



Horsham
District
Council



2026 Air Quality Annual Status Report (ASR)

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

Date: June 2026

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Local Responsibilities and Commitment

This ASR was prepared by the Environmental Health Department of Horsham District Council (HDC) with the support and agreement of the following officers and departments:

- Sussex Air
- Horsham District Council Sustainability Officer
- West Sussex County Council Transport Planning and Policy Senior Planner
- West Sussex County Council Public Health Health Protection Team

This ASR has been sent to high level Council Members, WSCC Transport Planning and WSCC Public Health. Although feedback was received, this draft ASR has not been approved by the aforementioned (at date of submission).

If you have any comments on this ASR please send them to Isabelle Carter at:

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Executive Summary: Air Quality in Our Area

Air Quality in Horsham District 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.

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

Table ES 1 - Description of Key Pollutants

Pollutant	Description
Nitrogen Dioxide (NO ₂)	Nitrogen dioxide is a gas which is generally emitted from high-temperature combustion processes such as road transport or energy generation.
Sulphur Dioxide (SO ₂)	Sulphur dioxide (SO ₂) is a corrosive gas which is predominantly produced from the combustion of coal or crude oil.
Particulate Matter (PM ₁₀ and PM _{2.5})	Particulate matter is everything in the air that is not a gas. Particles can come from natural sources such as pollen, as well as human made sources such as smoke from fires, emissions from industry and dust from tyres and brakes. PM₁₀ refers to particles under 10 micrometres. Fine particulate matter or PM_{2.5} are particles under 2.5 micrometres.

Horsham District is primarily agricultural in character and does not incorporate a significant heavy industrial base or major transport hubs. Air quality in the majority of Horsham district is good however there are a few areas where elevated concentrations of pollutants occur.

The main source of air pollution locally is road traffic emissions from major roads, notably the A24, which intersects the district north – south; A264 to the north of Horsham; A272

and A281 at Cowfold; and A283 at Storrington. Two Air Quality Management Areas (AQMAs) have been declared in the district, in the village of Cowfold (Cowfold AQMA) and town centre of Storrington (Storrington AQMA), both for the exceedances of the annual mean objective for nitrogen dioxide (NO₂).

Air Quality Action Plans (AQAPs) were prepared for both AQMAs; the Storrington AQAP was submitted to Defra in 2012 and the Cowfold AQAP in 2013 and both were updated in 2020. The preparation of a district-wide AQAP is ongoing and will be published following a public consultation. The new AQAP will present and discuss the last ten years' worth of monitoring data and modelling results for future NO₂ concentrations in the AQMA and will contain a range of schemes and measures that Horsham District Council (HDC) wishes to take forward. More information about the AQMAs can be found on HDC's [Air Quality webpage](#).

Although the work under the Local Air Quality Management (LAQM) is the legal obligation of district councils, actions aimed at improving air quality most of the time require the cooperation of other departments and organisations. HDC works in cooperation with other stakeholders, such as planning, UK Health Security Agency (UKHSA), West Sussex County Council (WSCC) highways, neighbouring Local Authorities, Sussex Air Quality Partnership, and the Environment Agency. The assessment and implementation of the identified traffic management schemes is done in cooperation with WSCC as they are the authority responsible for roads and transport management. Steering groups were set up for each of the AQMAs. They have contributed to the development of the Action Plans and make recommendations about the action plan measures to be taken forward by the relevant authorities (HDC, WSCC, etc.). The Council is consulted on planning applications for HDC Development Management and WSCC minerals and waste.

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.

Horsham District Council has taken forward several measures during the recent years in pursuit of improving local air quality. The key actions undertaken in 2025 were:

- Increasing availability of electric vehicles charging points

- Upgrading Sussex automatic monitoring network with a new PM_{2.5} and NO₂ analyser installed in Horsham in January 2025
- Continuation of the monitoring programme, which includes the operation and maintenance of three air quality monitoring stations, with the data shared at <http://www.sussex-air.net>
- Ongoing work with Planning Policy and Development Control to ensure the impacts of new development are mitigated and/or offset
- Attending Defra's workshops for Local Air Quality Management and Sussex Air partnership meetings. With this, we can take informed proactive actions
- Air quality promotion via website and social media, such as Clean Burn Night, Clean Air Day, and Walk to School Week
- Working with the County Council to support development of projects promoting improvements to Major Road Network routes through the district, for example the A24, which could reduce traffic routing through the AQMAs.
- Working with the County Council to support projects to improve sustainable transport provision. This includes Bus Service Improvement Plan improvements to bus stops and real time passenger information, and working to develop Local Cycling and Walking Infrastructure Plan measures, for example through supporting Strategic Transport Improvement Programme feasibility study measures being considered for key locations in Horsham.

Conclusions and Priorities

Nitrogen dioxide (NO₂)

- Urban background and roadside sites have shown an improvement in the last five years. This is believed to have been driven largely by general improvements in vehicle emissions standards but also to some extent by the implemented local traffic management measures, although it is difficult to isolate the impacts of individual interventions.
- There were no days of moderate or higher NO₂ air pollution in Horsham, or Storrington in 2025.
- WHO recommended 2021 Air quality guidelines level for NO₂ annual mean is 10 µg/m³. Based on this guideline all sites in Horsham District, except for urban background sites, were exceeding WHO guidelines in 2025.

- In 2025, as in previous years, NO₂ pollution tended to peak in the rush hours during weekdays. Concentrations at continuous monitoring roadside sites in 2025 during the working week were similar to, but slightly higher than, concentrations on the weekend.
- Monitoring within Storrington AQMA showed for the second consecutive year, there were no sites with concentrations within 10% of the annual mean NO₂ objective.
- Monitoring within Cowfold AQMA demonstrated the AQMA hasn't recorded any sites with concentrations within 10% of the annual mean NO₂ objective since 2020. This is why the Council proposed last year to revoke the AQMA, and this came into force in February 2026.
- Pulborough recorded the second highest concentration in the district (34 µg/m³), with peaks near the A29 traffic signals likely caused by congestion and vehicle idling.

Particulate matter (PM₁₀/PM_{2.5})

- In 2025, annual mean concentrations of PM₁₀ and PM_{2.5} increased slightly at Storrington AURN from 2024 levels.
- Horsham Park Way registered one day of 'moderate' PM₁₀ pollution in 2025.
- Storrington registered two days of 'moderate' PM₁₀ and three days of 'Moderate' PM_{2.5} pollution in 2025.
- Cowfold registered five days of 'moderate' PM_{2.5} pollution in 2025.
- In 2025, the highest concentrations of PM at all sites were in March. Concentrations were higher than expected compared to seasonal and annual trends. These results can be explained by the two PM pollution episodes that occurred in March, lasting a total of four days, meaning PM was unusually high. These results have skewed the yearly averages to be higher at each site.
- Domestic combustion of wood and coal in stoves and open fires is a large contributor to emissions of particulate matter both in the UK and is a large contributor towards elevated concentrations in winter months and during the evenings.
- Automatic monitoring at the Horsham Park Way, Storrington AURN and Cowfold sites indicates that both the annual mean and 24-hour UK objective were complied with in 2025 and all the previous years of monitoring.

- The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 sets the target to ensure that the annual mean concentration of PM_{2.5} in ambient air is equal to or less than 10 micrograms per cubic metre (µg/m³) by 31st December 2040. The 2040 target was achieved all three sites (HO2, HO4, and HO5) in 2025.
- WHO recommended 2021 Air quality guidelines level for PM_{2.5} and PM₁₀ annual mean is 5 and 15µg/m³ respectively. No sites were compliant with the WHO level for PM_{2.5}, but Horsham Park Way was compliant for PM₁₀.

How to get Involved

Members of the public can contribute to improving local air quality by adopting behavioural changes such as car sharing, walking, wheeling, cycling, and using public transport. Additional measures include joining car clubs, purchasing zero-emission vehicles for personal and commercial use, switching off vehicle engines when stationary, minimising wood burning (and only using dry, well-seasoned wood), and composting green waste instead of burning it where possible. Further guidance on how to get involved is available on the [Help to improve Horsham District's air quality page](#) webpage.

Horsham District Council also promotes [car sharing as a sustainable transport option](#) that can help reduce traffic volumes, congestion, and associated emissions. This includes carpooling, where individuals share journeys to lower costs and reduce their carbon footprint, as well as car rental approaches such as car clubs and peer-to-peer schemes, which provide flexible access to vehicles without the need for ownership. Local initiatives, including the West Sussex Carshare network, easitHORSHAM, and community car clubs, further support uptake by connecting users and encouraging shared travel as an affordable, practical, and lower-emission alternative.

Two air quality Steering Groups have previously been established in the district: Storrington Steering Group and Cowfold Steering group. Their objective is to progress the work on the Storrington and Cowfold Action Plans. Each group is a partnership of Councillors and officers from Horsham District Council and West Sussex County Council and includes representatives from the Parish Council.

For further information on the work being done, please visit the Horsham District Council website or contact:

- Environmental Health and Licencing Department:
tel. 01403 215609; email: ehl@horsham.gov.uk
- <https://www.horsham.gov.uk/environmental-health/air-quality>

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1 Local Air Quality Management

This report provides an overview of air quality in Horsham District during 2025. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in order to achieve and maintain the objectives and the dates by which each measure will be carried out. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by Horsham District Council to improve air quality and any progress that has been made.

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

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

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

A summary of AQMAs declared by Horsham District Council can be found in Table 2.1. The table presents a description of the AQMA that is currently designated within Horsham District Council. **Figure C.5 – Storrington (STOR1) Air Quality Dashboard**

Figure C.6 – Cowfold (COW1) Air Quality **Dashboard**

Figure C.7 – Horsham (HOR1) Air Quality Dashboard

Appendix D: Map(s) of Monitoring Locations and AQMA provides maps of AQMA and also the air quality monitoring locations in relation to the AQMA. The air quality objective pertinent to the current AQMA designation is NO₂ annual mean of 40 µg/m³.

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?	Highest Concentration: Declaration	Highest Concentration: Current Year	Number of Years Compliant with Air Quality Objective	Name and Date of AQAP Publication	Web Link to AQAP
Horsham AQMA No1	December 2010	NO2 Annual Mean	Storrington town centre incorporating West Street, the High Street, and part of School Hill and Manleys Hill	No – Roads controlled by WSCC	50.2 µg/m ³	35.2 µg/m ³	2 years (2024-2025)	Storrington Air Quality Action Plan, October 2012 (updated in 2020)	https://www.horsham.gov.uk/environmental-health/air-quality/horsham-districts-air-quality-management-areas-aqmas
Horsham Cowfold AQMA	October 2011	NO2 Annual Mean	Cowfold town centre incorporating The Street, part of Station Road and Bolney Road.	No – Roads controlled by WSCC	40.5 µg/m ³ (Cowfold 1,2) 45.9 µg/m ³ (Cowfold 7n)	25.6 µg/m ³	6 years (2020-2025)	Cowfold Air Quality Action Plan, September 2013 (updated in 2020)	https://www.horsham.gov.uk/environmental-health/air-quality/horsham-districts-air-quality-management-areas-aqmas

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

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

2.2 Progress and Impact of Measures to address Air Quality in Horsham District Council

Defra's appraisal of last year's ASR concluded that, on the basis of the evidence provided, the conclusions reached were accepted for all sources and pollutants.

- "As the Cowfold AQMA has remained complaint with the relevant AQOs for 5 consecutive years the council must progress with measures to revoke this AQMA as stated within LAQM.TG22"

Since then, towards the end of 2025, HDC began the process to revoke the Cowfold AQMA, which later came into effect 24th February 2026.

Horsham District Council has taken forward a number of direct measures during the current reporting year of 2025 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. 19 measures are included within Table 2.2, with the type of measure and the progress Horsham District Council have made during the reporting year of 2025 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.2.

More detail on these measures can be found in their respective Action Plans and previous Annual Status Reports at HDC's [Air Quality Report and Assessments page](#). Key completed measures are:

- Improving Sussex automatic monitoring network with new PM and NO₂ analysers installed in Park Way AQMS in January 2025. This provides more data on the air quality within Horsham town and expands the monitoring of PM_{2.5}
- Continuation of the monitoring programme, which includes the operation and maintenance of three air quality monitoring stations
- Ongoing work with Planning Policy and Development Control to ensure the impacts of new development are mitigated and/or offset
- An origin destination ANPR camera survey and subsequent air quality modelling study for Storrington AQMA was undertaken in November 2025. This provided an indication of the impact certain measures would have on the NO₂ and PM concentrations within the Storrington AQMA.
- Attending Sussex Air partnership meetings. With this, we can take informed proactive actions

- Working with the AQMAs steering groups on the development and implementation of AQAP measures
- Air quality promotion via website and social media
- Contacted schools in Horsham District directly to inform them of Walk to School Week (May 2025) to promote active travel and educate students on the benefits this has on health and air quality
- Working with the County Council to support development of projects promoting improvements to Major Road Network routes through the district, for example the A24, which could reduce traffic routing through the AQMAs. Specifically, the A24 Worthing to Horsham and Dorking Transport Improvements being developed through the Strategic Transport Investment Programme, which by making improvements to the Major Road Network, may help to reduce traffic through the AQMAs, as well as help to improve sustainable transport options across the District.
- Working with the County Council to support other projects to improve sustainable transport provision. This includes Bus Service Improvement Plan improvements to bus stops and real time passenger information, and working to develop Local Cycling and Walking Infrastructure Plan measures, for example through supporting feasibility study measures being considered for key locations in Horsham also being developed through the Strategic Transport Investment Programme.

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

- Publishing the update of the Air Quality Action Plan
- Continued work with Planning Policy and Development Control to secure air quality mitigation from new developments
- Improvements to the air quality website and communications to make air quality information more accessible to the public
- Delivery of the HDC's vehicle replacement programme
- Expansion of Electric Vehicle Network
- Continued work with WSCC to increase the rate of active travel to and from schools
- Continued work with WSCC to support other strategic improvements to transport infrastructure
- Contacting schools in Horsham District directly to inform them of national events such as Walk to School Week to promote active travel and educate students on the benefits this has on health and air quality.

- Continued work with the Storrington steering group on the development and implementation of AQAP measures
- Internal applications for s106 / CIL funding to facilitate the implementation of actions within the AQAP
- Exploring the viability of a Smoke Control Area declaration

Horsham District Council worked to implement these measures in partnership with the following stakeholders during 2025:

- Planning Officers
- UK Health Security Agency (UKHSA)
- WSCC Public Health team
- WSCC highways and transport planning
- Neighbouring districts local authorities
- Sussex Air Partnership
- Environment Agency
- Storrington Air Quality Steering Group

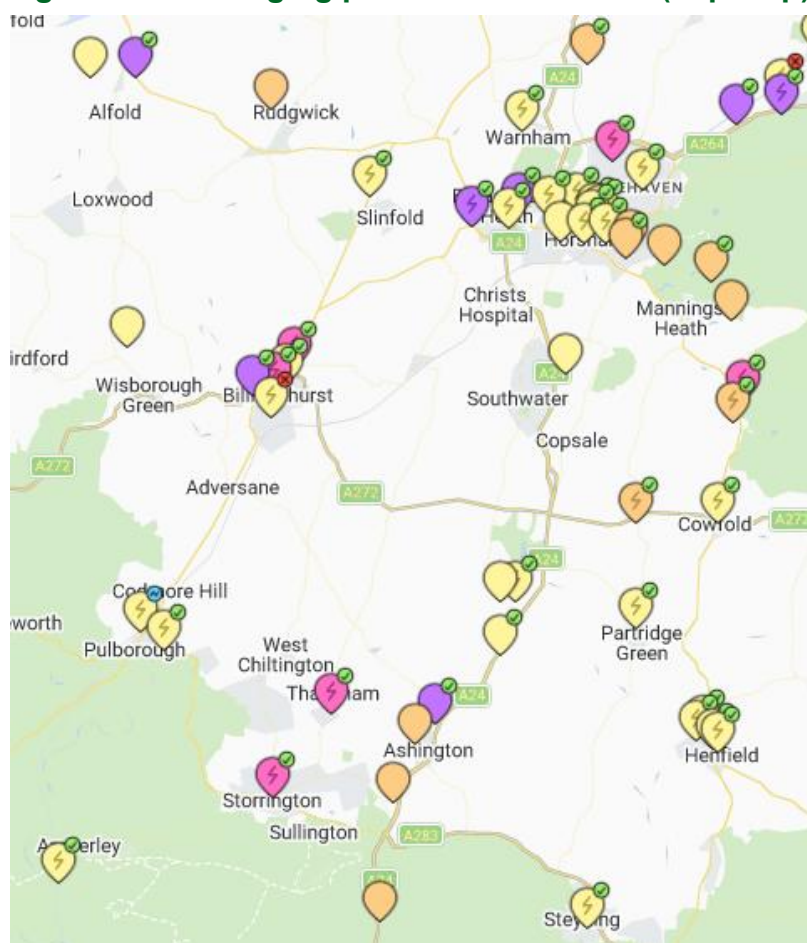
The principal challenges and barriers to implementation that Horsham District Council anticipates facing are the identification of schemes that are feasible, deliverable and can generate a positive business case and having funding to pursue bigger projects. The achievement of congestion improvement measures in Storrington has been challenging as there are no easy solutions, and many of the solutions fall outside the power of HDC to implement.

Horsham District Council anticipates that the measures stated above and in Table 2.2 will continue to bring compliance in the Storrington AQMA.

2.2.1 Promotion of Electric Vehicles

Because Horsham District relies on car transport, it will be essential to ensure that the District supports a transition to electric cars. Infrastructure is already being put in place to enable this transition, in March 2020 HDC approved its Electric Vehicle (EV) Charge Point Strategy which aims to enable the provision of EV infrastructure across the district. Figure 2.1 illustrates the locations of charging points currently (June 2026) in the district. More information can be found in [HDC's electric cars and charging points page](#).

Horsham District Council continued with the programme to electrify the fleet and consider EV options when replacing vehicles.

Figure 2.1 – Charging points in the District (Zap Map)

2.2.2 Air Quality and Climate Change

The challenges of climate change and poor air quality are closely related, and there are substantial benefits to tackling both together. By reducing harmful emissions, local authorities can not only contribute to global efforts to combat climate change but also deliver immediate local benefits, including improved air quality and public health. This dual approach presents a unique opportunity for local authorities to maximise the impact of their actions, making our communities more resilient, healthy, and sustainable.

WSCC has an ambitious target to be carbon neutral and climate resilient by 2030. The [Climate Change Strategy 2020 - 2030](#) sets out our framework for action and key commitments that will help achieve this. Including five key commitments:

- mitigate the effects of climate change by reducing carbon emissions
- adapt and be resilient to a changing climate
- source and use resources sustainably
- support and grow our local green economy

- transform how we work

Horsham District's [Climate Action Strategy](#) outlines a pathway to achieve net zero and climate resilience by 2050. It prioritises high-impact interventions across five key “systems” (buildings, transport, energy, waste, and land use and water), targeting major emission sources and carbon sinks through short-, medium-, and long-term actions. Transport is a key focus area, reflecting the fact that a significant proportion of both air pollution and carbon emissions within the district arises from this sector, particularly from private car use. Reducing reliance on car travel would therefore contribute to decarbonisation while delivering co-benefits, including improved air quality and enhanced public health and wellbeing.

Although emissions from the [District Council's own operations](#) represent only a small proportion of total district-wide emissions, progress has been made towards achieving a net zero council. Emissions have been reduced by approximately 64% since 2019/20. Fleet-related measures was responsible for most of the emissions reductions, these includes the electrification of fleet vehicles, expansion of electric vehicle charging infrastructure, driver training programmes, and route optimisation for refuse collection vehicles (Figure 2.2).

Figure 2.2 - Direct Horsham District Council Emissions



2.2.3 Storrington AQMA

HGV traffic

Although Storrington is not on WSCC Lorry Route Network of strategic and local roads recommended for use by lorries and heavy goods vehicles, the annual average weekday traffic of HGVs going through West Street in 2025 was approximately 325 per day.

In 2022 West Sussex County Council and Storrington & Sullington Parish Council undertook a review of the 7.5T weight limit restriction on the B2139 School Hill and A283 Manley's Hill in Storrington. This restriction (TRO) is marked "Except for Access" with an additional plate, where this refers solely to any side road access, delivery, or collection point between the restriction signs. The restriction has been in place since 2019 as one of the measures implemented to improve air quality within the designated Air Quality Management Area (AQMA).

As part of this review, a CCTV traffic survey was undertaken of Goods Vehicles entering from either end of the restriction and an additional CCTV camera was located within the restriction length. After the survey, 51 letters were sent to companies that were breaching the 7.5T weight limit restriction and more signs were installed (Figure 2.3).

Figure 2.3 – Weight restriction signs in Storrington



There are challenges with enforcement of breaches of weight restriction for HGVs accessing B2139 School Hill. Local Transport Authorities can now apply for 'Part 6' powers to enforce 'moving traffic offences' which would include Traffic Regulation Order breaches such as in relation to this weight restriction. WSCC has now adopted these powers and has confirmed initial back-office procedures to support these. However, for the time being, the only utilisation of the powers is for bus gates implemented across West Sussex as part of residential developments. In terms of other moving traffic offences, such as weight restrictions, these will not be considered until such time as a Moving Traffic

Enforcement Policy has been adopted by the County Council. There is no confirmed timetable for preparation of this policy currently.

Speed reduction

In addition, Storrington Air Quality Steering Group is investigating how to reduce the traffic going through the village and improve driver's behaviour related to speeding. The group is exploring schemes such as:

- Reduction of the speed limit of B2139 Amberley Road through a Traffic Regulation Order
- Implementation of a 20mph zone through the Community Highways Scheme

In 2025, the Parish Council initiated several measures to improve road safety and traffic management:

- The 30 mph speed limit on Washington Road has been extended towards Water Lane, with the addition of white village gateway features to create a clearer and safer entrance to the village.
- Four Speed Indicator Devices have been installed on Washington Road, Manley's Hill, Pulborough Road, and Amberley Road to encourage driver compliance with speed limits.
- Further improvements are also being implemented at the Monastery Lane roundabout to enhance both safety and traffic flow.

It is expected that the schemes will help improve noise, pollution and safety, as smoother driving style reduces particulate emissions from tyre and brake wear - which still represents a significant cause of air pollution from zero-emission vehicles; and improve active travel, lowering traffic speeds reduces the dominance of motor vehicles and makes our streets safer, more inviting, less polluted, and more attractive for walking, wheeling, cycling and public transport trips.

Through traffic

A study of the air quality in Storrington was carried out at the end of 2025. It used ANPR cameras and computer modelling to understand where pollution was coming from.

The results showed that, in some areas outside the AQMA, most of the road-related pollution came from local traffic. However, within the AQMA (Figure 2.4) about one-third of the pollution from road traffic came from vehicles passing through the village.

Amberley Road (Figure 2.5) had the highest proportion of through traffic pollution, with around half of NO₂ and particle pollution (PM₁₀ and PM_{2.5}) coming from through traffic.

Figure 2.4 – Source apportionment of road transport contributions to NO₂, PM₁₀, and PM_{2.5} concentrations at Manley’s Hill (hotspot location).

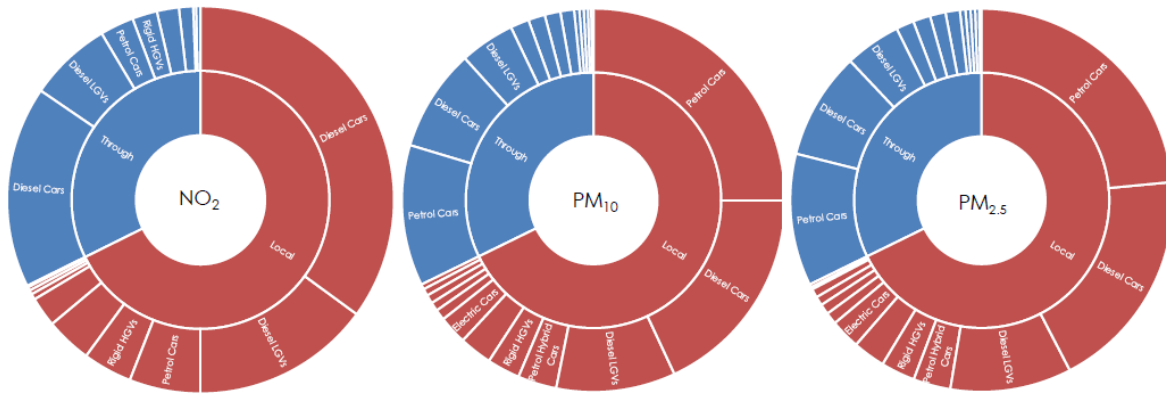
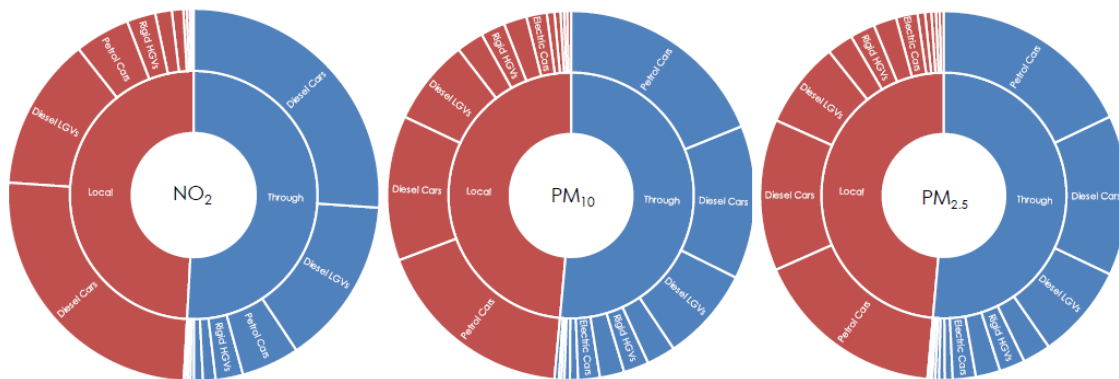


Figure 2.5 – Source apportionment of road transport contributions to NO₂, PM₁₀, and PM_{2.5} concentrations at Amberley Road.



Across the study area:

- Diesel cars and LGVs were the biggest source of NO₂
- Petrol cars were the main source of particle pollution from road traffic.

While road traffic is the main source of NO₂, other sources—such as emissions from buildings—also contribute, especially away from busy roads.

At the worst affected location within the AQMA:

- About 21% of NO₂ comes from background sources, which the council cannot easily control.

- About 79% comes from road traffic, which adds to background levels and causes pollution to exceed legal limits. This is the main area where the council can take action.

Computer modelling scenario testing

Different scenarios were tested to see how changes in traffic and vehicles might affect air quality.

- Reducing local traffic slightly or reducing through traffic each led to only small improvements (around 3–4%), mainly in the worst affected locations.
- Combining both approaches gave a bigger improvement (about 6–7%), but still mainly in those hotspot areas.
- Upgrading vehicles to cleaner standards had a larger effect, cutting pollution by around 12–13% at the worst locations—the biggest improvement from the planned interventions.
- However, the largest reductions came from natural changes over time (as older vehicles are replaced with cleaner ones), with ranging from 12% to 36% by 2035.

