gas, while lighting fires in our homes is the largest source of harmful small particle air pollution in the UK.

Find out more about how we look after air quality in Guildford on our website https://www.guildford.gov.uk/pollutioncontrol

#CleanAirNight

8 10 comments

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

This section sets out the monitoring undertaken within 2024 by Guildford Borough 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

Guildford Borough Council do not have any automated monitoring sites in their control within the borough.

3.1.2 Non-Automatic Monitoring Sites

Guildford Borough Council undertook non- automatic (i.e. passive) monitoring of NO_2 at 51 sites during 2024. Table A. in Appendix A presents the details of the non-automatic sites.

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

3.2 Individual Pollutants

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

3.2.1 Nitrogen Dioxide (NO_2)

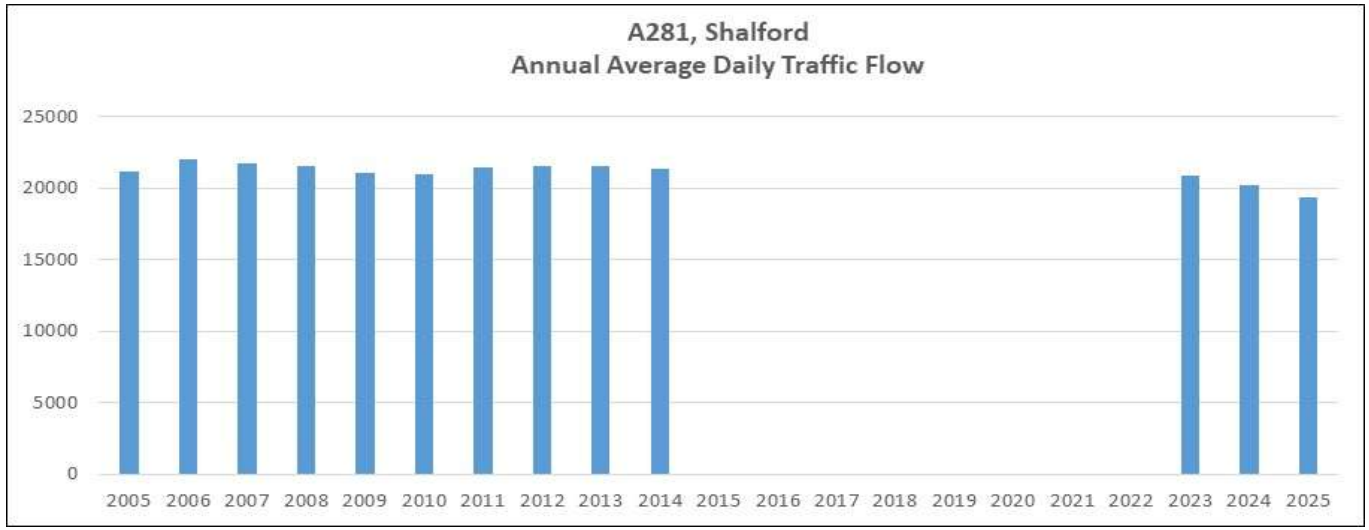
Error! Reference source not found. and Table A. in Appendix A compare the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40µg/m^3. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

For diffusion tubes, the full 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.

The 2024 monitoring and 5 year monitoring trend of NO_2 shows that:

- The annual mean NO_2 objective of 40 µg/m^3 was exceeded at three monitoring locations (TC6 Park Street, A3-10 and A3-20 along the A3 Guildford stretch). Of these only TC6 Park Street exceeded at the relevant exposure location after distance correction.
- The monitoring along A3 has shown considerable reduction in NO_2 concentrations at roadside locations since 2021, with reduction between 28 - 34%.
- The monitoring locations in the Shalford were well below the 10% of NO_2 objective level. Traffic data was requested from the SCC Highways to understand the reduction in the NO_2 in last 2 years. The traffic data shows that the flows have reduced very slightly post pandemic (5-6%), when compared with the data from the period 2011-2014. Another contributory factor is likely to be the change in vehicle engine performance and fuel type. The data available from the Department from Transport has indicated that

proportions of cars with diesel engines has reduced in Guildford, while hybrid or electric vehicles have increased to 10%. Proportion of petrol cars has remained relatively stable at around 64% since 2016.

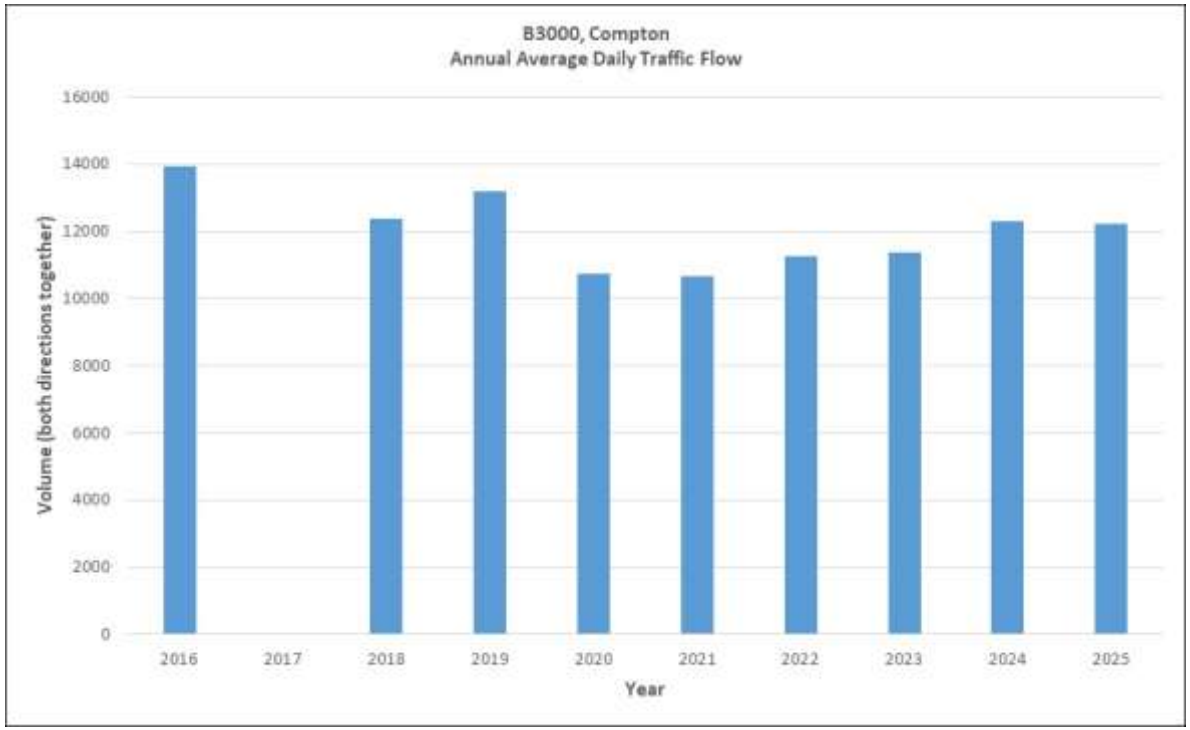


- Similar to Shalford, Compton monitoring locations have remained compliant in 2023 and 2024. It is likely to be a combination of small reduction in traffic flow, compliance to the no right turn ban at Down Lane and the change in vehicle engine composition to cleaner vehicles. The analysis of traffic data for Compton AQMA is presented below:

Traffic data for AQMA Annual Status Report

Trend in Annual Average Daily Traffic

Below is a graph showing the AADT for every year 2016 – 2025 (except for 2017)

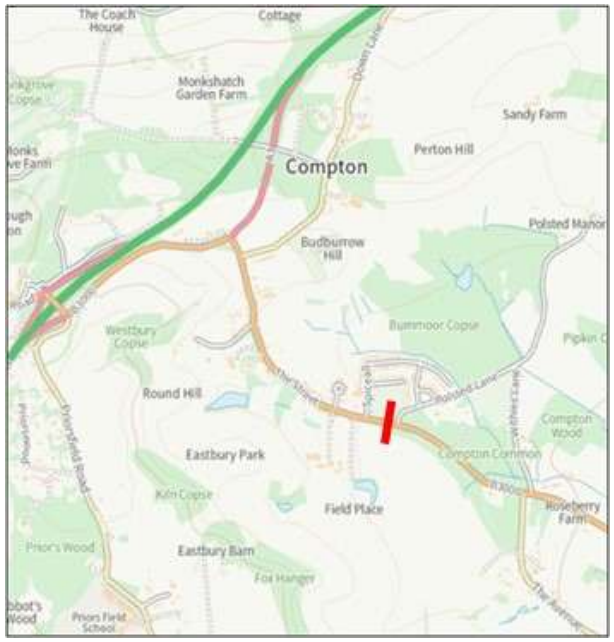


Source: SCC Transport Studies team

AADT is annual average daily traffic flow across all the days of the week, including weekends. It is the flow of vehicles on a stretch of road in both directions. The effect of the pandemic can be seen together with the gradual recovery. In 2024, average daily volumes were back to an average of over 12,300 vehicles using the B3000. It is too early in the year to be sure of the

average for 2025, but it is likely again to be over 12,000 vehicles per day. Please note, the data for 2016 was captured over just 1 month (September), which is likely to explain, at least in part, why the AADT is relatively high.

The counter is on B3000 The Street, close to the junction with Polsted Lane, shown on the map below by the red line:



Source: SCC

Licence: SCC © Crown copyright [and database rights] OS AC0000813791

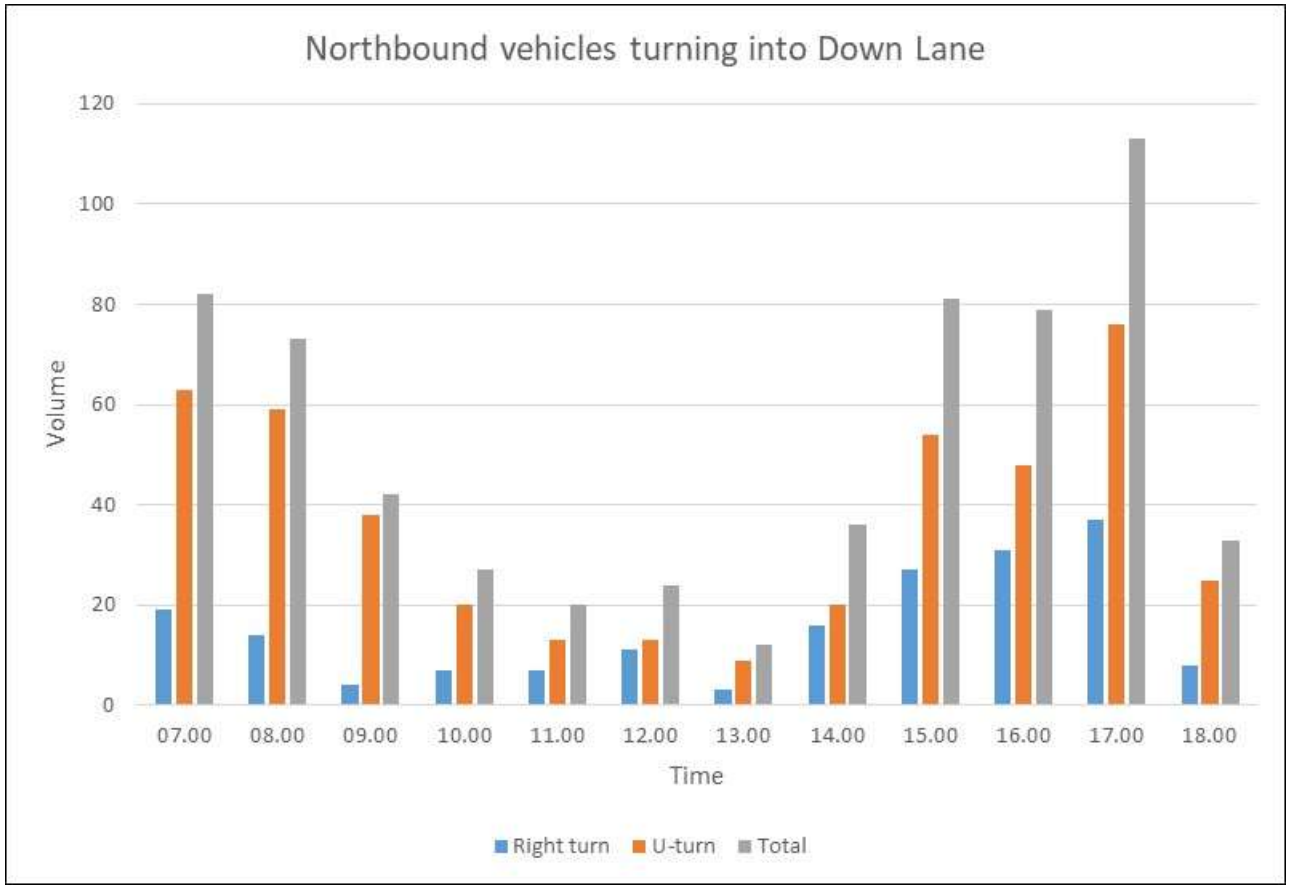
As the volumes increase, speed decreases, and this is most evident at the 85th percentile level:

Year	Average speed (mph)	Speed 85th percentile (mph)
2021	31.7	37.2
2022	32.2	37.2
2023	31.9	37.2
2024	31.4	36.6
2025	31.1	35.8

A one day 12 hour (07:00-19:00) count from September 2024 at the roundabout junction of The Street with the A3 southbound off-slip found that the percentage of HGVs using The Street was 4.3%.

