



# GMCA GREATER MANCHESTER COMBINED AUTHORITY

## 2025 Air Quality Annual Status Report (ASR)

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

Date: June 2026

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## Local Responsibilities and Commitment

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This ASR has been approved by:

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- Manchester City Council: Hayley Fails, Assistant Director of Infrastructure & Environment
- Oldham Council: Nasir Dad, Director of Environment
- Rochdale BC: Gary Parkinson-Fraser, Head of Public Protection
- Salford CC: John Wooderson, Head of Regulatory Services
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- Greater Manchester Director of Public Health Lead for Clean Air: Jilla Burgess-Allen, Stockport MBC
- The ASR has been reviewed by Claire Igoe, NHS Greater Manchester
- This ASR has been reviewed by UKHSA North West

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

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## Executive Summary: Air Quality in Our Area

### Air Quality in Greater Manchester

Greater Manchester (GM) is committed to making our city region a greener place for all, where people live well. This report demonstrates the work being carried out across the region to continuously improve air quality and deliver better health outcomes for all.

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.

GM has a population of nearly three million people, across 10 local authorities and covers an area of approximately 500 square miles. The city region contains high-density urban areas, suburbs, semi-rural and rural locations, with strong regional centres in Manchester, Salford Quays and Trafford Park. The principal pollutants of concern within GM are those mainly associated with traffic, nitrogen dioxide (NO<sub>2</sub>) and particulate matter (PM), at locations near busy roads where people live, study, work or shop. However, other sources also contribute to the overall air pollution burden for example, combustion, domestic activities, industry, agriculture and natural sources.

Table ES 0-1 provides a brief explanation of the key pollutants relevant to Local Air Quality Management and the kind of activities they might arise from. Air Quality Objectives set policy targets that specify the highest allowed concentration of pollutants in the air. These targets must be met, sometimes allowing a limited number of exceedances, within a defined period. The Objectives are also set out in [Appendix E: Summary of Air Quality Objectives in England](#).

Air pollution levels are expressed as the amount of pollutant by weight in a specific volume of air. For example, if the concentration is 1  $\mu\text{g}/\text{m}^3$ , it means that each cubic metre of air contains one microgram (which is  $10^{-6}$  grams) of the pollutant.

**Table ES 0-1 - Description of Key Pollutants and Air Quality Objectives**

Pollutant	Description	Air Quality Objective: Concentration	Measured as
Nitrogen Dioxide (NO <sub>2</sub> )	Nitrogen dioxide is a gas which is generally emitted from high-temperature combustion processes such as road transport or energy generation.	200 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 18 times a year	1-hour mean
		40 $\mu\text{g}/\text{m}^3$	Annual mean
Sulphur Dioxide (SO <sub>2</sub> )	Sulphur dioxide (SO <sub>2</sub> ) is a corrosive gas which is predominantly produced from the combustion of coal or crude oil.	350 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 24 times a year	1-hour mean
		125 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 3 times a year	24-hour mean
		266 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 35 times a year	15-minute mean
Particulate Matter (PM <sub>10</sub> and PM <sub>2.5</sub> )	Particulate matter is everything in the air that is not a gas. Particles can come from natural sources such as pollen, secondary sources (forming from chemical reactions between other pollutants), as well as human made sources such as smoke from fires, emissions from industry and dust from tyres and brakes. PM <sub>10</sub> refers to particles under 10 micrometres. Fine particulate matter or PM <sub>2.5</sub> are particles under 2.5 micrometres.	PM <sub>10</sub> 50 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 35 times a year	24-hour mean
		PM <sub>10</sub> 40 $\mu\text{g}/\text{m}^3$	Annual mean
		PM <sub>2.5</sub> 20 $\mu\text{g}/\text{m}^3$	Annual mean
		PM <sub>2.5</sub> 10 $\mu\text{g}/\text{m}^3$ 2030 target value	Annual mean

Air Quality Management Areas (AQMA) are declared where there is an exceedance, or likely exceedance, of an air quality objective. GM declared an AQMA in 2016 for exceedances of the annual mean NO<sub>2</sub> objective. It covers the trunk road network across GM and Manchester City Centre. Maps showing the locations of the AQMA are included in [Appendix D: Map\(s\) of Monitoring Locations and AQMAs](#) of this report or can be viewed via [this link to the Defra AQMA interactive map](#).

A joint Greater Manchester Annual Status Report (ASR) has been prepared to fulfil the combined local authorities' duties under the Environment Act 1995. It specifically reports on the air quality requirements of the Local Air Quality Management (LAQM) monitoring regime and progress against actions within the Greater Manchester Air Quality Action Plan (AQAP).

The AQMA is separate from the investment-led, non-charging Greater Manchester Clean Air Plan (CAP) to tackle roadside nitrogen dioxide exceedances. The GM CAP has its own monitoring regime with different reporting criteria to LAQM, as such, GM CAP monitoring results are included here for information but are reported separately. For LAQM, local authorities must pay due regard to Statutory Technical Guidance LAQM.TG22 when monitoring air quality to be representative of relevant public exposure, whereas CAP monitoring relates to roadside concentrations only.

Long-term trends in GM show an improvement in air quality for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> and no exceedance of the SO<sub>2</sub> objective since ASR reporting began in 2015. Over the short-term, following COVID-19 pandemic travel restrictions implemented during 2020 which dramatically reduced NO<sub>2</sub> levels, concentrations in GM increased as transport again became a contributing factor with more people moving around the city region. From 2023 and continuing to 2025, there has been an overall decrease in NO<sub>2</sub> concentrations compared to 2021-2022.

Air quality monitoring across GM uses two approaches: continuous reference standard automatic systems for real-time data collection and monthly non-automatic (manual diffusion tube sampling) for more spatially comprehensive analysis. Using both methods allows a more complete understanding of air pollution.

No LAQM exceedances of the NO<sub>2</sub> annual mean objective were recorded in GM for the first time in 2025; there were four in 2024. Oxford Street (MA29ANO) in Manchester recorded the highest concentration of 38.6 µg/m<sup>3</sup>, when distance corrected for relevant exposure, the concentration was 35.8 µg/m<sup>3</sup>. This compares to 51.3 µg/m<sup>3</sup> and a distance corrected value of 46.8 µg/m<sup>3</sup> in 2024.

GM CAP monitoring data showed 11 locations where exceedances of the NO<sub>2</sub> annual mean limit value in GM were indicated (down from 38 in 2024), with a further 39 locations considered to be at risk of exceeding the limit (down from 73 in 2024). The GM CAP monitoring data indicates that air pollution has generally decreased compared with 2024. There are now seven districts; Bolton, Bury, Rochdale, Salford, Tameside, Trafford and Wigan with no exceedances of the legal limit for nitrogen dioxide.

Across the 24 LAQM and CAP automatic monitoring sites, one CAP exceedance was recorded at A34 Manchester Bridge Street at 42.4 µg/m<sup>3</sup>, this represents a year-on-year reduction of 10 µg/m<sup>3</sup> compared to 2024. Manchester Bridge Street is a Clean Air Plan

roadside monitoring location; it does not count as an exceedance under LAQM as there is no nearby relevant exposure.

A similar reduction of  $10 \mu\text{g}/\text{m}^3$  was recorded at Manchester Oxford Road (LAQM) compared to 2024 (2025:  $34.6 \mu\text{g}/\text{m}^3$ , 2024:  $44.2 \mu\text{g}/\text{m}^3$ ). This improvement follows targeted investment in zero-exhaust emission buses on one of the busiest corridors in the region.

Table ES 0-2 shows LAQM Exceedances of the annual limit for  $\text{NO}_2$  at non-automatic and automatic sites between 2019 and 2025. In 2019, there were 59 exceedances at non-automatic monitoring locations and 3 at automatic locations. Following the implementation of the investment-led Clean Air Plan as well as local interventions, the number of annual  $\text{NO}_2$  exceedances reached zero in 2025. This demonstrates the commitment GM has made to improving the region's air quality and reflects the continued investment in community action, public transport and vehicle upgrades to improve air quality and work towards the enhanced local targets set out in the GM 5-Year Environment Plan.

**Table ES 0-2 - LAQM Exceedances of the annual limit for  $\text{NO}_2$  at GM non-automatic and automatic sites between 2019 and 2025**

Year	Non-Automatic Site (Diffusion Tube) Exceedances	Automatic Site Exceedances	Total Exceedances <sup>(1)</sup>
2019	59	3	<b>59</b>
2020	2	0	<b>2</b>
2021	13	1	<b>13</b>
2022	16	1	<b>16</b>
2023	12	1	<b>12</b>
2024	4	1	<b>4</b>
<b>2025</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Note:** (1) Diffusion tubes are co-located at automatic sites; to avoid double counting, the total number of exceedance locations is represented by the non-automatic sites.

Data collected by local authorities, including diffusion tube data is now available on the [UK-AIR Local Air Quality Dashboard](#) (link in text). The dashboard allows users to search by postcode and view air quality information relevant to their area, including local monitoring data. It also includes the actions local authorities are taking to improve air quality, the locations of Smoke Control Areas and Air Quality Management Areas.

## Summary of GM Air Quality Improvement

**In brief:** NO<sub>2</sub> levels generally fell across Greater Manchester in 2025, while PM<sub>2.5</sub> was slightly higher. The increase in PM<sub>2.5</sub> is most likely due to differences in weather conditions and pollution carried in from outside the region, rather than an increase in local emissions.

To make this year's air quality results easier to understand, and to help compare them with Greater Manchester's local targets set out in the Five-Year Environment Plan (5YEP), monitoring results have been summarised using both charts and tables. This approach reflects feedback from community groups and 5YEP challenge group participants. More detail and analysis of the 2025 results is provided in Conclusions and Priorities (page xxx) and in Section 3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance.

The charts below show how air pollution changed from 2024 to 2025 across Greater Manchester for nitrogen dioxide (NO<sub>2</sub>) and fine particles (PM<sub>2.5</sub>). The horizontal (x) axis shows the change between years: points to the left mean levels were lower in 2025 than in 2024, while points to the right mean levels were higher.

The vertical (y) axis shows the measured concentration in 2025. The lines on the chart show how the results compare with the UK air quality objectives and the World Health Organisation (WHO) guideline values.

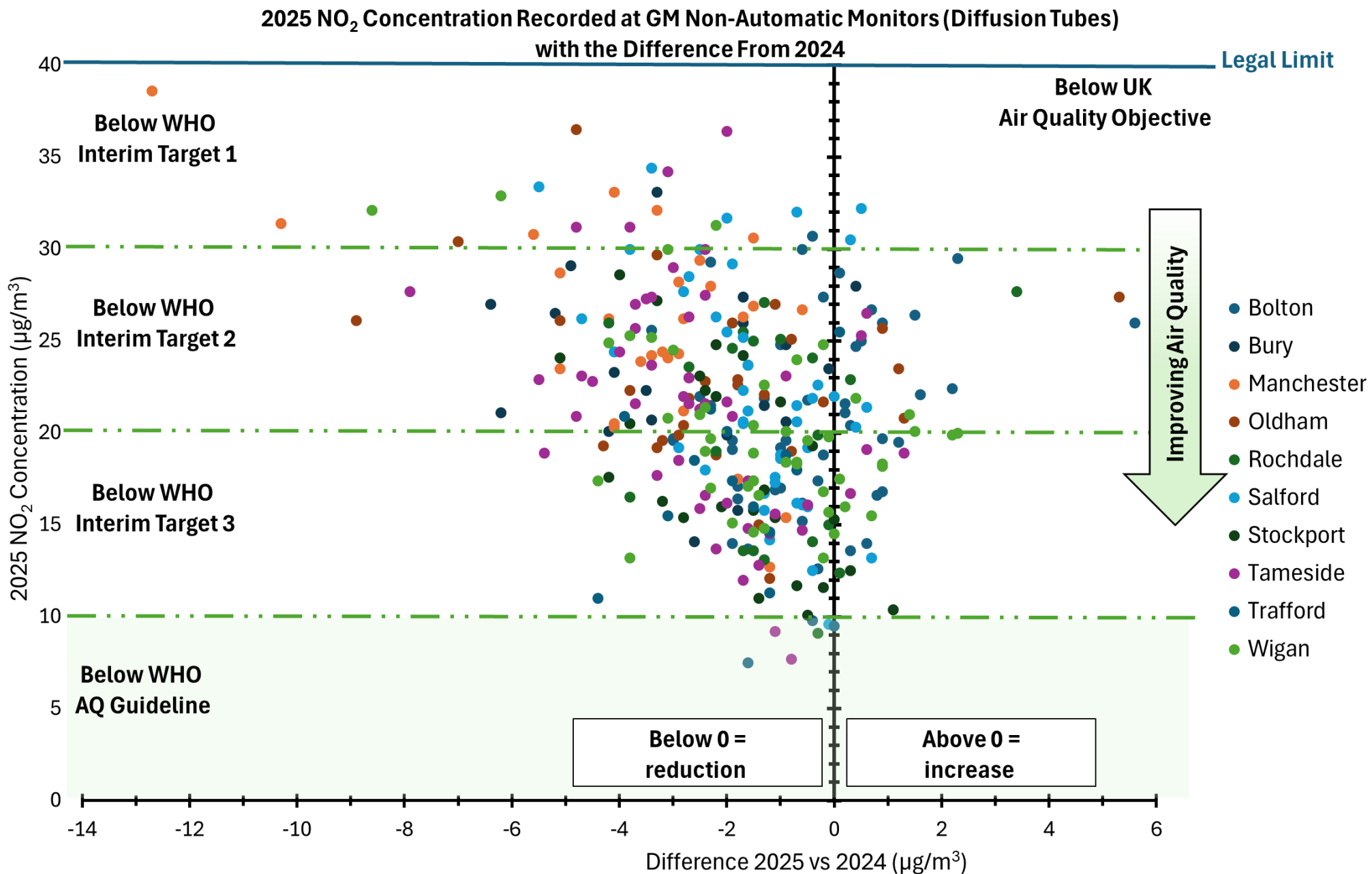
Figure 0-1 - 2025 NO<sub>2</sub> Concentration Recorded at GM Non-Automatic Monitors (Diffusion Tubes) with the Difference From 2024.

Figure 0-2 - 2025 NO<sub>2</sub> Concentration Recorded at GM Automatic Monitors with the Difference From 2024.

Figure 0-3 - 2025 PM<sub>2.5</sub> Concentration Recorded at GM Automatic Monitors with the Difference From 2024.

More information on the WHO air quality guidelines is available [this link to the WHO website](#). Feedback is welcomed on whether these summaries are clear and useful, and any suggestions for how we could improve them.

Mapped results are available at: <https://cleanairgm.com/data-hub/>.



**Figure 0-1 - 2025 NO<sub>2</sub> Concentration Recorded at GM Non-Automatic Monitors (Diffusion Tubes) with the Difference From 2024**

### 2025 NO<sub>2</sub> Concentration Recorded at GM Automatic Monitors

with the Difference From 2024

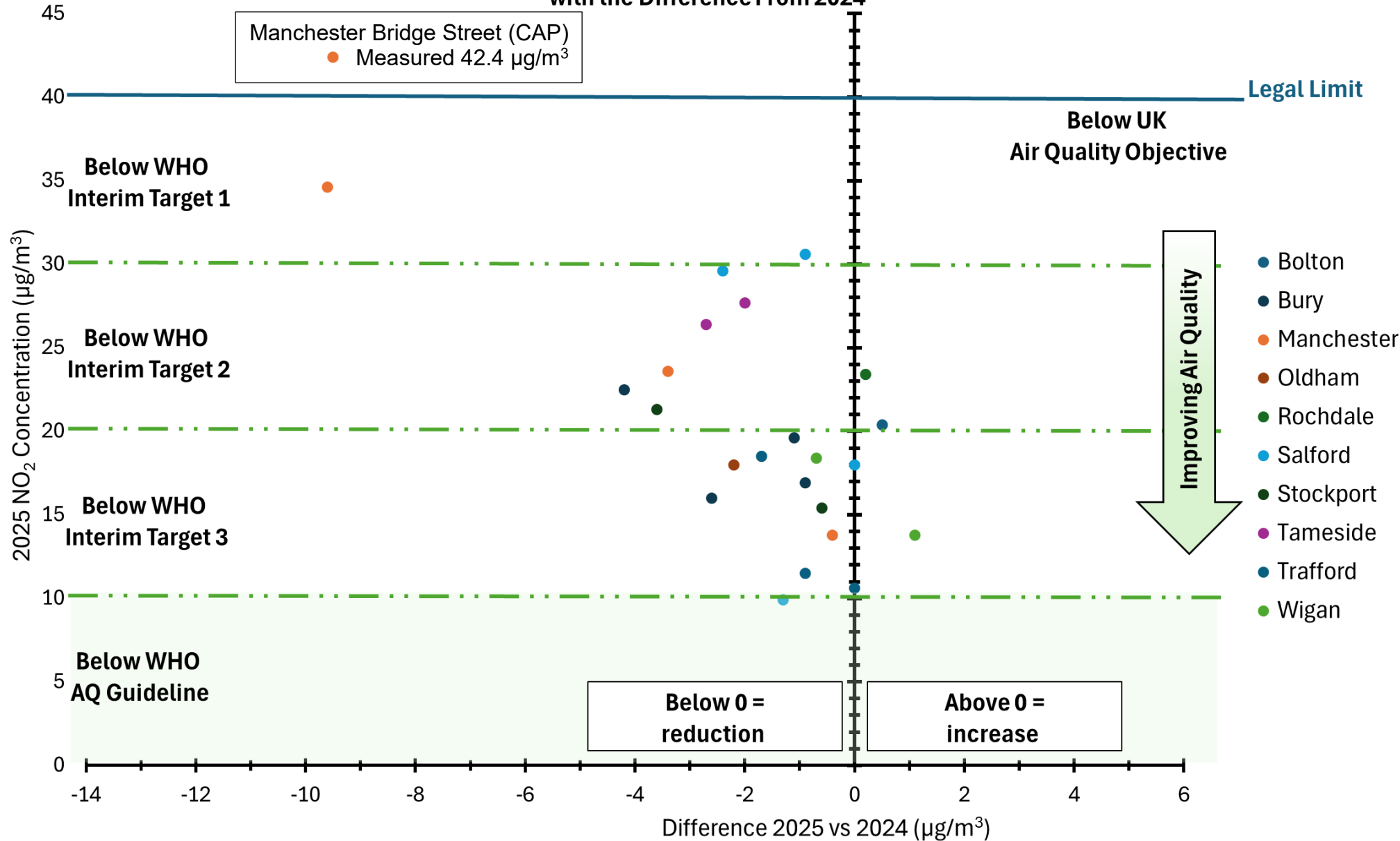


Figure 0-2 - 2025 NO<sub>2</sub> Concentration Recorded at GM Automatic Monitors with the Difference From 2024