For particle pollution (PM₁₀ and PM_{2.5}), none of the scenarios were significantly impacted, with changes of only about 1%. This is because levels are already relatively low and less influenced by road traffic.

2.2.4 Pulborough A29 Landslide

The landslide occurred in January 2023 at the narrowest part of the A29 in Pulborough, where both sides are flanked by steep embankments. WSCC is continuing its efforts to resolve the ongoing situation with the A29 and takes routine detailed inspections of the trees and the embankments.

Until works can be carried out to both private embankments, it is not safe to re-open the road under normal conditions. WSCC have decided to install traffic signals and concrete blocks to reduce the risk to the highway and people. In January 2025, The County Council served statutory notices on the owners of the land linked to the landslide on the A29 in Pulborough in an attempt to progress the situation and implement a solution by carrying out work on the embankments. These statutory notices were appealed and referred to the magistrates' court system, however at the hearing held on the 7 and 8 January 2026, the

appeals were dismissed. The County Council is continuing to engage with the landowners to secure completion of relevant tree works in a timely manner.

The traffic signal-controlled system introduced is intuitive and adapts to traffic flow fluctuations. Traffic detection cameras help monitor queue lengths at either end, adjusting the green time given in each direction until either the demand is serviced, or the maximum timer has elapsed. But despite WSCC efforts, congestion and traffic queuing has been observed and are influencing local air quality.

In 2024, HDC expanded NO₂ monitoring in Pulborough near the landslide around Church Hill, where pollution dispersion is affected by the topography and vegetation. HDC will continue working with WSCC to find solutions to reduce congestion and have installed anti-idling signs near the traffic lights.

A29 landslide update are available at: <https://www.westsussex.gov.uk/campaigns/a29-pulborough>.

2.2.5 Other measures

West Sussex County Council's "[Breathing Better](#)" initiative is a joint effort with district and borough councils to reduce air pollution. Updated in 2023, the strategy supports the West Sussex Climate Change Strategy 2020–2030 and aims to cut harmful pollutants like nitrogen dioxide and particulate matter, which are linked to serious health impacts including respiratory and cardiovascular conditions.

WSCC framework, [Creating healthy and sustainable places for West Sussex](#), provides public health guidance to decision makers on creating healthy and sustainable places in West Sussex. It identifies six key characteristics of a healthy and sustainable place:

- Social cohesion and participation
- Healthy housing
- Resilient built public infrastructure and services
- Safe and sustainable travel options
- Prosperous and sustainable economy
- Thriving and accessible natural environments

Air quality has shown improvement since 2019 due to cleaner vehicles and reduced traffic during the pandemic. However, rising use of wood and coal for home heating presents new concerns. The plan encourages sustainable travel, cleaner technologies, and

behaviour changes, such as reducing engine idling, to support healthier communities and long-term environmental goals.

There are several strategies being developed through WSCC and partners to improve active and sustainable travel, such as the Bus Service Improvement Plan programme measures to improve bus stops, shelters, Real Time information etc. as well as larger Strategic Transport Improvement Programme schemes that are in early development, for example for key parts of the A24 and in Horsham. There are crossovers in some of these areas with the Public Realm Improvements that HDC are progressing in Horsham town centre.

WSCC have a long-established [car sharing scheme](#) to allow members of the public to share their commute or other driving commitments. Through this scheme, drivers are matched with others doing the same journey at the same times so they can car share or offer lifts. The service is free, and arrangements or compensation are agreed independently by the commuters. This reduces pollution by reducing the overall number of journeys taking place.

The UK has a zero-emission vehicle mandate that all new cars and vans should be zero emission by 2035, while the UK also has a central government fleet commitment to ensure 100% of government owned cars and vans are zero emission by 2027. Schemes like this are likely to lead to increased zero emissions uptake in local authorities.

Table 2.2 – Progress on Measures to Improve Air Quality

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
Priority Air Quality Actions														
1	Speed Reduction Schemes in Storrington to improve air quality and facilitate active travel	Traffic management	Reduction of speed limits, 20mph zones, UTC, Congestion management, traffic reduction	2025	2030	Storrington and Sullington Parish Council / HDC / WSCC	WSCC / Lane rental scheme / Community Highway Scheme / S106	Not funded	£50k - £100k	Planning	NO ₂ emission reduction from local and through traffic	Improve noise, pollution and safety. Improve active travel. Improved traffic flow / reduction in traffic congestion. Reduction of emissions at hotspots.	Storrington and Sullington Parish Council have installed Speed Indicator Devices around the village	Lower speed limits can encourage shifts towards more sustainable transportation, such as walking, wheeling, and cycling increased feelings of safety. Areas where 20mph speed limits have been implemented often see a reduction in vehicle numbers or changes in driving patterns, contributing to overall reductions in emissions and improvements in air quality. Potentially use S106 to match fund or provide more detailed evidence. Storrington Traffic & Transport Committee meetings This measure also aims to reduction from 60mph to 40mph on B2139. Storrington Traffic & Transport Committee meetings Schemes need demonstrate clear local support for speed reduction measures such as 20mph speed limits.
2	Air quality and emissions mitigation guidance for Sussex	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2014	Ongoing	HDC / Sussex Air	HDC	Funded	<£10k	Implementation	NO ₂ reduction from development (traffic and building emissions)	Reduction in emissions from transport associated with new development through mitigation and compensation. Assessment of emissions from development required with application. Scheme of mitigation required.	The updated guidance (2021) has been published on HDC website and its application is tested in HDC and neighbouring districts within Sussex. It provides advice to developers on how to address local air quality when making a planning application.	Sussex Air partners are reviewing the guidance.
3	Electric vehicle charging network	Promoting Low Emission Transport	Other	2020	2031	HDC / WSCC	Connected Kerb	Funded	£500k - £1million	Implementation	NO ₂ emission reduction from local traffic Small initial impact on emissions but aim to facilitate the uptake of more LE vehicles.	Increase % of charging points installed on streets	Contract with Connected Kerb which will enable the large scale to roll out of thousands of public electric vehicle charge points across the district within the next decade was signed in 2021.	Over 45 on street charge points have been installed in Horsham District, with works planned for an additional 28 charge points in council car parks. More information available on HDC Electric cars and charging points webpage
4	[Storrington] Walk to School / Active Travel	Promoting Travel Alternatives	School Travel Plans	2013	Ongoing	WSCC	WSCC/Section 106	Partially Funded	£50k - £100k	Ongoing	NO ₂ emission reduction from local traffic	Increase active travel in Schools	Local Transport Improvements Programme is looking at active travel routes between key parts of Storrington and primary routes.	Considering closure of Browns Lane junction with Church Lane to a pedestrian/cycle route to reduce rat run issue and make route safer for pupils. Survey of all houses in Spierbridge to see what level of support there would be for a one-way route between North Street Junction with Spierbridge Lane toward Hormare side of Fryern Close (North Street remaining two way). This

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
													Engaged with local area head teachers to update their travel plans. Spierbridge Road Active Travel to School Scheme has passed moderation and is progressing to detailed design in 2026/27, with construction anticipated in 2027/28. Data collected by school wardens, the school travel plan, and further community engagement will be used to shape a robust and evidence-based active travel improvement scheme. The project is now included within the published Active Travel Delivery Plan (ADP).	would encourage use of car parks to park and stride to primary school and prevent rat running and poor driving behaviour both in front of the school and in North Street. Findings from a monitoring study on Spierbridge Road identified the highest pedestrian counts occur at ~8am and ~3pm on weekdays, aligned with Storrington Primary School's start and finish times. Estimates suggest around one-third of weekday traffic is related to school trips, with car use more common in the morning drop-off than the afternoon pick-up. West Sussex County Council recognised for commitment to Active Travel
5	Reduce single occupancy car use by supporting carpool and car sharing schemes, and other modes of transport.	Alternatives to private vehicle use	Car & lift sharing schemes	2023	Ongoing	HDC	Local Authority	Not funded	< £10k	Implementation	NO ₂ emission reduction from local traffic	Reduction in single occupancy car use		Direct impact on air quality issues in the short to medium are not likely to be significant, however they form part of a wider approach of promoting a culture of using alternative travel options to single occupancy car use West Sussex Car Share scheme Co-Wheels car sharing club
6	[Storrington] Review on-street car parking and loading bay provision	Traffic Management	UTC, Congestion management, traffic reduction	2013	On hold	HDC/WSCC	WSCC	Not Funded	< £10k	On Hold	NO ₂ emission reduction from local traffic	Reduction in nitrogen dioxide concentrations in Storrington. Improved traffic flow / reduction in traffic congestion.	Some issues related to the scheme: The potential impact of congestion related air quality issues associated with deliveries and parking is not known; Potential sensitivities regarding changes to availability of parking; The need to meet the needs of local businesses requiring deliveries.	A more detailed air quality assessment of changes to and re-designation of parking-bays and loading bays could be investigated further. Progression of a review will likely require local support and identification of resource to support this.
7	Sussex Air and HDC website	Public Information	Via the Internet	2012	Ongoing	Sussex Air / HDC	Local Authority	Funded	£50k - £100k	Implementation	No direct impact on emission reductions	Increase access to the website	Information on how to help improve air quality, air quality projects, health	www.sussex-air.net https://www.horsham.gov.uk/environmental-health/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
											but optimising use of monitoring network data		advice, health effects and real time air quality information	
8	Walking, Wheeling, and Cycling Measures	Promoting Travel Alternatives	Other	2012	Ongoing	HDC / WSCC	HDC / WSCC Lane rental scheme Community Highway Scheme	Partially Funded	£1million - £10 million	Implementation	NO ₂ emission reduction from local and through traffic	Increase in active travel		Direct impact on air quality issues in the short to medium are not likely to be significant, however they form part of a wider approach of promoting a culture of using alternative travel options to single occupancy car use. West Sussex Active Travel Strategy 2024-2036 Horsham's Local Cycling and Walking Infrastructure Plan Horsham District Council Infrastructure Delivery Plan (IDP) – July 2024 Cowfold Neighbourhood and Infrastructure Development Plans
9	Expansion of the monitoring network	Public Information	Via the internet	2025	Ongoing	HDC/Sussex Air	S106 HDC CIL	Partially Funded	£10k - £50k	Planning	None	Upgrading analysers and expanding the number and sites for monitoring	3 AQMS and 3 real-time air quality sensors proving live information to the public.	Road permission to install monitors and use street lighting is not always permitted.
10	Replacement of HDC vehicle fleet	Vehicle Fleet Efficiency	Vehicle Retrofitting programmes	2013	Ongoing	HDC	HDC	Partially Funded	£500k - £1million	Implementation	NO ₂ emission reduction from local traffic	Introduction & increase % of ULEV's into Council's vehicle fleet.	Replacement of HDC Neighbourhood Wardens vehicle fleet from petrol to hybrid vehicles. Vehicles that ran on diesel were switched to sustainable-sourced Hydrogenated Vegetable Oil (HVO) fuel. All electric sweepers for Horsham's town centre.	
11	[Storrington] Enforcement of the weight restriction for HGVs accessing School Hill.	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	2019	On going	HDC/Storrington & Sullington Parish Council	WSCC	Partially Funded	£50k - £100k	Implementation	NO ₂ emission reduction from through traffic	Reduction in nitrogen dioxide concentrations in Storrington. Improved traffic flow / reduction in traffic congestion.	WSCC have no powers to use ANPR cameras to issue Penalty Charge Notice and the cost estimates for CCTV ANPR camera equipment obtained in 2020 were found prohibitively high.	WSCC have now adopted 'Part 6' powers and have confirmed initial back-office procedures to support these. However, for the time being, the only utilisation of the powers is for bus gates implemented across West Sussex as part of residential developments. In terms of other moving traffic offences, such as weight restrictions, these will not be considered until such time as a Moving Traffic Enforcement Policy has been adopted by the County Council. There is no confirmed timetable for preparation of this policy at this time.

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
12	[Storrington] Community minibus	Vehicle Fleet Efficiency	Vehicle Retrofitting programmes	2013	Ongoing	HDC / WSCC	Section 106	Funded	£50k - £100k	Ongoing	1 % in the AQMA	Enhance existing Storrington minibus service by replacing existing diesel fleet with Low /Zero emission vehicles.		Liaise with local bus operators to improve the emissions standards of buses operating through the AQMA. Explore opportunities to improve and create new community-led transport schemes. Community Minibus in Thakeham and Ashington More information at: https://www.westsussexminibus.org.uk/storrington/
13	HGV/LGV Routing	Traffic Management	Strategic highway improvements, Re-prioritising Road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	2026	Ongoing	WSCC	WSCC, S106	Not funded	£50k - £100k	Planning	NO ₂ emission reduction from through traffic	Reduction in number of LGVs and HGVs driving through the AQMA	An advisory lorry route and services map is available on the West Sussex County Council website. The map is part of the County Council's approach to freight management which also includes providing real-time traffic information to support efficient freight movement and supporting major improvements on key lorry routes such as the A27 to reduce rat running.	A signing and routing strategy that directs longer-distance and freight traffic, including using sat-nav systems, towards the A27 / A24 and presents the town-centre corridor mainly as access to local destinations might reduce nonlocal traffic.
14	Travel Planning	Promoting Travel Alternatives	Personalised Travel Planning	2013	Ongoing	WSCC/HDC	Developers	Funded	£50k - £100k	On-going	NO ₂ emission reduction from local traffic	Increase in active travel and reduction in single occupancy car use	Staff in WSCC/HDC can apply for an easitCARD. The card offers a range of benefits including a 15% discount on off-peak and peak-time travel with Southern rail services, as well as reduced bus fares.	Travel plans for significant/major developments, Schools and Workplaces
15	Speed Reduction Schemes across the district to improve air quality and facilitate active travel	Traffic management	Reduction of speed limits, 20mph zones, UTC, Congestion management, traffic reduction	2025	2030	Parish Council / / HDC / WSCC /	WSCC / Lane rental scheme / Community Highway Scheme / S106	Not funded	£50k - £100k	Planning	NO ₂ emission reduction from local and through traffic	Improve noise, pollution and safety. Improve active travel. Improved traffic flow / reduction in traffic congestion. Reduction of emissions at hotspots.		Lower speed limits can encourage shifts towards more sustainable transportation, such as walking, wheeling, and cycling increased feelings of safety. Areas where 20mph speed limits have been implemented often see a reduction in vehicle numbers or changes in driving patterns, contributing to overall reductions in emissions and improvements in air quality.
16	Explore implementing a Smoke Control Area	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance			HDC / WSCC	S106 / HDC / WSCC	Not Funded	£100k - £500k	Planning	PM _{2.5}	Reduction of PM _{2.5} concentrations from heating		As a starting point, an engagement with WSCC Trading Standards Service on the enforcement of the Air Quality (Domestic Solid Fuels Standards) (England) Regulations 2020, including complaint-handling pathways to better understand the district's scenario.

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	[Storrington] Freight Delivery Partnership	Promoting Low Emission Transport	Public Vehicle Procurement – Prioritising uptake of low emission vehicles	2013	Ongoing	HDC / WSCC	-	Not Funded	£100k - £500k	Ongoing	Unknown but expected low	Emission reductions sought through partnership working with local businesses to minimise impact of deliveries etc. on the village.	Encourage use of WSCC preferred lorry route rather than A283 through Storrington AQMA.	In practice, this intervention would require significant levels of engagement outside of the local area, making it challenging to implement. For local traffic, freight and servicing management might reshape how goods are delivered within a town, potentially reducing trip numbers and changing vehicle mix. Lorries to use a sticker Friends of Storrington and request they follow a 20mph speed limit within Storrington
18	Strategic improvements to the A24 Worthing-Horsham corridor	Traffic Management	Strategic highway improvements, Re-prioritising Road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	2015	Unknown	WSCC	DfT / WSCC / S106	Not Funded	£1 million – £10 million	Planning	Unknown but expected low-medium	Reduction in nitrogen dioxide concentrations. Improved traffic flow / reduction in traffic congestion.	WSCC has undertaken a feasibility study of the A24 corridor between Worthing and Horsham including a package of traffic junction and sustainable transport measures. These proposals intended to encourage longer distance traffic flows to stay on the A27, A280, A24 and A264 corridors for journeys for example to and from the south west and north east of the county, and to avoid use of less suitable routes such as the B2139/A283/A272 through Amberley, Storrington and Cowfold.	This scheme is in the early stages of development and requires the further develop of designs, consultation, development of business case and securing of funding to deliver the package of measures.
19	Improve bus service and information	Alternatives to private vehicle use	Other	2013	Ongoing	WSCC / Local Bus Operators	DfT	Not funded	> £10 million	Ongoing	NO ₂ emission reduction from local traffic	Work with local bus service to utilise best available Euro standard vehicles for AQMA routes. Promote use of transport /travel plans to increase use of sustainable transport.	Real Time Passenger Information screens; Bus Stop Improvements; Bus fare discount scheme; Digital Demand Responsive Transport	Better bus services can support reductions in local car use, particularly for commuting and shopping trips where the service quality is high relative to the car alternative Latest updates at: West Sussex Bus Service Improvement Plan

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 Strategy¹, 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.

HDC has expanded its continuous PM_{2.5} monitoring network by installing a new analyser at Park Way Air Quality Station in January 2025. There are now continuous monitoring sites at Cowfold, Park Way, and Storrington. Additional monitoring is carried out using sensors, but these provide indicative results only (Summary of Low Cost Air Quality Sensor Monitoring). The data will further enhance the air quality database and provide a more detailed and substantive understanding of particulate concentrations across the region and will be used in our public engagement projects. Data is available on [Sussex Air website](#) and [Brighton & Hove and Sussex Public Air Quality Portal](#).

No locations in Horsham District exceeded the annual mean PM_{2.5} target of 10 µg/m³. While PM_{2.5} levels at Storrington (the only site with 2024 data) showed an increase, similar trends were observed across the wider Sussex monitoring network.

The Council contributes to reducing PM_{2.5} through the planning process by applying the *Interim Planning Guidance on the consideration of the Environment Act PM_{2.5} targets* and the Sussex-wide Air Quality and Emissions Mitigation Guidance (developed by Sussex-air in 2021). This aligns with the national approach of achieving gradual improvements in PM_{2.5} levels. Developers are required to incorporate appropriate mitigation measures from the design stage, ensuring emissions and exposure are kept to a minimum.

In addition, the Council recognises the growing contribution of domestic solid fuel burning to local particulate pollution and intends to expand its work in this area, particularly through awareness-raising and the promotion of cleaner burning practices.

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

2.3.1 Fraction of Mortality Attributable to Particulate Matter Pollution

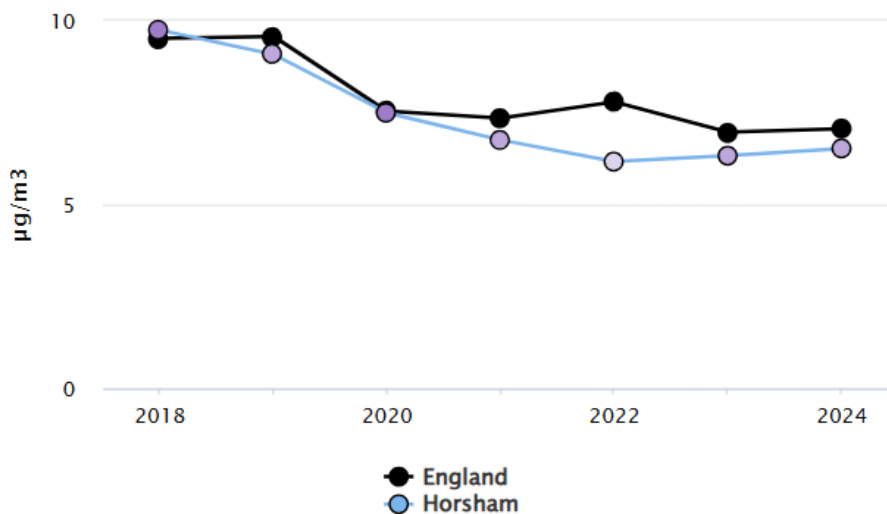
The Public Health Outcomes Framework utilizes two interconnected indicators to track the public health burden of air pollution across England: *Air pollution: estimated fraction of mortality attributable to particulate air pollution*) and its sister metric, *Air pollution: fine particulate matter (new method - concentrations of total PM_{2.5})*

Fine Particulate Matter (PM_{2.5}) Concentration

This indicator measures the average concentration of fine particulate matter in ambient air. Concentrations are reported as a population-weighted average, meaning that measurements are adjusted to reflect population distribution, with greater emphasis placed on areas where people live and are exposed.

In 2024, Horsham recorded an annual mean PM_{2.5} concentration of 6.5 µg/m³. This level is below the average recorded for both the South East region and England.

Figure 2.6 – Air pollution: fine particulate matter (new method - concentrations of total PM_{2.5}) for Horsham

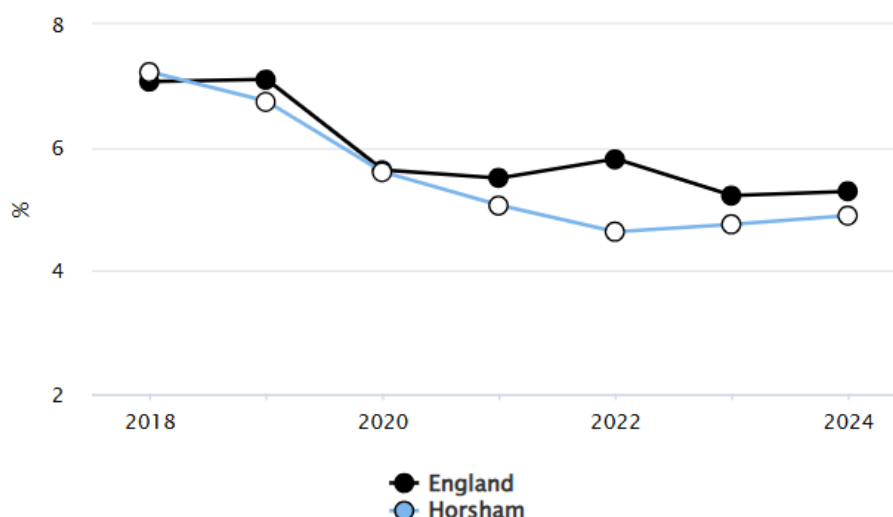


Fraction of Mortality Attributable to Particulate Air Pollution

This indicator quantifies the public health burden of long-term exposure to particulate air pollution by estimating the proportion of all-cause mortality (in adults aged 30 and over) attributable to PM_{2.5} exposure. While air pollution is rarely identified as the sole cause of death, it is a significant contributing factor that exacerbates conditions such as cardiovascular disease, respiratory illness, and stroke. This metric is commonly used by public health authorities to inform prioritisation of interventions and resource allocation.

In 2024, 4.9% of all adult deaths in Horsham were estimated to be attributable to particulate air pollution, which is lower than the regional and national averages. In absolute terms, this corresponds to approximately 71 deaths within the district.

Figure 2.7 – Fraction of mortality attributable to particulate air pollution (new method) for Horsham

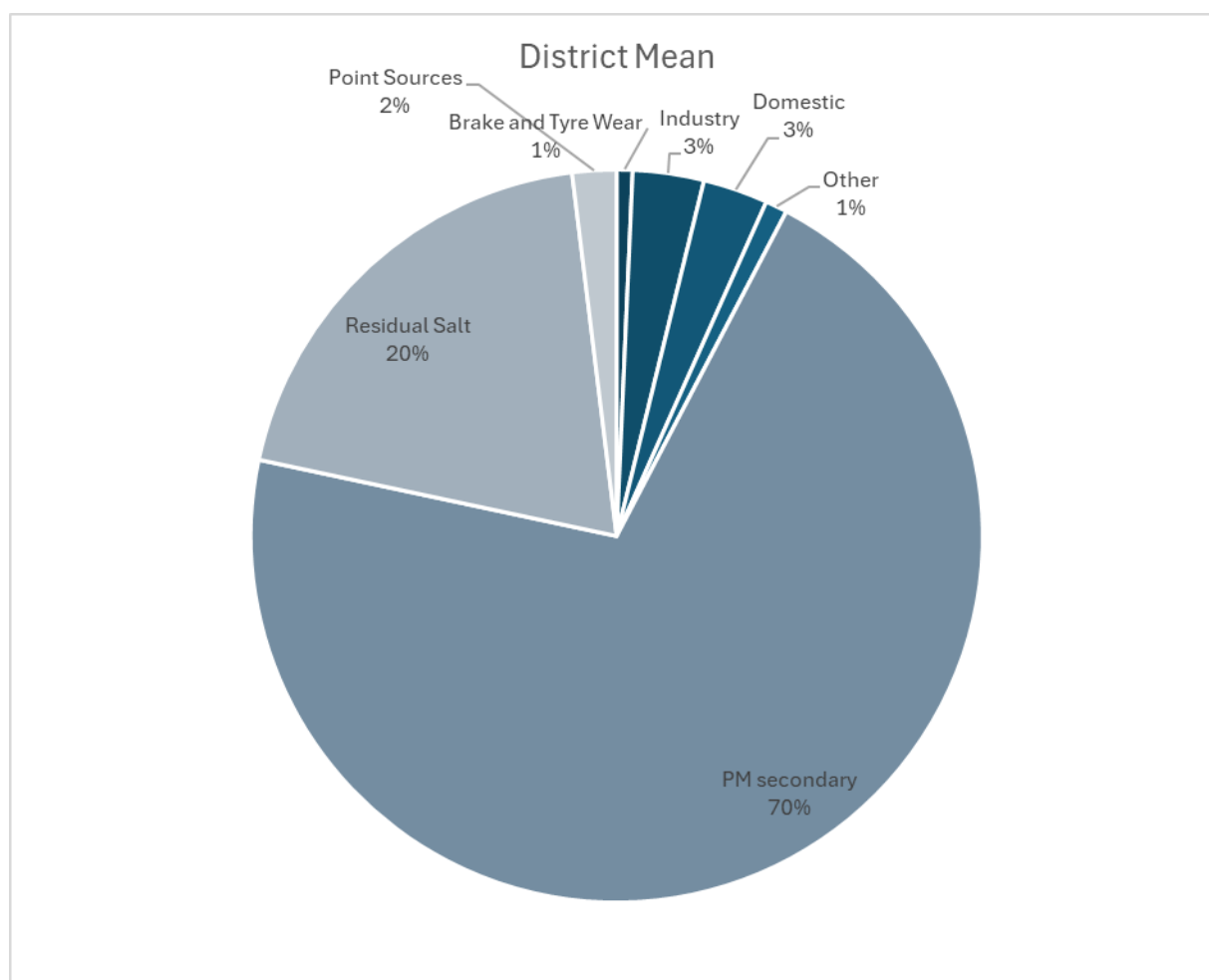


2.3.2 PM_{2.5} Background Concentrations

The total concentration of a pollutant comprises those from explicit local emission sources such as roads, chimney-stacks, etc., and those that are transported into an area by the wind from further away. If all the local sources were removed, all that would remain is that which comes in from further away; it is this component that is called 'background'.