Down Lane no right turn ban compliance:

The same survey (September 2024) also captured turning movements at the junction with Down Lane. While non-compliance was evident, some 438 drivers used the roundabout just to the north to U-turn and then turn left into Down Lane. Some 184 drivers chose to ignore the sign, but the survey indicates that most drivers, 70%, did conform to the restriction over the 12-hour period of the survey.



Source: SCC Transport Studies: turning count survey, September 2024

This graph illustrates that the demand to turn right into Down Lane is heaviest during the peaks, but at the same time shows that a significant proportion of drivers do obey the banned turn and u-turn at the roundabout followed by a left turn into Down Lane. This indicates that the banned turn is likely to have had a positive effect on air quality by reducing northbound queuing caused by drivers waiting to turn right into Down Lane and consequently smoothing the flow of the northbound stream of traffic.

It is unlikely that the banned turn on its own will have resulted in the improvement in air quality, but it is probable to have been a contributory factor. However, it is difficult to say how much of the improvement will have been due to this measure.

Appendix A: Monitoring Results

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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
GD2	York Road	Roadside	499799	149934	NO_2	No	12.0	1.5	No	2.6
GD6	Chantries	Rural	500385	148342	NO_2	No	0.0	120.0	No	2.0
GD10	The Garth	Urban Background	488629	150032	NO_2	No	0.0	132.6	No	2.2
GD16	Sandfields	Roadside	499761	149914	NO_2	No	2.5	2.0	No	2.5
GD18	Josephs Road	Urban Background	499665	150720	NO_2	No	2.4	1.0	No	2.4
TC4	Stoke Mews	Kerbside	499822	150010	NO_2	No	3.1	1.7	No	2.4
TC5	Mangles Court	Other	499486	149951	NO_2	Yes, Guildford Towncentre AQMA	0.0	7.5	No	2.4
TC6	18 Park Street	Kerbside	499299	149466	NO_2	Yes, Guildford Towncentre AQMA	1.0	0.5	No	2.4
TC17	Whittingtons, Park Street	Kerbside	499308	149453	NO_2	Yes, Guildford	0.0	3.8	No	2.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
						Towncentre AQMA				
TC8	13-21 Hi St, Wagama	Kerbside	499493	149402	NO_2	Yes, Guildford Towncentre AQMA	23.0	2.4	No	2.5
TC9	The Mount	Kerbside	499241	149257	NO_2	No	0.0	78.0	No	2.4
TC11	YMCA	Urban Centre	499308	149505	NO_2	Yes, Guildford Towncentre AQMA	-2.0	5.3	No	2.5
TC13	Weatherspoon	Kerbside	499406	149584	NO_2	Yes, Guildford Towncentre AQMA	1.5	0.5	No	2.6
TC14	ACM	Kerbside	499369	149577	NO_2	Yes, Guildford Towncentre AQMA	0.0	2.1	No	2.5
TC15	Weatherspoon/Popworld	Kerbside	499382	149567	NO_2	Yes, Guildford Towncentre AQMA	-0.4	1.9	No	2.5
TC18	11 Guildford Park Road	Roadside	499087	149503	NO_2	No	0.0	4.2	No	2.5
TC19	39 Guildford Park Road	Kerbside	499045	149574	NO_2	No	1.9	1.9	No	2.6
TC20	16A Park Street	Kerbside	499304	149458	NO_2	Yes, Guildford	0.0	1.6	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) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
						Towncentre AQMA				
TC21	106 Stoke Road	Roadside	499798	150682	NO_2	No	0.0	3.8	No	2.4
TC22	185 Stoke Road	Roadside	499780	150670	NO_2	No	0.0	5.8	No	2.1
A281-1	The Legion	Kerbside	499624	149278	NO_2	Yes, Guildford Towncentre AQMA	1.7	0.5	No	2.5
C4	Little Cottage, Compton	Kerbside	495437	147288	NO_2	Yes, The Street, Compton AQMA	0.0	1.5	No	2.4
C9	Moors Cottage	Kerbside	495442	147270	NO_2	Yes, The Street, Compton AQMA	3.0	1.0	No	2.3
SH1	Oppo Sea Horse pub	Kerbside	500046	147604	NO_2	No	4.0	1.0	No	2.4
SH2	36 The Street	Kerbside	499978	147704	NO_2	Yes, A281, The street, Shalford AQMA	0.0	2.0	No	2.3
SH3	Nr Shalford Lane	Kerbside	500003	147670	NO_2	No	2.3	1.0	No	2.4
SH4	A281 Oppo Bahamia Court	Kerbside	500086	147521	NO_2	No	6.0	1.2	No	2.4

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
SH6	A281, Bridge House	Kerbside	499955	148018	NO_2	No	0.0	3.2	No	2.4
SH8	28, The Street, Shalford	Kerbside	499723	146759	NO_2	Yes, A281, The street, Shalford AQMA	0.0	2.0	No	2.3
RP4	Newark Lane	Kerbside	505150	156741	NO_2	No	0.0	0.5	No	2.3
RP6	Ripley High Street	Kerbside	505374	156883	NO_2	No	0.0	1.7	No	2.0
RP7	Lamp 48, Nr The Anchor	Kerbside	505159	156705	NO_2	No	0.0	1.7	No	2.1
FRH2	38 Farnham Road	Roadside	499078	149414	NO_2	No	0.0	5.0	No	2.0
FRH6	22 Farnham Road	Roadside	499102	149421	NO_2	Yes, Guildford Town Centre AQMA	0.0	6.0	No	2.0
PR1	Wycliffe Building, Portsmouth Rd	Kerbside	499305	149168	NO_2	No	0.0	1.0	No	2.1
PR3	Oppo Cannon	Kerbside	499360	149326	NO_2	Yes, Guildford Town Centre AQMA	2.9	2.8	No	2.6
A3-4	Beckingham Road	Roadside	498133	150648	NO_2	No	0.0	4.0	No	2.7
A3-6	Ash Grove	Other	498217	150649	NO_2	No	0.0	19.5	No	2.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
A3-7	Kendale Court	Other	498653	150790	NO_2	No	0.0	15.0	No	2.4
A3-8	Noise barrier, Cathedral Hill	Roadside	497777	149774	NO_2	No	19.0	7.0	No	2.0
A3-9	Lamp post 513-12	Kerbside	497736	149590	NO_2	No	24.0	1.0	No	2.5
A3-10	Raymond Crescent, lamp 513-002	Kerbside	497876	150000	NO_2	No	19.0	1.0	No	2.5
A3-12	Onslow school Reception block	Other	497610	149263	NO_2	No	0.0	14.0	No	3.0
A3-13	Onslow School Reception play	Other	497592	149251	NO_2	No	0.0	10.0	No	1.8
A3-14	Onslow School Football court	Other	497636	149271	NO_2	No	0.0	30.0	No	3.2
A3-15	Onslow School Bug Hotel	Other	497637	149303	NO_2	No	0.0	8.0	No	1.6
A3-16	119 Raymond Cres	Other	497883	149998	NO_2	No	16.0	9.0	No	1.8
A3-17	Wilderness Road	Roadside	497743	149559	NO_2	No	7.2	12.0	No	2.3
A3-18, A3-19, A3-20	HE AMS3	Kerbside	497715	149494	NO_2	No	18.0	2.5	Yes	2.1
WTC3	Walnut Tree Close WTC-3	Kerbside	499257	149601	NO_2	No	1.0	1.4	No	2.2
Godalming AMS 1, Godalmin	Godalming AMS	Urban Centre	496711	143705	NO_2	No	NA	2.0	Yes	

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
g AMS 2, Godalming AMS 3										

Notes:

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

(2) N/A if not applicable.

Table A.2 – Annual Mean NO_2 Monitoring Results: Non-Automatic Monitoring (µg/m^3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
GD2	499799	149934	Roadside	90.6	90.6	21.7	23.4	29.9	22.1	18.0
GD6	500385	148342	Rural	100.0	100.0	8.1	10.1	11.4	9.4	8.1
GD10	488629	150032	Urban Background	90.6	90.6	10.0	14.8	15.0	12.2	11.3
GD16	499761	149914	Roadside	90.6	90.6	25.4	29.6	28.9	28.0	24.7
GD18	499665	150720	Urban Background	100.0	100.0	14.6	17.2	21.3	16.8	13.5
TC4	499822	150010	Kerbside	92.5	92.5	21.0	25.9	25.6	22.0	20.0
TC5	499486	149951	Other	100.0	100.0	16.0	20.5	21.5	18.7	16.7
TC6	499299	149466	Kerbside	83.0	83.0	**42.7**	**50.5**	**46.6**	**49.4**	**42.8**
TC17	499308	149453	Kerbside	100.0	100.0		27.2	26.8	24.4	21.3
TC8	499493	149402	Kerbside	100.0	100.0		34.3	34.4	27.6	26.4
TC9	499241	149257	Kerbside	100.0	100.0		26.1	24.3	20.2	18.7
TC11	499308	149505	Urban Centre	75.0	75.0			25.8	21.3	18.4

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
TC13	499406	149584	Kerbside	100.0	100.0			34.7	33.4	29.5
TC14	499369	149577	Kerbside	100.0	100.0			28.7	25.1	22.7
TC15	499382	149567	Kerbside	100.0	100.0			27.9	26.5	23.1
TC18	499087	149503	Roadside	100.0	100.0				22.8	20.7
TC19	499045	149574	Kerbside	100.0	100.0				27.6	23.6
TC20	499304	149458	Kerbside	100.0	100.0					33.7
TC21	499798	150682	Roadside	100.0	100.0					24.4
TC22	499780	150670	Roadside	75.0	75.0					20.0
A281-1	499624	149278	Kerbside	100.0	100.0	31.0	34.7	34.4	30.7	25.9
C4	495437	147288	Kerbside	100.0	100.0	33.3	37.3	38.8	33.2	28.8
C9	495442	147270	Kerbside	100.0	100.0	31.7	35.8	33.0	30.2	28.3
SH1	500046	147604	Kerbside	100.0	100.0	27.6	30.2	30.9	27.3	23.8
SH2	499978	147704	Kerbside	100.0	100.0	34.8	37.1	37.7	32.2	27.6