### 2025 PM2.5 Concentration Recorded at GM Automatic Monitors with the Difference From 2024

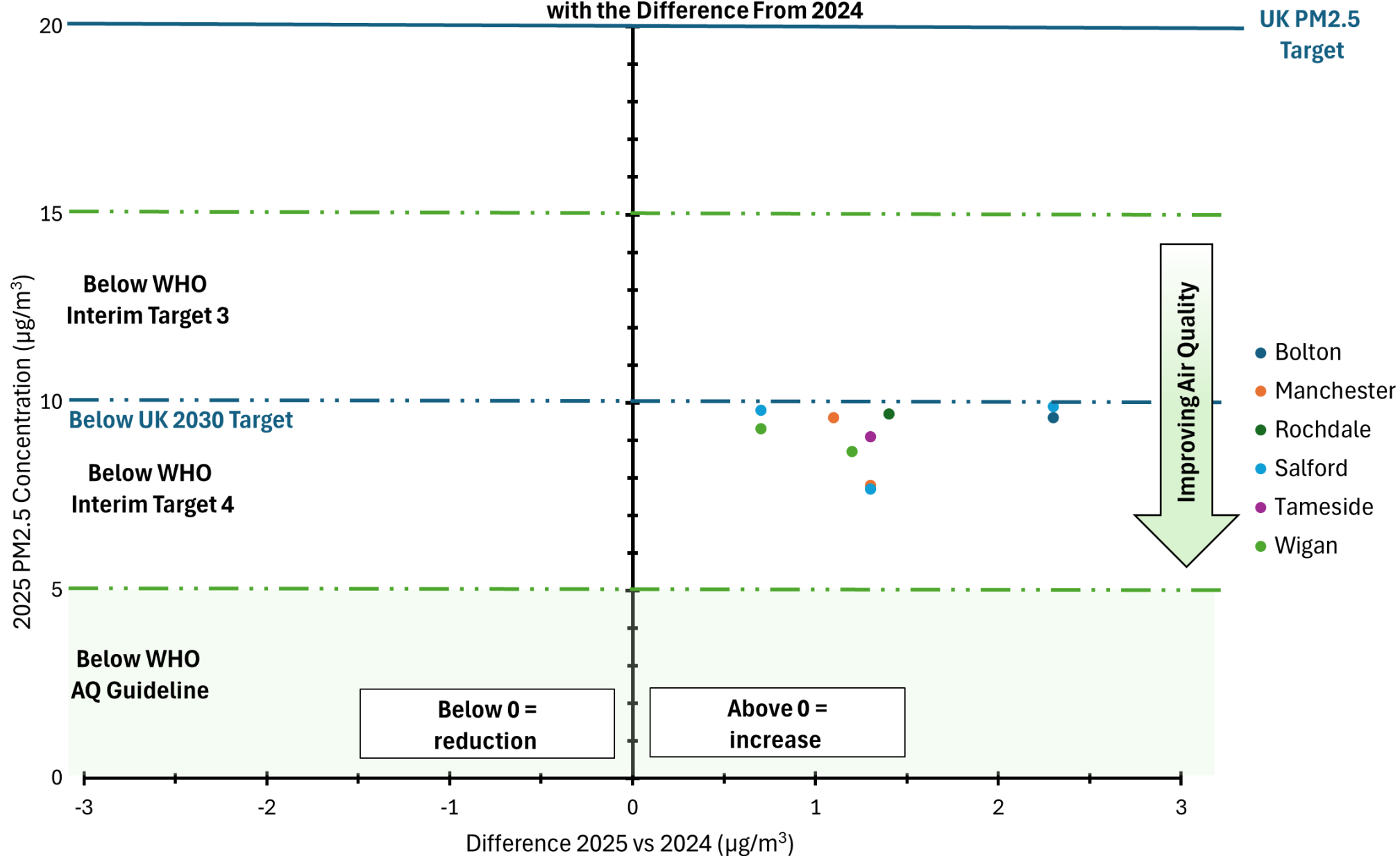


Figure 0-3 - 2025 PM2.5 Concentration Recorded at GM Automatic Monitors with the Difference From 2024

## Actions to Improve Air Quality

Whilst air quality has improved significantly in recent decades, there are areas where local action is needed to protect people and the environment from the effects of air pollution. Improvements in air quality, even below Air Quality Objective Levels and Standards, are associated with benefits to health.

The Environmental Improvement Plan is the cross-government plan to improve the natural environment and everyone's enjoyment of it. It was updated in 2025 and includes a number of targets which relate to air quality and brings forward the PM<sub>2.5</sub> annual mean concentration target of 10 micrograms per cubic metre to 2030 ([Link to Environmental Improvement Plan \(EIP\) 2025 at GOV.UK](#)). This is supported by the Air Quality Strategy for England, which provides information on how local authorities can work towards EIP targets and reduce fine particulate matter in their areas ([Link to the Air Quality Strategy for England at GOV.UK](#)).

The GM 2016 Air Quality Management Area was designated due to likely exceedances of the annual NO<sub>2</sub> air quality objective driven by transport emissions. The 10 GM local authorities adopted an Air Quality Action Plan, as well as implementing the investment-led Clean Air Plan, to address air pollution within GM.

The Action Plan has seven headline areas, broken down into 39 specific actions to improve air quality:

- **Development management and planning regulation:** Includes standardising regulation and policy across the GM region.
- **Freight and HGVs:** Opportunities to reduce emissions associated with the movement of freight and goods by road.
- **Buses:** Buses are a crucial part of the transport network, carrying by far the most public transport passengers, and give opportunities to improve air quality. New legislative developments, adoption of the GM Bus Strategy and improvements to vehicle standards will ensure that bus continues to play a vital role into the future.
- **Cycling:** Existing strategies and initiatives encourage cycling.
- **Travel choices:** Encouraging the public and businesses to make sustainable travel choices is essential in realising lasting air quality benefits.
- **Cars:** Measures to reduce emissions from cars and reduce the number of vehicle trips can deliver real air quality improvements.

- **Information and resources:** Educating and informing the public, businesses and policy makers is vital in bringing air quality improvements.

Further information on the AQMA and AQAP can be found in Section 2 Actions to Improve Air Quality.

## Greater Manchester Five-Year Environment Plan

The GM Five-Year Environment Plan (2025-2030) (5YEP) launched in December 2024 at the annual Greater Manchester Green Summit, it outlines how meeting our long-term environmental vision can be achieved, but it will take collaborative action from organisations, groups and individuals across the city region ([Link to Five-Year Environment Plan webpage](#))

The 5YEP guides all stakeholders in Greater Manchester toward our environmental goals, aiming for a healthy, low-carbon, and nature-rich region. While government support is important, progress depends on choices made by citizens, businesses, communities, investors, and property owners.

### The Five-Year Environment Plan Vision

Greater Manchester will be a nature-rich, carbon-neutral city region where everyone has access to affordable renewable energy, resilient homes, quality green spaces, healthy local food, and sustainable transport. The region will foster a circular green economy with thriving businesses, well-paid green jobs, and active local supply chains. Cleaner air and water, more trees and green spaces, and energy-efficient buildings powered by renewables will enhance both urban and rural environments. This transformation will reduce inequalities, engage citizens and businesses, and support biodiversity and sustainability across Greater Manchester.

To support the vision there are eight key aims for the city region:

1. Our **energy infrastructure** is smart, flexible and fit for a low carbon, sustainable future.
2. Our **buildings** are smart, flexible and energy efficient.
3. Our **transport** system is reliable, integrated, inclusive, affordable and enables sustainable **travel**.
4. Our **natural environment** is enhanced, providing benefits for nature and people.

5. Our city region transitions to a **circular economy** and our **waste** is reduced, reused, recycled or recovered.
6. Our city region is better **adapted** and more **resilient** to the increasing impacts of climate change.
7. Our **air quality** enhances the health, well-being, and quality of life of the city region.
8. Our **economy** will grow as a result of the interventions we make to benefit both our residents and businesses.

The action needed to achieve these aims is outlined further in the 5YEP with key objectives for the next five years for all sectors of society. For air quality, the objectives are:

- **Reduce** emissions that contribute to poor air quality
- **Support** communities and business to encourage the adoption of behaviours that contribute to improving air quality

Targets for 2030:

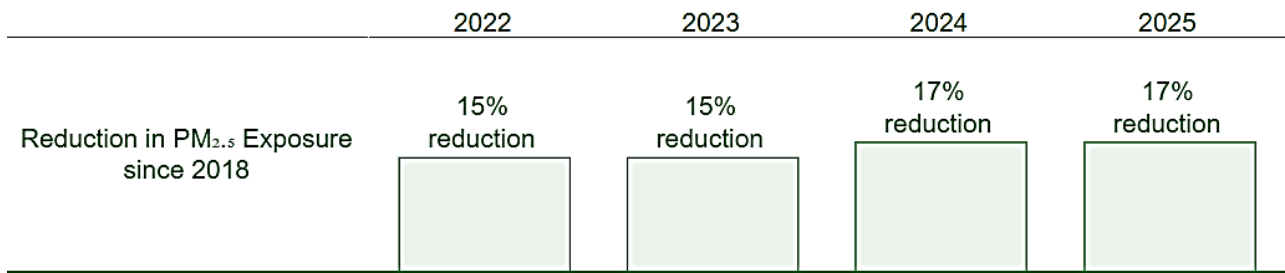
- 22% reduction in PM2.5 exposure by January 2028 compared to 2018 (measured using Defra's Criteria).
- Zero exceedances of the NO<sub>2</sub> of the legal limit by 2026 (measured using CAP criteria).
- % of monitoring sites that meet WHO interim Target 2 (30 µg/m<sup>3</sup>), Target 3 (20 µg/m<sup>3</sup>) and the Guideline value (10 µg/m<sup>3</sup>) Annual Mean for NO<sub>2</sub>.

### 5YEP Air Quality Progress 2025

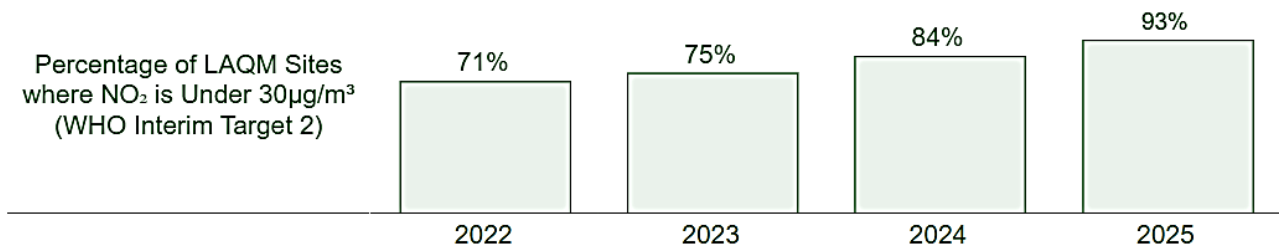
For 2025, there was good progress against the air quality targets:

- Despite a higher than average year for PM2.5 concentrations, the cumulative exposure reduction was maintained at 17% (Figure 0-4).
- CAP exceedances have continued to decrease with 11 sites of exceedance in 2025, down from 38 in 2024.
- The percentage of LAQM Sites where NO<sub>2</sub> is under 30 µg/m<sup>3</sup> (WHO Interim Target 2) increased to 93%, from 84% in 2024 (Figure 0-5).

Reporting for all 5YEP actions can be found via [this link to online performance dashboard \(for the targets\)](#) or via [this link to the 5YEP Partnership Quarterly Progress Reports](#).



**Figure 0-4 - Reduction in PM<sub>2.5</sub> Exposure since 2018**



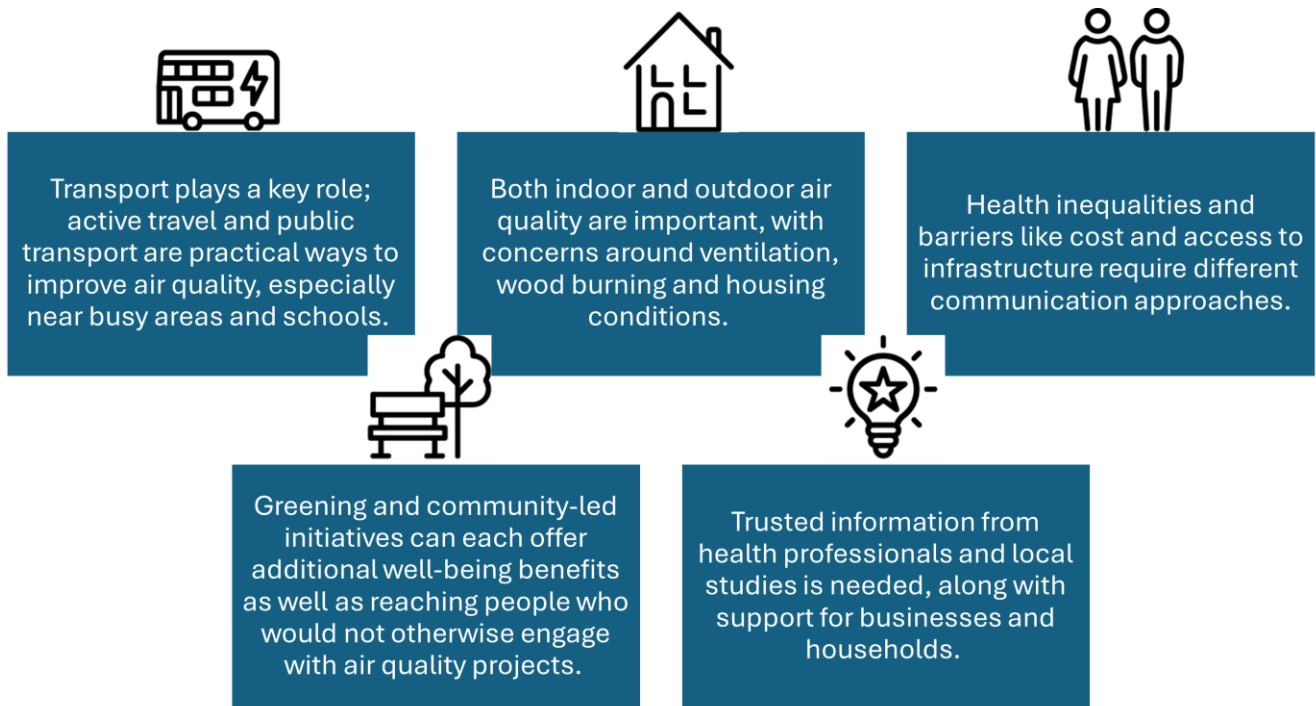
**Figure 0-5 - Percentage of LAQM Sites where NO<sub>2</sub> is under 30 µg/m<sup>3</sup>**

### Green Summit 2026

The eighth Greater Manchester Green Summit took place at Co-op Live in March 2026, with more than 2,000 people attending. The event was used to promote the Greater Manchester Transport Strategy 2050 (Local Transport Plan) consultation, which includes a network policy on pollution to monitor and tackle pollution caused by the transport network, focusing on locations which are worst affected, to avoid people and communities from being exposed to levels above legal limits and working towards the WHO ambitions.

There was an update on improving air quality across the city region and a roadmap to a fully electric public transport system by the end of the decade. A well-attended engagement session on the Future of Air Quality in GM generated plenty of feedback that will help inform our work moving forwards, a Summary of which is shown in Figure 0-6.

You can read more about the Green Summit in [this link to the news release](#) and watch the GM Mayor's plenary session and the Transport and Air Quality Panel Session discussion [via this link to the GM Green Summit 2026 webpage](#).



**Figure 0-6 – Summary of Topics Raised at the Green Summit Future of Air Quality Session**

## Active Travel

During 2025, Greater Manchester continued delivery of the Bee Network walking, wheeling and cycling programme, with progress captured in the [Active Travel in Greater Manchester Annual Report 2025](#) (link in text). Projects and schemes have been completed across the city region, with all GM boroughs benefitting from investment in high-quality infrastructure to deliver safer streets and improved air quality. This is working towards Greater Manchester’s ambition that by 2040, 50% of all journeys in Greater Manchester are made by public transport or active travel. This will support one million more public transport or active travel journeys every day across the region, in an ambition called the transport ‘Right Mix’.

Some headlines from 2025 are shown below, further information is available in the Annual Report or on each local authority website.