In many situations the background contribution may represent a significant or dominant proportion of the total pollutant concentration, so it is important that authorities give this careful consideration. A good understanding of background concentrations is important when completing air quality assessments as this in turn allows for a good understanding of local pollutant sources. Figure 2.8 shows the estimated mean background PM_{2.5} concentrations in the district (6 µg/m³). PM Secondary is the main source of background PM_{2.5}, these are fine particles that are formed within the atmosphere rather than being emitted directly, these particles can travel long distances, influenced by atmospheric chemistry and weather patterns.

Figure 2.8 - Estimated 2025 background PM_{2.5} concentrations in Horsham district (base year 2021)

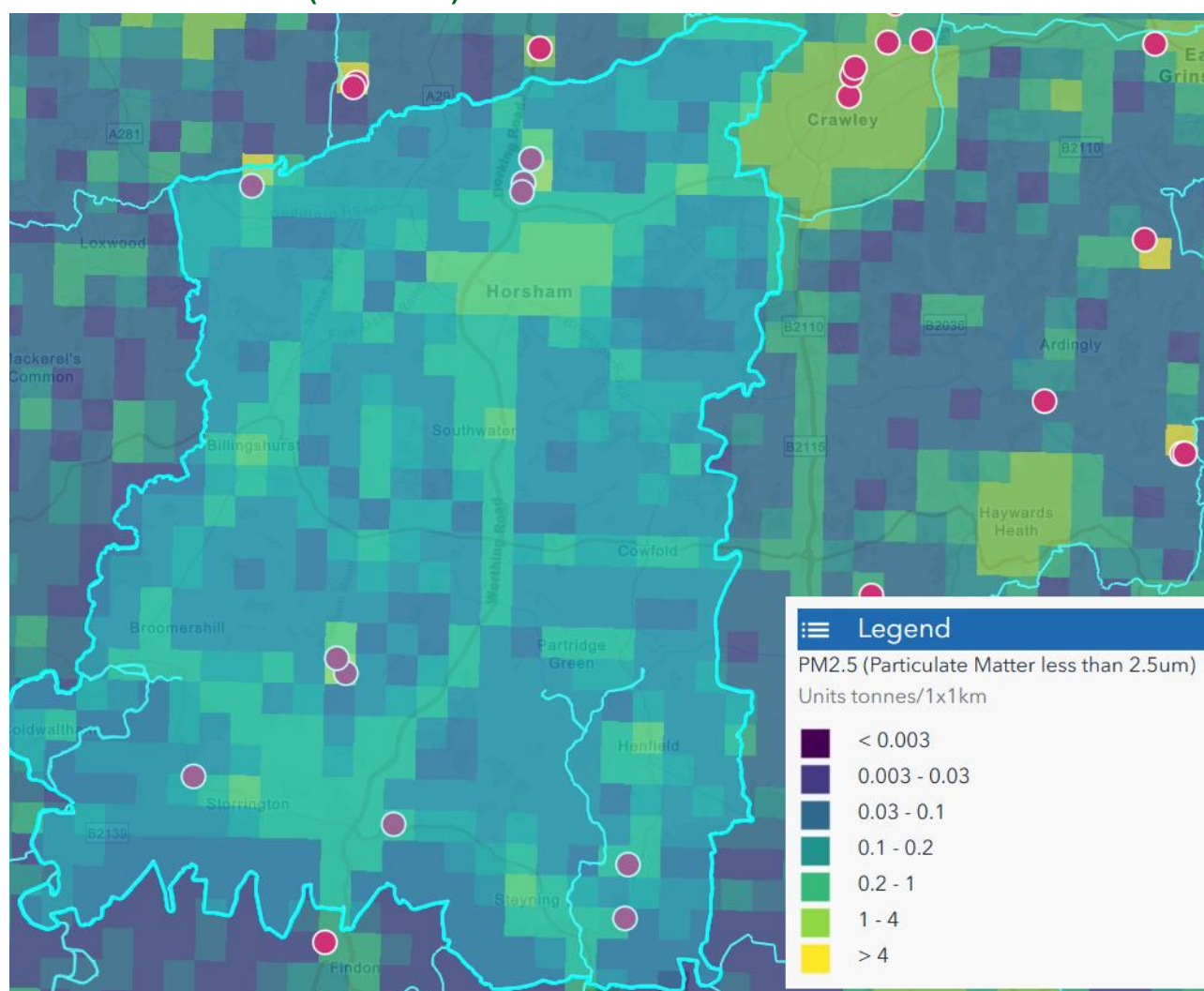


2.3.3 PM_{2.5} sources

The PM_{2.5} point sources in Horsham District identified in the National Atmospheric Emission Inventory (Figure 2.9) are:

- Ambion Brick Co Ltd
- Baggeridge Brick Plc
- Biffa Waste Services Ltd
- Ibstock Brick Ltd
- Star Energy Weald Basin Ltd
- UK Waste Management Ltd.
- Viridor Waste Disposal Ltd
- Viridor Waste Management Ltd
- Wienerberger Limited

Figure 2.9 - UK Emissions Interactive Map showing the point sources (pink dots) and PM_{2.5} emissions (in tonnes)



Air quality has shown improvement since 2021 due to cleaner vehicles and reduced traffic during the pandemic. However, rising use of wood and coal for home heating presents new concerns.

The council recognises the growing impact of domestic wood burning on air quality. Research has shown that wood burning is a large contributor to primary emissions of PM_{2.5}, and unlike most pollutants, emissions from domestic wood burning are increasing in many European countries. According to data from the National Atmospheric Emissions Inventory (NAEI), UK domestic wood burning emissions more than doubled from 6.8 kilotonnes in 2009 to 14.4 kilotonnes in 2018, before plateauing in recent years.

Horsham District faces particular challenges due to its semi-rural nature, with a high proportion of non-gas dwellings (23% ²). Many properties rely on oil or electric heating, and the district's ageing population adds further complexity. These factors make it essential to address emissions from domestic heating as part of a broader strategy to improve air quality and protect vulnerable residents.

West Sussex County Council is the enforcement authority under Regulation 16 of The Air Quality (Domestic Solid Fuels Standards) (England) Regulations 2020. The WSCC Trading Standards Service will investigate reports of non-compliance in accordance with its published [Enforcement Policy](#).

² <https://www.gov.uk/government/statistics/sub-national-estimates-of-households-not-connected-to-the-gas-network>

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

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

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Horsham District Council undertook automatic (continuous) monitoring at 3 sites during 2025. Table A.1 in Appendix A shows the details of the automatic monitoring sites. Live data is available through the Sussex-Air and the UK-Air websites.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C.

3.1.2 Non-Automatic Monitoring Sites

Horsham District Council undertook non- automatic (i.e. passive) monitoring of NO₂ at 44 sites with 49 diffusion tubes during 2025. *Cowfold used to monitor NO₂ until Nov 2024, using ML9841B. The NO₂ analyser was replaced with the FDMS to monitor PM_{2.5}.

** Park way used to monitor PM₁₀ using a TEOM. The analyser was replaced with the Fidas 200 in 2025.

Table A.2 in Appendix A presents the details of the non-automatic sites. Monitoring was in-line with the Defra diffusion tube deployment calendar.

Triplicate tubes have been exposed to validate diffusion tube data (bias adjustment) at HO2 Horsham Park Way and HO4 Storrington AURN automatic analyser sites, and duplicate tubes at the pedestrian crossing in Cowfold. Previously there had been triplicate

tubes at HO5 Cowfold automatic analyser, but this was moved to a single tube site after we replaced the NO_x analyser with a PM_{2.5} analyser.

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.

Diffusion tube changes in the past five years:

- 2021:
 - No changes.
- 2022:
 - Broadbridge Heath 1 – began monitoring at 3 Cheesmer Way, Broadbridge Heath.
 - Horsham 4N – stopped monitoring at this location.
 - N. Horsham 3N – began monitoring on Rusper Road Roundabout
- 2023:
 - A29_Pulborough1,3,4,5 – HDC carried out a short term (3-month – April, May and June 2023) diffusion tube survey using tubes placed along the relevant traffic routes following a landslide on the A29.
 - Cowfold 9n.1 – due to overhanging trees at the site of Cowfold 9n, the diffusion tube was redeployed further along the road.
 - Horsham 9n.1 – Horsham 9n was installed behind a traffic sign and there were concerns regarding the flow around the inlet sampling probe, so the diffusion tube was redeployed at a nearby location.
 - Horsham 12.1 – due to overhanging trees at the site of Horsham 12, the diffusion tube was redeployed further along the road.
 - Pulborough 3 – began monitoring near Chestnut Walk on London Road in Pulborough.
- 2024:
 - A281_A24 – monitored for a three-month period near Firs Close, Horsham
 - Ashington 1 – began monitoring on Church Ln

- Cowfold 6N – began monitoring outside Millers Cottage, after removing one of the tubes from the Cowfold AQMS triplicate site
- Faygate – monitored for a four-month period at Calvert Link, Faygate
- Horsham 12.2 – Horsham 12.1 was moved to the other side of the road, as it was a more suitable location for monitoring, with more relevant exposure
- Horsham 13 – began monitoring outside Arunside and St John’s primary school in Horsham
- Pulborough 1 – began monitoring at Swan Corner, Station Road in Pulborough
- Pulborough 3 – stopped monitoring near Chestnut Walk on London Road in Pulborough
- Pulborough 4 – began monitoring at the bottom of Church Hill in Pulborough
- Pulborough 3.1 – due to being a more suitable location, Pulborough 3 was moved to the top of Church Hill / London Road in Pulborough
- Storrington 14.1 – Storrington 14 was moved to the other side of the road, where it was safer to change the tube
- 2025:
 - Ashington 1 – stopped monitoring at this background site on Church Ln
 - Ashington 2 – began monitoring on London Rd
 - Billingshurst 2 – stopped monitoring on East St
 - Billingshurst 3 – stopped monitoring on Natts Ln due to regular interference with the tube
 - Billingshurst 4 – began monitoring outside Billingshurst Primary Academy
 - Billingshurst 5 – began monitoring near to the level crossing where there can be idling traffic
 - Horsham 5N – stopped monitoring on Harwood Rd
 - Horsham 6N.1 – moved Horsham 6N to the other side of the road, where there is idling traffic from level crossing, and away from a low wall which enabled interference with the tube

3.2 Individual Pollutants

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

3.2.1 Nitrogen Dioxide (NO₂)

Table A.3 and Table A.4 in Appendix A compare the ratified and bias-adjusted monitored NO₂ annual mean concentrations for the period 2021-2025 with the air quality objective of 40 µg/m³. 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). The data presented are representative of concentrations at the monitoring locations and do not include any distance correction to nearby receptors.

For diffusion tubes, the full 2025 dataset of monthly mean values is provided in Appendix B. Note that the concentration data presented in Table B.1 includes distance corrected values, only where relevant.

Table A.5 in Appendix A compares the ratified continuous monitored NO₂ hourly mean concentrations for the past five years with the air quality objective of 200 µg/m³, not to be exceeded more than 18 times per year. For all sites in Horsham, over the last five years there have been no exceedances of the air quality objective.

The monitoring results for 2025 indicate that all sites across the district complied with the annual mean NO₂ objective of 40 µg/m³. The majority of sites recorded concentrations well below the objective, with annual means typically ranging between approximately 15 and 30 µg/m³. No sites were measured within 10% of the objective (36 µg/m³), including those located within the Storrington AQMA and the Cowfold AQMA.

The highest concentrations continue to be recorded at roadside locations influenced by traffic emissions, particularly along key routes and areas of congestion. However, these concentrations remain below the objective and reflect a continued improvement when compared with historic levels.

Analysis of the five-year dataset (2021–2025) demonstrates a general downward trend in NO₂ concentrations across the district. This trend is evident at both roadside and

background locations and is consistent with national improvements in vehicle emissions, alongside local measures to improve traffic flow and promote sustainable transport.

Overall, the 2025 monitoring results confirm that nitrogen dioxide concentrations remain compliant with the relevant air quality objectives across Horsham District, with no new exceedances identified.

Horsham Town Sites

The automatic monitoring site in Horsham Town is at Park Way (HO2), a busy intersection in the middle of town. Annual NO₂ concentrations at this site have been steadily reducing each year, although it has remained steady between 2024 and 2025. There has been a 24.6% reduction in NO₂ at this site from 2021 to 2025, with the annual mean for 2025 of 15.9 µg/m³. It is important to note that in 2025 HDC has replaced the previous chemiluminescence APNA-370 analyser, which was used to monitor NO_x at HO2, with a T200 analyser. While the monitoring method remains unchanged, there may be slight differences in performance between the old and new instruments.

Hourly NO₂ peaks in the mornings and evenings of weekdays, representing rush hours. Concentrations are lower over the weekend and reached the lowest points overnight. Monthly concentrations were highest between January-March, and were lowest in June, August, and September, perhaps explained by improved dispersion and photochemical reactions that convert NO₂ into other pollutants and reduced combustion in warmer weather.

For diffusion tubes, data capture was good (above 75%) for all sites during 2025.

Non-automatic monitoring within Horsham town comprises a network of roadside and urban background diffusion tube sites. In 2025, all monitored concentrations were below the annual mean NO₂ objective of 40 µg/m³.

Annual mean concentrations across the town were generally moderate, with roadside sites typically recording concentrations in the range of approximately 10-26 µg/m³, whilst the urban background location was lower (7.8 µg/m³) (Table A.4). The highest annual mean was recorded at N.Horsham 3N with 26.4 µg/m³. This tube is located on a busy roundabout on the A264. Monitoring at this site will be important in the future as it is close to the new Mowbray development which is currently under construction.

The next highest concentrations were recorded at roadside locations influenced by high traffic flow, including sites near major routes such as Worthing Road, Albion Way and Station Road. These locations are consistent with previous years and reflect areas where vehicle emissions and congestion are the dominant sources of NO₂.

While concentrations within Horsham town remain well below the annual mean objective, some variation has been observed between 2024 and 2025. A number of sites recorded increases in annual mean concentrations, with changes ranging from approximately 3% to 32%, although these increases are not consistent across the monitoring network and other sites recorded small decreases over the same period.

The more notable increases were observed at specific locations influenced by local factors. For example, higher increases were recorded at Worthing Road (Horsham 8N), one of the main roads into the centre of Horsham Town, and at the monitoring site located outside St John's and Arunside Primary Schools (Horsham 13), which is subject to traffic peaks associated with school drop-off and pick-up. In addition, an increase was observed at North Horsham 3N (Rusper Road roundabout), where ongoing development and associated traffic activity are likely to be influencing local concentrations.

These changes are considered to reflect localised conditions, including traffic patterns, congestion, and short-term influences, rather than a district-wide deterioration in air quality.

Despite these localised elevations, all concentrations remained well below the objective and do not indicate any risk of exceedance. The longer-term trend across Horsham town remains stable overall.

Cowfold Sites

Diffusion tube data capture was good (above 75%) for all sites in Cowfold during 2025.

Monitoring within the Cowfold AQMA comprises a network of roadside diffusion tube sites located along the A272 and A281. In 2025, all monitored concentrations were below the annual mean NO₂ objective of 40 µg/m³, continuing the sustained period of compliance observed in recent years and confirms that nitrogen dioxide levels within Cowfold remain well within the relevant objective.

Annual mean concentrations at Cowfold sites were generally in the range of approximately 14–26 µg/m³, with the highest concentrations recorded at roadside locations directly

influenced by traffic emissions along the main routes (Table A.4). The maximum recorded concentration in 2025 was 25.6 $\mu\text{g}/\text{m}^3$ (Cowfold 7N on Bolney Road).

The results for 2025 are consistent with the long-term downward trend observed across the monitoring network and support the decision to revoke the Cowfold AQMA which came into force in February 2026. Monitoring will continue in the area to ensure that concentrations remain compliant and to identify any future changes in local air quality.

Storrington Sites

The automatic monitoring site in Storrington (HO4), is located on Manley's Hill on the road into the town. Annual NO_2 concentrations at this site have been steadily reducing over the past 5 years. There has been a 21.89% reduction in NO_2 at this site from 2021 to 2025, with the annual mean for 2025 of 15.7 $\mu\text{g}/\text{m}^3$.

Hourly NO_2 peaks in the mornings and evenings of weekdays, representing rush hours. Concentrations are lower over the weekend and reached the lowest points overnight. Monthly concentrations peaked in February and March, and the lowest monthly averages were in the summer months (June-September) perhaps explained by improved dispersion and photochemical reactions that convert NO_2 into other pollutants and reduced combustion in warmer weather.

Diffusion tube data capture was good (above 75%) for all sites in Storrington during 2025.

Diffusion tube monitoring within the Storrington AQMA comprises a network of roadside diffusion tube sites located along key routes including West Street, High Street, and Manley's Hill, where traffic congestion and narrow streets can influence pollutant dispersion. In 2025, all monitored concentrations were below the annual mean NO_2 objective of 40 $\mu\text{g}/\text{m}^3$ as well as below 36 $\mu\text{g}/\text{m}^3$ (which applies for the diffusion tubes).

Annual mean concentrations across the AQMA were typically in the range of approximately 15–35 $\mu\text{g}/\text{m}^3$, with roadside locations recording the highest concentrations within the network (Table A.4). The maximum recorded concentration in 2025 was 35.2 $\mu\text{g}/\text{m}^3$ (Storrington 19n), at the mini roundabout on Manley's Hill and therefore directly influenced by traffic flow through the village centre. This is the highest annual mean of all diffusion tubes across Horsham District.

While the overall trend in Storrington remains downward when considered over the longer term, some variation has been observed between 2024 and 2025. Some sites recorded

increases in annual mean concentrations in 2025, with changes typically in the range of approximately 1–15%. These increases are not uniform across the monitoring network, with many locations showing decreases over the same period. Such year-to-year fluctuations are common in diffusion tube data and are likely to reflect localised factors such as changes in traffic flow, meteorological conditions, and short-term congestion patterns, as well as the diffusion tube bias adjustment factor used.

Overall, the 2025 results confirm that nitrogen dioxide concentrations within the Storrington AQMA remain compliant with the annual mean objective and continue to improve, although the AQMA remains in place in line with LAQM.TG22 guidance.

Pulborough Sites

Data capture was good (above 75%) for all sites in Pulborough during 2025.

Monitoring within Pulborough comprises a number of roadside diffusion tube sites located along Lower Street and the A29. In 2025, all monitored concentrations remained below the annual mean NO₂ objective of 40 µg/m³ (Table A.4).

In contrast to other areas of the district, monitoring results in Pulborough are generally higher, particularly at sites located in close proximity to the traffic signal system introduced following the A29 landslide. The highest recorded concentration in 2025 was 34.7 µg/m³, observed on Church Hill (Pulborough 4), which is close to monitoring concentrations at Storrington AQMA hotspot location (Storrington 19n). This is likely attributable to prolonged vehicle idling and congestion associated with the restricted road layout and alternating traffic flow.

Although Pulborough 4 is not positioned directly adjacent to a relevant receptor, it is considered representative of conditions in the area. The anticipated hotspot is located on the opposite side of the road to the receptor; however, due to the absence of a safe footway, installation closer to this receptor was not feasible. The receptor itself is situated closer to the carriageway than the monitoring location, which would typically suggest higher pollutant concentrations. However, traffic queuing predominantly occurs on the side of the road where the diffusion tube is installed, indicating that concentrations measured at the tube may be slightly higher than those experienced at the receptor. Given these competing factors, a detailed modelling exercise would be required to more accurately characterise NO₂ concentrations at the receptor location.

Some increases have been observed between 2024 and 2025 at a number of monitoring sites. Changes range from approximately 2% to 13% increases, with the exception of one site showing a decrease. The highest increases were recorded at sites located along the A29 corridor, which has been subject to ongoing disruption and traffic management associated with the landslide. These increases are likely to reflect localised congestion, including stop-start traffic and vehicle idling linked to temporary traffic control measures.

Despite these increases, all monitored concentrations remain below $40 \mu\text{g}/\text{m}^3$ and below $36 \mu\text{g}/\text{m}^3$, and therefore are not within 10% of the objective. The observed changes are considered to be localised and situational, rather than indicative of a wider deterioration in air quality across the district. The situation will continue to be closely monitored as the traffic management arrangements evolve.

The ongoing situation at the A29 continues to represent a localised constraint on air quality improvement within Pulborough, and Horsham District Council will continue to work with West Sussex County Council to mitigate impacts where possible. Monitoring will be maintained to track future trends and assess any changes as the situation progresses.

Remaining Sites

The monitoring sites in Ashington, Billingshurst, Broadbridge Heath, Henfield, Rusper, Southwater, and Steyning have remained below the objective in the past five years. The concentrations measured in 2025 were all below $20 \mu\text{g}/\text{m}^3$ and data capture at all sights was good (above 75%).

3.2.2 Particulate Matter (PM₁₀)

Table A.6 in Appendix A: Monitoring Results compares the ratified and adjusted monitored PM₁₀ annual mean concentrations for the past five years with the air quality objective of $40 \mu\text{g}/\text{m}^3$. No exceedances of the air quality objective have been recorded at any of the monitoring locations.

Data capture over 2025 was excellent (>90%) for all monitoring sites. Monitoring At HO2 (Horsham Park Way) recorded an annual PM₁₀ concentration of $13.6 \mu\text{g}/\text{m}^3$, which is well below the Air Quality Objective of $40 \mu\text{g}/\text{m}^3$. Monitoring at Park Way used to be carried out using a Tapered Element Oscillating Microbalance (TEOM), but this instrument was replaced by a Light-Scattering Monitor (Fidas200) in 2025, therefore as stated in the technical guidance, only data derived from the same method should be used when

reporting PM₁₀ trends. The results from previous years have been included in Table A.6 and Figure A.7 for transparency, but should not be used to draw conclusions on trends across the last 5 years.

At HO4 (Storrington Roadside), annual mean PM₁₀ concentrations have fluctuated over the monitoring period. In 2022 the annual mean was 14.0 µg/m³. Concentrations decreased in 2023 and 2024 but increased in 2025 to 15.1 µg/m³. A similar increase has also been observed at most monitoring locations within the Sussex Air network.

This highest concentrations of PM₁₀ across both sites were seen in February and March. Other months of the year remained mostly consistent at both sites.

Table A.7 in Appendix A compares the ratified continuous monitored PM₁₀ daily mean concentrations for the past five years with the air quality objective of 50 µg/m³, not to be exceeded more than 35 times per year. In 2025, at both sites there were just 2 exceedances across the year.

3.2.3 Particulate Matter (PM_{2.5})

Table A.8 in Appendix A presents the ratified and adjusted monitored PM_{2.5} annual mean concentrations for the past five years.

Data capture was above 75% at all three monitoring sites and no annualisation has been required. Details of data collections and ratification are presented in Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC.

In 2024, we began monitoring fine particulate matter (PM_{2.5}) in Cowfold using a Thermo 1405 FDMS analyser. However, due to persistent equipment issues, very limited data was captured during the year. The analyser was first installed in March but had to be removed shortly after due to a component failure. Following the arrival of a replacement part, the unit was reinstalled in July. Unfortunately, it had to be withdrawn again just weeks later for repairs, after reporting noisy and frequently negative readings – a problem seen across similar FDMS units in the Sussex network at the time. The analyser was eventually reinstalled in November 2024 and was in operation for most of 2025 (89% data capture).

In the end of April 2022 three particulate matter analysers were installed in Storrington (HO4) as part of Defra's Particulate Matter research study, in 2023 HDC were able to keep Fidas analyser after the one-year study in Storrington, and in 2024 the analyser was integrated into the AURN.

Up until 2024, annual mean PM_{2.5} concentrations at Horsham Park Way (HO2) were estimated from PM₁₀ measurements, in line with the method described in Box 7.7 of Technical Guidance TG(22). From 2025 onwards, PM_{2.5} has been measured directly following the installation of a FIDAS monitor at the station. The results from previous years have been included in Table A.8 and Figure A.9, but may not be suitable to be used to draw conclusions on trends across the last 5 years.

Monitoring data at Storrington shows a levelling off in annual mean concentrations of PM_{2.5} over the period of 2022 to 2024 (Figure A.9), with a 10.4% increase in 2025 to 8.5µg/m³. The analysis of hourly mean concentrations at HO4 (Figure A.10) indicates that PM_{2.5} concentrations were fairly consistent throughout the daytime but showed more variability towards the end of the week. Figure A.10 indicates that the highest average monthly concentrations in the year at HO4 were recorded in February and March measuring 14.6 µg/m³ and 16.7 µg/m³, respectively.

Winter pollution levels are about 86% higher than the rest of the year at Horsham Park Way, with similar patterns at Storrington and Cowfold stations.

Looking specifically at the burning season (November–February), average concentrations increase to around 10–12, compared with 8-9 during the rest of the year. During this period, pollution is highest in the evenings. On weekdays between 5pm and 9pm, levels reach around 12–15, compared with 10–12 at other times. Overall, this pattern strongly suggests that domestic heating, particularly wood burning, is a key contributor to winter air pollution in the district.

All three of our PM_{2.5} monitoring sites were below the 2040 target of 10µg/m³. We will need to work proactively to keep PM_{2.5} levels down, as there has been fluctuations over the last five years so we should not be complacent about this year being below the target.

The annual concentrations of PM_{2.5} at all three sites were above the WHO-recommended guideline value of 5µg/m³ taken as annual mean in 2025. The WHO guideline is therefore best understood as a health-based ideal rather than a practically achievable limit at the local scale; even rural areas with few direct emission sources may remain above it. Consequently, while further reductions in local emissions (e.g. from domestic burning and transport) can deliver health benefits, achieving 5 µg/m³ consistently in Horsham is unlikely without significant wider national and international reductions in background pollution.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA?	Which AQMA? ⁽¹⁾	Monitoring Technique	Distance to Relevant Exposure (m) ^(1,2)	Distance to kerb of nearest road (m) ⁽¹⁾	Inlet Height (m)
HO2	Horsham - Park Way	Roadside	517490	130588	NO ₂ , PM ₁₀ , PM _{2.5}	No	N/A	Chemiluminescence (T200); FIDAS200**	8.9	1.5	3.0
HO4	Horsham - Storrington	Roadside	509089	114197	NO ₂ , PM ₁₀ , PM _{2.5}	No	N/A	Chemiluminescence (T200); FIDAS200	9.6	4.2	2.0
HO5	Horsham - Cowfold	Roadside	521359	122552	PM _{2.5} (NO ₂ *)	Yes	Yes, Horsham Cowfold AQMA (Horsham District Council)	FDMS 1405F (Chemiluminescence (ML9841B*))	23.8	6.5	2.0

Notes:

(1) N/A if not applicable

(2) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

*Cowfold used to monitor NO₂ until Nov 2024, using ML9841B. The NO₂ analyser was replaced with the FDMS to monitor PM_{2.5}.