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
SH3	500003	147670	Kerbside	100.0	100.0	23.5	25.0	26.8	24.2	21.6
SH4	500086	147521	Kerbside	84.9	84.9	28.4	31.5		27.3	23.6
SH6	499955	148018	Kerbside	100.0	100.0				18.5	17.9
SH8	499723	146759	Kerbside	100.0	100.0					24.8
RP4	505150	156741	Kerbside	83.0	83.0	22.1	25.4	26.9	22.6	22.1
RP6	505374	156883	Kerbside	100.0	100.0			26.3	21.5	18.6
RP7	505159	156705	Kerbside	100.0	100.0				21.5	17.0
FRH2	499078	149414	Roadside	100.0	100.0	25.5	29.3	32.5	28.1	22.6
FRH6	499102	149421	Roadside	100.0	100.0	24.6	28.1	32.5	27.6	24.7
PR1	499305	149168	Kerbside	100.0	100.0	23.7	28.4	30.6	26.8	23.7
PR3	499360	149326	Kerbside	100.0	92.5	20.8	22.6	26.7	21.5	21.6
A3-4	498133	150648	Roadside	100.0	100.0	23.2	35.0	31.4	30.5	22.9
A3-6	498217	150649	Other	100.0	100.0	19.0	21.7	26.5	20.7	19.1

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
A3-7	498653	150790	Other	100.0	100.0	20.7	26.1	26.6	27.3	18.7
A3-8	497777	149774	Roadside	100.0	100.0		**43.0**	39.8	37.1	27.7
A3-9	497736	149590	Kerbside	100.0	100.0		**49.2**	**49.3**	**41.3**	35.1
A3-10	497876	150000	Kerbside	100.0	100.0		**56.2**	**49.3**	**46.3**	**40.5**
A3-12	497610	149263	Other	92.5	92.5			23.8	18.1	17.9
A3-13	497592	149251	Other	75.0	75.0			20.6	19.3	14.2
A3-14	497636	149271	Other	84.9	84.9			22.2	20.5	17.4
A3-15	497637	149303	Other	92.5	92.5			25.4	22.5	19.1
A3-16	497883	149998	Other	75.0	75.0			25.3	21.3	21.2
A3-17	497743	149559	Roadside	100.0	100.0			30.5	25.1	22.2
A3-18, A3-19, A3-20	497715	149494	Kerbside	100.0	100.0				**50.7**	**44.7**
WTC3	499257	149601	Kerbside	81.1	81.1			25.5	24.7	23.6
Godalming AMS 1, Godalming	496711	143705	Urban Centre	75.0	75.0				19.3	16.3

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
AMS 2, Godalming AMS 3										

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

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

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

Notes:

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

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

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

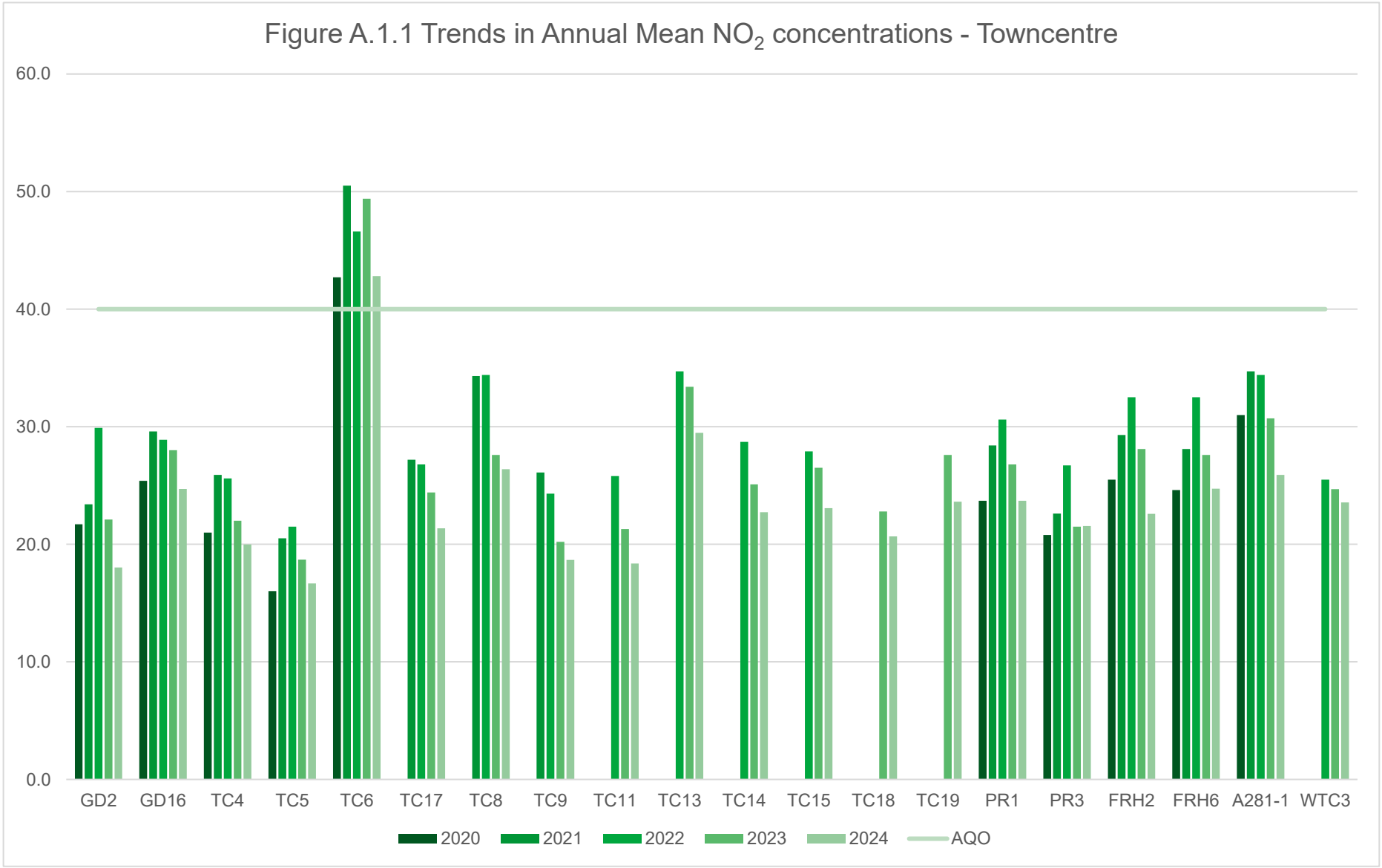
Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

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

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

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

Figure A.1 – Trends in Annual Mean NO_2 Concentrations



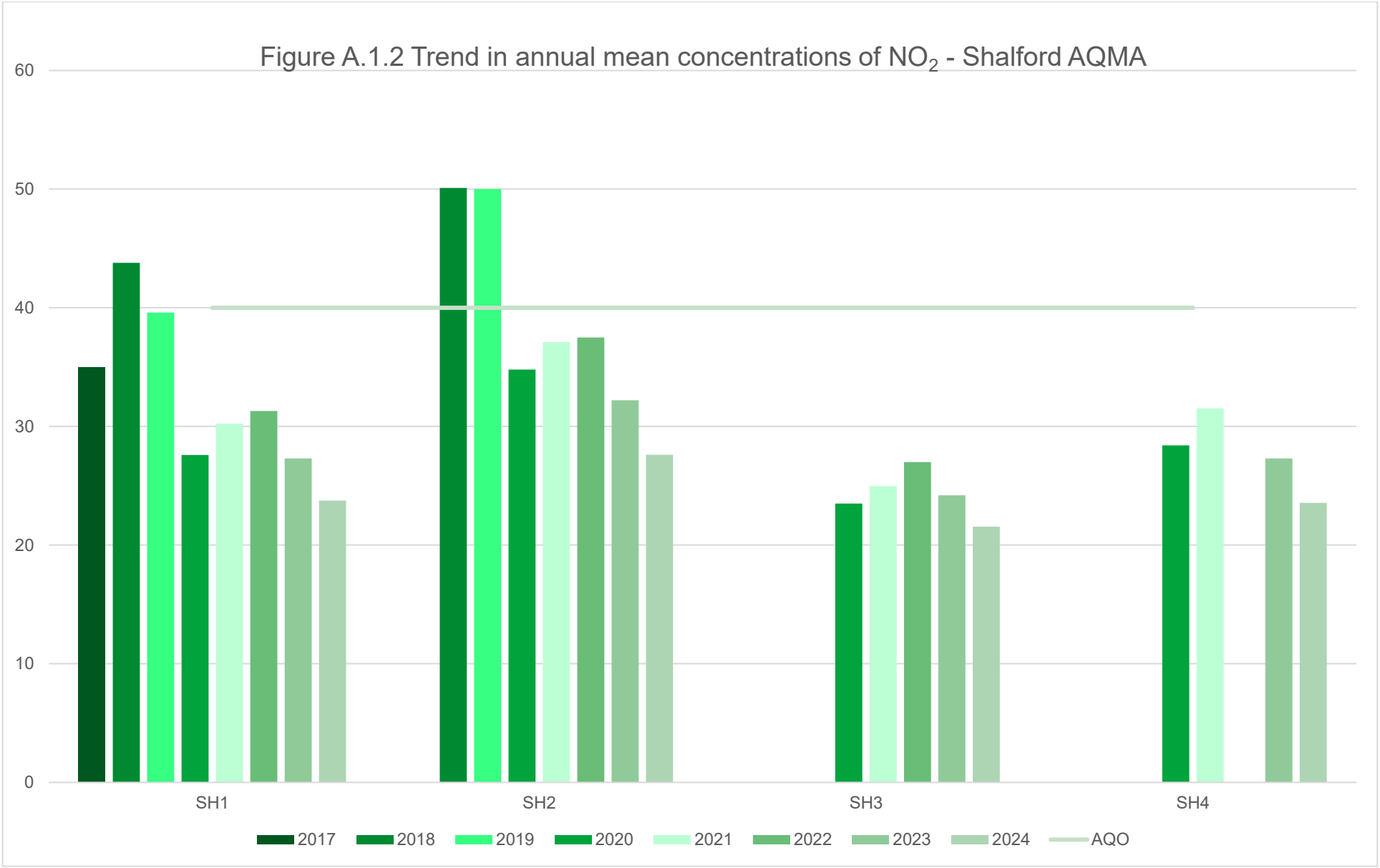
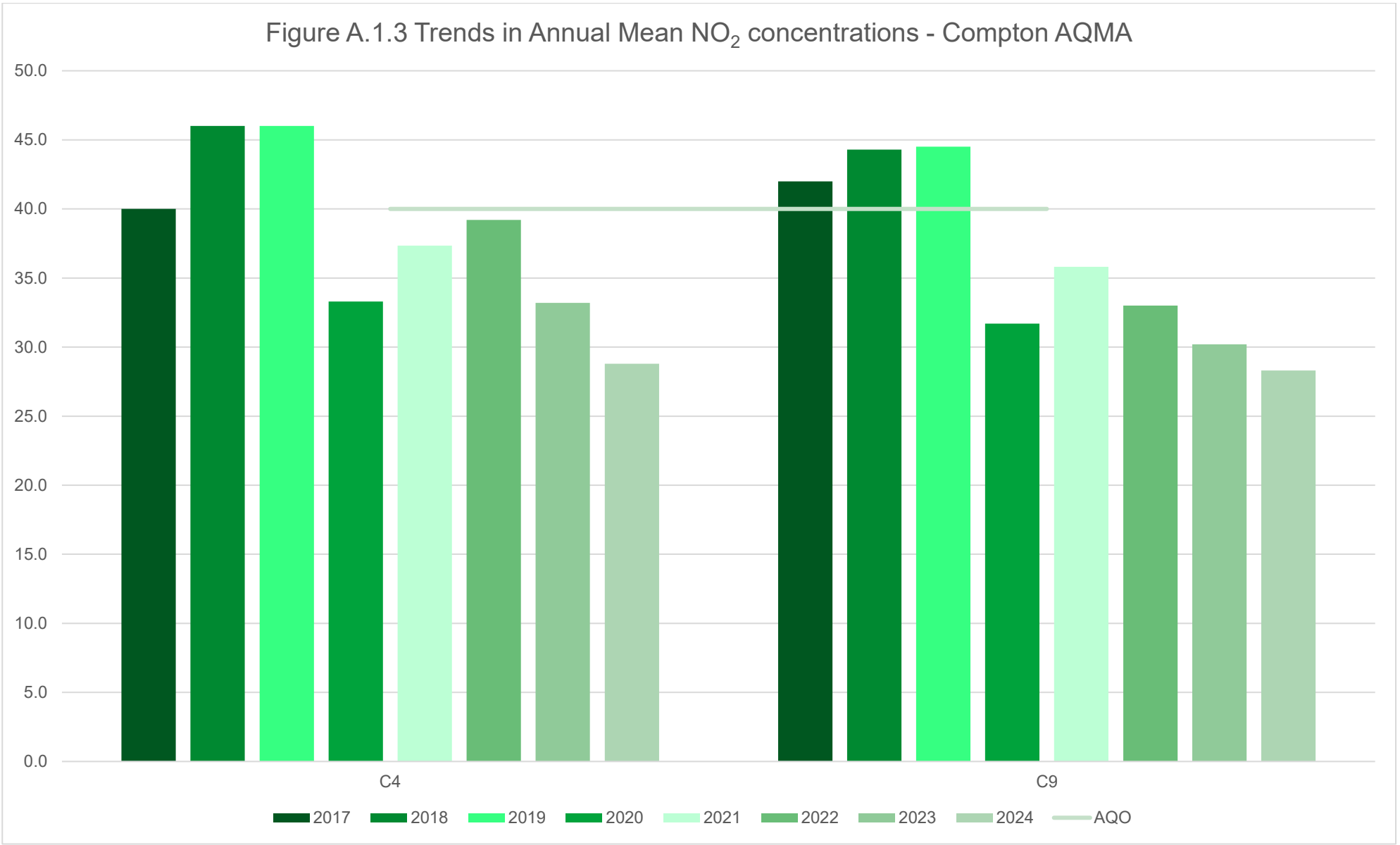