- Over 161 km of Bee Network standard segregated walking, wheeling and cycling routes have been completed in total, with 32 km added to the active travel network in 2025
- 24 school-area crossings upgraded (within 200 m of a school)

- 39 schools benefitting from School Streets; 60 schemes expected by end of current academic year
- Cycle hire fleet 50% electric-assist since May 2025
- Cycle storage: 1,757 new/improved spaces delivered by 99 organisations (by August 2025)
- 47% agree GM's network encourages walking/cycling (up from 31% in 2018)

In Bury, the Higher Lane junction with Pinfold Lane had no pedestrian signals and substandard pavements. It is next to a high school and has over 2,000 pedestrian crossings per day, with a high vehicle flow of over 20,000 vehicles per day. There were two collisions in the last four years, one of which injured a pupil. This crossing now has full pedestrian facilities and is optimised for school egress with reduced pedestrian wait times between 2.45 to 3.15 pm, Figure 0-7.



**Figure 0-7 - Upgraded signals with added pedestrian phases, Higher Lane/Pinfold Lane, Bury (before and after junction improvement works)**

Manchester's Chorlton Cycleway is a 5 km protected cycle route, built in stages between 2019 and 2024, connecting the Chester Road roundabout on the edge of Manchester city centre and Chorlton-cum-Hardy. In 2025, a pre-existing protected cycle route from the roundabout towards Deansgate railway station was improved and extended along Deansgate in the city centre to link with the recently completed Manchester to Chorlton Cycleway, Figure 0-8. Additional improvements have been made for pedestrians, with new and improved crossing points and street furniture to make it safer for people to travel in and around the city centre, along one of Manchester's busiest streets.



**Figure 0-8 – Protected junction installed at the busy intersection of Deansgate/Whitworth Street in spring 2025**

Recent projects in Oldham town centre have been shaped with an emphasis on active travel, enhanced accessibility to public transport, and the creation of inviting spaces. Access from the Cheapside bus terminal previously meant pedestrians and cyclists had to navigate a narrow, inadequately lit alleyway that did not provide a welcoming entrance. The newly implemented scheme addresses this concern by removing the (out of use) Snipe Inn and establishing a more accessible, friendly and prominent gateway into the town centre from Cheapside. The scheme incorporated planting, sustainable urban drainage systems, and seating, which have improved accessibility and created a pleasant open space for public use, Figure 0-9.



**Figure 0-9 - Snipe Gardens, Oldham**

The Wigan to Standish scheme features quiet residential streets and traffic-free paths linking places like Shevington Moor and other neighbourhoods directly to the town centres of Standish and Wigan, all while steering clear of the busy A49. The complete route network links to new housing, quiet local streets and signal-controlled crossings over busier roads. The route passes several local primary schools and Standish Community High School, providing for active travel to schools through an area of recent housing growth. The route also encourages walking and cycling for leisure and exercise, with interpretation boards that celebrate the local nature, cultural and industrial heritage, Figure 0-10.



**Figure 0-10 – Interpretation Board Installed on Wigan to Standish Route**

## Making active travel more inclusive

We are working to make sure that active travel in Greater Manchester is accessible to all residents and visitors, by building an inclusive cycling network, improving access to transport hubs, and leading initiatives to support people to walk, wheel, and cycle anywhere in the city region.

The Greater Manchester Inclusive Cycling Network has recently been created to enable partner organisations delivering inclusive cycling opportunities to come together. This is the first such established network across England for inclusive cycling. Find your nearest inclusive cycling centre using [this link to the Wheels for All website](#).

Across GM, schemes to promote walking, wheeling, cycling and other forms of active and sustainable travel for the journeys to and from school continued to grow. Youth Travel Ambassadors (YTA) achieved excellent progress over the 2024-25 academic year, with the programme reaching 16,400 students in 15 schools. Modeshift STARS, an award scheme to promote safe and green travel, saw a 32% increase in school accreditations (25 to 32 schools) and 121 new teachers registered. More information can be found through [this link to the Bee Active Supporting the school run webpage](#).

Wheels and Walks was launched in January 2025. Through this project, we plan to engage with 40 community groups over two years. Building on the success of the Cycle and Stride for Active Lives programmes, groups could apply for a grant of up to £5,000 and additional tailored support provided by TfGM. Successful applicants have included:

- [KRIMMZ Girls Youth Club in Bolton](#): Helping women and girls aged 6-18 years to cycle, providing loan bikes and equipment, coaching lessons, and led rides as part of their 'Pedal Power' activity, Figure 0-11.
- [Petrus Community in Rochdale](#): Offering an accessible way to engage in physical activity for people experiencing or at risk of homelessness, while reducing community exclusion through their 'Petrus Striding Forwards' activity.



**Figure 0-11 - KRIMMZ Girls Youth Club in Bolton can offer one to one cycling sessions**

### **Bike Hire**

GM's Starling Bank Bike hire scheme is part of the Bee Network's vision for a fully integrated, London-style public transport network that helps more people to walk, wheel and cycle around the city region. The scheme is operated by Beryl, with Starling Bank becoming the first sponsor in January 2024. Starling Bank Bikes play a key role in boosting access to cycling in GM, with 300 new e-bikes added to the Starling Bank Bike hire scheme in 2025, Figure 0-12.

Operator User Survey 2024 results indicate that the scheme is encouraging people to start cycling or to cycle more, and for some to switch to bike hire from journeys previously made by motorised types of transport. 504,807 rides were made from January to October 2025. This is about 29% higher than in January to October 2024. By October 2025 there had been a total of 1.57 million rides, totalling more than 3.86 million kilometres ridden, since the scheme launched in November 2021.

To hire a bike, people can either pay as they ride or save money using minute bundles with both payment methods available via the Starling Bank Bike App. Options are being explored to fully-integrate bike hire with the Bee Network fare structure and app in future.

Information on the Starling Bank Bike hire scheme can be found via [this link to the Bee Active Starling Bank Bikes webpage](#).



**Figure 0-12 - Active Travel Commissioner Dame Sarah Storey with a new e-bike**

## The Bee Network



**Figure 0-13 - Andy Burnham, Former Mayor of Greater Manchester, and Dame Sarah Storey, on Change Day launching Contactless 'tap and go'**

### 2025 Review

- **Bus Franchising** – GM completed bus franchising to bring all buses under local control as part of the Bee Network in 2025.
- From March, contactless 'tap and go' expanded to include buses as well as tram, enabling bus passengers to benefit from the scheme by simply tapping on a bus without needing a ticket, Figure 0-13. Fares will be capped automatically to ensure passengers pay the best value fare up to the daily or weekly cap.
- Enabling seamless, affordable and convenient journeys is key to the success of the Bee Network, and the tap and go system means customers can travel when, where and how they want without having to plan or buy in advance.
- **Cycle Hire** – The Starling Bank bike hire scheme continues to set new records for usage. During the last 12 months the scheme saw an 11% growth in users and a 32% full year on year increase in rides.
- **Active Travel** - 'Annual trips by walking' has increased by 23% from 2022 to 2024 and 'annual trips by cycling' has increased by 58% from 2022 to 2024. Combined, there are now over 704 million trips annually by walking and cycling.

- The Network Principles survey 2025 shows GM's transport network faces some challenges. Data indicates 47% of residents in 2025 feel encouraged to walk or cycle, a drop from 50% in 2024, though still a significant rise from 31% in 2018.
- Access to cycles enables active travel; we have focused on increasing access and availability, with successes in bike libraries, loans, and cycle hire, as well as delivering cycle training and parking schemes.
- **Tram** – Metrolink continues to set new records for passenger journeys. December 2025 and January 2026 were the busiest December and January on record. During the latest 12-month period Metrolink carried 46.3 million passenger journeys. This is 2% more than during 2019 and 1% more than the same period last year.
- Significant engineering works are planned across the Metrolink network in 2026 and beyond with changes to service patterns being developed to provide resilience to the network. Work will be done during this time to recruit over 60 additional drivers
- **Infrastructure Projects** – The first fully electric bus depot was completed in Ashton Tameside. It is one of the few fully electric depots in the UK and houses 83 double deck zero-exhaust emission buses making 14 routes fully electric, Figure 0-14.
- In December a second fully electric bus depot in Middleton was completed. 53 new electric buses are now carrying Bee Network passengers, marking another major step toward a fully electric bus fleet and bringing the total number of electric buses on the Bee Network to 390.



**Figure 0-14 – Andy Burnham, Former Mayor of Greater Manchester, with colleagues from TfGM, Willmott Dixon, Volvo and Metrolink at Ashton bus depot**

## Bus

Greater Manchester heralded a new era in public transport, transforming how people get around the city region with the completion of bus franchising marking the end of phase one of the Bee Network.

Following a phased approach, all bus services, 577 routes, 1,600 buses and accounting for more than 160 million trips per year, are now under local control and accountable to the people, businesses and communities of Greater Manchester, Figure 0-15.

Prior to bus franchising fewer than 2% of buses in Greater Manchester were electric. In 2025, the first full year of locally controlled buses, 390 zero-emission buses were on the road - representing 29% of the large franchise fleet and preventing an estimated 23,000 tonnes of CO<sub>2</sub> annually and 84 tonnes of nitrogen oxides (NO<sub>x</sub>).

Work on the electrification of the bus network will carry on until 2030, with more improvements planned for Bolton, Sharston, and a new all-electric bus depot in Stockport. By 2030, the Bee Network's large franchise fleet will be fully electric, with about 1,300 buses running, potentially cutting over 76,000 tonnes of CO<sub>2</sub> and 280 tonnes of NO<sub>x</sub> every year.



**Figure 0-15 - Bee Network branded buses and Trams at Rochdale Interchange**

Bus patronage in December 2025 was 10% higher than December 2024 representing an additional 1.2 million passenger journeys. Similar growth was seen in January 2026 with patronage 6% higher than during January 2025. In areas where franchising has been in

place longest, growth has been sustained and significant, with passenger journeys up 8% year-on-year in Tranche 1 (Wigan, Bolton, parts of Bury and Salford) and 10% year-on-year in Tranche 2 (Rochdale, Oldham and remainder of Bury). Early trends in Tranche 3 (Stockport, Tameside, Trafford, Manchester and remainder of Salford) services, franchised from January 2025, are showing 2%-3% year-on-year growth.

Bus punctuality has improved, with 82.7% of buses running on time during January 2026. This is a substantial improvement in punctuality during January 2025, when 71.9% of services were on time, an increase of more than 15% in the proportion of services operating on time. All franchise areas are showing improvement. Delivering on our commitment to transparency and accountability, weekly reporting of bus performance continues to be published. Performance figures are posted on social media and linked to a more detailed report on [the TfGM Bus punctuality report webpage](#).

### **New Routes**

In December, a new all electric number 30 service connecting previously underserved parts of Salford, the area with biggest resident growth in the North West, was announced to launch one year on from the completion of bus franchising. The new service connects the Trafford Centre, Trafford Park, Salford Quays, Ordsall Lane and Manchester City Centre and will run seven days a week, with a half-hourly service Monday to Saturday. It's the latest in a series of Bee Network enhancements that have seen three all new routes introduced already (629 Golborne to Platt Bridge, 615 Wigan to Middlebrook Retail Park service and 631 Wigan to Standish), alongside improvements to more than 80 other services, including new night buses.

The night-time economy is a major part of Greater Manchester's economy, with 358,000 people working in jobs or businesses that are significantly active at night, accounting for around 33% of the Greater Mancunian workforce.

Building on the success experienced on Greater Manchester's first two night routes: V1 and 36 services which connect Manchester with Leigh and Bolton via Salford. A new 24-hour pilot bus service for Rochdale launched in September, supporting the borough's night-time economy. Night buses will run on route 17 connecting communities in Rochdale, Castleton and Middleton with Manchester city centre. The trial will see services run on a three-day weekend service pattern (Thursday, Friday, and Saturday nights), running hourly throughout the night. Night buses have the same capped bus fares, to provide a simplified ticket offer consistent across all bus services in Greater Manchester.

## TravelSafe

Greater Manchester is pioneering a new, first-of-its-kind approach to keeping the travelling public safe. A new and improved 24/7 TravelSafe LiveChat service, allowing passengers and staff to discreetly report criminal or antisocial behaviour on public transport, was launched in 2025, with TravelSafe LiveChat QR codes now installed across the entire Bus and Metrolink fleet, Figure 0-16. The TravelSafe partnership brings together representatives from Greater Manchester Police (GMP), TfGM, Bus Operators, Keolis Amey Metrolink (KAM), Local Authorities and GMCA.

A new TravelSafe Virtual Reality film was launched in December 2025. The film titled 'No Excuse for Abuse', which was funded by KAM and the Light Rail Safety and Standards Board, illustrates the impact of verbal and physical abuse towards frontline staff and has already been shown to over 500 young people.



Figure 0-16 - TravelSafe LiveChat Poster

## Looking Forward

Franchising bus services has been key to Bee Network success. Attention now turns to the local railway network to deliver GM's ambition of creating a "World Class" inclusive and sustainable transport network, Figure 0-17. The first two lines, connecting Manchester to Glossop and Stalybridge, will integrate with the Bee Network from December 2026, and will see contactless 'tap in, tap out' ticketing rolling out across 17 stations.



**Figure 0-17 - A Bee Network Branded Train at Piccadilly Station**

The plan for bringing rail into the Bee Network is set to deliver:

- **Simpler, fairer fares:** Introducing simpler fares in December 2025 paved the way for contactless payments and integration with the Bee Network from 2026.
  - **Ticket acceptance during disruption:** Since December 2025, passengers benefit from ticket acceptance across bus, tram and train when there is disruption in Greater Manchester.
- Digital improvements:** By March 2026, the Bee Network app and TfGM website will feature comprehensive railway station information, with car park and cycle spaces and step-free access. Real-time rail departure and disruption information will be added by the summer, with journey planning available by autumn next year.
- **24/7 Rail Services:** From May 2026, TransPennine Express will run night-time trains to the airport, supporting GM's thriving night-time and visitor economy.
  - **Station upgrades:** From summer 2026, stations on the first two lines will be refreshed with Bee Network branding and new customer information points to make

onward journeys between train, tram, buses and bikes easier. Upgrades to nearby bus and tram stops will provide up-to-date travel information from spring 2026.

- **Major Travel Hubs:** TfGM and rail industry partners will join forces like never before to enhance the customer experience at Manchester Piccadilly and Victoria stations – two major gateways into the city. Our collaborative approach will create a truly seamless journey for all passengers (including visitors to the city), including improved signage, live travel information and Bee Network customer support.
- **Accelerating step-free access:** Building on the success of delivering step-free access schemes at Daisy Hill and Irlam stations. TfGM and partners have started to deliver improvements at Bryn station in Wigan, with work due to begin at Hindley, Reddish North and Swinton in the year ahead.
- **Contactless payments on the first rail lines:** GM is working with government to roll out tap and go contactless payments at 17 stations on the first two lines by December 2026, so there's no need to worry about having the right ticket (or buying individual tickets) the best rail fare will be calculated for you, with a weekly rail cap.
- **New Bee Network ticket:** Also from December 2026, a new pre-pay multi-modal ticket will launch, meaning you can use on any combination of buses, trams and trains across the city region. Similar to the approach taken to Bee Network buses, this will bring bus, tram and train together with a new pre-paid ticket.
- **Pilot Projects:** From 2027, we will pilot additional and later running services on the Airport, Alderley Edge, and Rochdale stopping lines.
- **Fully integrated eight rail lines into the Bee Network:** From January 2028, eight rail lines (including 64 stations) will be fully integrated with Bee Network buses and trams, with Tap and Go payments and daily and weekly fare caps. The remaining 32 stations will join the system by 2030.

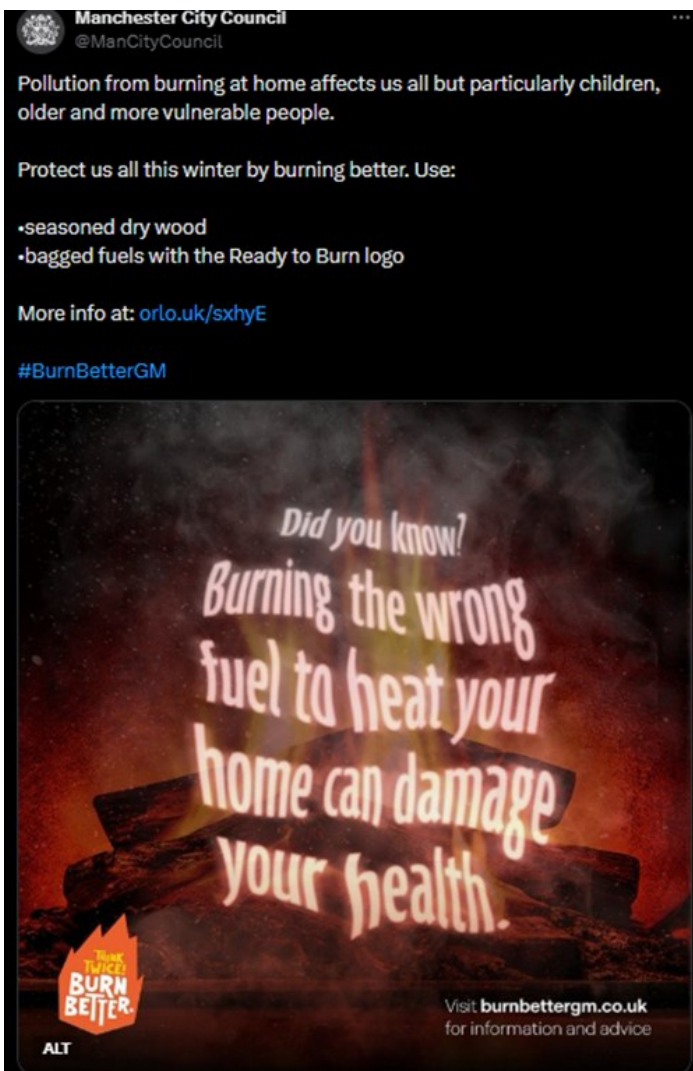
## Defra Air Quality Grant

Air Quality Grant funding, awarded by Defra in 2022, has continued to inform residents about the health impacts of wood-burning stoves, along with safer ways of burning solid fuel. In 2025, TfGM coordinated a fourth GM-wide information campaign, running from October 2025 to February 2026, and provided GMCA and the ten local authorities with content to raise awareness of the harmful effects to human health and pollution emitted from solid fuel burning, with a particular focus on woodburning stoves.