** Park way used to monitor PM10 using a TEOM. The analyser was replaced with the Fidas 200 in 2025.

Table A.2 – 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)
Ashington sites										
Ashington 1*	Church Ln / Fairfield Rd	Urban Background	513053	115867	NO ₂	No	10.0	1.1	No	2.0
Ashington 2	London Rd / The Cl	Roadside	513241	116283	NO ₂	No	16.0	1.9	No	2.3
Billingshurst sites										
Billingshurst 1	High St / St Mary's Cl	Roadside	508650	125855	NO ₂	No	2.2	1.5	No	2.6
Billingshurst 2*	East St / Windmill Pl	Roadside	509026	125936	NO ₂	No	9.2	1.5	No	1.9
Billingshurst 3*	Natts Ln / Groomsland Dr	Roadside	508515	124926	NO ₂	No	11.8	1.7	No	1.9
Billingshurst 4	Billingshurst Primary	Roadside	508583	125568	NO ₂	No	8.0	2.4	No	2.3
Billingshurst 5	Station Rd	Roadside	508787	125158	NO ₂	No	6.0	1.2	No	2.2
Broadbridge Heath sites										
Broadbridge_Heath 1*	Cheesmer Way	Roadside	514596	130556	NO ₂	No	1.0	1.8	No	2.3
Broadbridge_Heath 1.1	Buck Way	Roadside	514605	130621	NO ₂	No	3.5	2.6	No	1.9
Cowfold sites										
Cowfold 1, Cowfold 2	The St (between the roundabouts)	Roadside	521326	122614	NO ₂	Yes, Horsham Cowfold AQMA	5.0	1.7	No	2.7

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)
Cowfold 3	Station Rd (near roundabout)	Roadside	521272	122675	NO ₂	Yes, Horsham Cowfold AQMA	18.4	1.4	No	2.7
Cowfold 4	Brook Hill (near roundabout)	Roadside	521314	122700	NO ₂	Yes, Horsham Cowfold AQMA	25.0	2.3	No	2.0
Cowfold 5N*	Station Rd / Thornden	Roadside	521070	122706	NO ₂	No	23.0	3.6	No	2.5
Cowfold 6N	South Leas Bus Stop (A281)	Roadside	521312	122248	NO ₂	No	3.0	1.4	No	2.0
Cowfold 7N	Bolney Rd (West)	Roadside	521432	122486	NO ₂	Yes, Horsham Cowfold AQMA	2.6	1.1	No	2.4
Cowfold 8N	Fairfield Cottages	Urban Background	521417	122632	NO ₂	No	8.5	1.1	No	2.3
Cowfold 9N*	Oakfield Rd / Bolney Rd	Roadside	521584	122457	NO ₂	No	4.5	1.0	No	2.0
Cowfold 9N.1*	Oakleigh (Bolney Rd)	Roadside	521626	122471	NO ₂	No	7.0	1.5	No	2.2
Cowfold AU A	Cowfold AQMS	Roadside	521359	122552	NO ₂	Yes, Horsham Cowfold AQMA	23.8	6.5	No	2.0
Faygate sites										
Faygate 1	Calvert Link, Faygate	Kerbisde	523221	134924	NO ₂	No	17.0	0.3	No	2.0
Henfield 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)
Henfield 1n	High St / Cagefoot Lane	Roadside	521495	115906	NO ₂	No	0.0	2.0	No	2.3
Horsham sites										
Horsham 1N	Park Way	Roadside	517489	130607	NO ₂	No	3.5	2.0	No	2.2
Horsham 3N	67 Hillside	Urban Background	516012	130486	NO ₂	No	7.6	2.2	No	2.0
Horsham 4N*	Goring's Mead	Urban Background	517680	130069	NO ₂	No	9.8	1.2	No	2.5
Horsham 5N*	Harwood Rd West	Roadside	518214	131143	NO ₂	No	7.5	1.4	No	2.4
Horsham 6N*	Littlehaven Station	Roadside	518653	132481	NO ₂	No	10.0	1.5	No	2.2
Horsham 6N.1	Rusper Rd opp Kidmans Cl	Roadside	518650	132451	NO ₂	No	10.0	1.4	No	2.3
Horsham 7N	Warnham Rd (near Redford Ave)	Roadside	516955	132213	NO ₂	No	12.0	1.8	No	2.3
Horsham 8N	Worthing Rd (near Cricketfield Rd)	Roadside	516649	130221	NO ₂	No	6.5	1.8	No	2.4
Horsham 9n.1	Station Rd (Century House)	Roadside	518121	131161	NO ₂	No	1.0	1.6	No	2.2
Horsham 12*	Albion Way / Kings Gate	Roadside	516909	130755	NO ₂	No	3.5	1.5	No	2.0
Horsham 12.1*	29 Albion Way	Roadside	516853	130621	NO ₂	No	9.0	1.5	No	2.3

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)
Horsham 12.2	Albion Way / Bishopric	Roadside	516877	130704	NO ₂	No	1.0	4.1	No	2.0
Horsham 13	St John's and Arunside Primary School	Roadside	516307	130493	NO ₂	No	13.0	2.3	No	2.3
N. Horsham 2N	Langhurst Wood Rd	Kerbside	517477	134013	NO ₂	No	5.0	0.4	No	1.7
N. Horsham 3N	Rusper Rd Roundabout	Roadside	518814	133483	NO ₂	No	200.0	1.3	No	2.4
Park Way 1, Park Way 2, Park Way 3	Park Way AQMS	Roadside	517490	130588	NO ₂	No	8.9	3.0	Yes	3.0
Pulborough sites										
Pulborough 1	Station Rd / London Rd	Roadside	504569	118562	NO ₂	No	1.7	1.8	No	2.0
Pulborough 2	Lower St	Roadside	505290	118630	NO ₂	No	2.0	1.5	No	2.0
Pulborough 3*	London Rd / Chestnut Walk	Roadside	504878	118932	NO ₂	No	7.0	1.8	No	1.8
Pulborough 3.1	London Rd (top of Church Hill)	Roadside	504786	118791	NO ₂	No	4.5	1.6	No	2.5
Pulborough 4	Church Hill	Roadside	504649	118636	NO ₂	No	26.0	1.3	No	1.9
Rusper sites										
Rusper 1	Rusper Primary School	Kerbside	520538	137136	NO ₂	No	8.9	0.7	No	1.9
Southwater 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)
Southwater 1*	Worthing Rd (Opp Nursery)	Roadside	515639	126599	NO ₂	No	1.0	1.5	No	2.0
Southwater 1.1	Worthing Rd / Southwater Business Park	Roadside	515631	126135	NO ₂	No	43.0	2.2	No	2.1
Southwater 2	Worthing Rd / Southwater St	Roadside	515748	127431	NO ₂	No	18.0	2.2	No	1.9
Steyping sites										
Steyping 4N	High St (near Sheep Pen Ln)	Roadside	517646	111170	NO ₂	No	1.5	1.4	No	2.1
Storrington sites										
Storrington 1	Manley's Hill Roundabout (eastbound side)	Roadside	508960	114271	NO ₂	Yes, Horsham AQMA No1	2.5	1.1	No	2.8
Storrington 3	School Hill (Roundabout)	Roadside	508935	114294	NO ₂	Yes, Horsham AQMA No1	0.0	1.2	No	2.5
Storrington 4	High St (near Old Mill Dr)	Roadside	508833	114274	NO ₂	Yes, Horsham AQMA No1	2.8	2.2	No	3.0
Storrington 5	West St (Opp Church St)	Roadside	508745	114286	NO ₂	Yes, Horsham AQMA No1	1.9	1.9	No	2.3
Storrington 6	Pulborough Rd (near Reed Cl)	Roadside	508398	114444	NO ₂	No	8.3	1.8	No	2.6
Storrington 7	Amberley Rd / The Willows	Roadside	508367	114384	NO ₂	No	6.7	1.7	No	2.2
Storrington 8 AURN, Storrington 9 AURN, Storrington 10n AURN	Storrington AURN	Roadside	509089	114197	NO ₂	No	9.6	4.2	Yes	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)
Storrington 11n	53 West St	Roadside	508524	114363	NO ₂	Yes, Horsham AQMA No1	3.5	1.6	No	2.3
Storrington 13n	18 West St	Roadside	508671	114305	NO ₂	Yes, Horsham AQMA No1	0.5	1.6	No	2.4
Storrington 14.1	Moorings, Washington Rd	Roadside	509347	114141	NO ₂	No	18.4	1.4	No	1.8
Storrington 16n	School Hill (by Car Park)	Roadside	508971	114354	NO ₂	No	11.4	1.5	No	2.3
Storrington 17n	33 Church St	Urban Background	508679	114144	NO ₂	No	1.5	1.4	No	2.0
Storrington 19n	Manley's Hill Roundabout (westbound side)	Roadside	508948	114268	NO ₂	Yes, Horsham AQMA No1	0.5	1.0	No	2.2

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.

* These diffusion tubes were not active in 2025. However, they have been included as they have data reported within 2021-2024, displayed in Table A.4.

Table A.3 – Annual Mean NO₂ Monitoring Results: Automatic Monitoring (µg/m³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
HO2	517490	130588	Roadside	100.0	94.3	21.1	17.7	16.2	15.7	15.9
HO4	509089	114197	Roadside	89.8	89.8	20.1	17.6	17.4	16.6	15.7
HO5	521359	122552	Roadside	N/A	N/A	20.3	21.0	24.6	16.2	-

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

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

☒ Where exceedances of the NO₂ annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2025

Notes:

The annual mean concentrations are presented as µg/m³.

Exceedances of the NO₂ annual mean objective of 40 µg/m³ are shown in **bold**.

All means have been “annualised” as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

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

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

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

Table A.4 – Annual Mean NO₂ Monitoring Results: Non-Automatic Monitoring (µg/m³)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
Ashington sites										
Ashington 1	513053	115867	Urban Background	N/A	N/A	-	-	-	7.7	-
Ashington 2	513241	116283	Roadside	100.0	100.0	-	-	-	-	12.6
Billingshurst sites										
Billingshurst 1	508650	125855	Roadside	75.0	75.0	22.2	20.3	19.7	15.6	15.2
Billingshurst 2	509026	125936	Roadside	N/A	N/A	-	-	-	12.4	-
Billingshurst 3	508515	124926	Roadside	N/A	N/A	-	-	-	10.8	-
Billingshurst 4	508583	125568	Roadside	91.7	90.4	-	-	-	-	12.0
Billingshurst 5	508787	125158	Roadside	91.7	90.4	-	-	-	-	12.7
Broadbridge Heath sites										
Broadbridge_Heath 1	514596	130556	Roadside	N/A	N/A	-	-	10.2	-	-
Broadbridge_Heath 1.1	514605	130621	Roadside	91.7	92.3	-	-	-	11.5	13.1
Cowfold sites										

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 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
Cowfold 1, Cowfold 2	521326	122614	Roadside	100.0	100.0	26.5	26.4	24.1	21.5	22.3
Cowfold 3	521272	122675	Roadside	83.3	84.6	26.5	25.5	24.1	21.9	19.9
Cowfold 4	521314	122700	Roadside	83.3	84.6	22.2	20.3	19.5	17.5	14.5
Cowfold 5N	521070	122706	Roadside	N/A	N/A	21.3	20.3	18.7	-	-
Cowfold 6N	521312	122248	Roadside	100.0	100.0	20.5	20.3	19.6	16.5	17.1
Cowfold 7N	521432	122486	Roadside	100.0	100.0	31.2	31.7	28.3	24.9	25.6
Cowfold 8N	521417	122632	Urban Background	91.7	90.4	10.5	10.3	8.9	8.1	8.7
Cowfold 9N	521584	122457	Roadside	N/A	N/A	18.3	18.7	-	-	-
Cowfold 9N.1	521626	122471	Roadside	N/A	N/A	-	-	18.2	-	-
Cowfold AU A	521359	122552	Roadside	100.0	100.0	19.9	20.0	17.5	15.8	16.9
Faygate sites										
Faygate 1	523221	134924	Kerbside	N/A	N/A	-	-	-	8.3	-
Henfield sites										
Henfield 1n	521495	115906	Roadside	100.0	100.0	20.9	18.2	18.2	16.6	16.9

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
Horsham sites										
A281_A24	515513	131159	Other	N/A	N/A	-	-	-	11.8	-
Horsham 1N	517489	130607	Roadside	N/A	N/A	23.2	22.6	20.9	-	-
Horsham 3N	516012	130486	Urban Background	100.0	100.0	9.9	8.8	7.6	7.2	7.8
Horsham 4N	517680	130069	Urban Background	N/A	N/A	9.0	8.7	-	-	-
Horsham 5N	518214	131143	Roadside	N/A	N/A	22.7	21.6	20.4	18.1	-
Horsham 6N	518653	132481	Roadside	N/A	N/A	19.5	17.6	15.0	14.3	-
Horsham 6N.1	518650	132451	Roadside	75.0	75.0	-	-	-	-	11.5
Horsham 7N	516955	132213	Roadside	91.7	92.3	19.4	18.9	16.6	13.5	13.2
Horsham 8N	516649	130221	Roadside	83.3	82.7	20.7	19.9	18.7	13.4	17.7
Horsham 9N.1	518121	131161	Roadside	100.0	100.0	23.3	24.1	20.3	17.3	17.5
Horsham 12	516909	130755	Roadside	N/A	N/A	33.4	29.7	-	-	-
Horsham 12.1	516853	130621	Roadside	N/A	N/A	-	-	20.1	-	-

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 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
Horsham 12.2	516877	130704	Roadside	91.7	90.4	-	-	-	22.0	24.2
Horsham 13	516307	130493	Roadside	91.7	92.3	-	-	-	8.6	10.3
N. Horsham 1N	517702	133570	Roadside	N/A	N/A	17.6	13.9	-	-	-
N. Horsham 2N	517477	134013	Kerbside	100.0	100.0	14.6	14.1	14.1	11.9	11.4
N. Horsham 3N	518814	133483	Roadside	100.0	100.0	-	-	26.2	21.7	26.4
Park Way 1, Park Way 2, Park Way 3	517490	130588	Roadside	100.0	100.0	19.9	19.6	17.0	15.6	16.1
Pulborough sites										
A29_Pulborough1	505825	118857	Roadside	N/A	N/A	-	-	8.1	-	-
A29_Pulborough3	505320	119002	Roadside	N/A	N/A	-	-	9.1	-	-
A29_Pulborough4	506351	118728	Rural	N/A	N/A	-	-	9.2	-	-
A29_Pulborough5	505407	118854	Urban Background	N/A	N/A	-	-	6.3	-	-
Pulborough 1	504569	118562	Roadside	91.7	90.4	-	-	-	16.2	17.4
Pulborough 2	505290	118630	Roadside	100.0	100.0	16.7	16.1	15.8	12.2	13.8

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 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
Pulborough 3	504878	118932	Roadside	N/A	N/A	-	-	14.7	-	-
Pulborough 3.1	504786	118791	Roadside	91.7	92.3	-	-	-	28.9	29.5
Pulborough 4	504649	118636	Roadside	100.0	100.0	-	-	-	35.1	34.7
Southwater sites										
Southwater 1	515639	126599	Roadside	N/A	N/A	21.7	19.4	19.0	-	-
Southwater 1.1	515631	126135	Roadside	100.0	100.0	-	-	-	10.2	10.9
Southwater 2	515748	127431	Roadside	91.7	92.3	-	-	-	13.5	14.4
Rusper sites										
Rusper 1	520538	137136	Kerbside	100.0	100.0	-	-	-	11.4	12.0
Steyning sites										
Steyning 4N	517646	111170	Roadside	100.0	100.0	19.0	18.5	18.2	15.7	15.3
Storrington sites										
Storrington 1	508960	114271	Roadside	100.0	100.0	24.3	32.9	32.9	28.6	27.5
Storrington 3	508935	114294	Roadside	100.0	92.3	24.8	23.7	21.8	19.3	19.6
Storrington 4	508833	114274	Roadside	91.7	90.4	25.9	26.7	24.5	23.3	23.1

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 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
Storrington 5	508745	114286	Roadside	100.0	100.0	19.9	19.0	19.2	16.4	16.8
Storrington 6	508398	114444	Roadside	100.0	100.0	17.1	17.4	17.9	15.9	16.6
Storrington 7	508367	114384	Roadside	91.7	92.3	17.6	17.7	18.8	15.9	15.2
Storrington 8 AURN, Storrington 9 AURN, Storrington 10n AURN	509089	114197	Roadside	100.0	92.3	21.7	21.7	19.8	17.3	16.3
Storrington 11n	508524	114363	Roadside	100.0	100.0	26.5	25.9	24.8	20.7	20.6
Storrington 12n	508598	114323	Roadside	N/A	N/A	23.0	22.4	20.9	-	-
Storrington 13n	508671	114305	Roadside	100.0	100.0	23.1	23.0	21.1	18.4	19.1
Storrington 14n	509319	114160	Roadside	N/A	N/A	15.8	26.3	23.5	-	-
Storrington 14.1	509347	114141	Roadside	100.0	100.0	-	-	-	26.1	26.3
Storrington 15n	509103	114532	Roadside	N/A	N/A	15.4	14.6	14.7	-	-
Storrington 16n	508971	114354	Roadside	100.0	92.3	19.2	18.4	17.5	15.1	17.3
Storrington 17n	508679	114144	Urban Background	91.7	92.3	10.0	9.6	8.2	7.6	8.5

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 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
Storrington 18n	508215	114348	Roadside	N/A	N/A	18.1	15.4	13.7	-	-
Storrington 19n	508948	114268	Roadside	100.0	100.0	39.6	38.1	37.0	32.7	35.2

☒ **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 $\mu\text{g}/\text{m}^3$.

Exceedances of the NO₂ annual mean objective of 40 $\mu\text{g}/\text{m}^3$ are shown in **bold**.

NO₂ annual means exceeding 60 $\mu\text{g}/\text{m}^3$, indicating a potential exceedance of the NO₂ 1-hour mean objective are shown in **bold and underlined**.

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

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

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

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

Figure A.1 – Trends in Annual Mean NO₂ Concentrations in Horsham and Broadbridge HeathNO₂ concentrations (µg/m³): 2021-2025

● 2021 ● 2022 ● 2023 ● 2024 ● 2025 ● UK Objective

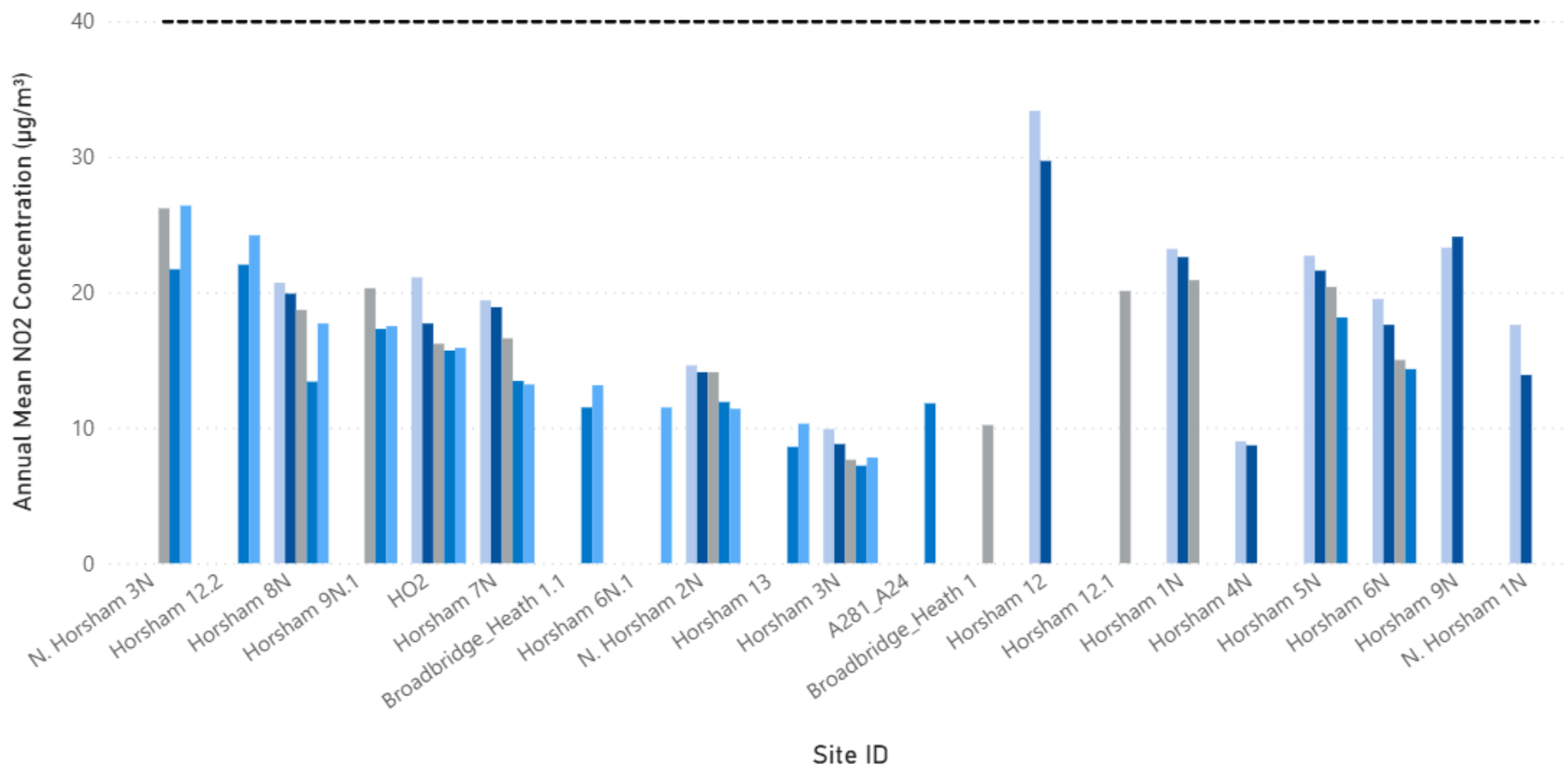


Figure A.2 – Trends in Annual Mean NO₂ Concentrations in CowfoldNO₂ concentrations (µg/m³): 2021-2025

● 2021 ● 2022 ● 2023 ● 2024 ● 2025 ● UK Objective

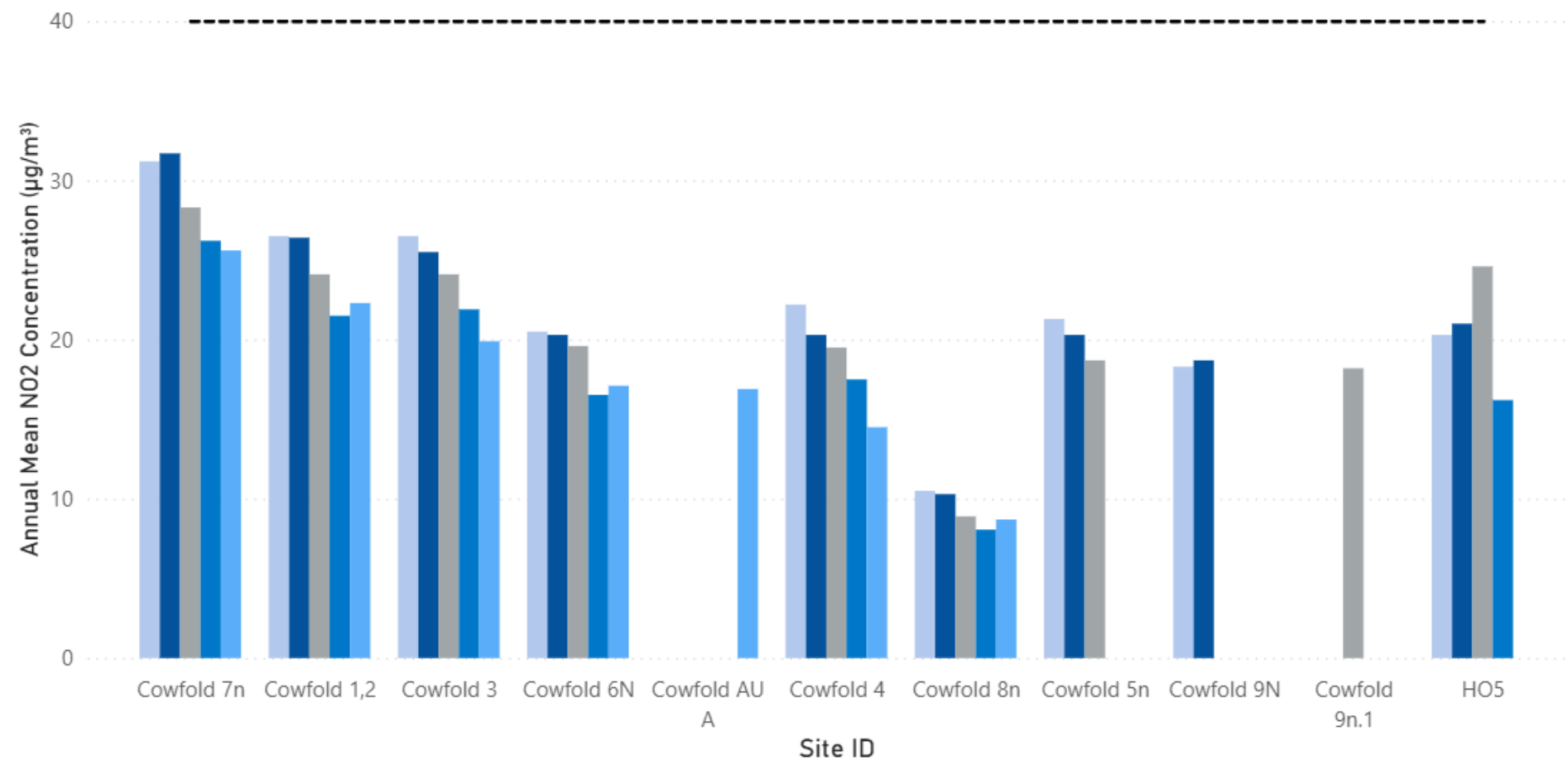


Figure A.3 – Trends in Annual Mean NO₂ Concentrations in StorringtonNO₂ concentrations (µg/m³): 2021-2025