Figure A.1.2 Trend in annual mean concentrations of NO2 - Shalford AQMA
60
50
40
30
20
10
0
SH1
SH2
SH3
SH4
2017
2018
2019
2020
2021
2022
2023
2024
AQO

Figure A.1.3 Trends in Annual Mean NO_2 concentrations - Compton AQMA



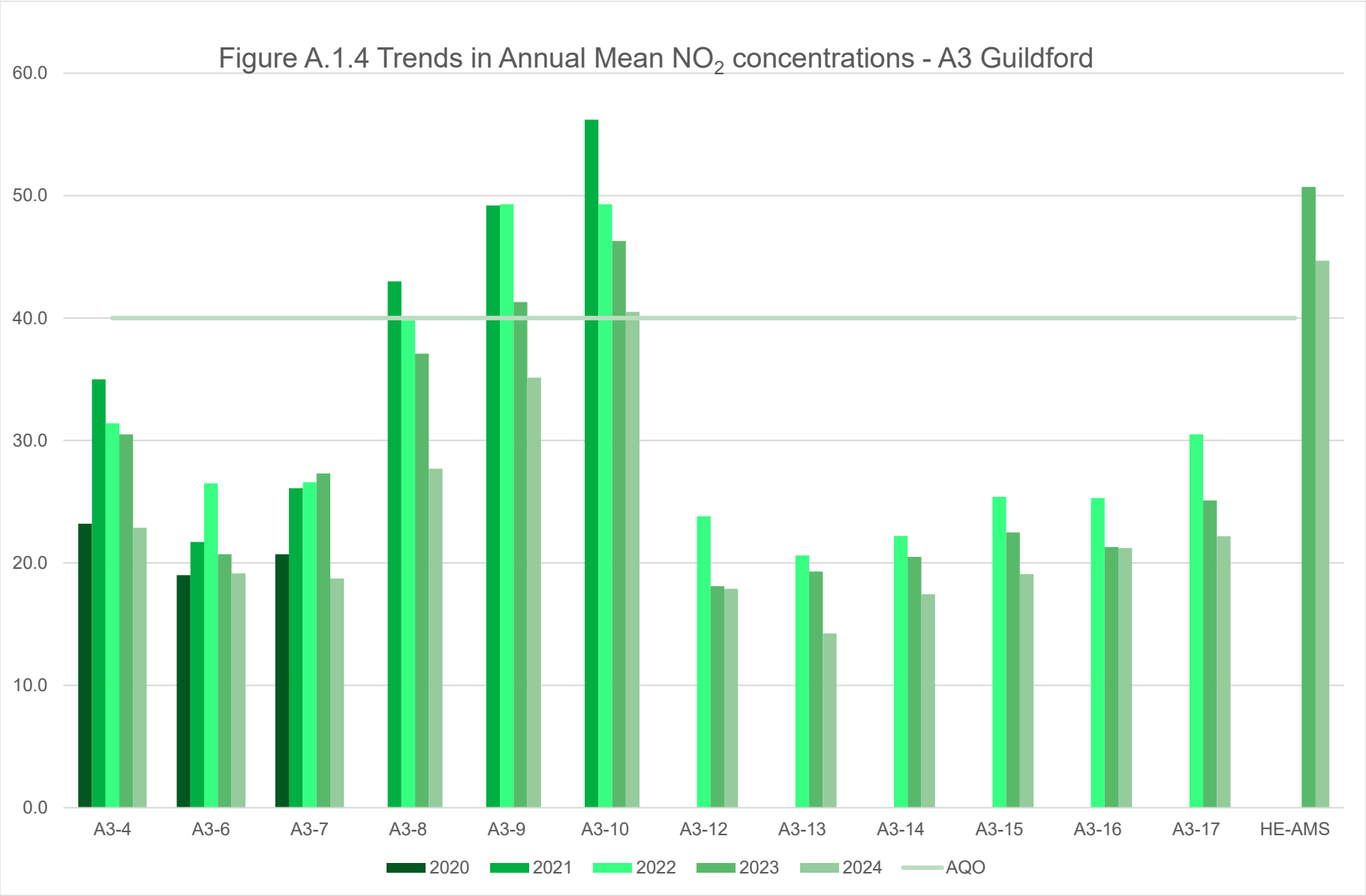


Figure A.1.4 Trends in Annual Mean NO2 concentrations - A3 Guildford
60.0
50.0
40.0
30.0
20.0
10.0
0.0
A3-4
A3-6
A3-7
A3-8
A3-9
A3-10
A3-12
A3-13
A3-14
A3-15
A3-16
A3-17
HE-AMS
2020
2021
2022
2023
2024
AQO

Appendix B: Full Monthly Diffusion Tube Results for 2024

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

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.83)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
GD2	499799	149934	27.0	26.0	24.0	21.0	18.0	18.0	14.0	15.0	23.0	24.0	30.0		21.8	18.0		
GD6	500385	148342	12.0	10.0	11.0	10.0	9.0	8.0	7.0	7.0	12.0	9.0	13.0	9.0	9.8	8.1		
GD10	488629	150032	18.0	14.0	14.0	12.0	10.0	11.0	9.0	9.0	18.0	14.0	22.0		13.7	11.3		
GD16	499761	149914	33.0	34.0	32.0	27.0		30.0	23.0	28.0	31.0	29.0	35.0	27.0	29.9	24.7		
GD18	499665	150720	23.0	17.0	18.0	19.0	15.0	13.0	9.0	9.0	21.0	15.0	20.0	17.0	16.3	13.5		
TC4	499822	150010	30.0	26.0	22.0	23.0	23.0	19.0	28.0	16.0		24.0	32.0	23.0	24.2	20.0		
TC5	499486	149951	26.0	22.0	22.0	19.0	21.0	16.0	14.0	12.0	23.0	22.0	26.0	19.0	20.2	16.7		
TC6	499299	149466		56.0	61.0	54.0		46.0	32.0	45.0	62.0	51.0	60.0	51.0	51.8	**42.8**	36.8	
TC17	499308	149453	35.0	29.0	28.0	30.0	23.0	22.0	15.0	19.0	30.0	23.0	32.0	24.0	25.8	21.3		
TC8	499493	149402	41.0	30.0	28.0	30.0	32.0	31.0	17.0	24.0	49.0	28.0	42.0	31.0	31.9	26.4		
TC9	499241	149257	29.0	24.0	23.0	22.0	21.0	20.0	15.0	16.0	29.0	23.0	29.0	20.0	22.6	18.7		
TC11	499308	149505		24.0		22.0	22.0	19.0	17.0	18.0	28.0		28.0	22.0	22.2	18.4	19.3	
TC13	499406	149584	44.0	41.0	23.0	38.0	34.0	39.0	28.0	35.0	41.0	39.0	34.0	32.0	35.7	29.5		
TC14	499369	149577	35.0	28.0	43.0	27.0	28.0	27.0	19.0	22.0	25.0	24.0	32.0	20.0	27.5	22.7		
TC15	499382	149567	35.0	31.0	28.0	23.0	26.0	27.0	19.0	23.0	33.0	28.0	36.0	26.0	27.9	23.1	23.7	
TC18	499087	149503	32.0	28.0	30.0	25.0	21.0	20.0	17.0	20.0	28.0	26.0	30.0	23.0	25.0	20.7		
TC19	499045	149574	35.0	33.0	29.0	24.0	28.0	27.0	19.0	20.0	32.0	31.0	37.0	28.0	28.6	23.6		

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 (0.83)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
TC20	499304	149458	52.0	49.0	35.0	31.0	27.0	47.0	23.0	38.0	52.0	46.0	47.0	42.0	40.8	33.7		
TC21	499798	150682	31.0	26.0	51.0	44.0	42.0	22.0	13.0	18.0	28.0	27.0	31.0	22.0	29.6	24.4		
TC22	499780	150670	32.0	25.0			25.0	23.0		19.0	27.0	22.0	25.0	20.0	24.2	20.0		
A281-1	499624	149278	35.0	33.0	28.0	29.0	29.0	32.0	22.0	23.0	39.0	35.0	39.0	32.0	31.3	25.9		
C4	495437	147288	39.0	36.0	33.0	36.0	35.0	38.0	27.0	30.0	42.0	35.0	36.0	31.0	34.8	28.8		
C9	495442	147270	33.0	35.0	37.0	33.0	36.0	39.0	28.0	28.0	39.0	33.0	42.0	28.0	34.3	28.3		
SH1	500046	147604	35.0	30.0	33.0	32.0	26.0	25.0	18.0	23.0	31.0	28.0	35.0	29.0	28.8	23.8		
SH2	499978	147704	41.0	36.0	31.0	33.0	34.0	33.0	27.0	28.0	35.0	33.0	36.0	34.0	33.4	27.6		
SH3	500003	147670	29.0	26.0	42.0	34.0	26.0	23.0	16.0	15.0	26.0	22.0	30.0	24.0	26.1	21.6		
SH4	500086	147521	39.0	32.0		30.0	26.0	23.0	23.0	26.0	32.0	26.0		28.0	28.5	23.6		
SH6	499955	148018	27.0	21.0	27.0	33.0	19.0	19.0	19.0	17.0	20.0	17.0	24.0	17.0	21.7	17.9		
SH8	499723	146759	40.0	34.0	21.0	26.0	26.0	31.0	28.0	26.0	34.0	30.0	36.0	28.0	30.0	24.8		
RP4	505150	156741			40.0	33.0	28.0	27.0	26.0	18.0	26.0	25.0	25.0	19.0	26.7	22.1		
RP6	505374	156883	30.0	24.0	28.0	24.0	20.0	24.0	14.0	11.0	27.0	21.0	26.0	21.0	22.5	18.6		
RP7	505159	156705	25.0	23.0	23.0	21.0	19.0	18.0	12.0	13.0	23.0	22.0	28.0	20.0	20.6	17.0		
FRH2	499078	149414	35.0	34.0	24.0	28.0	30.0	28.0	28.0	24.0	30.0	24.0	13.0	30.0	27.3	22.6		
FRH6	499102	149421	33.0	33.0	35.0	31.0	27.0	29.0	21.0	26.0	32.0	31.0	34.0	27.0	29.9	24.7		
PR1	499305	149168	32.0	30.0	35.0	26.0	32.0	30.0	23.0	26.0	33.0	30.0	32.0	15.0	28.7	23.7		
PR3	499360	149326	30.0	26.0	32.0	27.0	32.0	23.0	14.0	15.0		30.0	32.0	26.0	26.1	21.6		
A3-4	498133	150648	36.0	38.0	24.0	30.0	5.0	26.0	15.0	23.0	34.0	34.0	39.0	28.0	27.7	22.9		
A3-6	498217	150649	26.0	21.0	39.0	28.0	29.0	17.0	15.0	13.0	23.0	18.0	28.0	21.0	23.2	19.1		