The communications pack included social media content and newsletter/website copy for GM communications teams, partners and stakeholders to share, supported by an updated Burn Better information hub at [www.burnbettergm.co.uk](http://www.burnbettergm.co.uk) and #BurnBetterGM for use with social media posts. The content aimed to:

- Raise awareness of the health impacts of air pollution from domestic solid fuel burning.
- Raise awareness of 'Ready to Burn' resources and how to 'burn better.'
- Raise awareness of smoke control areas.
- Change behaviour to reduce the number of households burning solid or incorrect fuel.

An example of a Burn Better social media post and messaging by Manchester City Council is shown in Figure 0-18 . Further details on our work to reduce particulate matter from domestic burning are provided in Section 2.3.



**Figure 0-18 - Manchester City Council Burn Better Social Media Post, October 2025**

## Clean Air Plan Update

This report covers monitoring data for 2025. It is important to note that in January 2025 the government accepted the assessment that an investment-led, non-charging Greater Manchester Clean Air Plan will achieve compliance with nitrogen dioxide levels on the local road network in the shortest possible time, and Greater Manchester will not need to implement a charging Clean Air Zone.

The Direction specifies that in terms of the GM Clean Air Plan the measures approved are as detailed in the appraisal report ('Evidence Submission for a new GM Clean Air Plan' dated October 2024) and its supplement. This includes a package of non-charging measures, specifically:

- Cleaner buses: provision of Euro VI buses, zero exhaust emission buses, charging infrastructure and associated support.
- Local traffic management measures at:
  - A57 Regent Road, Salford
  - St John's area around A34 Quay Street, Manchester
- Support for moving the hackney carriage fleet to cleaner vehicles.

These measures have been implemented during 2025, with final implementation expected in 2026. The Clean Air Plan will continue to monitor and evaluate the effectiveness of these measures and proactively employ adaptive planning if there is considered a risk of any exceedances remaining in 2026. More information can be found on the Clean Air Plan website: <https://cleanairgm.com/>.

## Conclusions and Priorities

In 2025 there was a continued improvement in air quality across GM with no LAQM exceedances recorded for any pollutant for the first time this year, due to the implementation of the Clean Air Plan and investments in zero-exhaust and low emission buses across the Bee Network.

### Nitrogen Dioxide Summary

In 2025, GM local authorities carried out NO<sub>2</sub> monitoring using:

- **Continuous automatic monitoring:** 24 continuous air quality monitoring stations, 3 of which are CAP specific sites, 15 are located at the roadside.
- **Non-automatic monitoring (Diffusion tubes):** 336 LAQM monitoring locations, and 273 monitoring locations for the GM CAP which meet the criteria for the legal Limit Value.

### Local Air Quality Management

For LAQM, no exceedances of the annual air quality objective (AQO) for NO<sub>2</sub> (40 µg/m<sup>3</sup>) were recorded in 2025 for the first time, a reduction of four compared to 2024, and 62 in 2019.

The highest diffusion tube annual mean concentration was 38.6 µg/m<sup>3</sup> at Manchester Oxford Street (MA29ANO) inside the AQMA; this is a reduction of 12.7 µg/m<sup>3</sup> between 2024-2025. When adjusted for relevant exposure the annual mean concentration at this location was 35.8 µg/m<sup>3</sup>. The Oxford Street/Road corridor joined the Bee Network in January 2025, since when, there has been investment in compliant buses such as electric and euro 6 diesel buses on this heavily used route which has reduced local emissions.

In accordance with LAQM.TG22, monitoring locations are still under an AQMA until they maintain a concentration below 36 µg/m<sup>3</sup> for three consecutive years at the point of exposure (distance corrected). Maintaining compliance consistently below the legal limit will increase confidence that concentrations are falling.

The highest LAQM automatic site annual mean concentration recorded was 34.6 µg/m<sup>3</sup> at Manchester Oxford Road. This is a decrease from 44.2 µg/m<sup>3</sup> in 2024, and less than the 36 µg/m<sup>3</sup> recorded in 2020 when COVID-19 travel restrictions were in place. The automatic monitor on Oxford Road is located at section of the road which has daytime

traffic restrictions, permitting only buses and taxis. This increases confidence that the significant improvements in air quality can be attributed to investment in zero-exhaust and low emission buses through the Bee Network.

The Clean Air Plan roadside automatic monitoring location at Manchester Bridge Street recorded an annual NO<sub>2</sub> concentration of 42.4 µg/m<sup>3</sup> in 2025 (cf. 2024: 51.9 µg/m<sup>3</sup>). This location has no relevant exposure nearby and does not count as an exceedance for LAQM. The differences between LAQM and CAP monitoring regimes are explained in Section 2.4 CAP NO<sub>2</sub> Monitoring Results 2025.

There were no significant increases recorded in the automatic site network. The majority of sites either showed decreases or a stabilisation in NO<sub>2</sub> concentrations between 2024 and 2025.

No exceedances of the NO<sub>2</sub> 1-hour mean objective were observed (more than 18 exceedances of an hourly concentration of >200 µg/m<sup>3</sup>); nor were there any exceedances of this objective in 2021-2024.

327 LAQM diffusion tube locations operating across both 2025 and 2024 with valid data were available for comparison. 249 of which recorded reductions in annual mean NO<sub>2</sub> concentrations of up to 12 µg/m<sup>3</sup> (range 0.5 – 12.7 µg/m<sup>3</sup>), 45 remained constant or changed by less than 0.5 µg/m<sup>3</sup> (range -0.4 – 0.4 µg/m<sup>3</sup>), and 33 recorded annual mean concentration increases in the range 0.5 – 5.6 µg/m<sup>3</sup>.

Of the monitoring locations operational in 2020 (the pandemic year), in 2025, 253 recorded concentrations less than or equal to 2020 in the range 0 – 11 µg/m<sup>3</sup>, 7 had slight increases (≤1 µg/m<sup>3</sup>), and 6 increased in the range 1.1 – 9 µg/m<sup>3</sup>.

Table ES 0-3 summarises NO<sub>2</sub> concentrations and LAQM annual air quality objective exceedance changes for automatic and non-automatic locations across GM for 2025.

Full details of the LAQM sites, as well as data for 2025, can be found in [Appendix A: Monitoring Results](#). Maps showing the location of the LAQM monitoring sites are provided in [Appendix D: Map\(s\) of Monitoring Locations and AQMAs](#) and via [this link to the Clean Air GM Data Hub](#).

**Table ES 0-3 - Summary of LAQM NO<sub>2</sub> monitoring in GM in 2025**

Authority	Automatic sites (with valid data capture) <sup>(1)</sup>	Non-automatic sites (unique locations) <sup>(2)</sup>	Concentration range (all sites) (µg/m <sup>3</sup> )	Exceedances of NO <sub>2</sub> Annual Mean (non-automatic sites)		Increase / (Decrease) of Exceedances from 2024
				In AQMA	Outside AQMA	
Bolton MBC	1	54 (49)	7.5 – 30-7	0	0	-
Bury MBC	3	21 (19)	14.1 – 33.1	0	0	-
Manchester CC	3	33 (27)	12.7 – 38.6	0	0	<b>(2)</b>
Oldham MBC	1	32 (30)	12.1 – 36.5	0	0	<b>(1)</b>
Rochdale MBC	1	29 (27)	9.1 – 27.7	0	0	-
Salford CC	3	54 (46)	9.6 – 34.4	0	0	-
Stockport MBC	2	29 (25)	10.1 – 28.6	0	0	-
Tameside MBC	2	53 (51)	7.7 – 36.4	0	0	-
Trafford MBC	3	21 (14)	9.5 – 25.5	0	0	-
Wigan MBC	2	50 (48)	13.2 – 32.9	0	0	<b>(1)</b>
<b>Total</b>	<b>21</b>	<b>376 (336)</b>	<b>7.5 – 38.6</b>	<b>0</b>	<b>0</b>	<b>(4)</b>

**Notes:**

(1) >25% (3 months or more) data capture.

(2) Number in brackets is total unique locations per district, accounting for duplicate/triplicate sites.

**Particulate Matter Summary**

All 20 PM<sub>10</sub> automatic monitoring stations recorded slightly increased concentrations in 2025 compared to 2024. Annual PM<sub>10</sub> concentrations were in the range 12.2 - 22.6 µg/m<sup>3</sup>, compared to 10.3 - 20.5 µg/m<sup>3</sup> in 2024. There were no recorded exceedances of the annual mean objective (40 µg/m<sup>3</sup>) for PM<sub>10</sub> in 2025.

All 10 automatic monitoring stations recording PM<sub>2.5</sub> showed slightly increased annual mean concentrations in 2025 compared to 2024. Annual PM<sub>2.5</sub> concentrations were in the range 7.7 - 9.9 µg/m<sup>3</sup>, compared to 7.5 - 9.1 µg/m<sup>3</sup> in 2024. All monitoring stations were compliant with the national air quality objective for PM<sub>2.5</sub> (20 µg/m<sup>3</sup>) in 2025, and below the 2030 target level of 10 µg/m<sup>3</sup>.

As annual mean PM<sub>10</sub> and PM<sub>2.5</sub> concentrations at all GM air quality monitoring sites increased in 2025 compared with 2024, it is likely to be due to differences in

meteorological conditions affecting dispersion and particulate formation between the two years, rather than an increase in local emissions.

2024 experienced slightly above average rainfall and several storm systems, with very few stagnant periods ([Link to Met Office 2024 Annual Assessment](#)). These conditions may have enhanced dispersion and rainfall-driven removal (washout) of atmospheric particulates. As a result, it is reported that particulate concentrations in 2024 were lower across the UK ([Link to Defra accredited official statistics - Particulate Matter](#)).

In contrast, 2025 was the UK's warmest and sunniest year on record, with more prolonged dry spells and several stable high-pressure periods ([Link to Met Office 2025 Annual Assessment](#)). These conditions may have reduced atmospheric mixing and allowed particulate matter to accumulate more easily. Dry weather also increases the resuspension of coarse particles, contributing to higher PM<sub>10</sub> levels, while warmer and sunnier periods support secondary PM<sub>2.5</sub> formation.

Weather conditions and prevailing winds also determine the level of transboundary pollution (air pollution from other areas and overseas) received in Greater Manchester, particularly the impact of European and North American wildfires, and Saharan dust. Further analysis is presented in [Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC](#).

National emissions data show that particulate emissions have continued to reduce over the long term. The higher concentrations observed in 2025 therefore are likely to reflect normal annual variability driven by weather conditions, rather than a deterioration in underlying air quality or changes in local emissions sources.

### **Greater Manchester Clean Air Plan**

In 2025, monitoring for the CAP was carried out at 273 diffusion tube locations (up from 270 in 2024) which met the legal Limit Value siting criteria and three continuous analysers, with 11 sites of exceedance (down from 38 in 2024). A further 39 locations were considered to be at risk of exceedance (down from 73 in 2024). The GM CAP results for 2025 are summarised in Table ES 0-4.

- Monitoring data for 2025 shows air pollution has continued to improve in GM compared to 2024 and is significantly lower than levels recorded pre-pandemic.
- In 2019, there were 129 exceedance locations, compared to 11 in 2025.

- There are now seven districts across the city region with no exceedances of the NO<sub>2</sub> legal limit: Bolton, Bury, Rochdale, Salford, Tameside, Trafford and Wigan.
- This latest air quality monitoring data continues a really encouraging trend and indicates that the steps Greater Manchester is taking to invest in cleaner buses through the Bee Network is helping clean up the air we all breathe.
- By taking back control of local buses, the city region is delivering cleaner, greener and more reliable services, with nearly 400 electric buses running across the Bee Network. Prior to bus franchising fewer than 2% of buses in GM were electric, now nearly a third of the fleet is zero exhaust emission.
- The Clean Air Plan will see further investment in zero exhaust emission buses, as well as funding for cleaner taxis and targeted traffic measures to reduce pollution.
- Our bus depots are being electrified as we work to deliver a fully electric fleet by 2030. Middleton and Ashton bus depots have been fully electrified, with further upgrades taking place at Bolton, Oldham and Hyde Road depots in Manchester.
- The majority of NO<sub>2</sub> exceedances (8) are in the regional centre. The continuing electrification of the bus fleet, on routes serving the central transport hubs with high bus flows, has driven significant reductions in bus emissions and improvements to measured concentrations. For example, at Oxford Street in Manchester city centre, monitoring showed high levels of NO<sub>2</sub> were recorded in 2024 associated with a mix of older retrofitted buses that were running before the completion of bus franchising. Since January 2025, fully electric and cleaner Euro VI buses now on the Oxford Road corridor are reducing NO<sub>2</sub> levels.
- Maximum concentrations have reduced from 59 µg/m<sup>3</sup> in 2024 to 43 µg/m<sup>3</sup> in 2025. This includes large reductions in concentrations at other roads where bus emissions are less prevalent and indicates natural upgrades to the wider vehicle fleet are also leading to improvements across the wider GM road network.

**Table ES 0-4 - Summary of GM CAP NO<sub>2</sub> monitoring in 2024**

Authority	Non-automatic sites (with valid data capture)	Concentration range (all sites) (µg/m <sup>3</sup> )	Exceedances of NO <sub>2</sub> Annual Mean Limit (non-automatic sites)
Bolton MBC	19	23.0 - 38.5	0
Bury MBC	25	21.5 - 37.4	0
Manchester CC	128	21.1 - <b>42.5</b>	9 <sup>(1)</sup>
Oldham MBC	10	23.6 – <b>41.0</b>	1
Rochdale MBC	6	24.2 - 31.1	0
Salford CC	33	19.9 - 37.5	0
Stockport MBC	23	24.4 - <b>41.9</b>	1
Tameside MBC	19	17.5 - 38.2	0
Trafford MBC	4	21.7 - 26.9	0
Wigan MBC	6	25.7 - 36.1	0
<b>Total</b>	<b>273</b>	<b>17.5 - 42.5</b>	<b>11<sup>(1)</sup></b>

**Note:** (1) Includes the A34 Bridge St Manchester continuous monitoring site which records an exceedance, but nearby diffusion tube sites are no longer in exceedance

## How to get Involved

By working together in Greater Manchester our air quality continues to improve, but there is still more we can do to build a thriving city region where everyone can live a good life. We can all act to improve our air quality, both outside and indoors. For tips and advice please visit [this link to the GM Clean Air website](#) or [this link to the GM Burn Better webpage](#). Small changes to our daily habits can make a big difference.

GM welcomes scrutiny and suggestions from residents, voluntary groups, business and public bodies about our air quality monitoring and work programmes. You can contact us directly via e-mail to [info@cleanairgm.com](mailto:info@cleanairgm.com) or through your local council's Environmental Health Department.

## Travel Choices

Could you swap the car for cleaner, greener travel? With a third of all journeys under 1 km made by car, why not walk, wheel or cycle instead? For longer trips, try public transport. If you need to drive, there are ways to reduce your impact. Every small change helps to take pressure off our roads and reduces pollution.

- **Walking and wheeling:** Choosing to walk or wheel, whether for your entire journey or just a part of it, is a positive step towards improving air quality and your wellbeing. It's free and provides significant benefits for both physical and mental health. To support this, Greater Manchester is investing in enhanced street infrastructure, making public spaces more inclusive, accessible and user friendly. These improvements are designed to ensure that everyone can travel safely and comfortably. You can find schemes nearby on [the TfGM Bee Active webpage](#).
- **Cycling:** Cycling can be a great way to boost both your physical and mental health. If you need some advice or don't know where to start find everything you need to know about buying, hiring or borrowing a bike by following [this link to the Bee Active - Get a Bike website](#).

Get a better bike for less through the 'Bike to work' scheme. It doesn't cost your employer anything to join this scheme, in fact it saves them money! So, if they don't offer it, it shouldn't be hard to persuade your boss to sign-up. Find out more here [at the Gov.uk Cycle to work scheme guide](#).

- **Public Transport:** The Bee Network is GM's vision for a joined-up transport network, getting our people, communities and businesses where they need to be. GM bus fares are capped at £2 for adult single 'hopper' tickets, and £1 for children, these can be used to travel on other Bee Network buses, for no additional cost, within 60 minutes. Daily tickets for adult travel are still £5 and £2.50 for children. The Bee Network will be a one-stop shop for all local journeys. Whether you catch the bus, tram, train or walk, cycle or wheel, it will be:
  - Easier to get around, with joined up services.
  - Great value, with capped fares and flexible tickets.
  - Simple to plan, with easy-to-understand passenger information.
  - Accessible and available to everyone.
  - More reliable and more sustainable.

**If you have to drive:**

- **Park & Ride:** GM has a large Park & Ride network so you can cut down on driving, then catch the bus, tram or train. Parking is always free with the right public transport ticket. Find out more at this [link to the Bee Network Park and Ride page](#).
- **Car share:** If you and a colleague (or two) can share the commute, it is an easy way to take unnecessary car journeys off the road, and you could split the cost.
- **Consider going electric:** It could help reduce emissions and save money on fuel and maintenance. Check out the [link to the GM Electric Travel website](#).
- **Don't drive under pressure:** Looking after your car and simple things like topping up tyre pressures can save you money in fuel and will reduce harmful emissions.
- **Switch your engine off:** Not leaving engines running when stopped for 30 seconds or more can improve air quality and save you money. Turning your engine off and on again, instead of idling, doesn't damage your engine, drain the battery or waste fuel. In fact, it can be much better for the health of your engine than idling. Idling for just 10 seconds wastes more fuel than restarting the engine.
- **For more tips check out the [Clean Air GM Be the Change webpage](#).**

**Leisure Travel**

We are making it easier to choose public transport and active travel to support our communities and help our environment. For everything you need to plan your journey go to [the Bee Network website](#) or [download the Bee Network app powered by TfGM](#).