2021 2022 2023 2024 2025 UK Objective

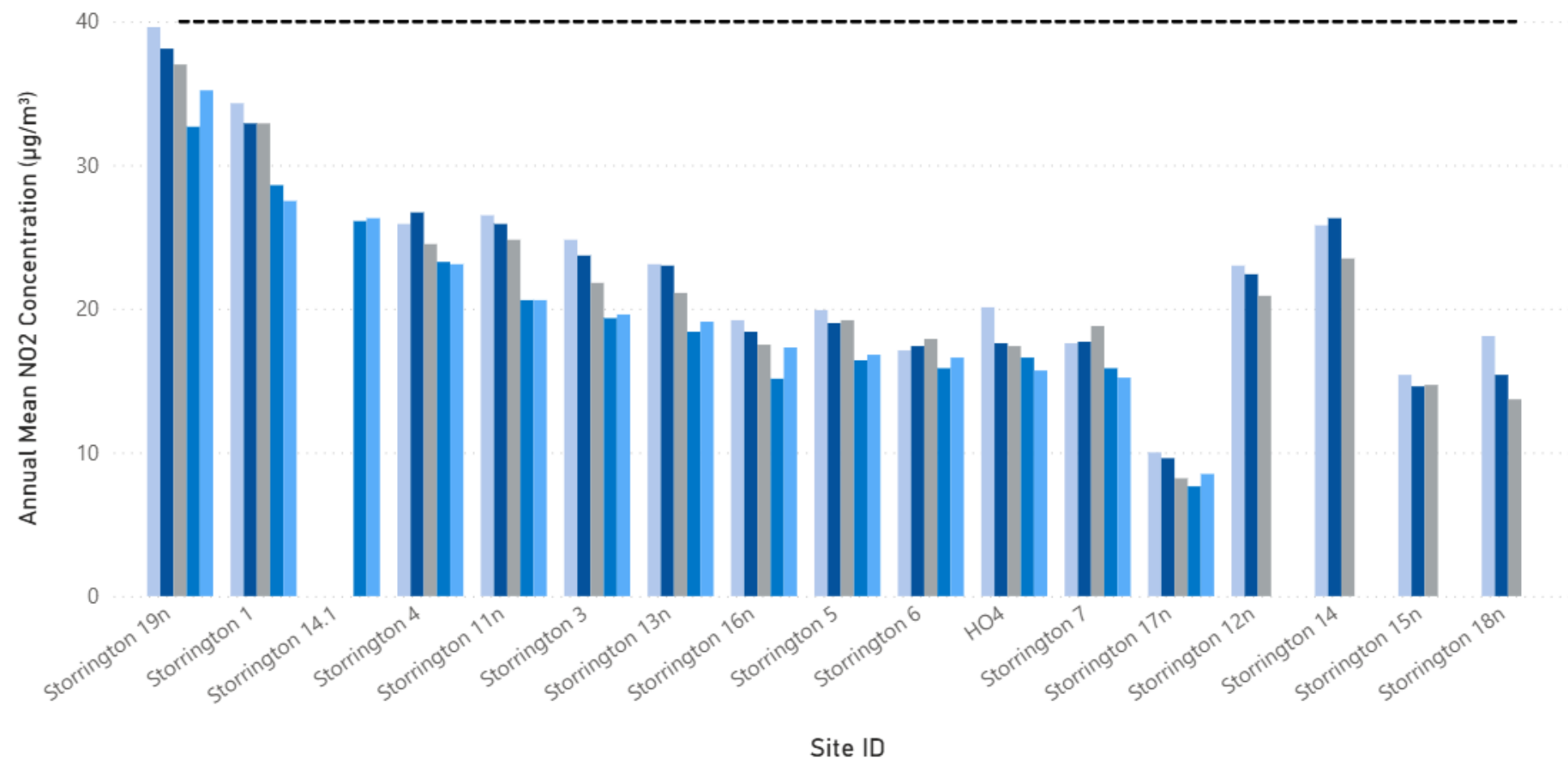


Figure A.4 – Trends in Annual Mean NO₂ Concentrations in Pulborough

NO₂ concentrations (µg/m³): 2021-2025

● 2021 ● 2022 ● 2023 ● 2024 ● 2025 ● UK Objective

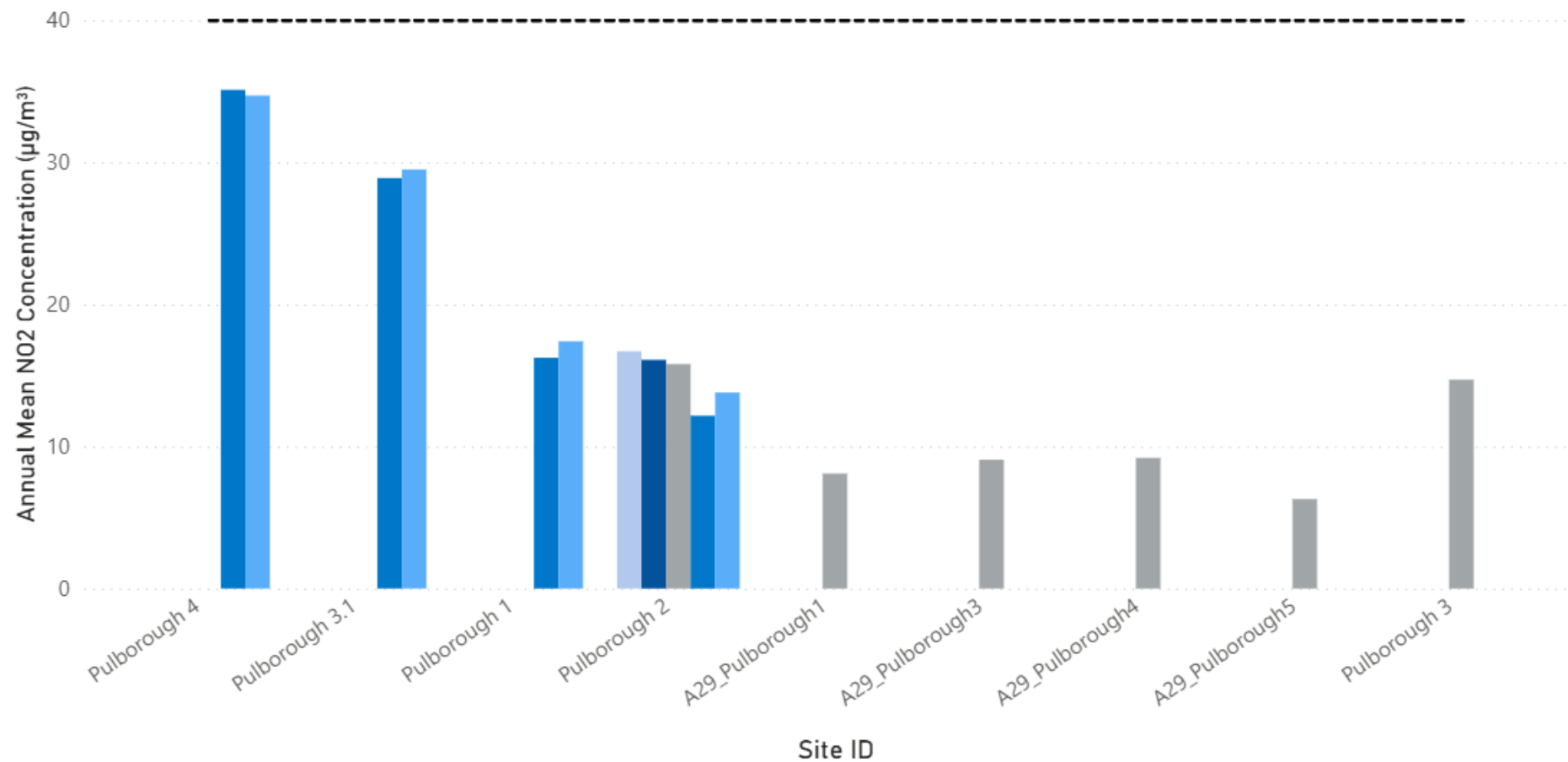


Figure A.5 – Trends in Annual Mean NO₂ Concentrations in Billingshurst, Henfield, Southwater, Steyning, Faygate, Ashington and Rusper

NO₂ concentrations (µg/m³): 2021-2025

● 2021 ● 2022 ● 2023 ● 2024 ● 2025 ● UK Objective

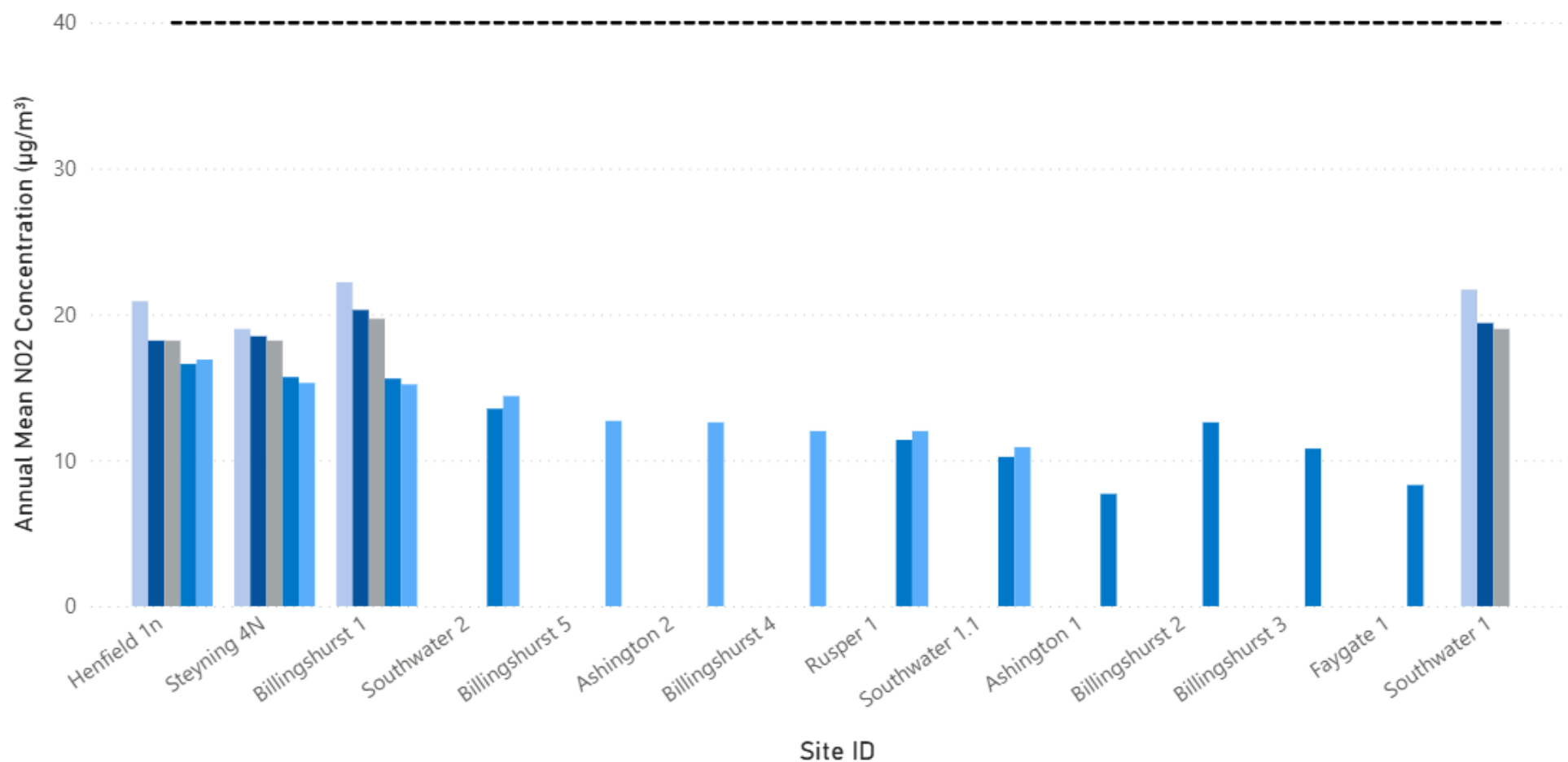


Table A.5 – 1-Hour Mean NO₂ Monitoring Results, Number of 1-Hour Means > 200µg/m³

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
HO2	517490	130588	Roadside	100.0	94.3	0	0 (66.3)	0	0	0
HO4	509089	114197	Roadside	89.8	89.8	0	0 (77.2)	0	0	0

Notes:

Results are presented as the number of 1-hour periods where concentrations greater than 200µg/m³ have been recorded.

Exceedances of the NO₂ 1-hour mean objective (200µg/m³ not to be exceeded more than 18 times/year) are shown in **bold**.

If the period of valid data is less than 85%, the 99.8th percentile of 1-hour means is provided in brackets.

(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.6 – Monitoring Results: NO₂ Concentrations trends (µg/m³) at HO2 Park Way and HO4 Storrington AURN in 2025

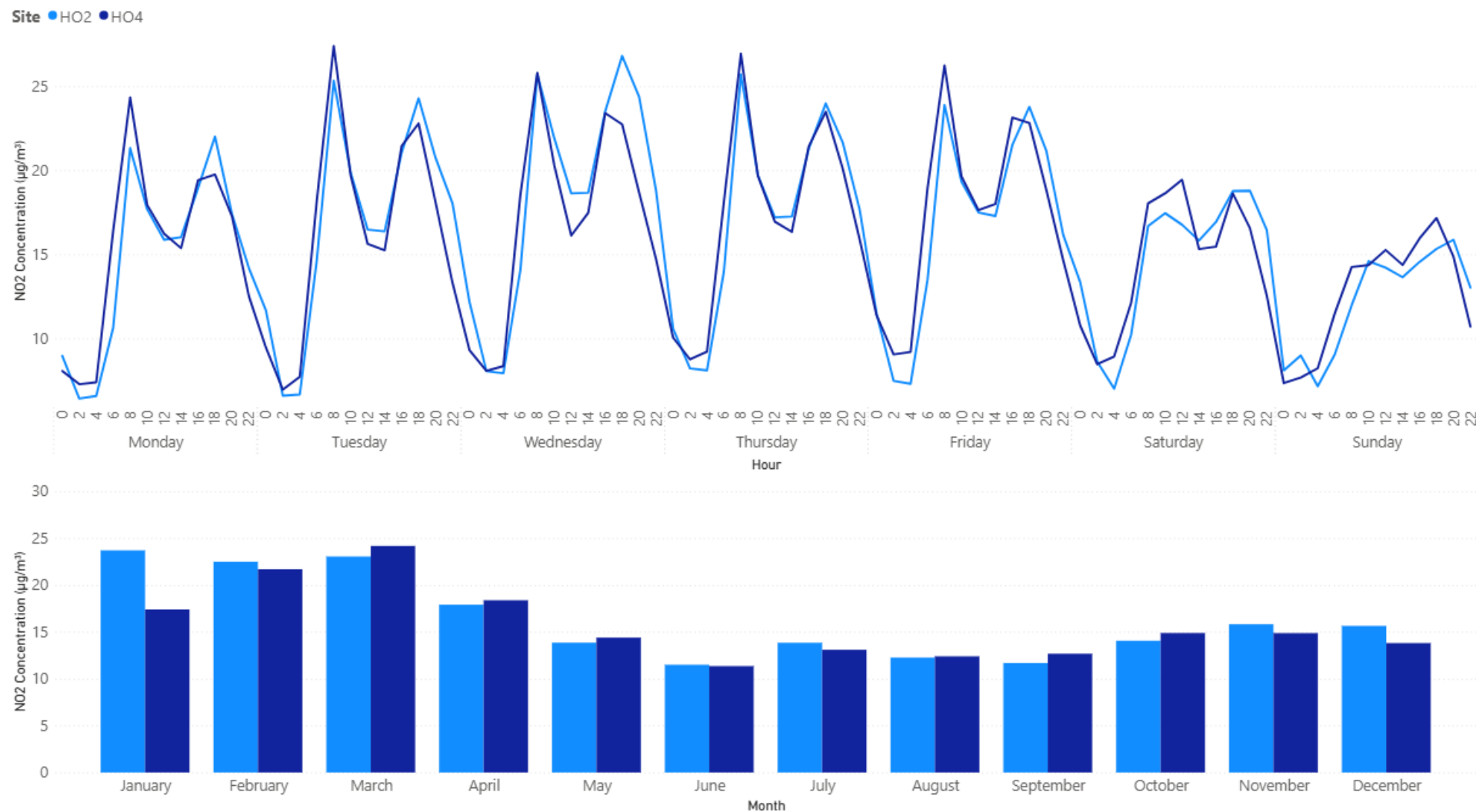


Table A.6 – Annual Mean PM₁₀ Monitoring Results (µg/m³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
HO2*	517490	130588	Roadside	100.0	92.4	17.5	19.3	20.5	16.1	13.6
HO4	509089	114197	Roadside	93.6	93.6	-	14.0	13.7	12.6	15.1

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

Notes:

The annual mean concentrations are presented as µg/m³.

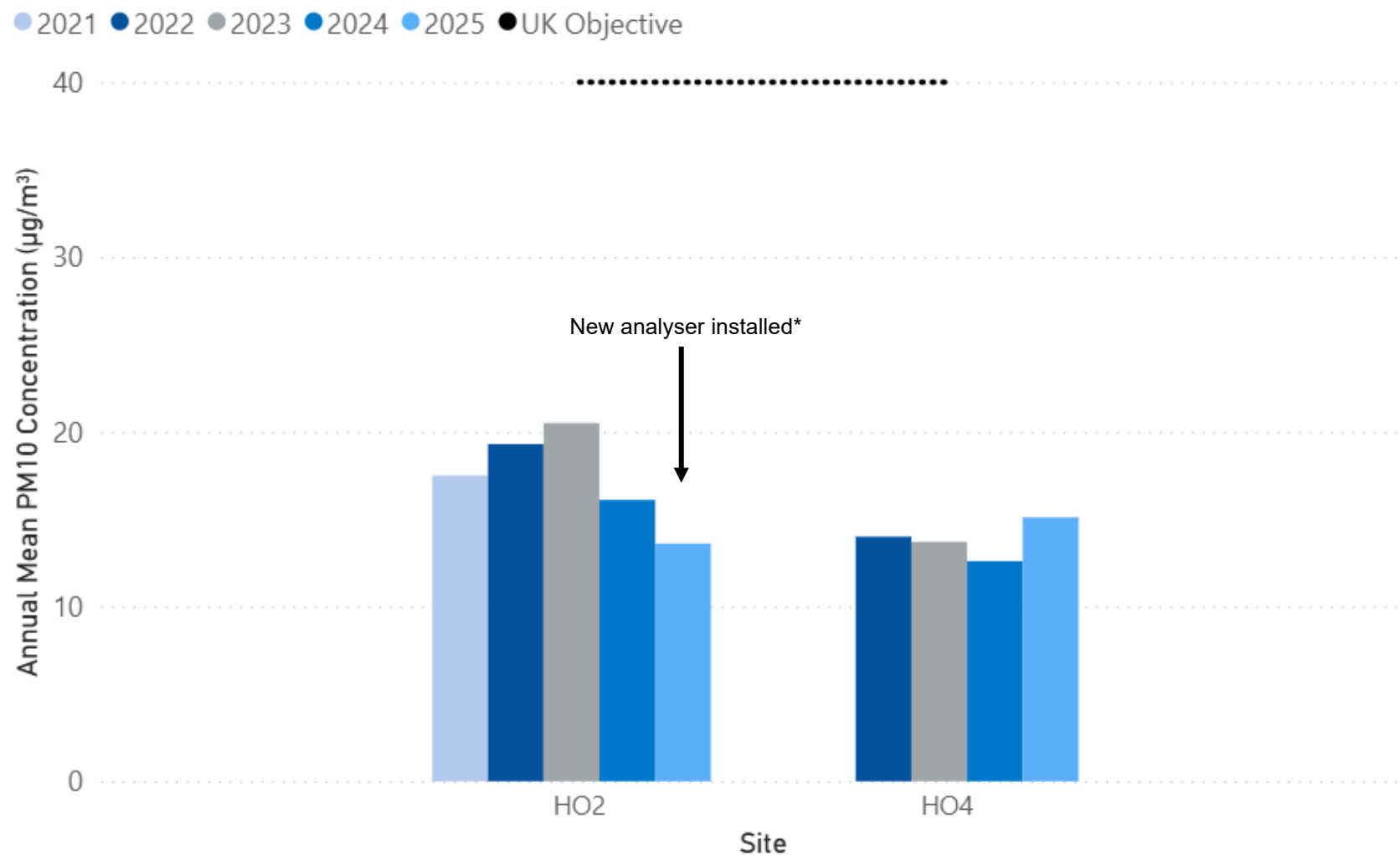
Exceedances of the PM₁₀ annual mean objective of 40µg/m³ are shown in **bold**.

All means have been “annualised” as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

(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%).

*It should be noted that the method of monitoring changed from TEOM to a Fidas200 in 2025. TG(22) states “When reporting PM10 trends, only data derived from the same method should be used”. The previous data has been included for transparency, but it should not be used to draw conclusions on the trends over the last 5 year.

Figure A.7 – Trends in Annual Mean PM₁₀ Concentrations

* It should be noted that the method of monitoring changed from TEOM to a Fidas200. TG(22) states “When reporting PM10 trends, only data derived from the same method should be used”. The previous data has been included for transparency, but it should not be used to draw conclusions on the trends over the last 5 years.

Table A.7 – 24-Hour Mean PM₁₀ Monitoring Results, Number of PM₁₀ 24-Hour Means > 50µg/m³

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
HO2*	517490	130588	Roadside	100.0	92.4	0	0	0	1	2
HO4	509089	114197	Roadside	93.6	93.6	-	0 (21.5)	0	0	2

Notes:

Results are presented as the number of 24-hour periods where daily mean concentrations greater than 50µg/m³ have been recorded.

Exceedances of the PM₁₀ 24-hour mean objective (50µg/m³ not to be exceeded more than 35 times/year) are shown in **bold**.

If the period of valid data is less than 85%, the 90.4th percentile of 24-hour means is provided in brackets.

(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%).

*It should be noted that the method of monitoring changed from TEOM to a Fidas200 in 2025. TG(22) states “When reporting PM10 trends, only data derived from the same method should be used”. The previous data has been included for transparency, but it should not be used to draw conclusions on the trends over the last 5 year.

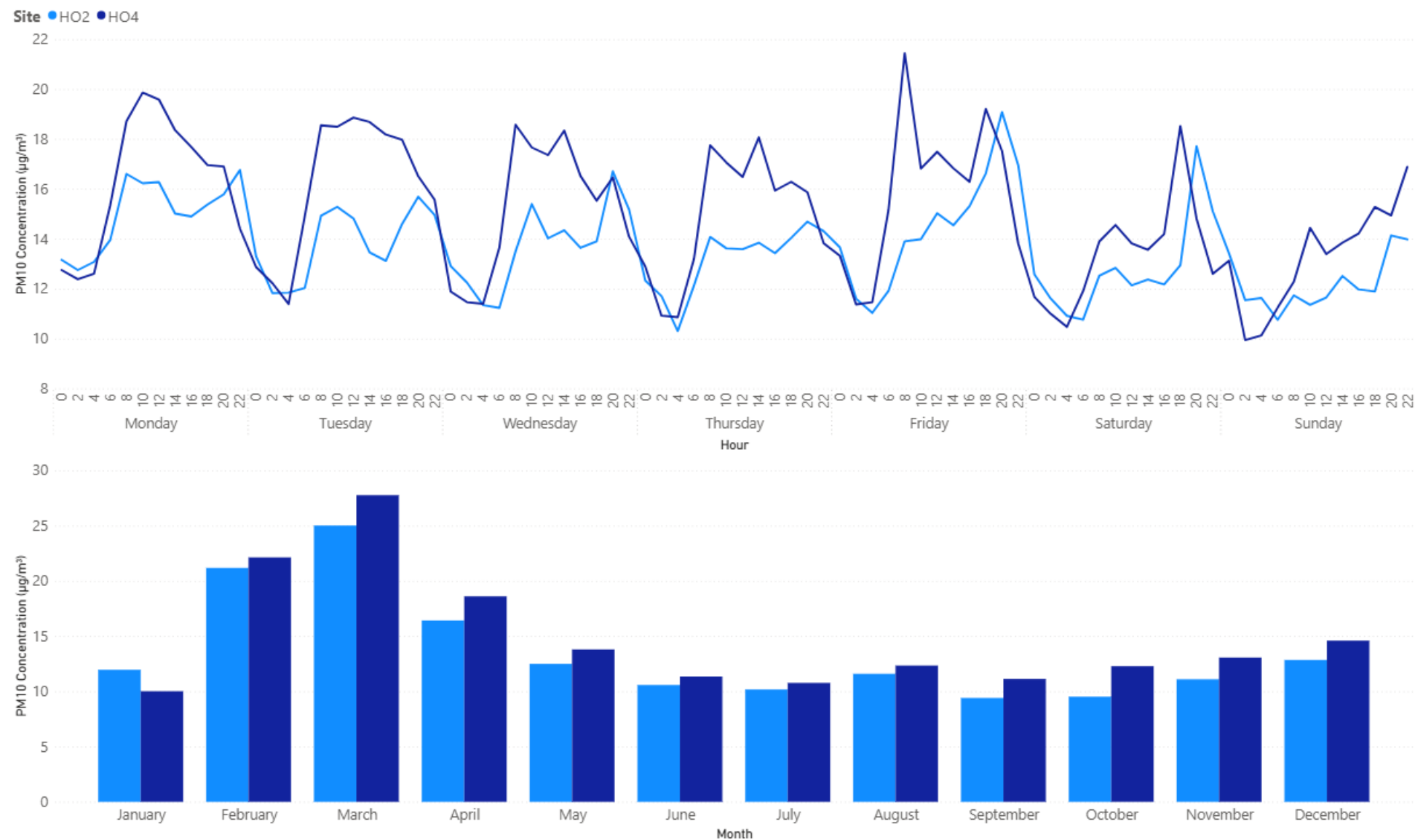
Figure A.8 – Monitoring Results: PM₁₀ Concentrations trends (µg/m³) at HO2 Park Way and HO4 Storrington AURN in 2025

Table A.8 – Annual Mean PM_{2.5} Monitoring Results (µg/m³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
HO2*	517490	130588	Roadside	100.0	92.4	12.3	13.1	14.6	10.1	9.0
HO4	509089	114197	Roadside	93.6	93.6	-	7.3	7.7	7.7	8.5
HO5	521359	122552	Roadside	89.1	89.1	-	-	-	-	9.8

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

Notes:

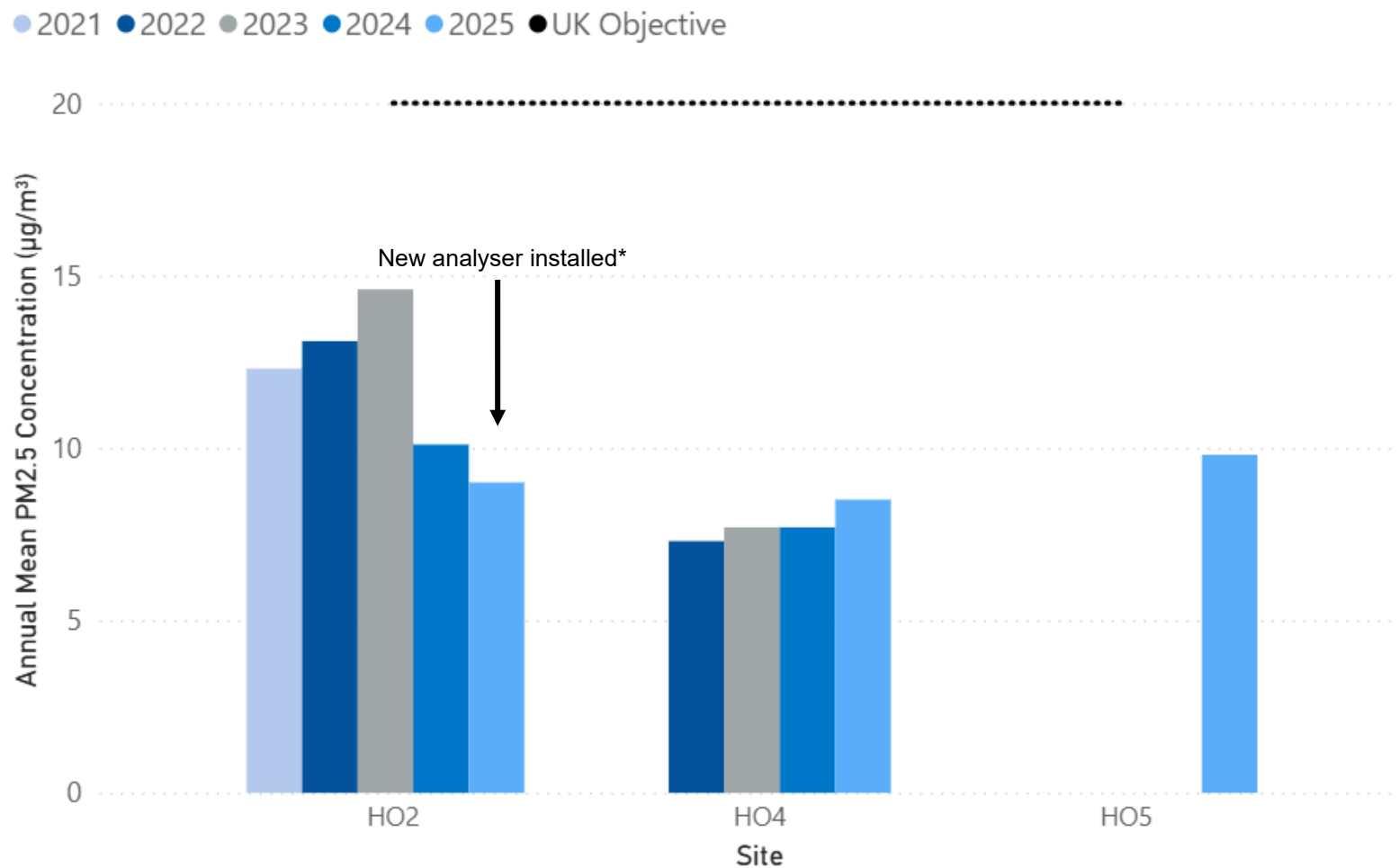
The annual mean concentrations are presented as µg/m³.