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.83)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
A3-7	498653	150790	27.0	25.0	21.0	21.0	20.0	23.0	18.0	17.0	23.0	26.0	30.0	21.0	22.7	18.7		
A3-8	497777	149774	42.0	43.0	27.0	36.0	23.0	43.0	21.0	24.0	38.0	29.0	43.0	33.0	33.5	27.7		
A3-9	497736	149590	46.0	43.0	45.0	45.0	38.0	42.0	34.0	33.0	52.0	39.0	57.0	36.0	42.5	35.1		
A3-10	497876	150000	55.0	55.0	46.0	56.0	31.0	49.0	34.0	47.0	57.0	51.0	59.0	48.0	49.0	40.5	22.1	
A3-12	497610	149263	27.0	20.0		24.0	41.0	19.0	13.0	15.0	23.0	14.0	23.0	19.0	21.6	17.9		
A3-13	497592	149251	26.0	19.0		26.0			14.0	15.0	20.0	14.0	3.0	18.0	17.2	14.2		
A3-14	497636	149271	28.0	20.0		25.0	18.0	18.0		14.0	23.0	16.0	27.0	22.0	21.1	17.4		
A3-15	497637	149303	30.0	20.0		26.0	21.0	27.0	15.0	17.0	31.0	17.0	27.0	23.0	23.1	19.1		
A3-16	497883	149998	32.0	24.0	53.0	30.0	19.0		16.0	19.0			17.0	21.0	25.7	21.2		
A3-17	497743	149559	31.0	30.0	25.0	27.0	25.0	31.0	20.0	25.0	35.0	14.0	30.0	29.0	26.8	22.2		
A3-18	497715	149494	54.0	57.0	64.0	52.0	56.0	59.0	36.0	54.0	70.0	54.0	57.0	51.0	-	-		Triplicate Site with A3-18, A3-19 and A3-20 - Annual data provided for A3-20 only
A3-19	497715	149494	56.0	55.0	63.0	48.0	56.0	45.0	25.0	40.0	64.0	61.0	56.0	46.0	-	-		Triplicate Site with A3-18, A3-19 and A3-20 - Annual data provided for A3-20 only
A3-20	497715	149494	58.0	57.0	64.0	51.0	58.0	59.0	32.0	58.0	68.0	59.0	51.0	52.0	54.1	**44.7**	26.6	Triplicate Site with A3-18, A3-19 and A3-20 - Annual data provided for A3-20 only
WTC3	499257	149601	32.0	26.0	29.0	25.0	27.0	24.0	21.0		52.0		27.0	22.0	28.5	23.6		
Godalming AMS 1	496711	143705	29.0		24.0	19.0	24.0	20.0	14.0	13.0			11.0		-	-		Triplicate Site with Godalming AMS 1, Godalming AMS 2 and Godalming AMS 3 - Annual data provided for Godalming AMS 3 only
Godalming AMS 2	496711	143705	28.0	22.0	24.0	18.0	19.0	21.0	14.0	15.0			10.0		-	-		Triplicate Site with Godalming AMS 1, Godalming AMS 2 and Godalming AMS 3 - Annual data provided for Godalming AMS 3 only
Godalming AMS 3	496711	143705	29.0	24.0	23.0	21.0	20.0	18.0	25.0	12.0			14.0		19.8	16.3		Triplicate Site with Godalming AMS 1, Godalming AMS 2 and Godalming AMS 3 - Annual data provided for Godalming AMS 3 only

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

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

☒ **Local bias adjustment factor used.**

☐ **National bias adjustment factor used.**

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

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

Notes:

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

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

See Appendix C for details on bias adjustment and annualisation.

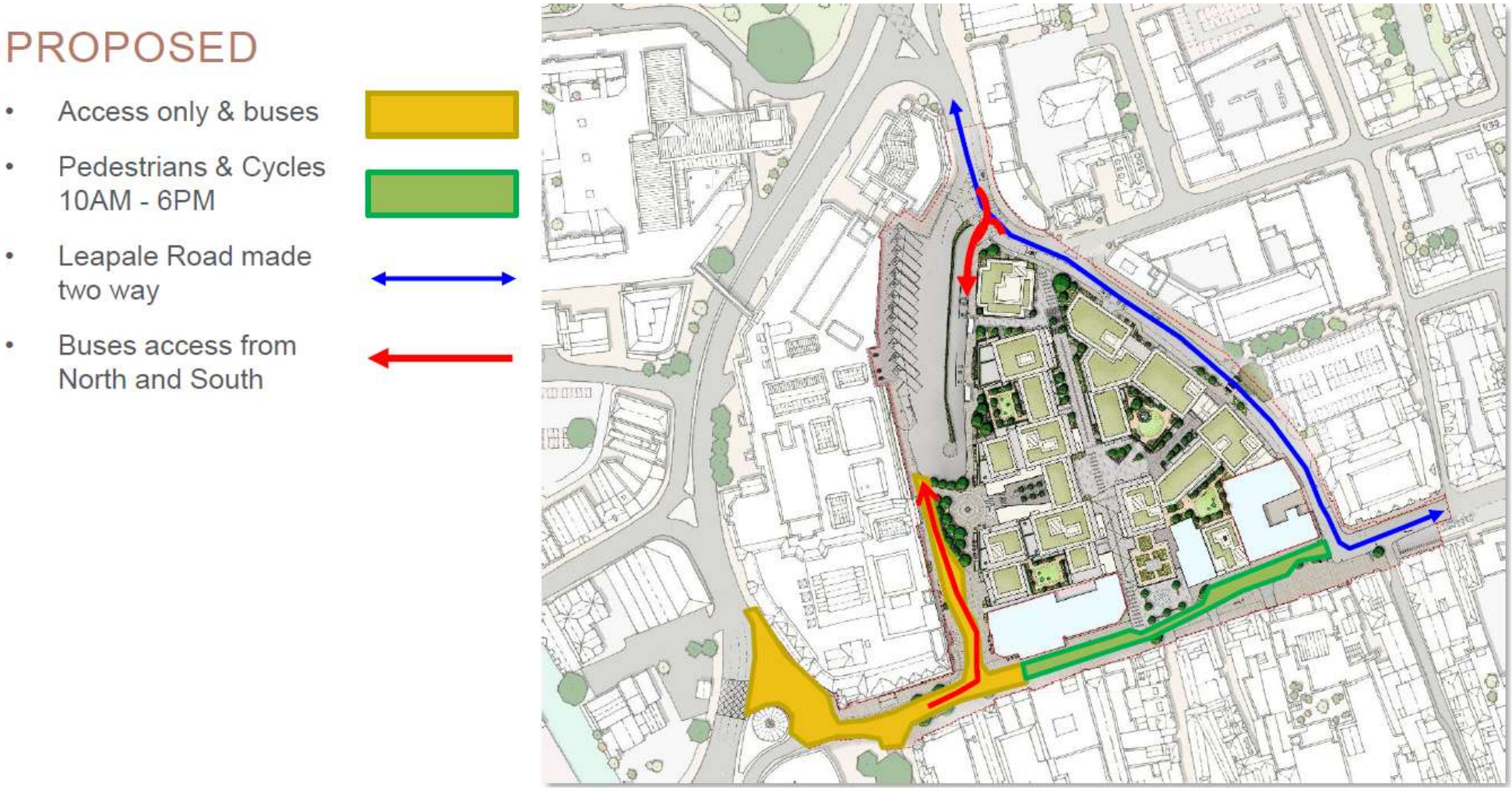
Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC

New or Changed Sources Identified Within Guildford Borough During 2024

1. 21/P/02232 | Demolition of existing building and erection of two buildings comprising residential accommodation (Use Class C3), flexible retail floorspace (Use Class E) and cinema (Sui Generis), together with car and cycle parking, plant and all highways, landscaping and other associated works. | Debenhams, Millbrook, Guildford, GU1 3UU.
   The demolition at Debenhams is currently underway at the time of writing this report.

2. 23/P/01211 | A mixed use redevelopment on a site bounded by North Street, Leapale Road and including Commercial Road and part of Woodbridge Road, Guildford comprising: Demolition of existing buildings; A new bus interchange with new access junction arrangement, new canopy, waiting facilities, a hard and soft landscaped pedestrian public area and hardstanding; Erection of buildings ranging from 4 to 11 storeys comprising the following uses: residential dwellings with associated car parking, hard and soft landscaped communal areas, ancillary cycle storage, residents gym, concierge and management office (Use Class C3); flexible non-residential floor space (Class E) together with; Hard and soft landscaped areas to form pedestrianised streets and public spaces; Associated vehicular access, servicing arrangements, plant, highway works (including alterations to North Street, Leapale Road and Commercial Road; and junctions at Leapale Road / North Street; Leapale Road / Commercial Road / Woodbridge Road) and associated infrastructure; **Land bounded by the Friary Centre Bus Station, North Street, Leapale Road, Guildford, GU1**

The implementation of planning approval has begun which will deliver 471 sustainable new homes using the derelict brownfield site. The North Street will be pedestrianised as part of the development, all of the car parking with active EV charging infrastructure and the development will benefit from a new modernised bus station. The plan below shows the proposed development:



3. 24/P/00563 & 24/P/00564: Surrey County Constabulary Police Headquarters Mount Browne, Sandy Lane, Guildford, GU3 1HG; The redevelopment will see a consolidation of services relocated to Mount Browne from elsewhere in Surrey, specifically the closure of the Police Station in Guilford Town Centre. A total of 267 operational vehicles (including response vehicles) would be based at the site, which is an additional 197 when compared to the existing fleet based at the site. The proposed redevelopment of Mount Browne would result in a net uplift of 147 two-way trips during the network AM peak hour and 181 during the PM peak hour.

Additional Air Quality Works Undertaken by Guildford Borough Council During 2024

Guildford Borough Council has not undertaken any additional works within reporting year of 2024.

QA/QC of Diffusion Tube Monitoring

The following details relate to the following aspects of non-automatic (i.e. passive) monitoring using diffusion tubes:

- Lambeth Scientific Services was the supplier used for diffusion tubes within 2024 and the method of preparation, was 50% TEA (triethanolamine) in acetone.
- Lambeth participated in NO_2 Proficiency Testing Scheme (February 2023 – February 2025)[15]. AIR NO_2 PT forms an integral part of the UK NO_2 Network's QA/QC and is a useful tool in assessing the analytical performance of those laboratories supplying diffusion tubes to Local Authorities for use in the context of Local Air Quality Management (LAQM). The following summary from the report shows the percentage of samples submitted for the study by Lambeth in 2024.

[15] https://laqm.defra.gov.uk/wp-content/uploads/2025/04/AIR-PT-Rounds-55-to-68-January-2023-to-February-2025.pdf Summary of Laboratory Performance in AIR NO2 Proficiency Testing Scheme (February 2023 – February 2025).

AIR PT Round	AIR PT AR055	AIR PT AR056	AIR PT AR058	AIR PT AR059	AIR PT AR062	AIR PT AR063	AIR PT AR065	AIR PT AR066	AIR PT AR068
Round conducted in the period	January – February 2023	May – June 2023	July – August 2023	September – October 2023	January – February 2024	April – June 2024	July – August 2024	September – October 2024	January – February 2025
Lambeth Scientific Services	0 %	75 %	50 %	0 %	50 %	50 %	50 %	50 %	100 %

Lambeth has provided an explanation on the AIR-PT results 2024, which is as follows:

April to June 2024 - **AR063** two results were satisfactory and two were questionable. The satisfactory range for two questionable samples were 0.86 to 1.16 and 0.87-1.17. The laboratory results of these two samples submitted were 1.20 and 1.23 which was slightly out of top range, hence was questionable and not 'Unsatisfactory'. It's difficult to find out exactly what is the root cause as two results of the same batch were satisfactory.