- **Bus:** Find out what is leaving soon, how to plan your journey and buy tickets through [this link to the Bee Network bus page](#).
- **Cycle, walking and wheeling:** Let's get moving! Find out how we can help you to move more, whether it's a trip to the shops or the school run, there's plenty of help to get you started at [this link to the Bee Active website](#).
- **Tram:** With 99 stops and a network of lines across Greater Manchester, the fully accessible Metrolink tram system is a key part of the Bee Network. Find everything you need to get around with [this link to the Bee Network tram page](#).
- **Train:** Eight commuter rail lines, covering 64 stations, are coming into the Bee Network starting from the end of 2026, delivering major improvements to stations, services and passenger experience. National Rail provides information for long distance journeys ([Link to National Rail website](#)) and money saving offers for choosing rail travel ([Link to Rail Days Out Guide](#)).

## Domestic Burning

If you use a log burner, stove or have an open fire, it's important to find out how to burn safely. Smoke releases tiny particles that can damage everyone's health. Even the cleanest eco-burners produce air pollution.

Not burning or reducing your burning is best, there may be healthier, greener and cheaper ways to keep your home warm. If you have to burn at home, following a few simple tips and rules will help you burn better and more safely:

- Install a Carbon Monoxide detector.
- Burn only dry, seasoned wood. Don't burn plastic, treated waste or wet wood.
- Look for the 'Ready to Burn' logo on packaging, [link to Ready to Burn website](#).



- Store wood in a dry, well-ventilated area.
- Keep your appliance and chimney clean. A professional sweep can give advice on using your appliance better.
- Speak with your stove manufacturer or installer for operating advice.
- If you have an older or inefficient stove or one that is too big, consider replacing it with a modern efficient model.

Most areas of Greater Manchester have Smoke Control Areas. There are rules in place about what you can burn at home, to protect our health and the environment.

For more information and advice visit [www.burnbettergm.co.uk](http://www.burnbettergm.co.uk).

There are also ways to help to improve air quality at home:

- When cooking with gas use the extractor or, including when burning candles and incense, opening a window can help to improve indoor air quality.
- Instead of bonfires, composting or your Council's garden waste collection service (where available) could be a better option.

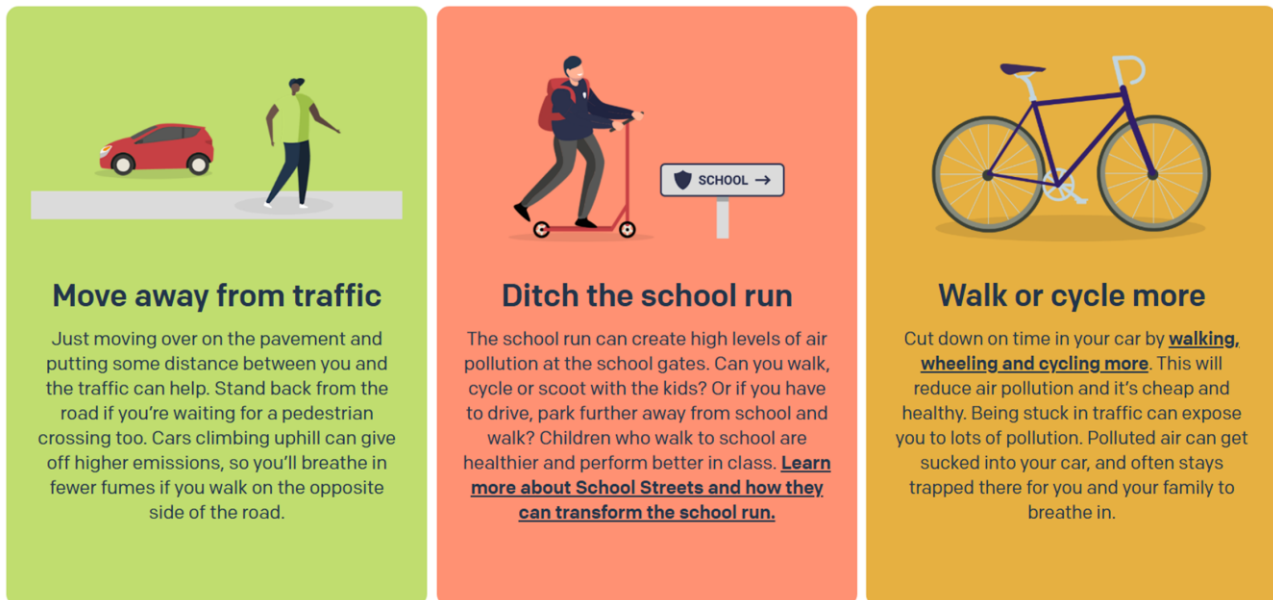
Remember it is important to heat your home appropriately to remain safe and healthy.

[This link to the GM Green City website](#) has information on Burn Better GM and advice on help available for heating bills or to improve your home insulation.

More information on our work to reduce fine particulate matter (PM<sub>2.5</sub>) across GM is in Section 2.3 (PM<sub>2.5</sub> – Local Authority Approach).

## Clean Air GM Website

The Clean Air GM website, Figure 0-19, is updated with information on the Clean Air Plan, air quality advice, mythbusting, data on local air quality and how you can play your part in reducing and avoiding air pollution. You can also sign up to receive alerts about forecasted air quality in your area. Follow [this link to the Clean Air GM website](#).



**Figure 0-19 - Clean Air GM section on 'top tips' to avoid and reduce air pollution**

## GM Air Quality Alerts

GM offers a free pollution alert service via [this link to the Clean Air GM Forecast & Alerts webpage](#). In 2025, there were 755 subscribers to the service. Table ES 0-5 shows the number of pollution alert subscribers by authority for 2025.

Work is on-going to improve the performance of the modelling supporting the AQ forecasting and to better understand trends through the year. Using the Daily Air Quality Index (DAQI) criteria, the majority of AQ Alerts in GM are triggered due to predicted elevated ozone levels. Note, not all alerts may be relevant to all GM districts.

Over the next 12 months we will be reviewing the service to better shape the future delivery of the service and gather feedback from current users, to assess its effectiveness and whether it is reaching those who may benefit most. This will incorporate findings from the Defra Air Quality Information System (AQIS) Review, to update the behavioural advice that accompanies the alert messages ([Link to Defra AQIS reports](#)). Find out how the short term health risks of air pollution are measured, and the effects of air pollution on human health via [this link to the GOV.UK DAQI information](#).

**Table ES 0-5 - Number of GM Air Quality Alert Subscribers by Authority**

<b>Authority</b>	<b>Number of subscribers in December 2025</b>
Bolton	91
Bury	24
Manchester	352
Oldham	11
Rochdale	41
Salford	56
Stockport	56
Tameside	22
Trafford	49
Wigan	53
<b>Total</b>	<b>755</b>

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# 1 Local Air Quality Management

This report provides an overview of air quality in Greater Manchester 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 Greater Manchester to improve air quality and any progress that has been made.

The statutory air quality objectives applicable to LAQM in England are presented in Appendix E: Summary of Air Quality Objectives in England 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 Greater Manchester can be found in Table 2-1. The table presents a description of the AQMA that is currently designated within Greater Manchester. Appendix D: Map(s) of Monitoring Locations and AQMAs provides maps of AQMA and the air quality monitoring locations in relation to the AQMA. The air quality objective pertinent to the current AQMA designation is:

- Nitrogen dioxide (NO<sub>2</sub>) annual mean

The 2016 AQMA for NO<sub>2</sub> covers areas across GM modelled to have an annual mean concentration greater than 35 µg/m<sup>3</sup>. The AQAP was produced following consultations and workshops with key stakeholders, including the GM local authorities, UK Health Security Agency (formerly Public Health England), Transport for Greater Manchester and National highways (formally Highways England), to gain feedback on the measures proposed.

GM, with the agreement of Defra, will not review the current AQMA and consequently the AQAP until the outcome of the GM Clean Air Plan has been determined. In January 2025, the government approved GM's investment-led, non-charging Clean Air Plan. The CAP was introduced to address ongoing roadside exceedances of annual average limit values for NO<sub>2</sub> in response to a UK government issued mandate to bring levels within legal limits in the shortest possible time. More information is available via [this link to the Clean Air Plan website](#).

In May 2025, Defra recognised that the requirements for LAQM and CAP are established under distinct and separate legal regimes. The reporting and assessment criteria for each differ, making it inappropriate to simply read across actions from the CAP to demonstrate projected compliance with the air quality objectives under the LAQM regime. Defra further

acknowledged that it is necessary to understand how successful the CAP measures are in addressing compliance at all locations and agreed to extend the requirement for a revised AQAP, provisionally, until June 2027, at which point they will reassess whether compliance has been achieved or whether a revised AQAP is needed.

For 2025 there were no LAQM exceedances of the NO<sub>2</sub> annual mean objective recorded in GM at relevant exposure sites, there were four in 2024. In 2025, Oxford Street (MA29ANO) in Manchester recorded the highest concentration of 38.6 µg/m<sup>3</sup>, when distance corrected for relevant exposure, the concentration was 35.8 µg/m<sup>3</sup>. This compares to 51.3 µg/m<sup>3</sup> and a distance corrected value of 46.8 µg/m<sup>3</sup> in 2024. Table 2-1 shows the number of years of compliance with the air quality objective for NO<sub>2</sub> annual mean.

Table 2-1 – Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	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
AQMA Greater Manchester	Declared 01/05/2016	NO <sub>2</sub> annual mean (40 µg/m <sup>3</sup> )	An area covering the ten districts of Greater Manchester, including arterial routes, district centres and airport.	YES	58.7 <sup>(1)</sup>	35.8 <sup>(2)</sup>	1 year	Greater Manchester Air Quality Action Plan 2016-2021 (16/12/2016)	<a href="https://cleanairgm.com/technical-documents/">https://cleanairgm.com/technical-documents/</a>

**Notes:**

(1) Manchester Oxford Road, Distance corrected.

(2) Manchester Oxford Street, Distance corrected.

**Greater Manchester confirms the information on UK-Air regarding their AQMA(s) is up to date.**

**Greater Manchester confirms that all current AQAPs have been submitted to Defra.**

## 2.2 Progress and Impact of Measures to address Air Quality in Greater Manchester

Defra's appraisal of last year's ASR concluded the report was well structured, detailed, and provides the information specified in the Guidance.

The GM authorities are grateful for the feedback received and have noted the following comments, which were provided to help inform future reports:

1. GMCA has provided a detailed list of action plan measures, with discussion split across its constituent councils and by individual measure. All relevant fields of Table 2.2 have been completed and progress against each measure is fully up to date. The Council has included many specific examples and additional metrics to measure progress. This level of detail is encouraged. GMCA should provide an updated in next year's ASR on whether compliance has been achieved and whether a revised AQAP is to be produced. **[Addressed in Section 2.1]**
2. GMCA have provided detailed trends of NO<sub>2</sub> concentrations within the borough over recent monitoring years which has been split into regions within the borough for focused discussion of pollution levels and their effects. This is commended and this level of detail should be carried forward into future ASRs. **[Comment noted]**
3. Pictures have been included throughout the document which helps provide additional context and allows for easier understanding, which is encouraged. **[Comment noted]**
4. GMCA have shown clear commitment to improving air quality in their region through implementation of extensive travel schemes, i.e. cycle schemes and EVs, and development of a new Clean Air Plan and updates on its progress should be include in next year's ASR. **[Comment noted]**
5. GMCA have worked closely with other authorities to complete this ASR, i.e. National Highways and Public Health England, which is welcomed. **[Comment noted]**
6. The Council have provided detailed ways for the local populace to engage in air quality improvement, including extensive travel schemes to help encourage the

public to use sustainable transport. The Council have also included the number of pollution alerts to help measure engagement, which is commended. **[Comment noted]**

7. GMCA have mentioned they are undertaking indicative PM<sub>2.5</sub> monitoring and will publish the results after project completion in 2026. This can be a useful tool to identify hotspots, respond to local resident's concern or track specific developments or actions; the additional monitoring is welcomed. GMCA are reminded that, as these monitors are indicative, they cannot provide any conclusions against the air quality objectives. It is recommended that the details and results of monitoring from these sensors are included as separate appendices in future ASRs. **[Comment noted. Report provided in Appendix F]**
8. The GMCA have included reference to the Public Health Outcomes Framework (PHOF) indicator for fractions of mortality attributable to PM<sub>2.5</sub> emissions to provide additional context as to PM levels in the district. Similarly, the Council also included reference to Defra background maps for additional context regarding background PM levels across Greater Manchester. This is commended. **[Comment noted]**
9. Robust QA/QC measures have been demonstrated and this should be continued in future ASR reports. **[Comment noted]**
10. The Defra Diffusion Tube Deployment Calendar has been largely adhered to and appropriate actions have been taken to data where it hasn't. **[Comment noted]**
11. The maps have been clearly labelled for each monitoring sites, easily showing their locations, but scale bars and north arrows could also be added for additional context. **[Comment noted – These are now larger to increase visibility]**

GM has noted and actioned feedback and comments from the previous ASR submission and incorporated them into this report.

GM has taken forward a number of 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 2-3. 39 measures are included, with the type of measure and the progress Greater Manchester 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 2-3.

More detail on these measures can be found in their respective Action Plans the GM AQAP, the GM Clean Air Plan and GM Five-Year Environment Plan.

Key completed measures are:

- Final tranche of bus franchising completed in Stockport, Tameside, Trafford and parts of Salford and Manchester. GM buses are under public control as part of the Bee Network. This allows low-emission vehicles to target the highest need areas.
- Investment-led, non-charging Clean Air Plan agreed by government in January 2025 and implementation is underway.
- Hackney Support Fund launched to upgrade taxi fleet. An £8m funding package to help eligible black cab vehicle owners upgrade to cleaner vehicles was opened, with 193 applications processed and £1.58m committed in non-repayable grants.

Greater Manchester expects the following measures to be completed over the course of the next reporting year:

- Greater Manchester is considering an additional fund to support private hire vehicle licensees to upgrade their vehicles to meet emission standards during the 2026/27 budget setting process.
- Several targeted local traffic interventions are being delivered to reduce NO<sub>2</sub> hotspots and improve the flow of traffic:
  - Speed reductions on A57 Regent Road.
  - Signal timing upgrades on the A57 Regent Road to improve traffic flow, reduce congestion and cut stop-start emissions.
  - Yellow box enforcement at key junctions across Regent Road and A34 Quay Street corridor, with cameras going live from January and February 2026.
- Completion of Defra-funded Burn Better PM<sub>2.5</sub> monitoring (extended to June 2026).

Greater Manchester's priorities for the coming year are:

- Review performance of the Clean Air Plan.
- Review existing AQMA and Air Quality Action Plan.
- Bus Improvements. Targeted deployment of low emission/zero exhaust emission buses on key public transport corridors.
- Review of the Air Quality Alert service to better focus how this service operates and to assess whether it meets the needs of those who may benefit most.
- Ongoing monitoring and analysis for the domestic burning project with investigation of PM<sub>2.5</sub> impact on Greater Manchester.

- Awareness raising. Work with residents, vulnerable groups and hard to reach communities to raise awareness of air pollution and actions to improve air quality.
- Partnership working with health colleagues and the voluntary sector to focus on managing air quality impacts across GM's diverse communities. Linking with NHS Net Zero Travel and Transport Strategy and integrated care board green plans.

Greater Manchester worked to implement these measures in partnership with the following stakeholders during 2025:

- Neighbouring local authorities
- National Highways
- Joint Air Quality Unit (JAQU)
- NHS Greater Manchester and Greater Manchester Public Health Network
- UKHSA
- Local bus operators
- Schools
- Residents

The principal challenges and barriers to implementation that GM anticipates facing are:

- Public understanding of air quality and actions to improve it.
- Local Authority resourcing to undertake actions in the AQAP.

GM anticipates that the measures stated above and in [Table 2-3](#) will maintain compliance in the GM AQMA for NO<sub>2</sub> by 2026.

The following section 2.2.1 details how GM and the 10 Local Authorities are working towards the Air Quality Action Plan 2016-2021 objectives. Although some may have been completed from an AQAP perspective, there is still ongoing work taking place to ensure GM is working towards improved air quality and becoming a sustainable region. The progress updates provided either address air quality improvements directly or as a co-benefit of other measures.

Some objectives require additional Local Authority reporting. Where this is the case, a narrative has been provided under the relevant Local Authority heading.

## 2.2.1 Progress on actions across Greater Manchester

### 2.2.1.1 Development Control and Planning Regulation

#### AQAP 1.1 - Construction Management Guidance

AQAP Action completed 2017.

#### AQAP 1.2 – Development Planning Guidance

AQAP Action completed 2017.

#### AQAP 1.3 – Cumulative Development Database

AQAP Action completed 2017.

#### AQAP 1.4 – Clean Air Zone Appraisal

This action is covered by the GM Clean Air Plan which is coordinated by TfGM in partnership with the 10 GM Local Authorities. Government agreed the Clean Air Plan in January 2025; updates are available via [this link to the Clean Air GM website](#). In 2019, air quality monitoring data showed 129 locations of nitrogen dioxide exceedance. This has now fallen to 11 sites across the city region, down from 38 in 2024.