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.

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

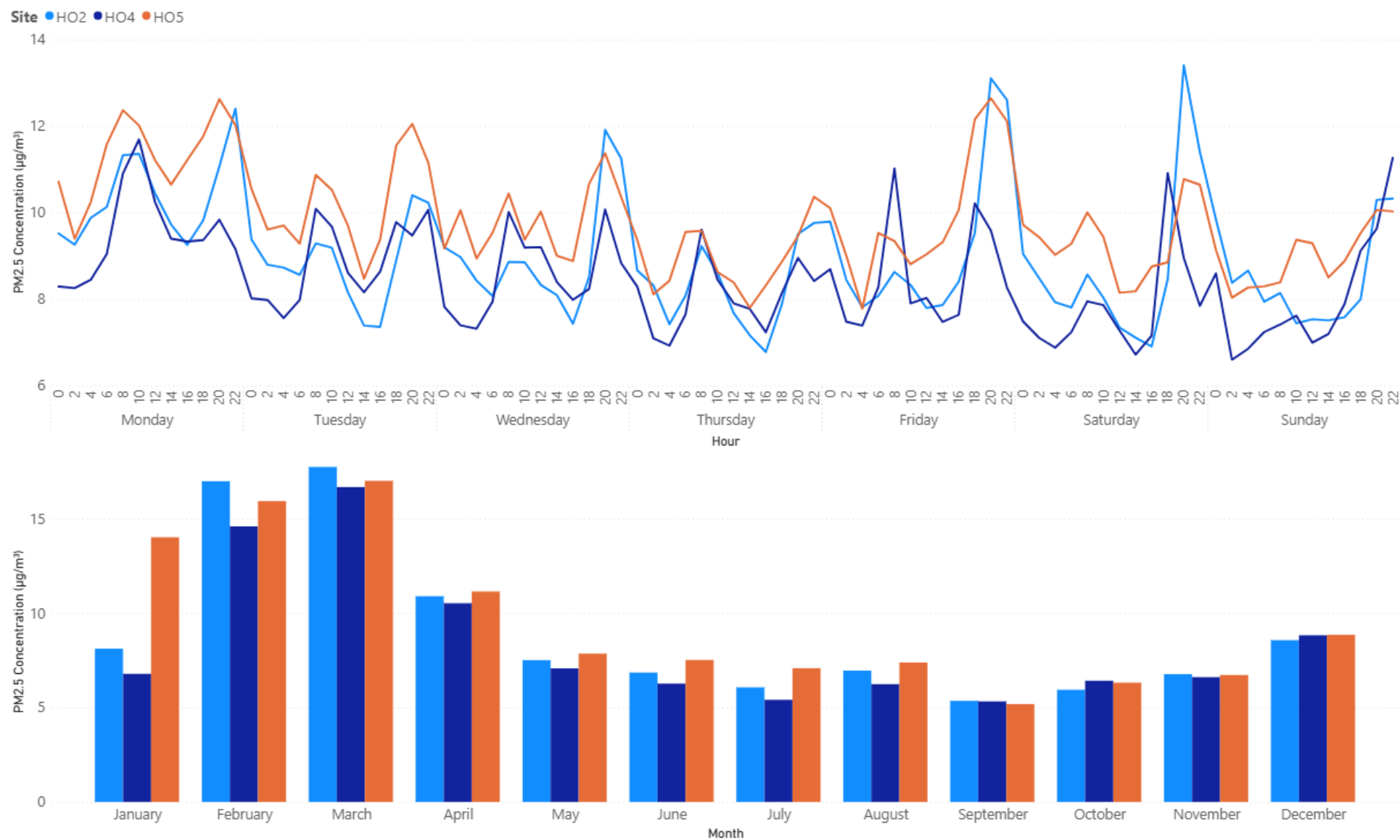
(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

* PM_{2.5} values for HO2 were estimated from the PM₁₀ data using: a nationally derived correction multiplying ratio of 0.7 (2021); subtracting a national factor of 6.4 (2022); subtracting a national factor of national factor 5.9 (2023); and subtracting a national factor of 6.0 (2024).

Figure A.9 – Trends in Annual Mean PM_{2.5} Concentrations

* It should be noted that a Fidas200 was installed in 2025. Results from previous years were obtained by estimating from PM₁₀ data as per the method set out in TG(22) due to there not being a PM_{2.5} analyser present at HO2 prior to 2025.

Figure A.10 – Monitoring Results: PM_{2.5} Concentrations trends (µg/m³) at HO2 Park Way, HO4 Storrington AURN, and HO5 Cowfold in 2025



Appendix B: Full Monthly Diffusion Tube Results for 2025

Table B.1 – NO₂ 2025 Diffusion Tube Results (µg/m³)

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 <(0.81)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
Storrington 14.1	509347	114141	42.5	30.1	39.0	31.0	35.5	32.0	32.2	30.3	31.1	29.4	32.1	26.7	32.7	26.3	-	
Storrington 8 AURN	509089	114197		28.0	29.6	18.0	19.0		18.8	17.1	17.7	19.5	20.6	20.7	-	-	-	Triplicate Site with Storrington 8 AURN, Storrington 9 AURN and Storrington 10n AURN - Annual data provided for Storrington 10n AURN only
Storrington 9 AURN	509089	114197		28.5	28.7	19.3	20.0	17.0	18.9	17.6	18.8	16.7	15.8	17.0	-	-	-	Triplicate Site with Storrington 8 AURN, Storrington 9 AURN and Storrington 10n AURN - Annual data provided for Storrington 10n AURN only
Storrington 10n AURN	509089	114197		28.5	27.3	19.4	19.5	17.5	19.0	17.7	17.7	18.3	18.4	18.1	20.2	16.3	-	Triplicate Site with Storrington 8 AURN, Storrington 9 AURN and Storrington 10n AURN - Annual data provided for Storrington 10n AURN only
Storrington 16n	508971	114354	31.2	26.9	27.1		19.6	18.9	14.9	16.2	18.4	18.0	22.6	22.3	21.5	17.3	-	
Storrington 3	508935	114294	32.6	30.1	28.6	22.9	23.3	20.4	21.6	20.8	21.8	23.0		22.9	24.4	19.6	-	
Storrington 5	508745	114286	28.1	27.0	28.7	21.1	21.5	15.2	18.2	16.6	15.8	18.1	21.5	18.7	20.9	16.8	-	
Storrington 13n	508671	114305	33.5	33.5	33.6	27.9	23.1	17.5	17.8	12.9	18.7	20.0	23.3	22.6	23.7	19.1	-	
Storrington 6	508398	114444	30.1	27.6	26.6	21.0	15.0	18.3	19.6	13.7	16.1	17.0	20.2	21.3	20.5	16.6	-	
Storrington 7	508367	114384	23.3	24.8	24.8	18.3	17.7	15.2	15.2		16.8	15.4	17.2	18.3	18.8	15.2	-	
Storrington 11n	508524	114363	37.1	33.0	26.8	24.5	21.7	22.6	20.5	21.5	23.8	24.7	25.0	24.7	25.5	20.6	-	
Storrington 17n	508679	114144	16.8	11.0	15.2		8.1	8.7	8.0	7.7	8.4	9.3	11.0	12.2	10.6	8.5	-	
Storrington 4	508833	114274	40.4	32.7	33.8	24.6	25.8	28.3	24.5	25.0	26.3	24.4	29.4		28.7	23.1	-	
Storrington 19n	508948	114268	52.1	54.9	46.5	40.1	38.6	45.6	42.7	40.5	41.4	40.2	41.8	39.8	43.7	35.2	-	
Storrington 1	508960	114271	38.3	31.5	45.2	39.5	38.6	29.1	32.9	22.9	29.6	32.2	34.7	34.6	34.1	27.5	-	
Pulborough 2	505290	118630	26.5	23.8	23.1	12.4	16.8	12.0	13.9	12.1	13.0	15.8	17.7	17.6	17.1	13.8	-	
Pulborough 1	504569	118562	27.8	27.5	22.4	18.6	19.3	20.2	18.1	20.6	19.3	21.0	22.2		21.5	17.4	-	
Pulborough 4	504649	118636	52.6	47.9	52.5	42.8	45.8	45.8	43.8	37.9	33.4	40.9	31.5	42.0	43.1	34.7	-	
Pulborough 3.1	504786	118791	50.0	30.5	43.6	35.2	37.6	40.2	35.6		33.7	34.1	31.6	30.8	36.6	29.5	-	

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 <(0.81)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
Billingshurst 5	508787	125158	25.4	22.0	19.8	16.3	13.2	12.2	10.5	10.6	9.9		15.6	17.7	15.7	12.7	-	
Billingshurst 4	508583	125568	24.7	20.5	18.8	12.0	13.0	11.7	12.6	8.4	12.8	11.1	17.9		14.9	12.0	-	
Billingshurst 1	508650	125855	29.8		23.5	13.4	16.5	16.9	13.7	14.6	17.2			23.6	18.8	15.2	-	
Broadbridge 1.1	514605	130621	26.1	23.4	20.7	10.7	13.4	13.6	13.1	12.1	13.6	14.1		18.4	16.3	13.1	-	
Horsham 3N	516012	130486	17.1	15.4	13.3	10.2	6.8	5.4	5.8	6.0	6.9	7.8	9.3	12.7	9.7	7.8	-	
Horsham 13	516307	130493	21.4	15.2	15.4	10.7	9.5		9.1	8.6	10.2	11.9	13.4	15.6	12.8	10.3	-	
Horsham 8N	516649	130221	33.0	29.3	26.0	21.8	18.1	15.9	15.9	17.1	16.9			25.5	22.0	17.7	-	
Southwater 1.1	515631	126135	21.7	18.6	17.0	11.0	12.2	11.8	9.1	7.4	11.1	12.3	15.8	13.8	13.5	10.9	-	
Southwater 2	515748	127431	25.9	24.1	19.7		13.7	13.1	14.8	12.0	15.5	15.9	20.8	20.5	17.8	14.4	-	
Horsham 12.2	516877	130704	40.3	37.3	33.2	25.9		28.9	27.7	26.0	26.1	23.9	29.2	31.5	30.0	24.2	-	
Horsham 7N	516955	132213		17.2	21.3	14.1	15.2	12.5	14.2	14.1	14.2	14.4	20.6	22.8	16.4	13.2	-	
N. Horsham 2N	517477	134013	21.0	18.5	15.8	13.8	12.2	12.4	13.8	11.1	12.3	11.3	14.2	12.7	14.1	11.4	-	
N. Horsham 3N	518814	133483	44.3	38.1	34.9	30.7	31.4	28.1	28.9	29.3	27.7	31.8	35.8	32.1	32.8	26.4	-	
Rusper 1	520538	137136	23.2	21.0	18.9	11.5	13.6	11.0	10.5	9.1	12.0	14.4	16.9	15.9	14.8	12.0	-	
Horsham 6N.1	518650	132451	28.8	19.0	20.6	9.9	12.3	9.0	9.7	9.9	9.0				14.2	11.5	-	
Horsham 9n.1	518121	131161	34.8	25.4	22.7	17.5	18.7	19.3	18.2	17.2	19.2	22.0	21.3	23.8	21.7	17.5	-	
Park Way 1	517490	130588	30.4	25.9	23.6	16.3	18.3	15.4	17.2	14.5	17.0	17.5	24.7	22.0	-	-	-	Triplicate Site with Park Way 1, Park Way 2 and Park Way 3 - Annual data provided for Park Way 3 only
Park Way 2	517490	130588	30.7	24.7	26.3	15.5	17.2	16.7	17.0	14.5	16.2	18.4	22.3	21.2	-	-	-	Triplicate Site with Park Way 1, Park Way 2 and Park Way 3 - Annual data provided for Park Way 3 only
Park Way 3	517490	130588		22.5	26.4	15.8	16.3	15.5	17.4	15.0	16.2	17.5	20.7	23.3	20.0	16.1	-	Triplicate Site with Park Way 1, Park Way 2 and Park Way 3 - Annual data provided for Park Way 3 only
Cowfold 8n	521417	122632	16.8	15.8	13.5	7.0	7.1	9.8	8.9	7.5	8.3		12.4	11.7	10.8	8.7	-	
Cowfold 4	521314	122700	28.4			15.5	17.6	16.9	13.2	15.2	15.0	14.2	21.7	21.8	18.0	14.5	-	
Cowfold 3	521272	122675		22.3	28.5	28.2	21.1	26.3	22.5	19.8		23.2	28.6	26.4	24.7	19.9	-	
Cowfold 1	521326	122614	40.4	33.1	29.7	27.6	25.9	26.8	25.3	25.0	24.5	19.4	23.4	28.6	-	-	-	Duplicate Site with Cowfold 1 and Cowfold 2 - Annual data provided for Cowfold 2 only
Cowfold 2	521326	122614	38.4	34.5	29.9	27.1	24.8	28.6	23.2	19.2	24.7	23.7	30.2	30.0	27.7	22.3	-	Duplicate Site with Cowfold 1 and Cowfold 2 - Annual data provided for Cowfold 2 only
Cowfold 6N	521312	122248	33.1	27.7	20.5	15.3	18.6	19.5	18.4	17.5	19.0	18.3	24.5	22.5	21.2	17.1	-	

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 <(0.81)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
Cowfold 7n	521432	122486	42.3	38.6	36.5	29.8	29.3	29.9	27.1	25.6	28.0	26.1	35.4	31.8	31.7	25.6	-	
Cowfold AU A	521359	122552	32.8	26.5	23.9	16.7	15.5	19.0	17.0	17.8	18.6	17.5	23.7	22.4	21.0	16.9	-	
Henfield 1n	521495	115906	33.5	29.0	24.8	15.5	18.5	16.7	17.3	14.0	15.6	18.0	24.5	23.7	20.9	16.9	-	
Steyning 4N	517646	111170	28.3	28.6	22.5	14.4	15.6	17.6	14.9	13.5	16.1	15.8	19.4	20.6	18.9	15.3	-	
Ashington 2	513241	116283	25.0	23.7	19.8	12.2	13.3	12.2	10.7	12.2	14.2	17.3	13.0	14.4	15.7	12.6	-	

- ☒ All erroneous data has been removed from the NO₂ 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
- ☒ Horsham District Council confirm that all 2025 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System

Notes:

Exceedances of the NO₂ annual mean objective of 40 µg/m³ are shown in **bold**.

NO₂ annual means exceeding 60 µg/m³, indicating a potential exceedance of the NO₂ 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 Horsham District Council During 2025

Horsham District Council has not identified any new sources relating to air quality within the reporting year of 2025.

Additional Air Quality Works Undertaken by Horsham District Council During 2025

Horsham District Council commissioned Air Quality Consultants Ltd to carry out an origin–destination ANPR survey and subsequent air quality modelling study for the Storrington AQMA in 2025. Section 0 summarises the findings, providing an indication of the potential impact of various measures on NO₂ and PM concentrations within the AQMA. Full reports are available on request.

HDC has been monitoring NO₂ in Cowfold since 2008. There has been no exceedance of the objectives since 2020 and concentrations in 2019 were only marginally over 10% of the annual mean NO₂ objective (36.1 µg/m³). HDC is satisfied that the objectives will continue to be met at all locations in the future and consequently, towards the end of 2025, HDC began the process to revoke the Cowfold AQMA, which later came into effect 24th February 2026.

In addition, monitoring of concentrations along the A29 in Pulborough has continued following the landslide in 2023. Further details are provided in Section 2.2.4 of the report.

QA/QC of Diffusion Tube Monitoring

The samples have been analysed in accordance with SOCOTEC's standard operating procedure ANU/SOP/1015. This method meets the guidelines set out in DEFRA's 'Diffusion Tubes For Ambient NO₂ Monitoring: Practical Guidance.'

The tubes were prepared by spiking acetone:triethanolamine (50:50) onto the grids prior to the tubes being assembled. The tubes were desorbed with distilled water and the extract analysed using a segmented flow autoanalyser with ultraviolet detection. Please note:

i) As set out in the practical guidance, the results were initially calculated assuming an ambient temperature of 11oC, the reported values have been adjusted to 20oC to allow for direct comparison with EU limits.

In the AIR PT intercomparison scheme for comparing spiked Nitrogen Dioxide diffusion tubes, SOCOTEC currently holds the highest rank of a Satisfactory laboratory³.

HDC followed the Defra Diffusion Tube Deployment Calendar in 2025.

Diffusion Tube Annualisation

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

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 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/ NO₂ continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

Horsham District Council have applied a local bias adjustment factor of 0.81 to the 2025 monitoring data. A summary of bias adjustment factors used by HDC over the past five years is presented in Table C.1.

Table C.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2025	Local (Storrington, Park Way)		0.81
2024	National	06/25	0.78

³ <https://laqm.defra.gov.uk/air-quality/air-quality-assessment/qa-qc-framework/>

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	Local (Storrington, Cowfold, Park Way)		0.80
2022	Local (Cowfold)		0.80
2021	Local (Storrington, Cowfold, Park Way)		0.83

Table C.2 – Local Bias Adjustment Calculation

	Local Bias Adjustment (Storrington)	Local Bias Adjustment (Park Way)
Periods used to calculate bias	10	11
Bias Factor A	0.79 (0.73 - 0.86)	0.82 (0.76 - 0.9)
Bias Factor B	27% (17% - 36%)	21% (12% - 31%)
Diffusion Tube Mean ($\mu\text{g}/\text{m}^3$)	20.5	19.1
Mean CV (Precision)	4.9%	4.4%
Automatic Mean ($\mu\text{g}/\text{m}^3$)	16.2	15.7
Data Capture	90%	96%
Adjusted Tube Mean ($\mu\text{g}/\text{m}^3$)	16 (15 - 18)	16 (14 - 17)
Overall Diffusion Tube Precision	Good Overall Precision	Good Overall Precision
Overall Continuous Monitor Data Capture	Poor Overall Data Capture (i.e <90%)	Good Overall Data Capture

Notes:

A combined local bias adjustment factor of 0.81 has been used to bias adjust the 2025 diffusion tube results.

NO₂ Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO₂ concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO₂ fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO₂ concentrations corrected for distance are presented in Table B.1.

No diffusion tube NO₂ monitoring locations within Horsham District required distance correction during 2025.

QA/QC of Automatic Monitoring

Calibrations and routine checks are carried out by an in-house Local Site Operator. At Park Way and Storrington, NO_x analysers (T200) are calibrated every two weeks, while at

Cowfold the FDMS 1405F analyser is calibrated every four weeks. Park Way and Cowfold are locally managed sites and are maintained under contract by Matts Monitors, the Equipment Support Unit (ESU), which undertakes servicing of the equipment twice a year.

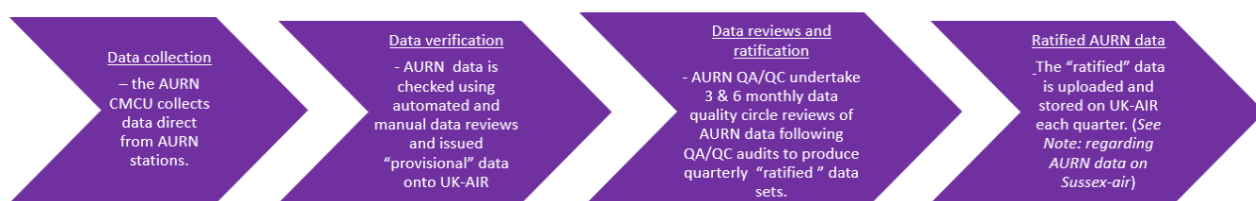
The FIDAS PM analyser does not require frequent calibration; however, it is regularly serviced by the ESU and, in the case of Storrington, is also subject to audit. Storrington is part of the Automatic Urban and Rural Network (AURN) and therefore follows national QA/QC procedures, including independent auditing. Locally managed sites are not subject to external quality assurance audits.

Data verification and ratification procedures for AURN sites are available on the UK-AIR website⁴. Park Way and Cowfold form part of the Sussex Air Quality Network, with data managed and validated by Bureau Veritas⁵. Flowcharts of the validation process are provided in the figures below.

Figure C.1 – Sussex Air Quality Network data validation process



Figure C.2 – AURN data validation process



All monitoring data presented in this Annual Status Report have been fully ratified / approved. Live and historic data are available via the Sussex Air website.

⁴ <https://uk-air.defra.gov.uk/networks/network-info?view=aurn>

⁵ <https://www.sussex-air.net/wp-content/uploads/2024/08/Sussex-data-validation-process-v2.1-2024-update.pdf>

PM₁₀ and PM_{2.5} Monitoring Adjustment

The type of PM₁₀/PM_{2.5} monitors utilised within Horsham District do not require the application of a correction factor.

Automatic Monitoring Annualisation

All automatic monitoring locations within Horsham District recorded data capture of greater than 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

NO₂ Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO₂ concentration at the nearest location relevant for exposure has been estimated using the NO₂ fall-off with distance calculator available on the LAQM Support website. Where appropriate, automatic annual mean NO₂ concentrations corrected for distance are presented in Table A.3.

No automatic NO₂ monitoring locations within Horsham District required distance correction during 2025.

Summary of Low Cost Air Quality Sensor Monitoring

There has been a significant growth in the development of low-cost sensor systems capable of measuring air pollutants in recent years, and both the technology and methods of operation continue to evolve rapidly. Typically, these instruments represent a lower capital investment cost when compared to more complex continuous methods of monitoring, and their use can reduce the extent of running costs over a yearly period. As such, they are an attractive option that allows measurements to be undertaken at improved spatial and temporal resolutions. However, this comes with a trade-off on the accuracy and precision of the measurements being made.

Horsham district is part of Brighton Sussex Real-Time network, with 3 sensors installed within the district. Live air quality data can be accessed in close to real time on the [Brighton & Hove and Sussex Real-Time Air Quality Portal](#). A summary of the results from these sensors in 2025 can be seen in Table C.4.

Figure C.3 – Snapshot of the Brighton & Hove and Sussex Public Air Quality Portal

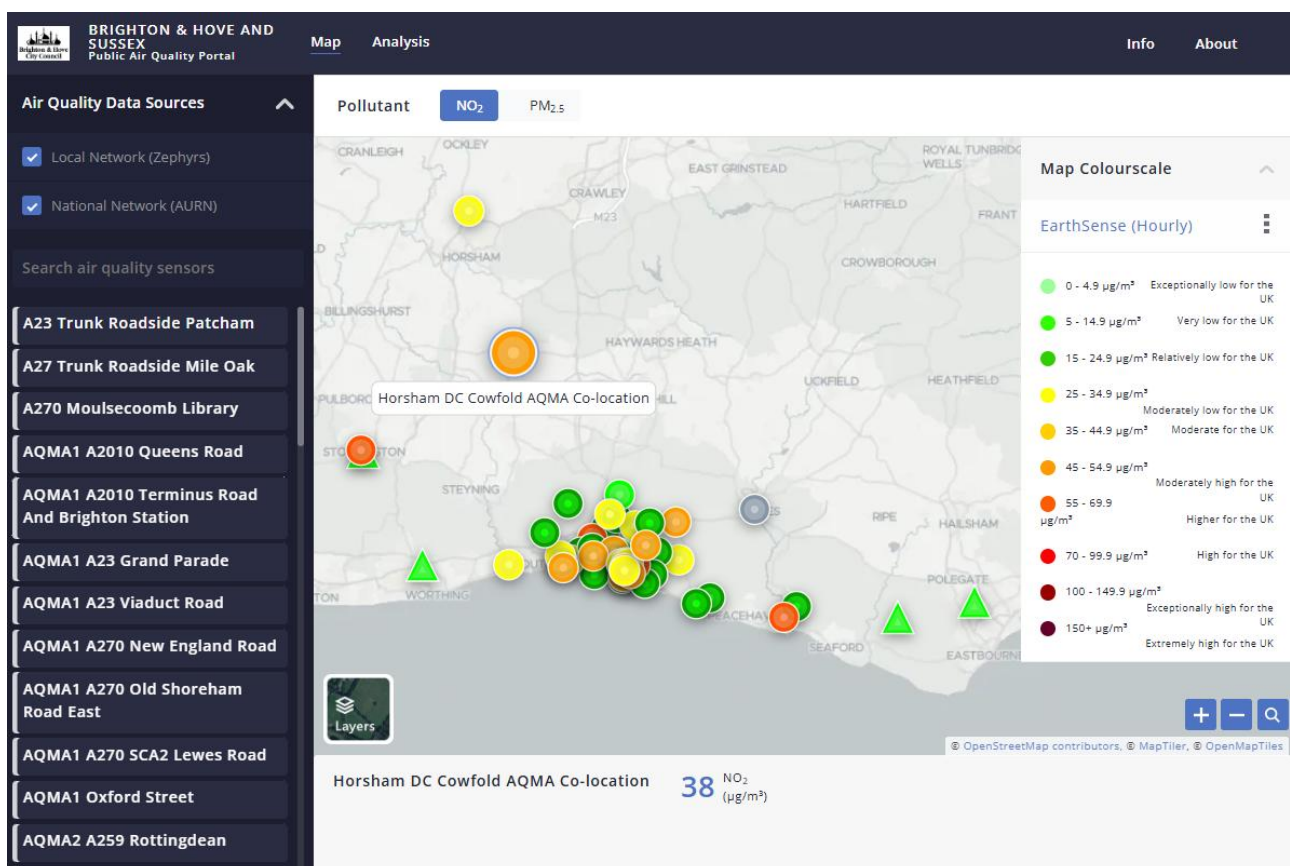


Figure C.4 – Air Quality Sensors installed in Horsham

The monitoring equipment being used are known as Zephyr sensors, and they are provided and maintained by EarthSense. The EarthSense sensors have a [MCERTS certification](#) for indicative ambient particulate, and can be operated in two ways:

- **For qualitative measurements:** Providing qualitative measurement data for the analysis of particulate pollution trends, and source identification studies based for example on pollution roses etc.
- **For quantitative measurements:** Providing measurement data with the uncertainty defined for indicative instruments (+/- 50%). This can be achieved on condition that each instrument used for measurement has been calibrated on the specific site where monitoring is taking place against a standard reference method for a period of two weeks and the resulting slope and intercept have been used for instrument calibration. Using non-standard filters and procedures for this purpose is not acceptable. To maintain the validity of data this calibration has to be repeated at least every twelve months or when the instrument is moved to a different site. They cannot be used on national automatic monitoring networks for compliance reporting against the Ambient Air Quality Directives

For gaseous (NO, NO₂, CO, O₃ or SO₂) sensor systems there is no current certification scheme, and therefore it is not possible to distinguish which the better sensor systems are until this is in place. A [European Certification Scheme](#) for gaseous sensor systems is currently under development.