July to September 2024 **(AR065)** –two results were satisfactory and two were questionable, despite close monitoring of the procedure. The satisfactory range for two questionable sample was 0.70 to 0.94 and 0.71-0.95. The laboratory results of these two samples submitted were 1.00 and 1.01 which was slightly out of top range, hence was questionable and not 'Unsatisfactory'. It's difficult to find out exactly what is the root cause as two results of the same batch were satisfactory. **It appears that guiding analyst to allow longer shaking after low extraction on two samples AR062, caused range to exceed slightly to round AR063 and AR065.**

October to December 2024 **(AR066)** and Januray to February 2025 **(AR068)** all four results submitted were satisfactory, with results almost the same as the assigned value.

The bias factor for monthly Inter-Laboratory Scheme run by NPL for 2024 was 0.8 which was satisfactory.

- All the monitoring has been completed in adherence with the 2024 Diffusion Tube Monitoring Calendar. No divergences were necessary.
- The officers responsible for swapping diffusion tubes undergo training emphasizing the criticality of accuracy during tube replacements. They ensure that the correct batch number is matched (with the exposed tube typically belonging to the older batch), thereby maintaining consistency in sampling. Additionally, site labels are printed in alternating colours to facilitate easy differentiation between new and exposed tubes, enhancing accuracy.

Diffusion Tube Annualisation

All diffusion tube monitoring locations within Guildford Borough Council recorded data capture of 75% therefore it was not required to annualise any monitoring data. Only one of the triplicates collocated with the Godalming AMS (AMS-1) had data capture of less than 75%. Annual tube data is provided for Godalming AMS-3.

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

Site ID	Annualisation Factor Southampton Centre	Annualisation Factor London Hillingdon	Annualisation Factor Oxford Street Ebbes	Annualisation Factor London Bexley	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
Godalming AMS 1	1.0498	1.0024	1.0299	1.0433	1.0314	-	-

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2025 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG22 provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO_x/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

GBC undertook two collocation study:

1. Triplicates collocated with Godalming Automated Monitoring Station (AMS), located on Ockford Road near the junction with the High Street
2. Triplicates collocated with National Highway's managed AMS on A3 – Guildford and Godalming Bypass (westbound)

The A3-AMS had poor overall data capture. The local bias factor from Godalming AMS alone was calculated as 0.83 based on 9 months diffusion tube data at the Godalming AMS. This is not too far from the national bias adjustment factor of 0.81. As in the previous years, a conservative approach has been taken in selecting the bias adjustment factor, resulting in a higher bias-adjusted NO_2 value. Guildford Borough Council have applied a local bias adjustment factor of **0.83** to the 2024 monitoring data. A summary of bias adjustment factors used by Guildford Borough Council over the past five years is presented in

Table C.2.

Table C.2 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	**Local**	**-**	**0.83**
2023	National	V 03/24	0.85
2022	National	V 06/23	0.95
2021	National	V 03/22	0.97
2020	National	V 06/21	0.95

Table C.3 – Local Bias Adjustment Calculation

	Local Bias Adjustment Input 1	Local Bias Adjustment Input 2	Local Bias Adjustment Input 3	Local Bias Adjustment Input 4	Local Bias Adjustment Input 5
Periods used to calculate bias	9				
Bias Factor A	0.83 (0.69 - 1.04)				
Bias Factor B	21% (-4% - 45%)				
Diffusion Tube Mean (µg/m^3)	19.4				

	Local Bias Adjustment Input 1	Local Bias Adjustment Input 2	Local Bias Adjustment Input 3	Local Bias Adjustment Input 4	Local Bias Adjustment Input 5
Mean CV (Precision)	7.6%				
Automatic Mean (µg/m^3)	16.1				
Data Capture	98%				
Adjusted Tube Mean (µg/m^3)	16 (13 - 20)				

Combined Local Bias Adjustment Factor	**0.83**

Notes:

A combined local bias adjustment factor of 0.83 has been used to bias adjust the 2024 diffusion tube results.

NO_2 Fall-off with Distance from the Road

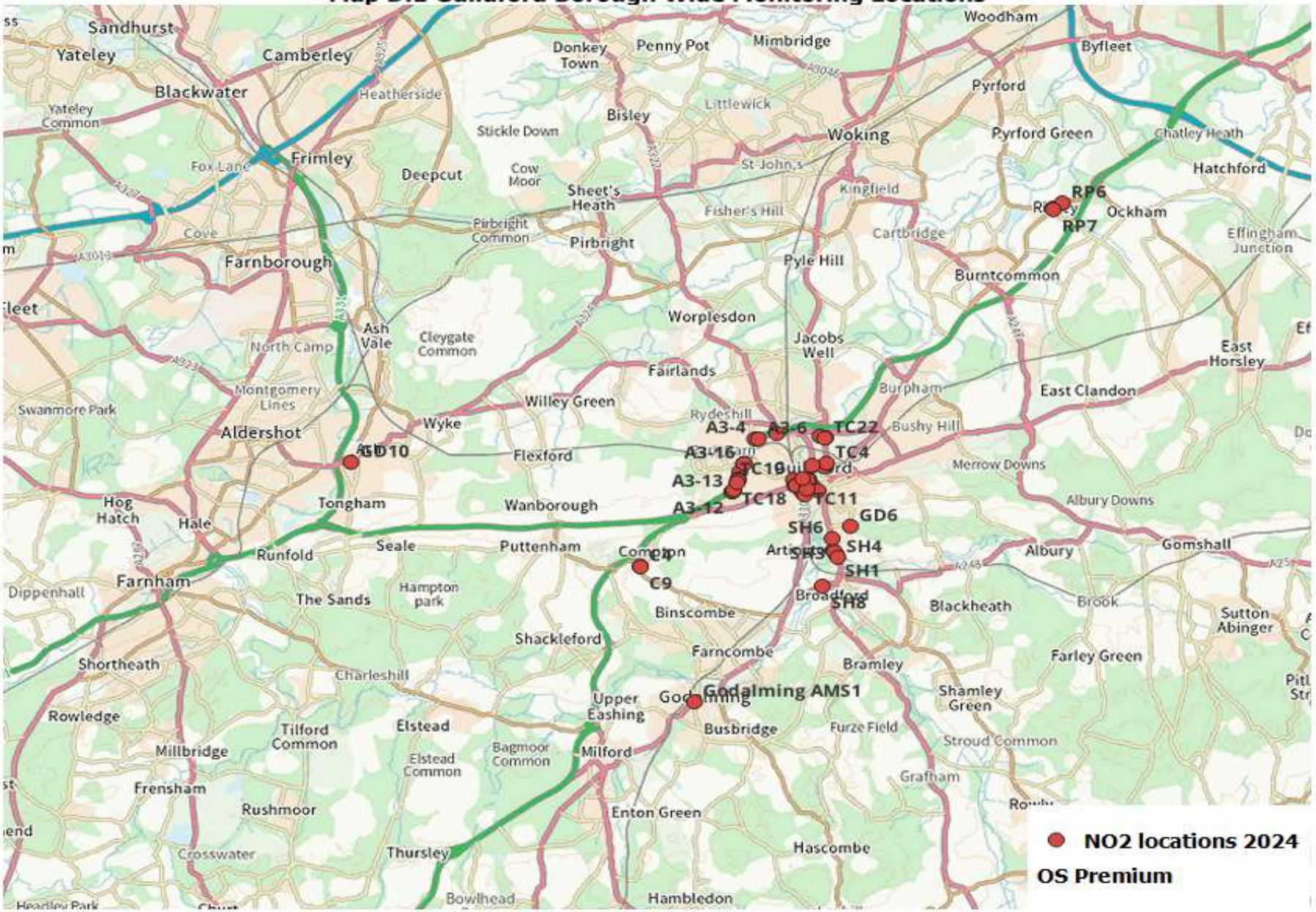
Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO_2 concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO_2 fall-off with distance calculator available on the LAQM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

Table C.4 – Non-Automatic NO_2 Fall off With Distance Calculations (concentrations presented in µg/m^3)

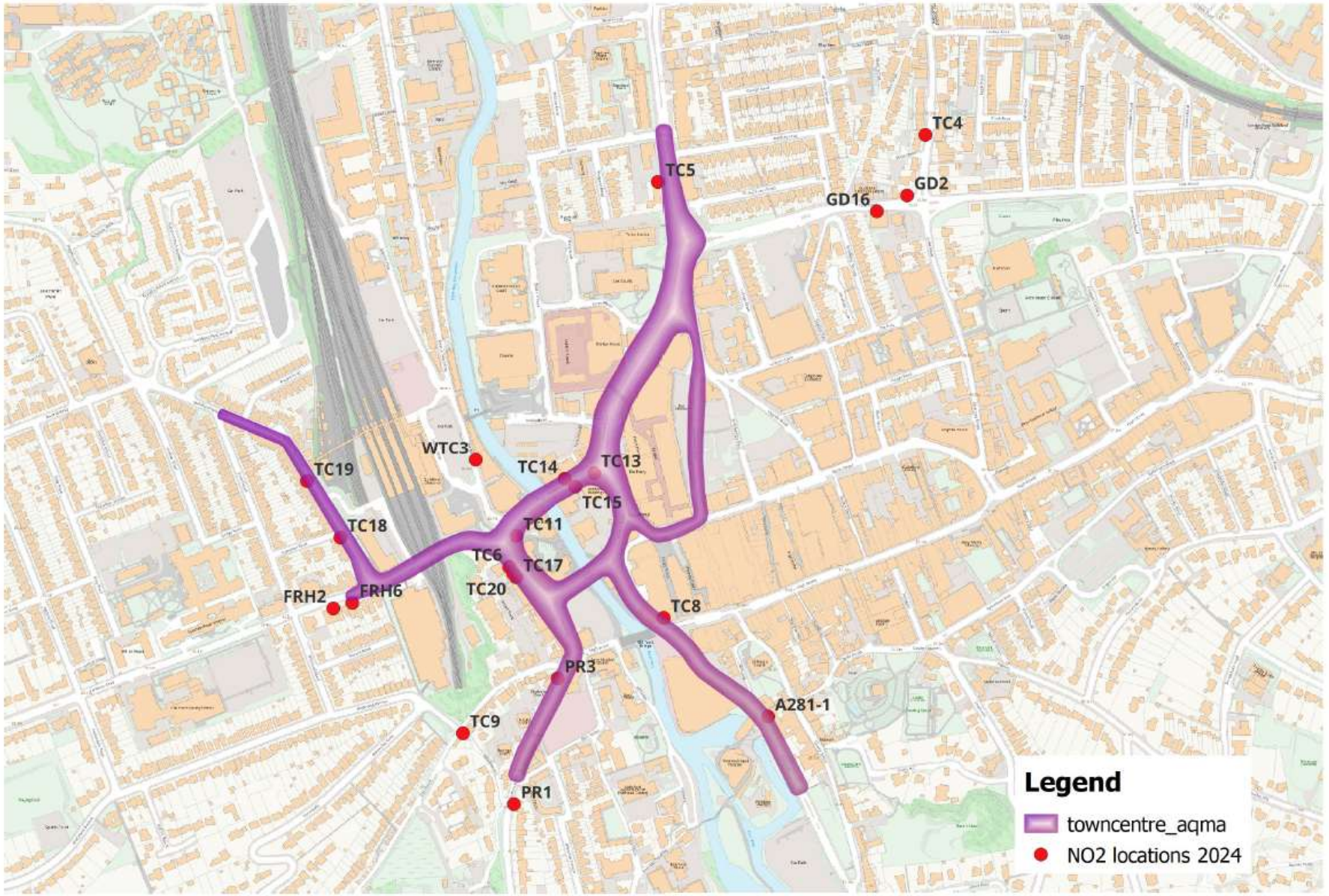
Site ID	Distance (m): Monitoring Site to Kerb	Distance (m): Receptor to Kerb	Monitored Concentration (Annualised and Bias Adjusted	Background Concentration	Concentration Predicted at Receptor	Comments
TC6	0.5	1.5	42.8	12.0	*36.8*	*Predicted concentration at Receptor within 10% the AQS objective.*
TC11	5.3	3.3	18.4	12.0	19.3	
TC15	1.9	1.5	23.1	12.0	23.7	
A3-10	1.0	20.0	40.5	10	22.1	
A3-18, A3-19, A3-20	2.5	20.5	44.7	10	26.6	*Warning: your receptor is more than 20m further from the kerb than your monitor - treat result with caution.*