#### AQAP 1.5 – 20 mph Zones

Each local authority has provided their own update below.

#### AQAP 1.6 – Encouraging Travel Planning

GM works with employers to enable them to assess workforce travel habits and encourage uptake of more sustainable modes through direct engagement and free resources on TfGM's website. TfGM hosts business-focussed resources on the dedicated [Travel planning for employer's webpage \(link in text\)](#), it includes simple tools and support to enable more sustainable staff travel. TfGM host a Business Transport Advisory Council, to bring a business and employer voice into the development of the Bee Network.

Night bus services are expanding across Greater Manchester, offering more sustainable options for shift workers and supporting the nighttime economy, which makes up a third of the region's economy, Figure 2-1. An employer forum supported the development of these services.

# 24/7

Pilot of **24/7 bus services** launched, reinstating night time connectivity to the north-west of Greater Manchester for the first time in over a decade.

# Improved routes

Changes have already been made to around **75 routes** to provide earlier, later, more frequent and better connected services.

**Figure 2-1 – Night Bus Services and Improve Routes**

## **AQAP 1.7 – Taxi & Private Hire Licensing**

In January 2025, the government accepted the assessment that an investment-led, non-charging Greater Manchester Clean Air Plan will achieve compliance with nitrogen dioxide levels on the local road network in the shortest possible time and by 2026, and Greater Manchester will not need to implement a charging Clean Air Zone.

When assessing the investment-led plan, the government decided that the full £30.5m funding proposed for a Clean Taxi Fund was not needed, as legal compliance was still

predicted in 2026 without the full fund. However, the government agreed to provide £8 million to help upgrade Greater Manchester’s hackney carriage fleet, Figure 2-2. The Hackney support fund opened in December 2025 ([link to the Support Fund website](#)). Alongside this, work began in Greater Manchester to explore how private hire vehicle (PHV) can be supported to make the switch to cleaner vehicles.

Greater Manchester’s ten local authority leaders endorsed plans to allow all hackney and private hire vehicle PHV drivers more time to upgrade their vehicles, by extending the emission compliance date from the end of 2025 to 31 December 2026 and allowing licensed vehicles to remain in service up to each authority’s maximum age limit.



**Figure 2-2 – EV Taxi in Wigan**

## **AQAP 1.8 – Green Infrastructure**

Each local authority has provided their own update.

### **2.2.1.2 Freight and Heavy Goods Vehicles**

#### **AQAP 2.1 – TfGM Delivery and Servicing Plan (DSP) Toolkit**

AQAP Action completed 2022.

#### **AQAP 2.2 – Urban Distribution Centres**

Amazon use e-cargo bikes out of the Trafford Park delivery hub, part of a five-year £300 million investment in electrifying and decarbonising their UK transportation network, and e-cargo bikes and walkers are expected to make more than two million deliveries a year. These deliveries will replace traditional delivery vans, reduce city traffic congestion and improve air quality. These issues were discussed at the 2026 GM Freight Forum.

### **AQAP 2.3 – Urban Consolidation**

Linked to AQAP 2.2. Plans will be set out in the forthcoming Local Transport Plan in relation to urban consolidation.

### **AQAP 2.4 – Access for Freight to Key Economic Centres and Sub-regional Freight Facilities**

The Greater Manchester Transport Strategy 2050 will provide guidance at a strategic, multi-modal level (relating to both potential and progress). TfGM are currently analysing consultation responses the resultant freight policy and strategic direction will be incorporated into the forthcoming GM Local Transport Plan.

### **AQAP 2.5 – Freight Information Channels**

TfGM are a partner in CLOCS (Construction Logistics & Community Safety) and FORS (Freight Operator Recognition Scheme) to bring benefits to safety and the environment. TfGM have reinvigorated the GM Freight Forum to bolster two-way engagement with the industry on environmental matters.

### **AQAP 2.6 – Diesel Transport Refrigeration Units (TRUs)**

Action paused due to resource prioritising on other projects, however, focus on this has been included in the updated Greater Manchester 5 Year Environment Plan, launched in December 2024.

### **AQAP 2.7 – Engine Idling**

Each local authority has provided their own update.

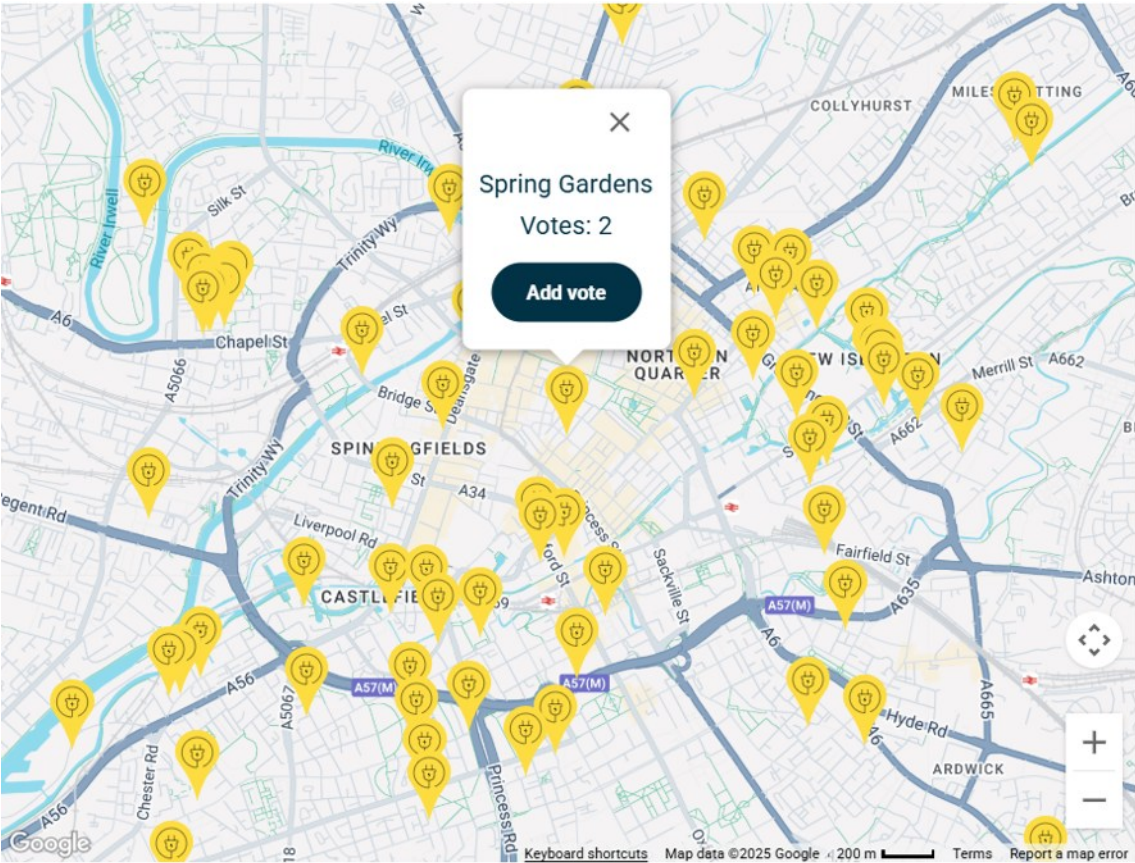
### **AQAP 2.8 – Alternative Fuels**

Information on electric vehicle travel options within the region are available via [this link to TfGM Electric Travel webpage](#). This resource was created by TfGM to give residents and businesses confidence in making an informed decision when switching to EVs, e-cycles and e-scooters, Figure 2-3.

The website has information on home chargers, energy tariffs and if there are government grants available to get them up and running. Interactive maps of charging locations show their availability, with a feature allowing residents to request a charge point to be installed in their area, other users can then vote to support the location, Figure 2-4.



Figure 2-3 - The TfGM Electric Travel Webpage



Suggest charging point location

Figure 2-4 - Example of the Interactive Map for Residents Showing Suggestion for a New Charge Point Location

## Local Electric Vehicle Infrastructure (LEVI) Scheme

Like many local authorities across the country, GM was awarded LEVI funding to facilitate EV growth within the region, thanks to the Office for Zero Emission Vehicles. This funding has specific criteria to provide infrastructure for on-street parking in areas that are not necessarily commercially viable. The project team at TfGM are continuing work with the 10 local authorities to deliver the project by procuring a Charge Point Operator (CPO) to install the assets across the region. Due to the length of the contract, it is essential that a suitable CPO is appointed and as such the process to complete this has taken longer than originally anticipated. Further updates will be provided in next year's ASR.

### 2.2.1.3 Buses

#### AQAP 3.1 – Bus Priority Programmes

Bus Infrastructure is a core element of the £219m City Region Sustainable Transport Settlement (CRSTS) investment programme currently being progressed with local authority partners. The programme includes:

- 'Improving Journeys' corridor schemes, improving bus routes between key destinations in GM.
- 'Bus Pinch Points and Maintenance,' improving performance of GM bus routes.
- 'Bus stop improvements,' improving the quality of our bus stops.

Several schemes have been delivered through this programme, while the remainder is progressing to business case development. To date, we have delivered the following:

- Bus signal priority at 149 junctions to improve bus reliability and speeds
- Signal technology improvements at 33 junctions to prioritise bus journeys
- Measures to better manage parking on 25km of key bus routes
- 7.3 km of bus lane and other bus priority renewals
- Bus lane enforcement cameras.

Bus users on the Leigh to Manchester (via Salford) route benefited from improvements to reliability and journey times following implementation of Greater Manchester Bus Priority Programme, Figure 2-5. Business cases are currently being progressed on a further 15 schemes to enable delivery of further bus priority measures.



**Figure 2-5 - The Leigh to Manchester (via Salford) route benefited from the Greater Manchester Bus Priority Programme**

### **AQAP 3.2 – Bus Improvements**

In 2025, the 390 zero-exhaust emission buses on the road, nearly a third of the fleet, prevented an estimated 23,000 tonnes of CO<sub>2</sub> and 84 tonnes of nitrogen oxides annually. Around 300 more electric buses will join the fleet in the coming months, part of a plan to have 1,300 electric buses on the city region's streets, potentially preventing over 76,000 tonnes of CO<sub>2</sub> and 280 tonnes of nitrogen oxides each year. The aim is to have a fully electric bus fleet by 2030.

### **AQAP 3.3 – Hybrid Bus Improvements**

AQAP Action completed 2023.

### **AQAP 3.4 – Trial of Low-Emission Vehicles**

AQAP Action completed 2023.

#### **2.2.1.4 Cycling**

### **AQAP 4.1 – Cycling Programmes**

By the end of 2025, 161 km of Active travel routes to Bee Network standard had been built (routes with cycling, walking and wheeling provision), with 32 km added in the year.

Junctions and crossings are amongst the main hazards that can deter walking and cycling. More than 20 entirely new protected junctions have been created since the programme

started. They enable people to get where they need to go safely by foot or by bike, such as the protected junction installed at the busy intersection of Deansgate/Whitworth Street in spring 2025.

In 2023, 189 of the 1,362 signal-controlled junctions in Greater Manchester had no 'green man' controlled pedestrian crossing. A further 282 were substandard, in that they didn't have facilities on all arms or were missing important facilities like tactile signals. Since then, 26 crossings were installed with improved waiting times at other sites.

The completion of the Chorlton Cycleway in April 2025 means that it's now possible to cycle, completely separated from traffic, all the way from Deansgate in Manchester city centre, a distance of 6 km.

Wigan completed several off-road cycle and pedestrian routes in 2025 including the Standish Western Route which offers traffic free access to schools and the local high street from large new housing estates as well as onward links to Wigan town centre.

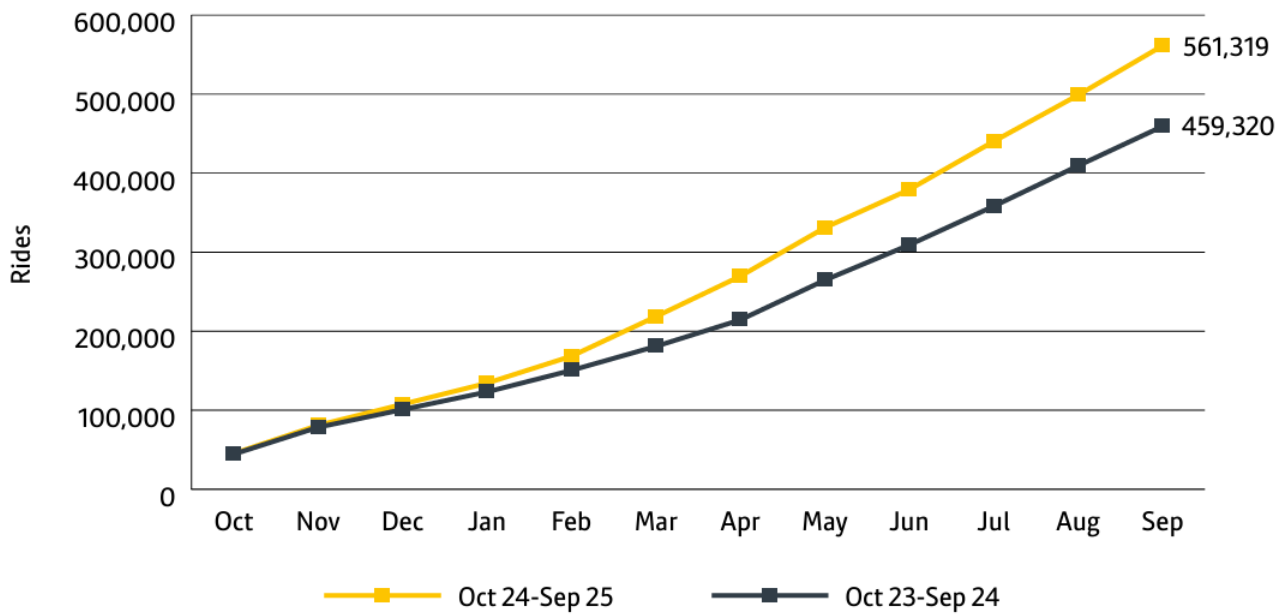
Recently completed work in Oldham town centre includes Snipe Gardens which provides an attractive public space, sustainable drainage and direct pedestrian access to the bus interchange. A linear park extending from the Tommyfield Market site through to St Mary's Way incorporates cycle and walking routes and sustainable drainage into the park.

#### **AQAP 4.2 – Public Cycle Hire**

After GM's launch of public cycle hire in November 2021, it expanded in 2022 and 2023 throughout Manchester, Salford and Trafford, and now has over 2,500 stands. Plans to relocate approximately 30 existing stations are being prepared, some of which will extend the footprint, allowing the scheme to grow and increase usage from new areas.

Usage has exceeded expectations, from an average 1.86 rides daily per bike since November 2021 to just over 2 in 2025. This represents over 1.78 million total rides and 4.35 million km ridden. 504,807 rides were made from January to October 2025. This is about 29% higher than in January to October 2024, Figure 2-6. The average ride per user per month has increased by around 6%, with growth coming from new users and existing users riding more frequently mainly since October 2025. The year-on-year linear increase in new users joining (and using) the scheme shows a steady increase and a current average of 1,729 rides per day for the last 365 days.

Usage is mainly driven by seasonal and weather conditions, although October 2025 saw a sharp increase which can be linked to bus operator industrial action.



**Figure 2-6 - Starling Bank Bike Hire Cumulative rides year to September 2025 compared with year to September 2024**

The percentage of survey respondents who had used a bike to commute to or from a regular place of work was 81% in 2025, up from 57% in 2024. Use for all other purposes was also up. 77% of survey respondents were satisfied with their experience using a hired cycle in Greater Manchester in 2025, up from 63% in 2024.

New e-bikes, with a new design, were introduced to the scheme in the spring/summer of 2025 and take the percentage of e-cycles from 20% to 50%, Figure 2-7.

Vandalism and theft have been challenging but kept under control in 2025 allowing the scheme to gather momentum unlike previous years. This is down to people reporting abandoned or stolen bikes, the operator recovering more bikes and regular Police interventions that have helped recover bikes



**Figure 2-7 - 300 new e-bikes joined the Starling Bank Bike fleet**

### **AQAP 4.3 – Cycle Logistics**

During 2022-2025, TfGM’s Community Access Grant offered funding to community organisations, small businesses, NHS healthcare providers and education providers to deliver cargo cycles, accessible/adaptive cycles and/or community innovation. 157 groups applied (bids totalled more than £1.1m) with £530k allocated to 78 organisations. The project expects to deliver 67 new cargo cycles enabling organisations to:

- Conduct day-to-day logistics and transit activities specific to the organisation, replacing or significantly reducing the reliance on a motor vehicle.
- Provide additional services or widen the support they can offer to their community.
- Offer community members access to cargo bike solutions for daily tasks.

### **AQAP 4.4 – Walking & Wheeling to 2040**

GM continues to take strides to increase walking and cycling under the guidance of Dame Sarah Storey, GM’s Active Travel Commissioner. The mission is built around three foundations (accessibility, behaviour change and communications and engagement), and has six priorities: infrastructure delivery, home to school travel, cycle hire and access to cycles, integration with public transport, road danger reduction and providing access to everyone. Progress is reported in the Active Travel in GM Annual Report (2025), which can be found via [this link to the report](#).

The Local Transport Plan and Delivery Plan are scheduled to be agreed and published in 2026, along with the Active Travel Action Plan. This document will detail strategies and actions aimed at promoting active modes of travel, such as walking and cycling, throughout the area.

Additionally, a map of the Strategic Cycle Network will be made available. This map will illustrate the planned cycling routes and infrastructure, supporting the region's commitment to enhancing accessibility and connectivity for cyclists.