Zephyrs undergo several quality control processes to ensure reliable data. During manufacturing, each unit is calibrated against reference-grade MCERTS instruments and

validated through co-location to assess correlation, bias and overall performance. Factory Acceptance Testing then verifies hardware function, sensor response, communications, and power before shipment. During deployment, installation checks confirm appropriate mounting location, airflow, and connectivity, followed by an initial review of baseline data. Once operational, Automated Fleet Reviews continuously monitor incoming data to detect issues such as sensor drift, communication failures, flatlining signals, abnormal spikes or readings outside expected environmental ranges. Over time, performance is maintained through remote monitoring and periodic replacement of the Zephyr sensor cartridge to address ageing or drift.

Table C.3– Details of Low Cost Sensor Sites

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	Sensor Type	In AQMA?	Distance to Relevant Exposure (m)	Distance to kerb of nearest road (m)	Inlet Height (m)
S_COW1	Horsham DC Cowfold AQMA Co-location	Roadside	521356	122553	NO ₂ , NO, O ₃ , PM ₁ , PM _{2.5} , PM ₁₀	Earthsense Zephyr	YES, Cowfold AQMA	4.0	6.5	2.0
S_HOR1	Horsham DC Langhurstwood	Industrial	517360	134236	NO ₂ , NO, O ₃ , SO ₂ , H ₂ S, CO, PM ₁ , PM _{2.5} , PM ₁₀	Earthsense Zephyr	NO	78	3.0	3.0
S_STOR1	Horsham DC Storrington AQMA	Kerbside	508932	114273	NO ₂ , NO, O ₃ , CO ₂ , PM ₁ , PM _{2.5} , PM ₁₀	Earthsense Zephyr	YES, Storrington AQMA	0	0.5	4.0

Table C.4– Annual Mean Monitoring Results: Sensors

Site ID	Data Capture	NO ₂ (µg/m ³)	NO (µg/m ³)	O ₃ (µg/m ³)	SO ₂ (µg/m ³)	H ₂ S (µg/m ³)	CO (mg/m ³)	CO ₂ (ppm)	PM ₁ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)
S_COW1	521356	22	6	50	n/a	n/a	n/a	n/a	6	9	13
S_HOR1	517360	15	4	41	3	3	0	n/a	5	6	10
S_STOR1	508932	42	27	51	n/a	n/a	n/a	1074	5	8	11

Figure C.5 – Storrington (STOR1) Air Quality Dashboard

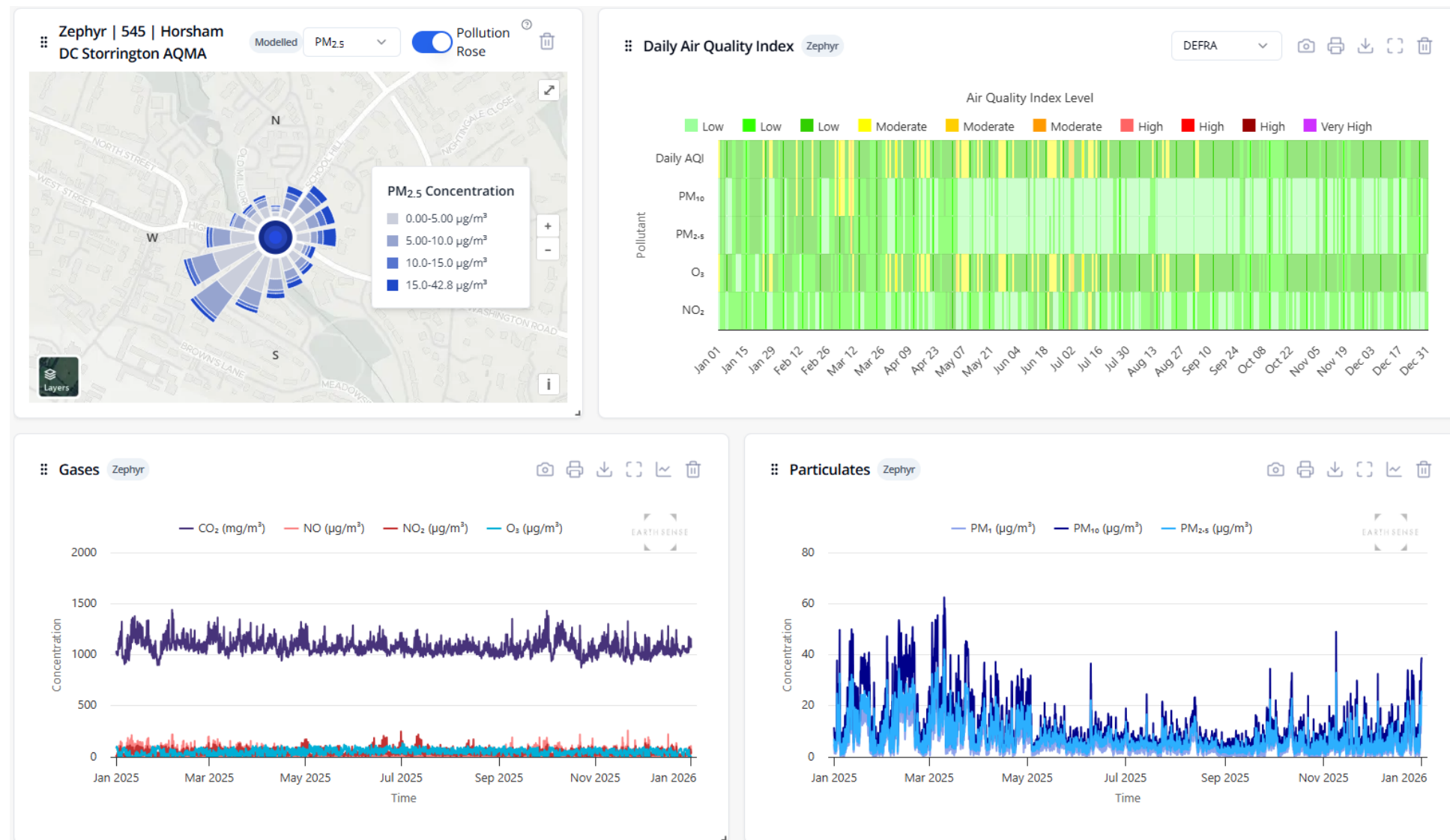
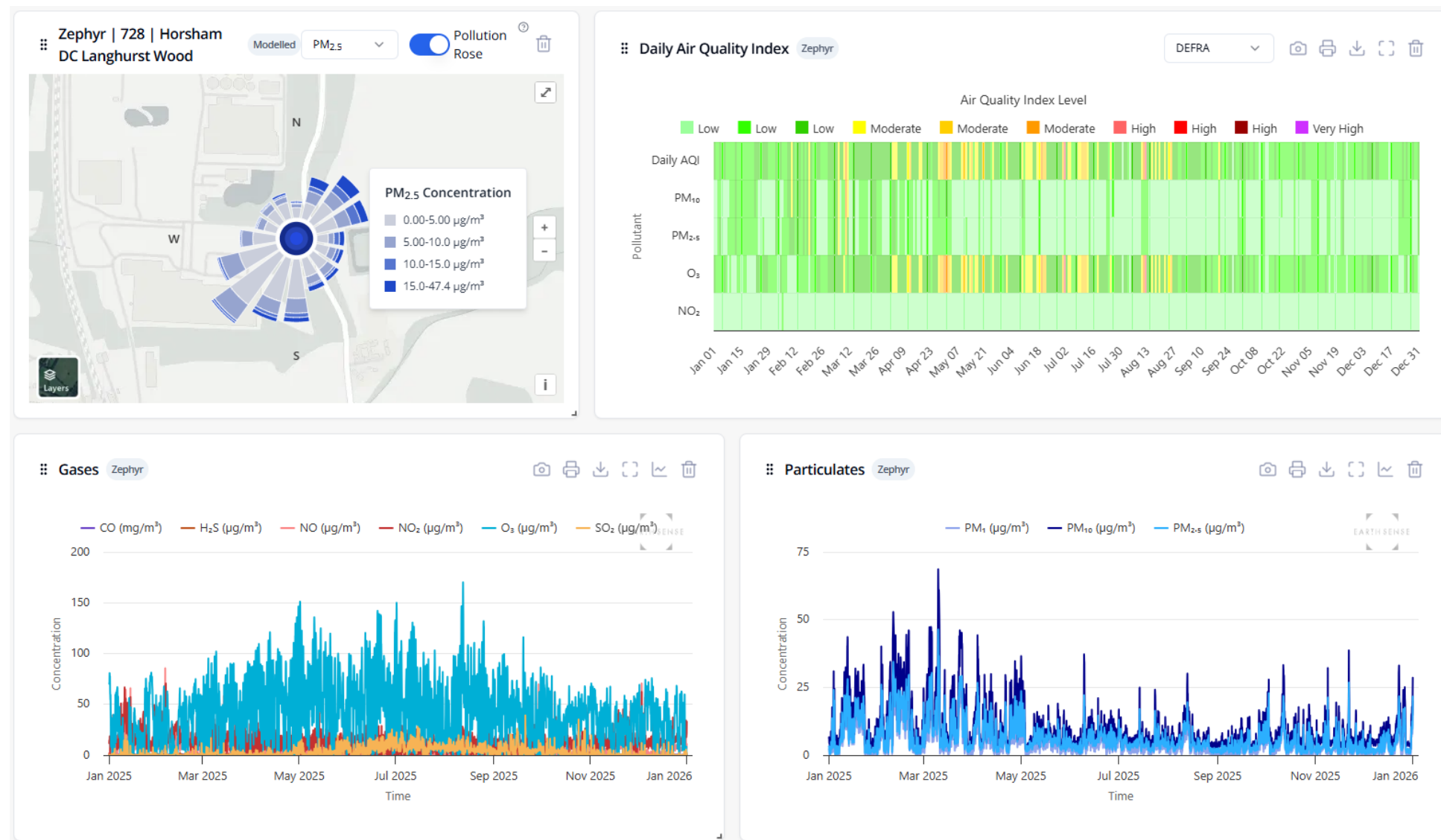


Figure C.6 – Cowfold (COW1) Air Quality Dashboard



Figure C.7 – Horsham (HOR1) Air Quality Dashboard



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

Figure D.1 – Map of Automatic Monitoring Sites

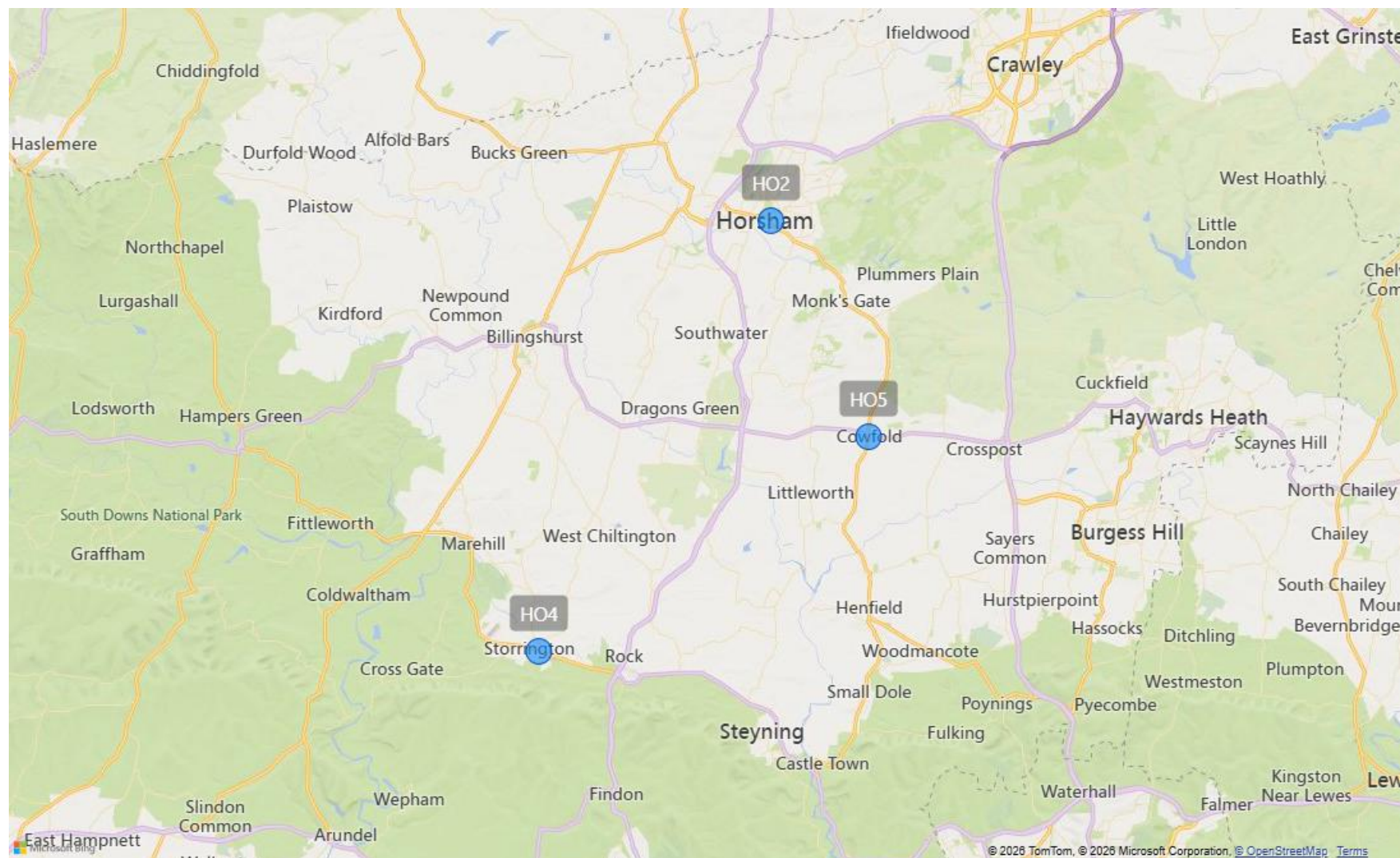


Figure D.2 – Map of Non-Automatic Monitoring Sites –Horsham and Broadbridge Heath

NO₂ concentrations (µg/m³)

● 0.0 - 10.0 ● 10.0 - 20.0 ● 20.0 - 30.0

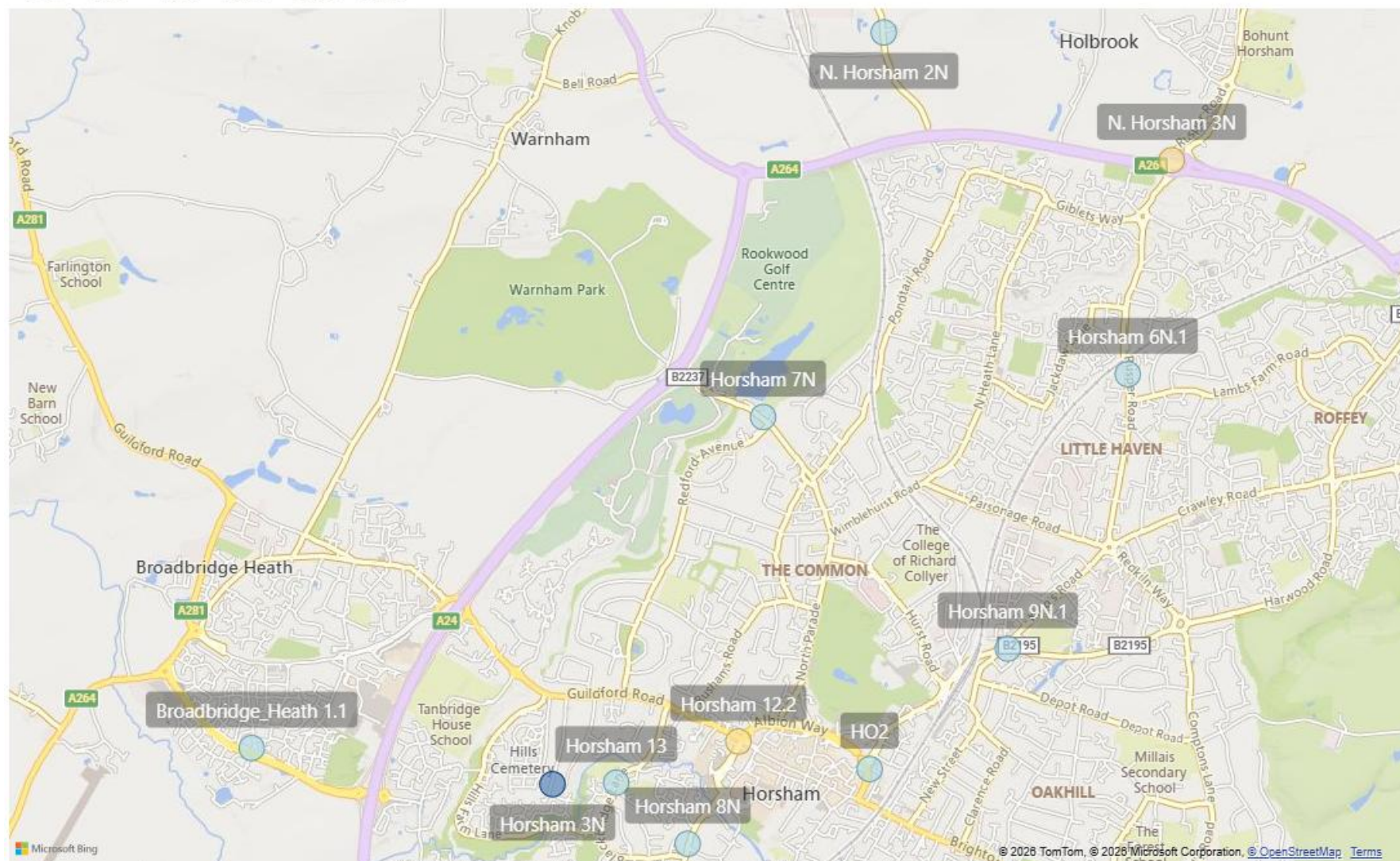


Figure D.3 – Map of Non-Automatic Monitoring Sites – Rusper

NO₂ concentrations (µg/m³)

● 10.0 - 20.0

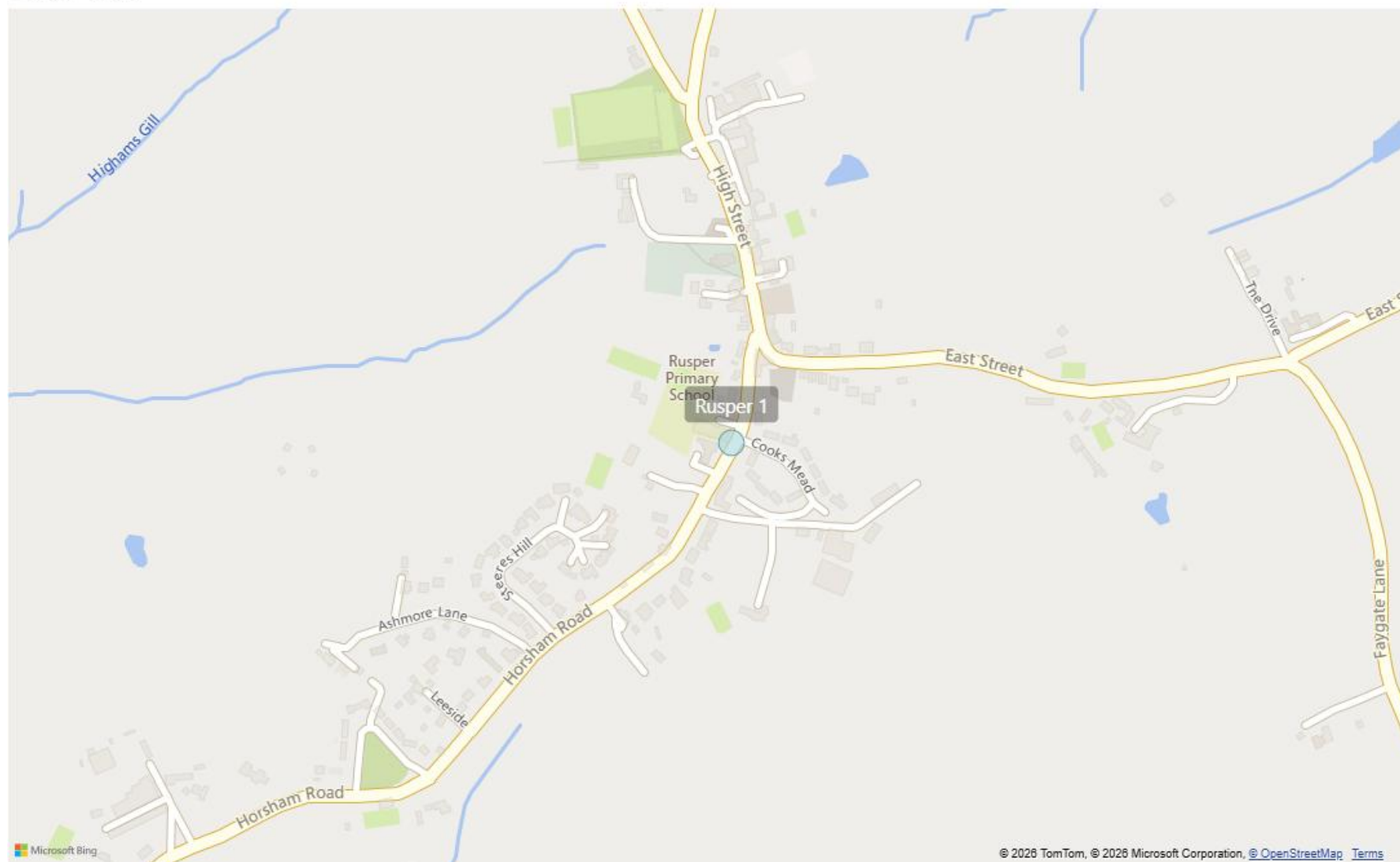


Figure D.4 – Map of Non-Automatic Monitoring Sites – Cowfold and AQMA boundary

NO₂ concentrations (µg/m³)

● 0.0 - 10.0 ● 10.0 - 20.0 ● 20.0 - 30.0

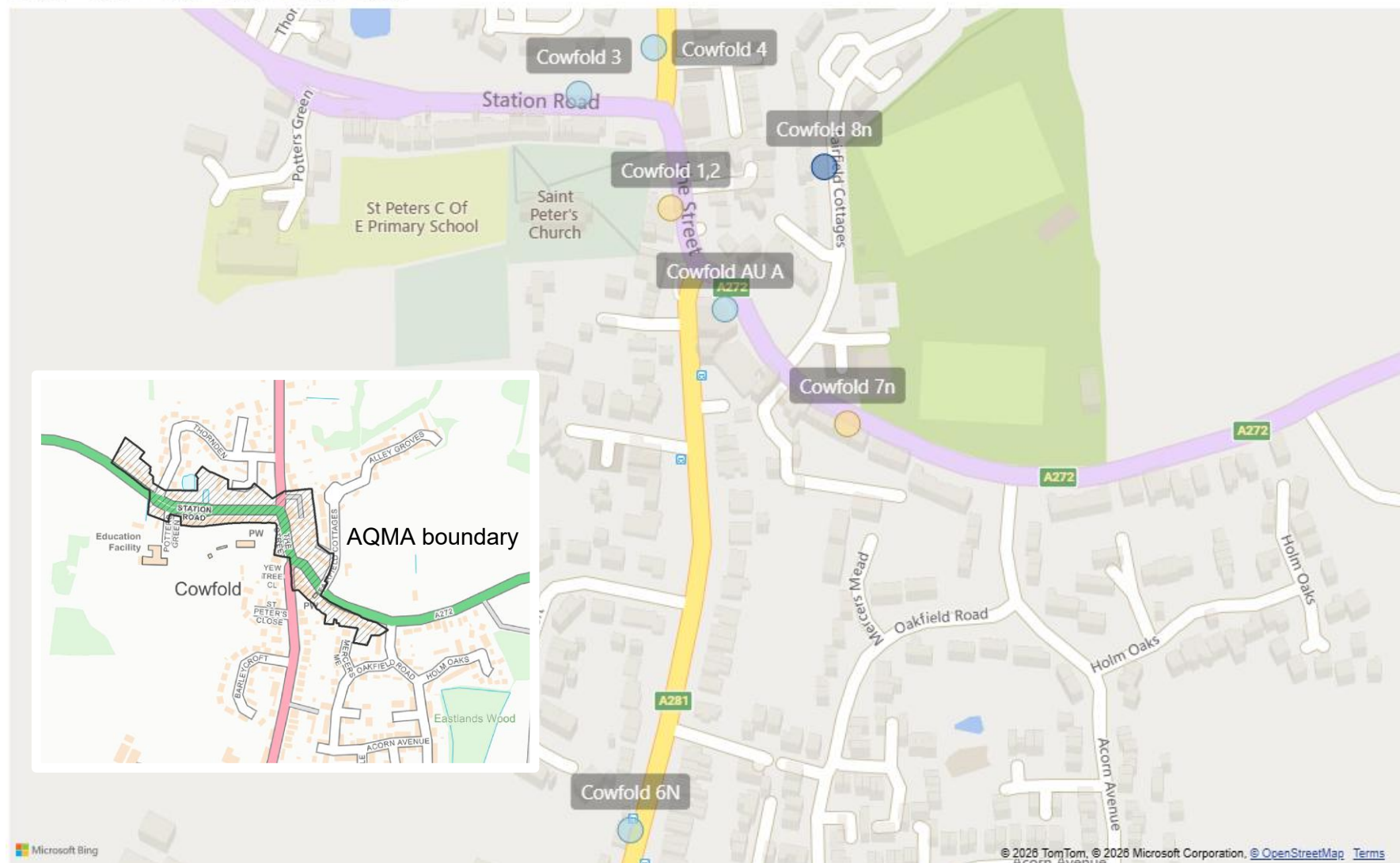


Figure D.5 – Map of Non-Automatic Monitoring Sites – Storrington and AQMA boundary

NO₂ concentrations (µg/m³)