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

Map D.1 Guildford Borough Wide Monitoring Locations

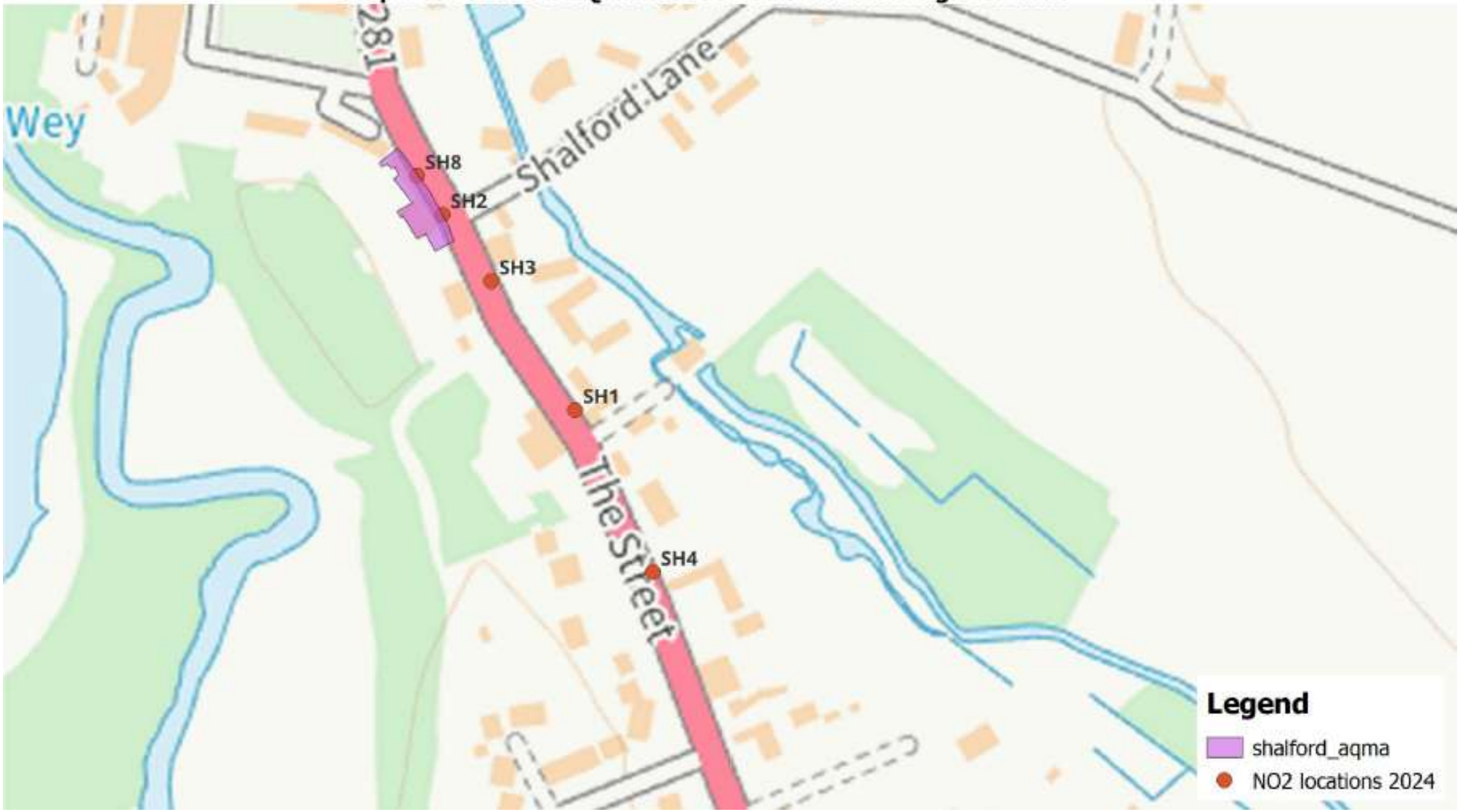


Map D.2 Guildford Town centre AQMA and relevant monitoring locations



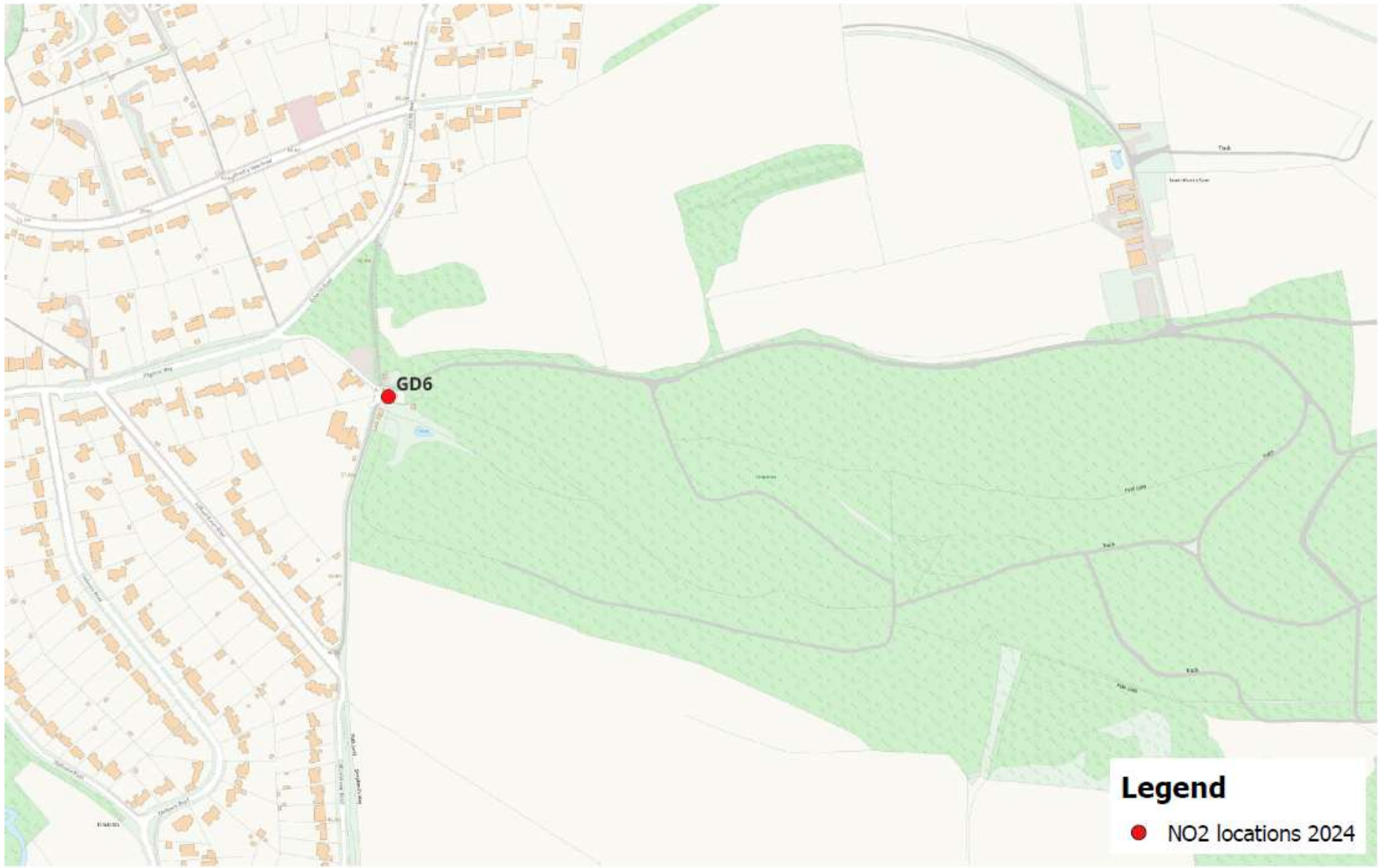
Map D.3 Compton AQMA and relevant monitoring locations