### **2.2.1.5 Travel Choices**

#### **AQAP 5.1 – Car Clubs**

Work on a GM-wide car club was paused in May 2024. One local authority has since released a tender which received no bids and the number of Car Club vehicles in GM is in decline. The EV business case is weak and an approach requiring minimal investment is needed to demonstrate the demand for Car Club provision in GM.

#### **AQAP 5.2 - Dynamic Road Network Efficiency and Travel Information Systems**

TfGM continues to use its traffic signal asset to dynamically manage the network with more than 1 in 4 junctions now providing priority for public transport (both Bus and Metrolink). This signal network in GM comprises of:

- 2,500 sets of traffic signals (1,400 junction and 1,100 pedestrian crossings).
- Over half (1,400) run on adaptive control with signal timings varying depending on demand to help minimise delays.
- 118 sites include control of Metrolink trams, providing them with full priority.
- A growing number of sites (currently 250) include priority for late running buses with funding available for a further 140 junctions through CRSTS.
- 60 sets of signals are managed on behalf of National Highways to improve coordination across National and Locally managed networks.

Day to day management of the network includes:

- Urban Traffic Control (UTC) engineer working with TfGM's Operational Control Centre to monitor the network making changes to the signal timings when necessary.
- Working with local authorities both in advance and during roadworks to help minimise delays.

- Identify, develop and refine a range of signal strategies for known or recurrent demands on the network such as events and National Highways diversion routes.
- Review and evolve signal timings based on changes in land use, travel behaviour etc.

TfGM have been working with Google on an AI project to ensure signal timings are optimised to reduce stop-start traffic and emissions. This initiative has delivered local benefits where signal timings were adjusted.

TfGM's enhanced Operational Control Centre enables bus franchise operators, TravelSafe and GMP as well as comms and control centre colleagues from TfGM to be co-located, enabling a coordinated approach to managing the Bee Network.

Through the Christmas Market period, seasonal travel behaviour affected congestion levels across GM at retail and town centres and the Regional Centre. During December weekend volumes in the Regional Centre are 12% above typical, equivalent to an addition 90k journeys to, from, or through the Regional Centre. A programme of interventions was developed and delivered to manage seasonal congestion, events and travel demand. Messaging encouraged the use of sustainable modes with those visiting the Regional Centre advised not to drive on busy weekends.

Delivering greener events travel remains a focus of activity, The award-winning matchday bus network for Manchester City fans is set to grow after proving popular with fans. To cater for the growing level of demand, five extra buses will now be added to five of the busiest routes. The network serves areas with poor public transport options for the Etihad. The additional buses take the total number for weekend matchdays to 20 and the number of locations served to 82. Patronage on the network, which won the Innovative Sustainable Travel Project category at the 2024 Modeshift Awards, has grown by more than 30% over the last year, with around 700 people travelling on the buses each matchday. City supporters have made 22,000 journeys on matchday buses since the start of the initiative, with survey data showing a 2% shift from car to bus travel.

TfGM continues to use variable message signs for Park & Ride sites and special events across the region, promoting more sustainable travel. Four pop up park and rides to help people travel to and from Manchester City Centre at Christmas were launched in November 2025 offering 1,000 free parking and dedicated buses to Manchester city centre.

### 2.2.1.6 Cars

#### AQAP 6.1 – Plugged-in Places Electric Vehicle (EV) Network Charging

GM continues to experience significant growth in the EV charging network. The growth in private and publicly owned infrastructure has given residents and tourists more charging locations in GM, ensuring dense residential areas and leisure facilities are connected.

The existing Publicly Owned Infrastructure (POI) network is constantly monitored to understand usage and revenue. In 2025, TfGM's POI delivered over 1 million kWh, and 76,500 charging events were recorded, with an average of 19 kWh per charging event.

Across GM, 60 rapid chargers solely for taxi and private hire use were live by the end of 2024, Figure 2-8. Locations can be viewed via [the link to TfGM Electric Travel website](#). The dedicated taxi and private hire drivers have been opened to licensed drivers from outside the conurbation to boost utilisation.



**Figure 2-8 – Taxi Rapid Charging Point Installation**

TfGM is working closely with the 10 LAs to develop a contract to procure a supplier in 2026. The aim of LEVI funding is to supply Electric Vehicle Charging Infrastructure (EVCI) to residents with no off-street parking and in areas not considered commercially viable. It is hoped that providing more infrastructure in these areas will increase EV usage and remove barriers to access and availability.

Supplier Owned Infrastructure has seen further development in 2025, with Greater Manchester showing as an attractive investment for EVCI. Across the whole of Greater Manchester, there are now over 1,800 charge points at over 50 locations. These charge points usually have multiple connectors, increasing availability for users. The speed of charge points varies across the network, from Slow (<3 kWh) to Ultrarapid (150 kWh) with a network of over 40 suppliers.

Greater Manchester expects further investment into 2026, which will be accompanied by the development of the LEVI scheme and Local Authorities progressing programmes using CRSTS funding. CRSTS programmes have commenced in Manchester and Trafford, where funding has been focused on Cross Pavement Channels and Street Lighting Charging (in Manchester) and a range of pedestal chargers (in Trafford). Circa 80 chargers/pavement channels will have been implemented by the end of March 2026 using CRSTS funding. These developments help to deliver the ambition to be net zero by 2038 and the goal of achieving a sustainable city region. In addition, Greater Manchester is preparing to roll-out a programme of Cross Pavement Channels using £1.9m Grant from the Office for Zero Emission Vehicles. The 10 GM local authorities, as the highway authority, are currently confirming their policy.

### **AQAP 6.2 – Car Use Allowance**

Each local authority has provided their own update.

### **AQAP 6.3 – Local Authority Parking Charges**

Each local authority has provided their own update.

### **AQAP 6.4 – School Travel**

School Streets restrict access to motor vehicles at school drop-off and pick-up times to promote active travel for the school run. They lead to healthier, safer and greener environments at schools, improving the air that children breath.

School Streets aims to support 70% of primary school students in Greater Manchester to walk, wheel, scoot or cycle to school by 2030. For secondary school and further education students, the target is 80% students to walk, wheel, scoot, cycle or use public transport to travel to school by 2030. The programme has progressed to supporting 39 schools with School Streets, funded through the Capability and Ambition Fund 4 programme, with an additional 28 in development, totalling to 65.

TfGM continues to work with 10 Local Authorities to achieve the target of 100 School Streets by 2028, through the facilitation of robust monitoring and evaluation, qualitative impact and safer experiences for schoolchildren.

The Youth Travel Ambassador (YTA) programme empowers students to deliver active travel behaviour change campaigns within their schools, positively impacting air quality by increasing the number of students walking, wheeling and cycling, contributing to the reduction of car use and emissions. Students are empowered to deliver campaign

activities and initiatives such as Park and Stride schemes, Bikeability training, consistent active travel communications and many more, supporting the implementation of future school streets:

- 18 secondary schools currently participate in the YTA programme, over a period of five and a half years, with ambitions to continue this growth and development.
- The number of Ambassadors has reached 741 students, with 51 staff appointed as YTA Coordinators across all 18 schools

Modeshift STARS travel planning platform supports schools to identify travel barriers staff, pupils and parents might face in getting to school. Action plans are formed to address the issues and work towards long-term and sustained behaviour change.

- Achieved 169 sign-ups, showing an increase of 32 schools, with 14 accredited at the “good” level and two schools accredited at the “excellent” level.
- Through the free licenses available to all 10 local authorities, the platform aims to increase the number of approved travel plans, through quarterly workshops and monthly meetings with local authorities.

### 2.2.1.7 Information & Resources

#### AQAP 7.1 – Website and Online Resources

During 2025, [the Clean Air GM website](#) (link in text) was updated with the latest public information.

Promotional activity for the CAP was scaled back, with efforts directed towards implementing the government-funded Clean Air Plan measures. This was prompted by a government announcement in January, confirming that Greater Manchester would not be introducing a charging Clean Air Zone. As a result, reduced public interest meant that the website received fewer visits than in 2024:

- 25,803 people visited the site compared to 62,754 in 2024.
- 58,286 page views compared to 113,381 in 2024.
- Engagement rate was 54%.

The most visited pages in 2025 were:

- [Clean Air Plan homepage](#) with 22,390 page views (16,753 users)
- [Clean Air GM homepage](#) with 7,763 page views (5,680 users)
- [News article \('Government backs investment led plan for clean air' 23.1.25\)](#) with 2,313 page views (1,804 users)

Traffic to the site was spread evenly throughout the year. Two media announcements were made in January and July 2025, highlighting progress with the plan and reductions in NO<sub>2</sub> pollution. These announcements were supported by updates to the websites, local stakeholders and customer newsletters.

There was a spike in interest on 24 January (1,018 views). This was due to the media announcement and Clean Air Plan subscriber newsletter confirming that the government had backed the investment-led plan as the best route to cutting nitrogen dioxide air pollution, with no Clean Air Zone.

In July, the Data Hub was updated to include the most recent air pollution data for Greater Manchester, including to the map of diffusion tubes used for CAP and LAQM monitoring. A news release was issued and posted on the site and signposted by a customer newsletter, resulting in a small spike in visits to the site (520 views).


In November, a new [Hackney Support Fund webpage](#) was introduced on the site as the home for all information related to the Clean Air Plan £8 million fund, which opened in December. The page is designed to give eligible hackney carriage vehicle licensees all the information they need about the fund, so that they can apply for grants to upgrade to cleaner vehicles.


### **AQAP 7.2 – Online Route Finding**


The Journey Planner went live on the TfGM website in 2023 and the Bee Network app at the start of 2024. It shows the options available for each journey and associated distance and estimated travel time (example shown in Figure 2-9). If public transport is chosen, the tool displays real-time departures.


The live bus tracking tool, launched in March 2024, incorporates the bus location, upcoming departure times from a chosen stop and travel disruptions. 1.8 million buses are tracked by customers each week demonstrating the need for greater confidence in planning effective journeys using public transport.


22nd Jan | Dep 11:46 | Options


**From: Manchester United Footb...** 


**To: Manchester City FC** 


**Cycle**  
  
 Cycle the entire journey  
 Show details 45 min

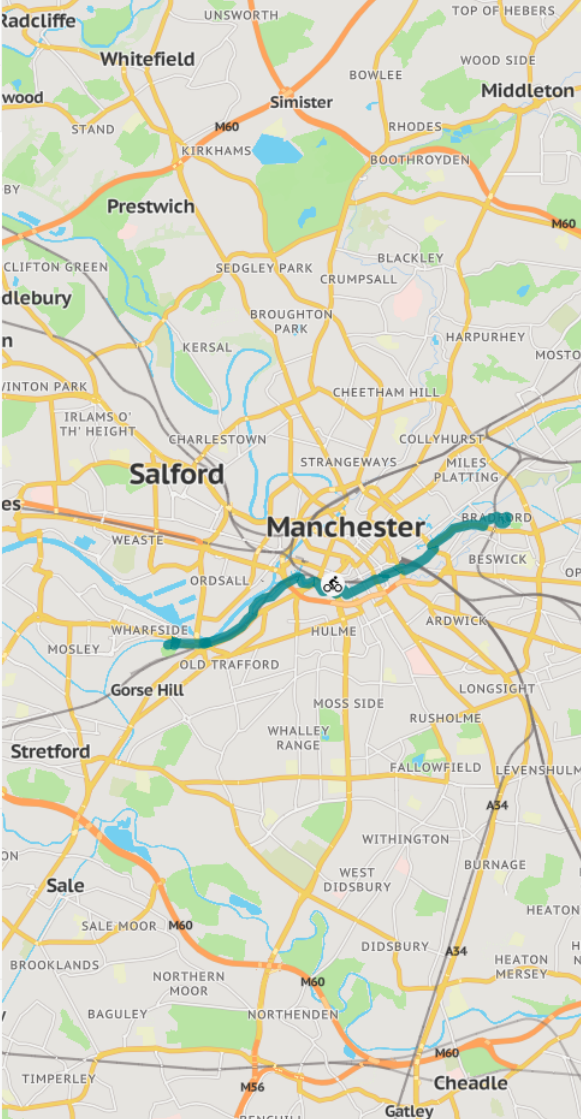
**Include cycle hire in your journey**  
  
 Hire a bike as part of your journey. [Download the app today.](#)  
 Show details | Fewer options 51 min

**Public transport**  
  
 Use bus, tram or train on your journey  
 Show details | Fewer options 39 min

**Public transport - Option 2**  
  
 Use bus, tram or train on your journey  
 Show details 39 min

**Public transport - Option 3**  
  
 Use bus, tram or train on your journey  
 Show details 39 min

**Drive**  
  
 Drive the entire journey  
 Show details 18 min



**Figure 2-9 - Example of the TfGM Journey Planner tool**

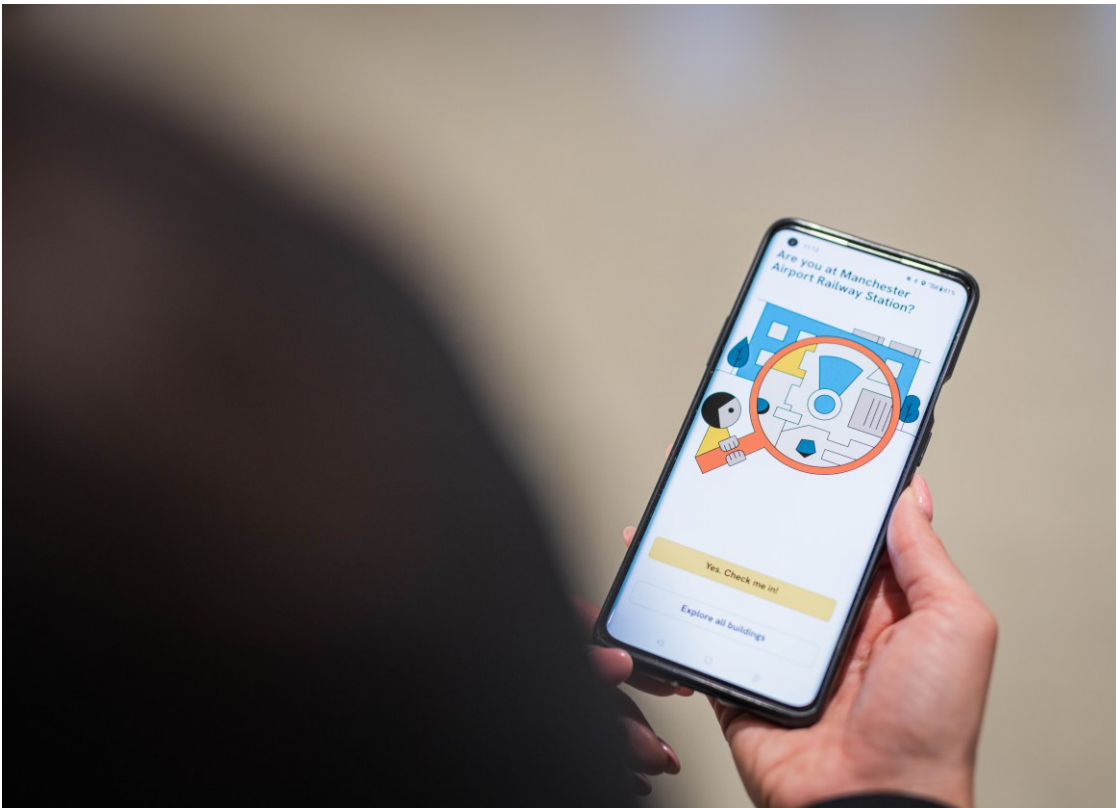
The Bee Network is trialling wayfinding technology to help visually impaired passengers to access and navigate public transport more easily. GoodMaps technology, accessed via a free app, is available to use at several transport hubs in Greater Manchester that started with a three-month trial running from March to May 2025. People can download the GoodMaps App to their [Android](#) or [Apple](#) device.

Using information gathered by camera-based positioning, GoodMaps provides turn-by-turn directions to key destinations such as bus and tram platforms, accessible toilets, food and drink kiosks, emergency help points and more, Figure 2-10. It has been designed to help people with visual impairments, hearing impairments and people who require step free access navigate busy public spaces that are not covered by GPS technology. It is also helpful for people with luggage, bulky items and those whose first language isn't English.

GoodMaps is available in the following Bee Network locations:

- Bolton Interchange and train station
- Manchester Victoria Metrolink stop and train station
- Manchester Piccadilly Metrolink stop and train station
- Manchester Airport Metrolink stop and train station
- Shudehill Interchange

TfGM is working with its Disability Design Reference Group as part of the trial, as well as other groups representing older people and those with visual, hearing and mobility impairments. It comes as part of the continued focus to make the Bee Network as inclusive and accessible as possible. This work includes engagement with charities and passenger groups across the city region to inform the ongoing transformation of the public transport and active travel network.



**Figure 2-10 - The GoodMaps app in use at Manchester Airport station**

### **AQAP 7.3 – Air Pollution Alert**

The Air Quality Alert service has been in operation since 2019. The number of subscribers increased to 755 during 2025, with the majority requesting an alert for Manchester. In 2025 most alert triggers were for ozone.

Work is on-going to review how this service operates, to assess whether it is reaching those who may benefit most from receiving this information, and actions taken as a result of receiving an air pollution alert. Work is also underway to improve the quality of the messaging provided to those signed up to the alerts, to align with best available evidence as per recommendations from the Defra Air Quality Information System Review ([Link to AQIS reports](#)).