● 0.0 - 10.0 ● 10.0 - 20.0 ● 20.0 - 30.0 ● 30.0 - 36.0

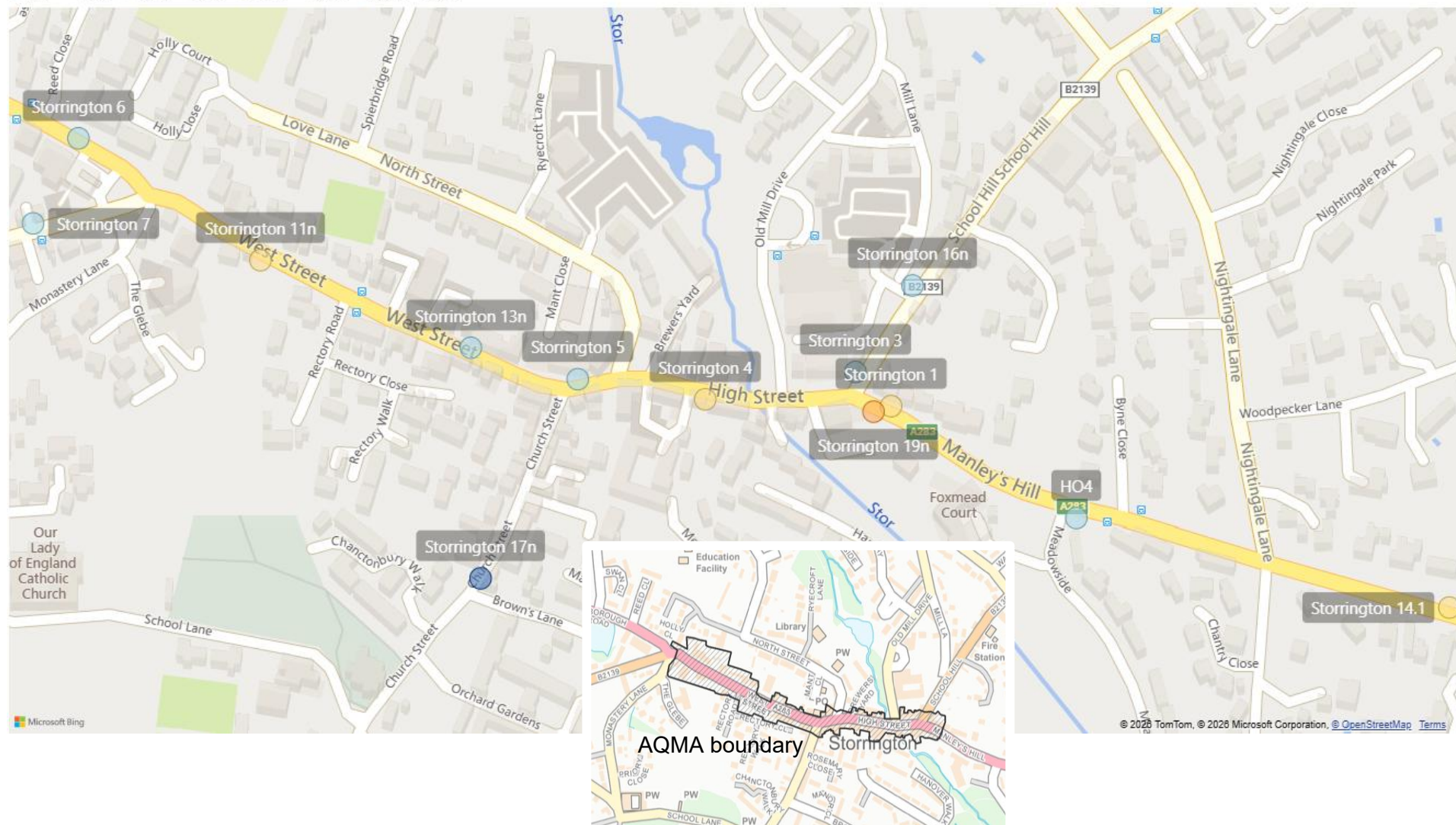


Figure D.6 – Map of Non-Automatic Monitoring Sites – Billingshurst

NO₂ concentrations (µg/m³)

● 10.0 - 20.0

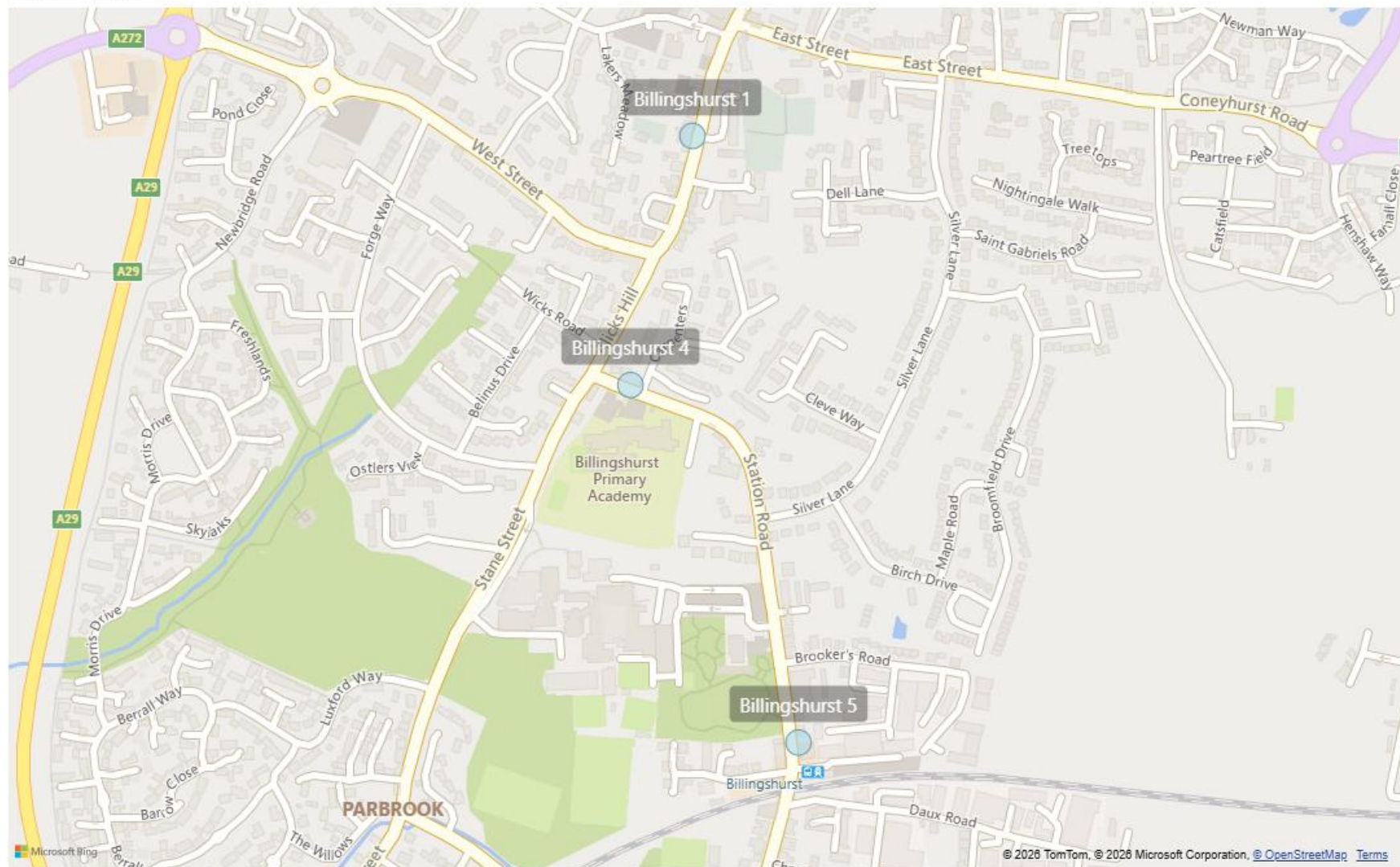


Figure D.7 – Map of Non-Automatic Monitoring Sites – Southwater

NO₂ concentrations (µg/m³)

● 10.0 - 20.0

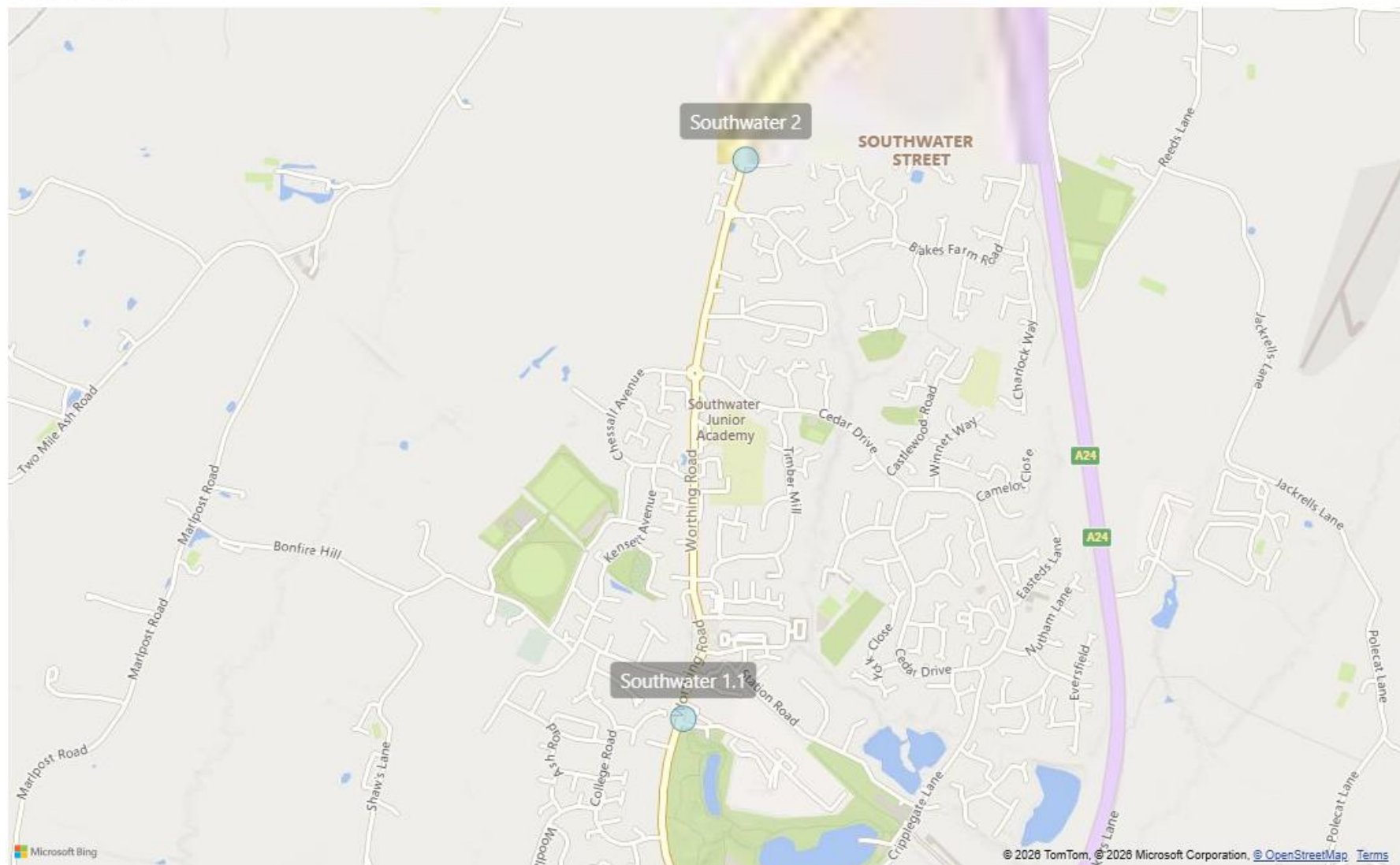


Figure D.8 – Map of Non-Automatic Monitoring Sites – Pulborough

NO₂ concentrations (µg/m³)

● 10.0 - 20.0 ● 20.0 - 30.0 ● 30.0 - 36.0

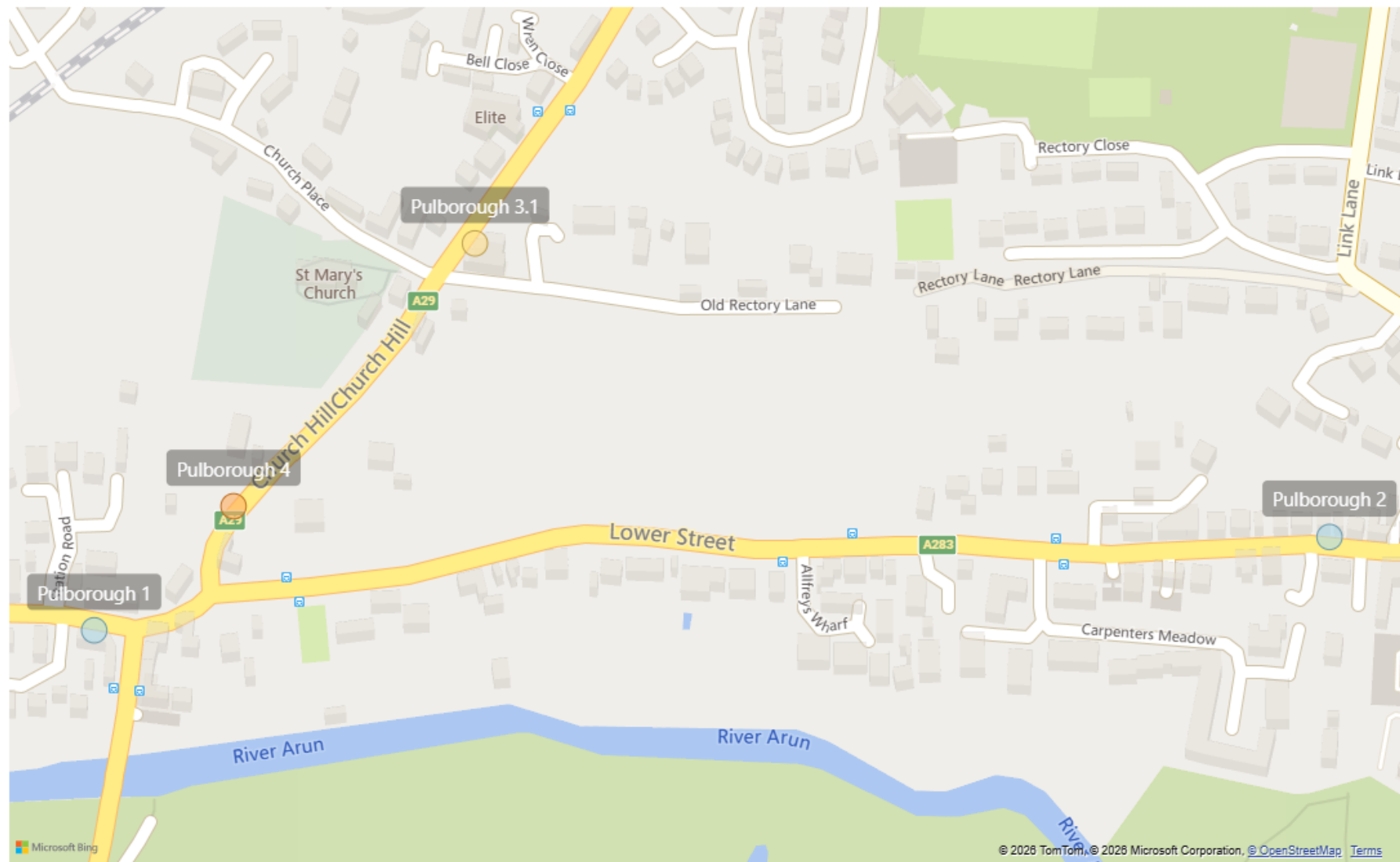


Figure D.9 – Map of Non-Automatic Monitoring Sites – Steyning

NO₂ concentrations (µg/m³)

● 10.0 - 20.0

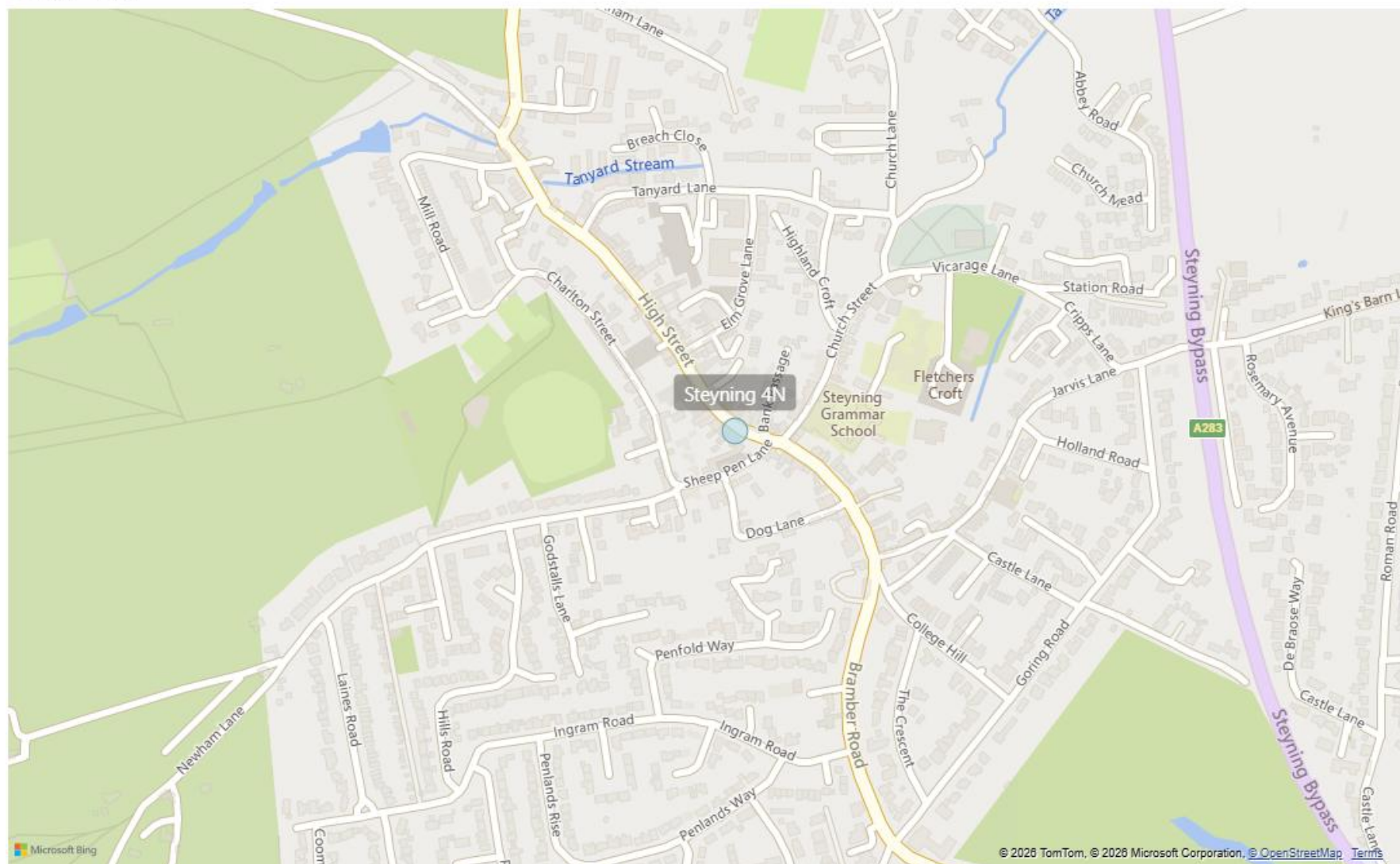


Figure D.10 – Map of Non-Automatic Monitoring Sites – Henfield

NO₂ concentrations (µg/m³)

● 10.0 - 20.0

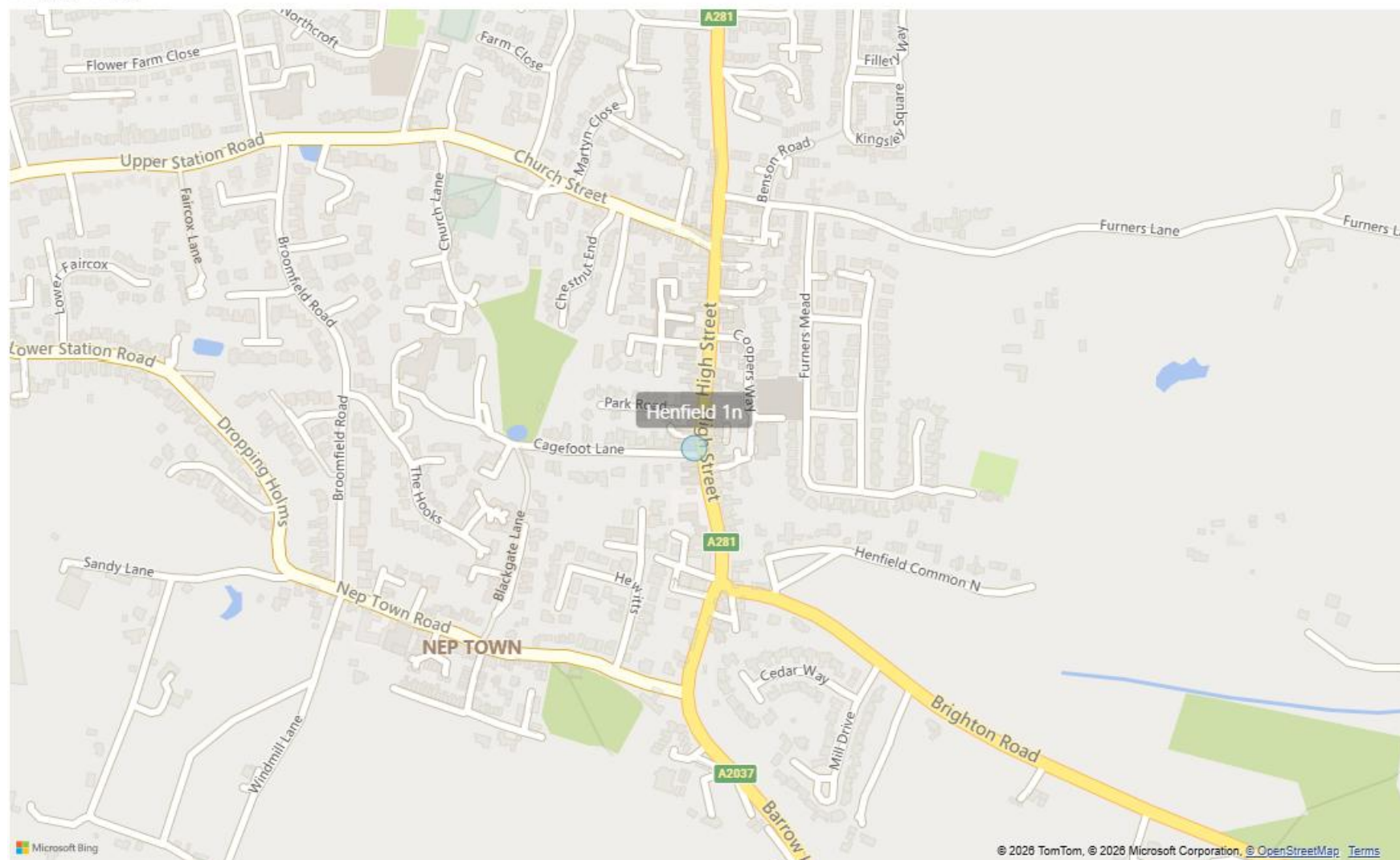
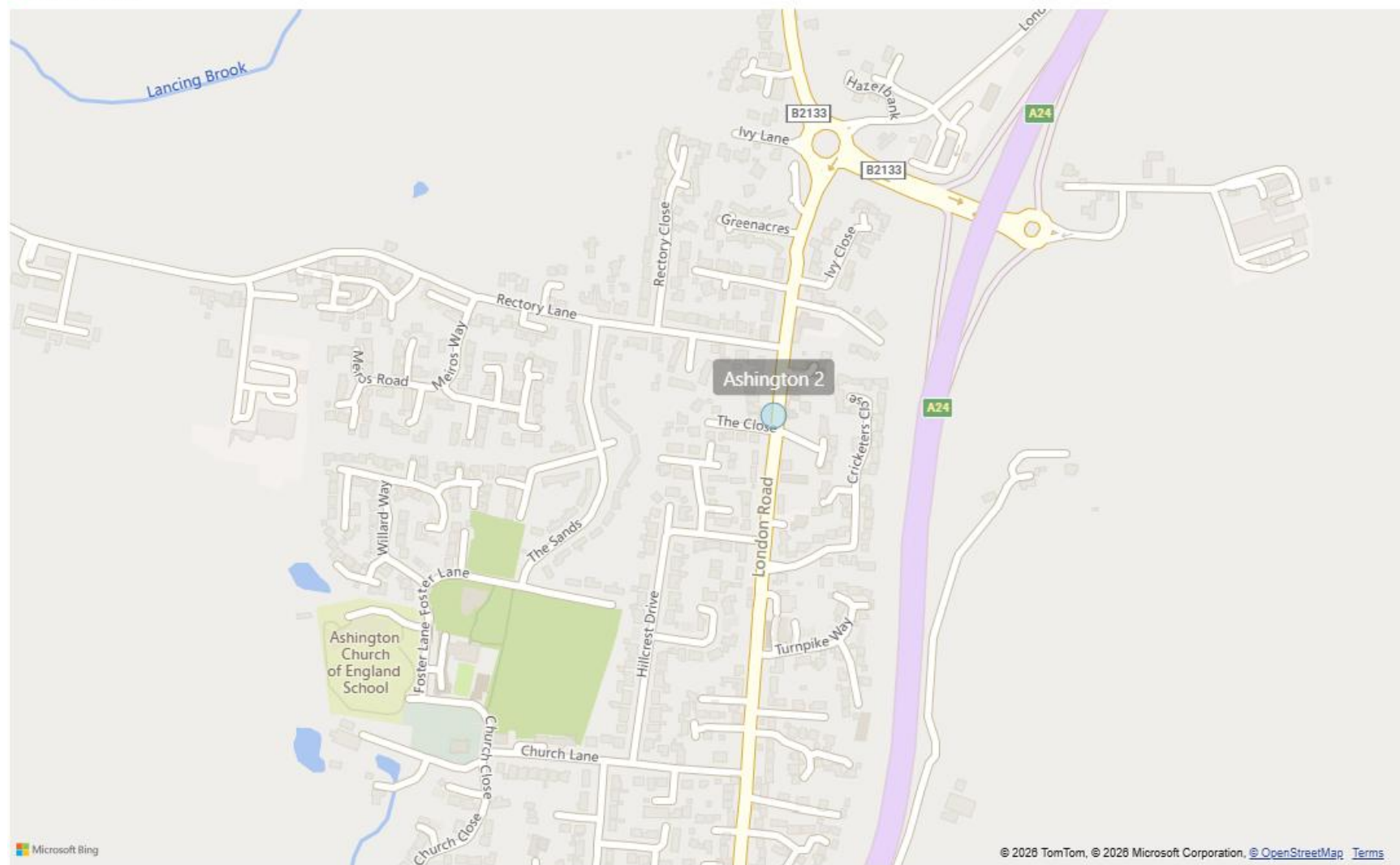


Figure D.11 – Map of Non-Automatic Monitoring Sites – Ashington

NO₂ concentrations (µg/m³)

● 10.0 - 20.0



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England⁶

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

⁶ The units are in microgrammes of pollutant per cubic metre of air (µg/m³).

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.