Map D.4 Shalford AQMA and relevant monitoring locations



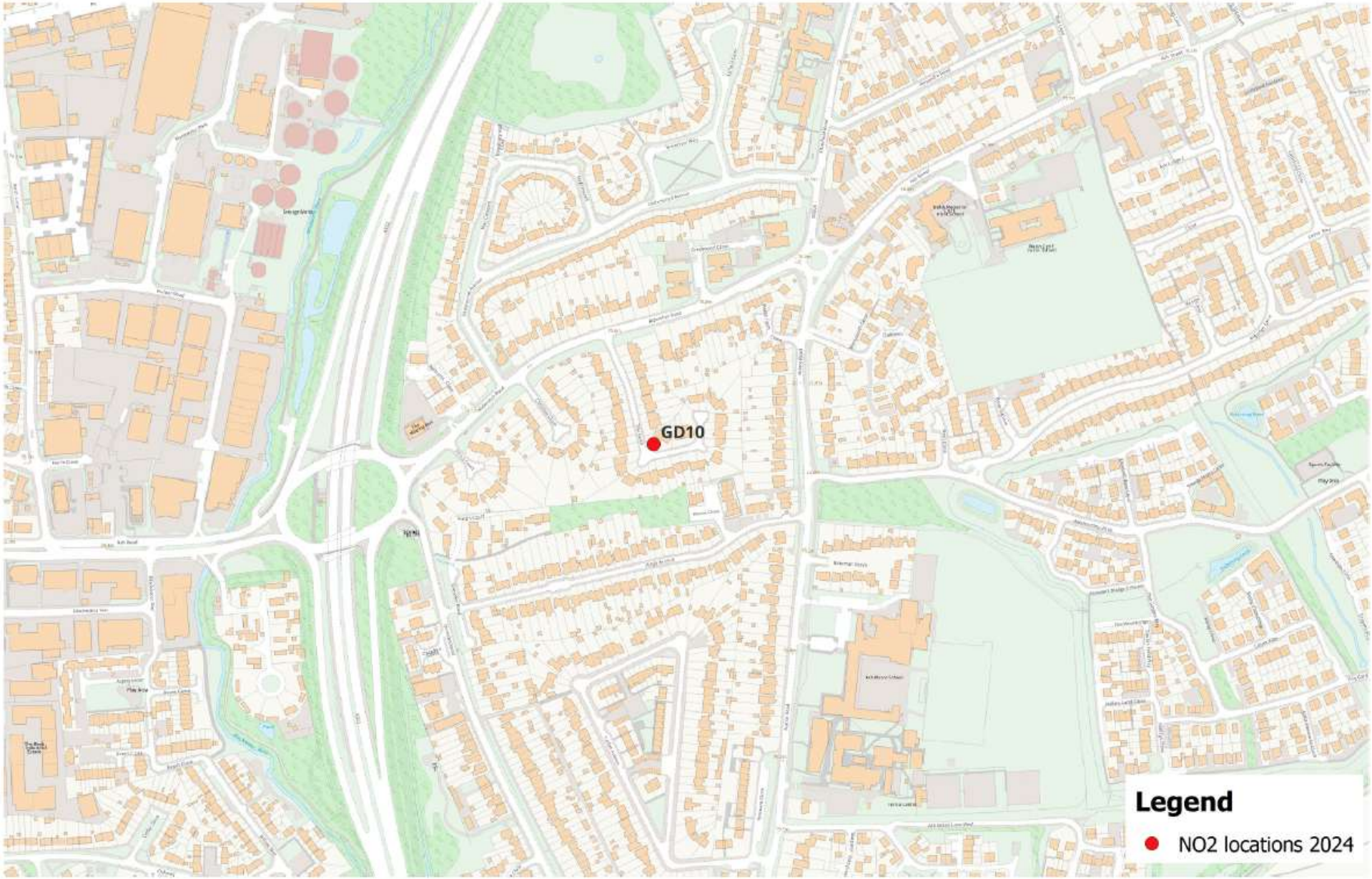
Map D.5 Shaford Monitoring Locations

Map D.6 Background locations - Chantries

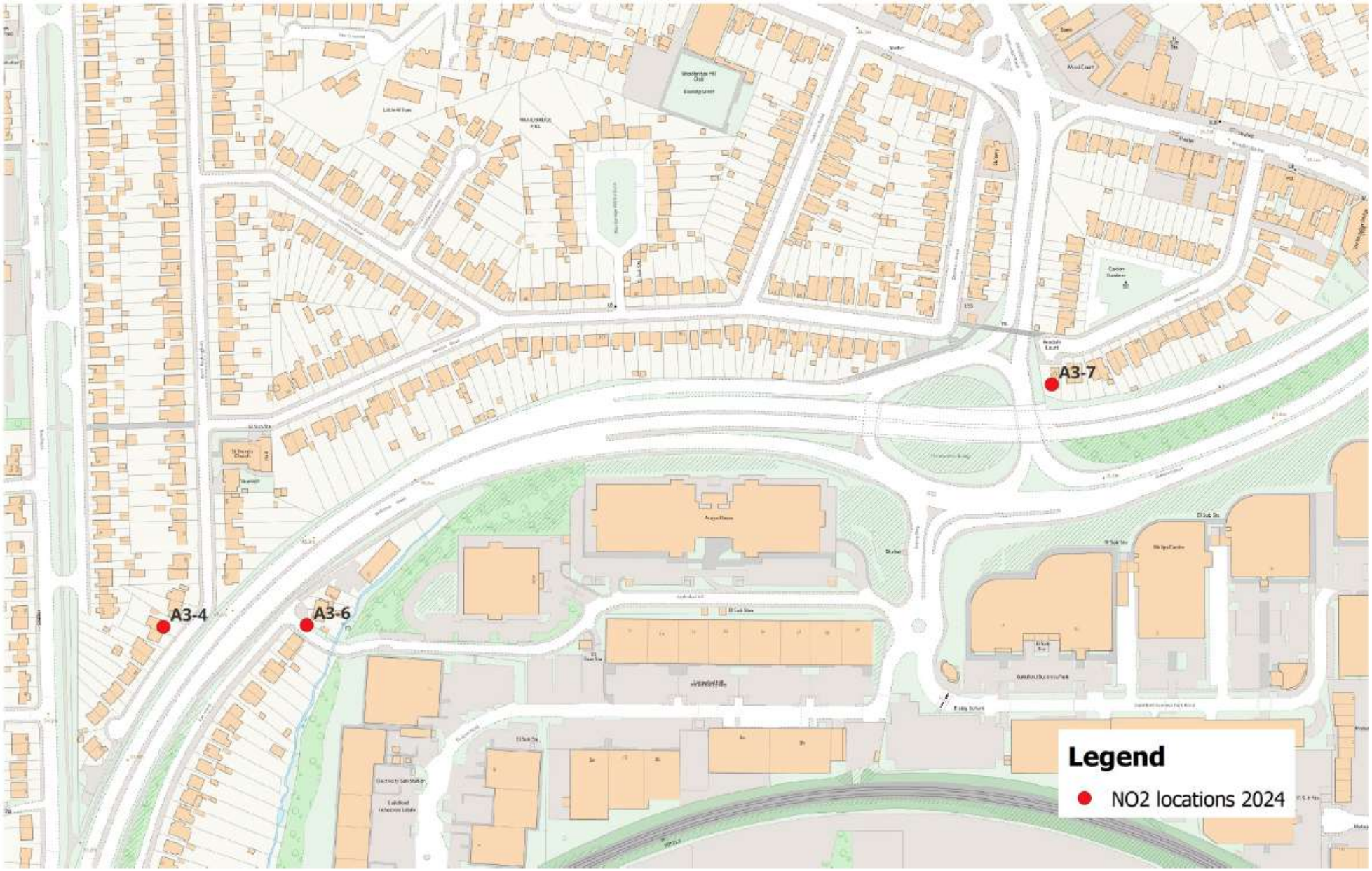


Map D.7 Background locations - Joseph's Road

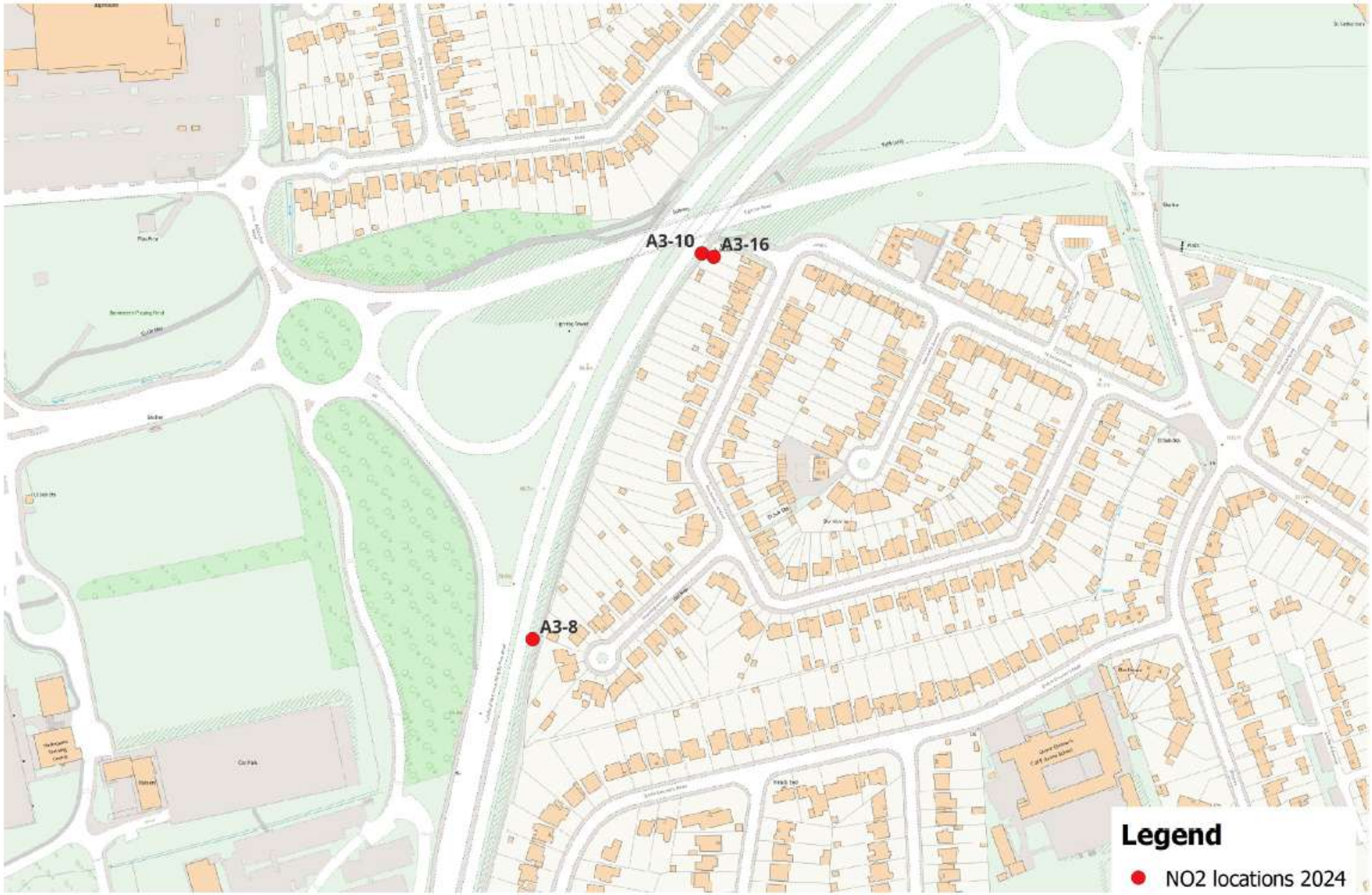
Map D.8 Background locations - The Garth



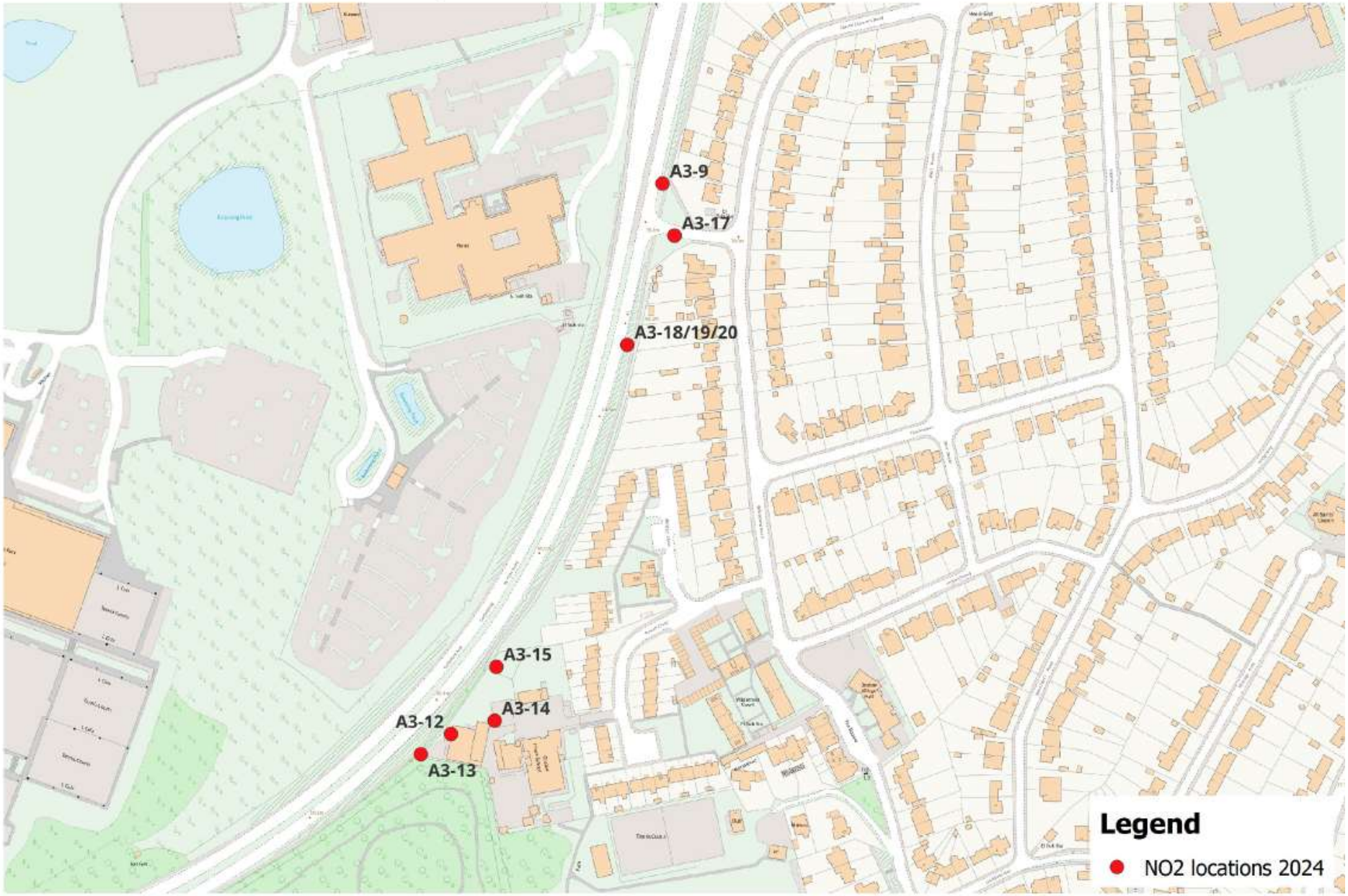
Map D.9 A3 Monitoring Locations



Map D.10 A3 Monitoring Locations



Map D.11 A3 Monitoring Locations



Map D.12 Monitoring locations - Stoke Road, Guildford

Map D.13 Monitoring locations - Ripley

Map D.14 Godalming AMS Collocation

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[16]

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

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

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
ASR	Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
LAQM	Local Air Quality Management
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide

References

- Local Air Quality Management Technical Guidance LAQM.TG22. August 2022. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- Local Air Quality Management Policy Guidance LAQM.PG22. August 2022. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- Chemical hazards and poisons report: Issue 28. June 2022. Published by UK Health Security Agency
- Air Quality Strategy – Framework for Local Authority Delivery. August 2023. Published by Defra.