#### **AQAP 7.4 – Health Effects of Air Pollution within Greater Manchester**

Although planned work for AQAP 7.4 has been achieved, due to the importance of air quality on health, GM continues to collaborate with local and national partners in this area. A Health-themed Air Quality Working Group has been established including representatives from TfGM, UKHSA, Public Health and NHS GM. The group meet bi-monthly to maximise the benefits of work happening across the system, ensure workstreams are aligned and public health messaging regarding air quality for GM is evidence-based and consistent across all partners.

Future work will include developing the advice, actions and recommendations supporting the AQ Alerts Service to raise awareness of the health impacts of air pollution and reduce inequalities in those impacts. This could include collaborating with health and care providers to integrate the use of the DAQI within services, targeting at-risk individuals.

#### **AQAP 7.5 – Contingency Response Plan**

Greater Manchester Resilience Forum has robust multi-agency plans in place to respond to major incidents within Greater Manchester and surrounding Local Resilience Forums, including those impacting air quality such as major fires and heatwaves. The plans detail multi-agency structures which can be activated as needed, bringing together partner agencies who can provide expert guidance and tools to monitor air quality and develop a comprehensive public communications plan tailored to each situation.

#### **AQAP 7.6 – TfGM Air Quality Team**

TfGM continues to work on projects internally, across the GMCA family and with the 10 GM local authorities to improve air quality across the region, to support ongoing work and to develop collaborations with relevant stakeholders.

TfGM air quality officers attend meetings with community groups, local business and stakeholders to provide updates on local air quality and actions that can be taken to improve it.

Every quarter, TfGM chair the Greater Manchester Air Quality Working Group, a group active for over 40 years, set up to tackle challenges around air quality in the region. The group has representatives from each local authority and invitees from ongoing projects, supported by the Director of Public Health (with lead responsibility for air quality).

The Defra funded PM<sub>2.5</sub> project is ongoing and provides monthly and quarterly reports on indicative air quality recorded at each monitoring site, along with other information such as transboundary contributions, giving valuable insight into air quality trends across the year and its sources.

TfGM manage the Clean Air GM Data Hub, hosting monitoring data and forecasts, and the GM Air Quality Alerts. TfGM, with the 10 local authorities, respond to requests for air pollution information and seek robust evidence-based responses from technical experts.

The Greater Manchester Air Quality Working Group completed re-tendering of the Data Management and Service and Maintenance contracts for the Greater Manchester Air Quality Network, the automatic monitoring network of 24 locations across the region.

### **AQAP 7.7 – Air Quality Monitoring Database**

The Clean Air GM Data Hub is updated with the most recent air pollution data for GM to inform stakeholders about current air quality. The data comes from non-automatic (diffusion tube) and automatic sites on the GM Air Quality Network.

### **AQAP 7.8 – Traffic Flow Data**

During 2025 TfGM has operated an Automatic Number Plate Recognition (ANPR) network across GM. This data on vehicle fleet mix and taxi frequency, has been reviewed by the CAP to understand road vehicle emissions and their contribution to areas of poor air quality. It is being used during the monitoring and evaluation phase of the CAP, along with NO<sub>2</sub> monitoring data, to determine progress and inform potential options for adaptive planning where a potential risk of exceedance is identified for 2026.

### **AQAP 7.9 – Awareness Raising**

Each local authority has provided their own update.

## **2.2.2 Progress on actions for Bolton Metropolitan Borough Council**

### **2.2.2.1 Development Control and Planning Regulation**

#### **AQAP 1.1 – Construction Management Guidance**

Bolton Council requires Construction Environmental Management Plans (CEMPs) to be submitted and adhered to for large developments where dust and noise emissions may be a concern. These are required through the development control system and conditions are imposed requiring appropriate measures to be undertaken. Relevant measures to reduce emissions from the building works, including (but not limited to) measures such as wheel cleaning/wheel washes, damping down of haul roads and stockpiles and inspections off-site to ensure that there are no visible emissions of site. In 2025, CEMPs for 22 large sites in the Bolton area were assessed.

### **AQAP 1.2 – Development Planning Guidance**

The Council adopted a new planning validation checklist in December 2024 setting out in detail which developments require an air quality assessment, it is available via [this link to the Bolton Local Validation Checklist](#). Air quality assessments are required for significant developments, such as large residential developments, industrial estates, combustion processes and large retail premises. The air quality assessments are considered to determine whether the proposed development would have a significant impact on air quality in the area. It is a requirement that the Air Quality Assessment should:

- Demonstrate future occupants of the residential development would not be at risk of harm due to poor air quality and how any residual risks would be mitigated.
- Demonstrate that the development would not exacerbate any existing air quality issues and how any residual risks would be mitigated.

### **AQAP 1.5 – 20 mph Zones**

The Council introduced 20 mph zones outside schools several years ago as a safety measure to reduce speeds and prevent accidents. The majority of these are variable 20 mph zones that are activated at school start and finish times, without hard measures such as speed bumps. There are no plans to introduce new 20 mph zones in Bolton for air quality purposes.

### **AQAP 1.6 – Encouraging Travel Planning**

Conditions are imposed on major planning applications requiring the implementation of travel plans. The types of development requiring travel plans include schools, industrial estates and some residential developments. The Planning validation checklist and Accessibility, Transport and Safety Supplementary Planning Document set out where a Travel Plan is required. The aim is to reduce car use, particularly single car occupancy use, and increase walking, cycling and public transport access to new developments.

Bolton Council adopted a new Transport strategy in July 2024, which can be viewed through [this link to the Bolton Transport Strategy](#). One key objective of the strategy is to be environmentally responsible in Bolton by lowering carbon and improving air quality.

### **AQAP 1.8 – Green Infrastructure**

Bolton Council continues to work with City of Trees ([Link to City of Trees website](#)) in relation to identifying suitable locations and planting trees in the borough. 193 large trees, 3,033 small trees and 230 metres of hedgerow have been planted in Bolton. Since 2021 over 32 hectares of trees have been planted. Whilst most of these trees are not located adjacent to busy roads they do make a positive contribution to the urban environment.

The 2024 ASR reported that Bolton Council was successful in a funding bid from the Green Heat Network Fund. £11 million was awarded to develop a district heating system in the town centre, unfortunately no compliant bids were received to implement the scheme and therefore the proposed scheme will not be developed further.

### **2.2.2.2 Freight and Heavy Goods Vehicles**

#### **AQAP 2.7 – Engine Idling**

Bolton Council receive a handful of complaints each year about engine idling, which are dealt with informally by providing advice. The Council does have an enforcement toolkit available designated to issue fixed penalties under the Road Traffic (Vehicle Emissions) (Fixed Penalty) (England) Regulation 2002 if persistent offenders are identified.

### **2.2.2.3 Cars**

#### **AQAP 6.2 – Car Use Allowance**

Car allowances within the Council are only paid for essential journeys, car parking charges are only paid in exceptional circumstances, which encourages people to walk/use public transport for appointments in town and district centres. People are encouraged to host and attend meetings using teleconferencing rather than in-person to reduce the need to travel. The Council has invested in tele-conferencing facilities (screens, speakers etc.) to improve the capacity for hosting remote meetings.

#### **AQAP 6.3 – Local Authority Parking Charges**

On street parking charges for short and long stay parking bays increased slightly from June 2025. Most on street parking bays are only chargeable during daytime only and are

free in the evenings and on Sundays. Any surplus from parking charges is invested into highways maintenance.

### **AQAP 6.4 – School Travel**

St. Peters school in Farnworth introduced the first School Streets initiative in 2023. The scheme closes roads around the school, encouraging families to walk and cycle rather than use cars, thereby reducing emissions. Since then, St Bede’s Academy have started work on a School Streets scheme and the Council is working with a further eight primary schools to develop similar schemes.

The Council offers a Bikeability scheme to schools to encourage safe cycling by pupils to and from school and in the wider community, [link to Bikeability Bolton](#). In 2025, 3,385 Year 6 children completed Bikeability training.

Bolton’s newly adopted Transport Strategy sets out priorities to encourage active travel, particularly to and from schools.

### **2.2.2.4 Information & Resources**

#### **AQAP 7.9 – Awareness Raising**

Throughout 2025, social media was used to try and improve the air quality in Bolton by raising awareness. The focus of this was raising awareness of The Burn Better campaign. This was regularly promoted to encourage residents who use solid fuels to choose the right fuels for their appliance and to operate it correctly to reduce air pollution. Information on air pollution and transport, particularly around active travel is published on the Council’s website, which can be viewed at [this link to Transport and Travel – Bolton Council](#).

### **2.2.3 Progress on actions for Bury Metropolitan Borough Council**

#### **2.2.3.1 Development Control and Planning Regulation**

#### **AQAP 1.1 & 1.2 – Construction Management Guidance / Development Planning Guidance**

- Air Quality Assessment Reports are requested for major developments where the impact of local air quality may be significant.
- EV charge points for all residential and commercial (with car parking spaces) developments are required through the planning and building regulations approval process.

- A policy on Air Quality and Pollution Control with the aim of preventing both new and existing development from contributing to, or being adversely affected by, unacceptable levels of pollution and poor air quality is set out within the Draft Bury Local Plan (March 2025). Under this policy, applicants would have to submit a Pollution Assessment.
- Places for Everyone (2024) includes a policy which requires planning applications to submit air pollution data so that development is only permitted where air quality would be acceptable, or provide suitable mitigation, and restricts developments which would generate significant point source pollution.
- New Town Centre Plans include air quality considerations.

### **AQAP 1.5 – 20 mph Zones**

Three further 20 mph speed limit schemes were introduced at the following locations in 2025:

- i) Church Street area, Bury – proposed 20 mph Zone featuring traffic calming measures.
- ii) Charlton Avenue, Prestwich – School 20 mph speed limit area.
- iii) Clough Street, Radcliffe – School 20 mph speed limit area.

### **AQAP 1.6 - Encouraging Travel Planning**

Travel Plans are required and submitted with certain planning applications.

The Council's full-time Active Travel Activation officer is continuing to encourage behaviour change and the use of new infrastructure. This post has funding for an additional 12 months to cover 2025/26 and will be extended into 2026/27.

[Bury's Local Transport Strategy \(2023\)](#) (link in text) sets the strategic direction for travel and mobility within Bury. The investment priorities set out within the Bury Transport Strategy promote health and wellbeing through active travel and help meet the borough's commitment to having fossil-fuel free travel by 2038.

### **AQAP 1.8 – Green Infrastructure**

- Places for Everyone and the Draft Bury Local Plan set out plans for the borough's green infrastructure.
- Our new town centre redevelopments are progressing and will include green space provision (Bury, Prestwich, Radcliffe and Ramsbottom).
- The council has planted 580 whips and 79 standard trees as part of its woodland creation activities.

- The Council is working with City of Trees to establish an Urban Forestry Hub in Barnfield Park.
- The Council now has 15 Green Flag Sites, including 13 parks and 2 cemeteries.
- There is ongoing active engagement between the Parks team and local communities.
- City of Trees projects are on-going across Bury as well as other local action groups championing action and engagement.
- Bury Council has published a biodiversity strategy following a consultation in 2024. It is available via [this link to the Biodiversity Strategy document](#).

### 2.2.3.2 Cycling

#### AQAP 4.1 – Cycling Programmes

##### Fishpool and Pimhole Bee Active Travel Scheme – Phase 1

Installation of new signalised pedestrian and cycle crossings, along with traffic-calming measures such as modal filters, quiet streets, and vehicle chicanes, example shown in Figure 2-11. These interventions aim to create safer, low-traffic neighbourhoods that support walking and cycling as alternatives to short car journeys.



Figure 2-11 - Part of Phase 1 Scheme in Fishpool

### **Spring Lane CYCLOPS Junction Upgrade (Radcliffe)**

Completion of a new CYCLOPS junction outside Radcliffe Metrolink Station, improving safe access for pedestrians and cyclists travelling to the new STAR Academy site. The design prioritises active travel movements and reduces conflict with motor traffic.

### **Milltown Street Cycle & Pedestrian Bridge (Radcliffe)**

Delivery of a new 48-metre single-span bridge replacing the structure lost during the Boxing Day floods, shown in Figure 2-12. The £3.2m reinstatement project provides a key active-travel link across the river, supporting sustainable travel connectivity in Radcliffe.



**Figure 2-12 - Installation of the new Milltown Street Bridge**

### **Fishpool and Pimhole Bee Active Travel Scheme – Phase 2**

Ongoing development of large-scale active-travel improvements, including new signalised crossings, segregated cycle lanes along Market Street, and further CYCLOPS junction upgrades, Figure 2-13. These works will significantly enhance the safety and attractiveness of non-car travel in the area.



**Figure 2-13 - Part of Pimhole Phase 2 Scheme**

### **Pinfold Lane / Bury New Road Junction Upgrade**

Introduction of signalised pedestrian crossings on all arms of the junction to improve safety and encourage walking as a viable alternative to short vehicle trips.

An award scheme called Modeshift STARS has been implemented. This award will be granted to schools or other establishments where pupils/users change travel mode to active travel/public transport. Bury has 6 schools and 2 healthcare settings with accreditations for Modeshift STARS, Figure 2-14.



**Figure 2-14 – A Modeshift STARS session in action**

TfGM Learn to Ride and Road Rider Ready training courses are available for free and delivered fortnightly in Clarence Park (TfGM's North Manchester hub for training). 177 courses were delivered in 2025/26.

A weekly Bike Hospital has been set up at Clarence Park where Bury families can come to have their bikes repaired. A Bury Bike Hospital information poster is shown in Figure 2-15.

Dr Bike Days are held within schools, colleges, and businesses. In 2025, 292 bikes were repaired.

79 bike maintenance courses were delivered in 2025/26 by the [Nationwide Cycling Academy in Whitefield \(link in text\)](#).

The 'Wheels for All' programme is continuing at Clarence Park and is now active at Bury Athletics Club.

The 'Let's Get Bury Moving' strategy heavily leans on active travel and climate change, more information is available via [this link to the Let's Get Bury Moving Physical Activity Strategy](#).



Figure 2-15 - Bury Bike Hospital information poster

## **AQAP 4.2 – Public Cycle Hire**

Bike Libraries have opened at Clarence Park, Radcliffe and Openshaw Park, Bury and Bury Library. Bury has applied for funding for a bike library at the Phoenix Centre, Prestwich and conversations started for a new bike library at the proposed Live well hub in Whitefield.

### **2.2.3.3 Travel Choices**

#### **AQAP 5.1 – Car Clubs**

Currently considering the potential options for introducing car clubs in relation to town centre regeneration schemes where suitable

### **2.2.3.4 Cars**

#### **AQAP 6.1 – Plugged-in Places EV Charging Network**

Bury are working with TfGM and other GM councils to use City Region Sustainable Transport Settlement and Local Electric Vehicle Infrastructure funding to appoint a supplier to deliver a comprehensive network of fast charge points throughout GM. These charge points will be to serve those residents without access to off street parking.

#### **AQAP 6.2 – Car Use Allowance**

Bury council operate a bike travel allowance scheme.

#### **AQAP 6.4 – School Travel**

The School Streets scheme at Guardian Angels RC Primary is still operational and several other schemes are now being developed.

Bury Council's Public Health Team have developed their Bury Active School Award, and 18 schools have received accreditation.

St Lukes, St Luke with St Mark, St Marys RC, Cams Lane and St Johns Radcliffe have had air quality assemblies delivered by Performance in Education. The Performance in Education sessions provide theatrical performances that help young people understand more about their opportunities, choice, risks and consequences in relation to air quality. Two secondary schools signed up to the Youth Travel Ambassador scheme. This programme empowers the students themselves with the skills and confidence to address transport issues affecting their school community.

'Action for schools' sessions held at Bury Athletics Track. Action for schools supports Sensory-Motor, Social & Emotional benefits for children & young people with disabilities,

Figure 2-16. The adapted bikes provided a world of possibilities, offering a unique way to improve social connections, enhance cardiovascular health & develop motor skills.



**Figure 2-16 - An Action for Schools session at Bury Athletics Track**

Bikeability training is being carried out in schools to build cycle confidence. This is delivered by the Nationwide Cycling Academy (NCA) and offered to all Primary Schools and High Schools in the Borough. In the financial year 2025/26 Bury has provided:

- 106 Balance bike sessions
- 220 Learn to ride sessions.
- 1700 Level 1+2 training sessions
- 57 Level 3 training sessions

Ten Bury schools are involved in WOW which is an active travel tracking project operated via Living Streets.

Bury Council's Public Health Team are developing a public health accreditation scheme to reward schools adopting active travel programmes. Nine schools participate in WOW which is an active travel tracking project operated via Living Streets. Bury are hoping to gain further Active Travel England funding to support more schools with this initiative.

Bury's Walking and Cycling Forum continues to be well attended and provides a dynamic arena for consultation and the exchange and development of ideas from Bury stakeholders.

### **2.2.3.5 Information & Resources**

#### **AQAP 7.9 – Awareness-Raising**

Bury has continued to promote the Burn Better GM campaign across Autumn-Winter 2025.

## 2.2.4 Progress on actions for Manchester City Council

### 2.2.4.1 Development Control and Planning Regulation

#### AQAP 1.1 – Construction Management Guidance

Although this action is complete, Manchester City Council (MCC) have:

- Continued to promote the council’s published [AQ & Planning Guidance \(link in text\)](#) for developers including best practice air pollution control measures for demolition and construction site works.
- Continued to recommend minimum emissions standards for Non-Road Mobile Machinery for city centre major developments.

#### AQAP 1.2 – Development Planning Guidance

Although this action is complete, MCC have:

- Continued to promote the [AQ & Planning Guidance \(link in text\)](#) for developers.
- Continued with planning development requirements, including:
  - Air quality impact and exposure assessments
  - Mitigation such as electric vehicle charge points
  - Boiler emissions standards
  - Travel plans

#### AQAP 1.5 – 20 mph Zones

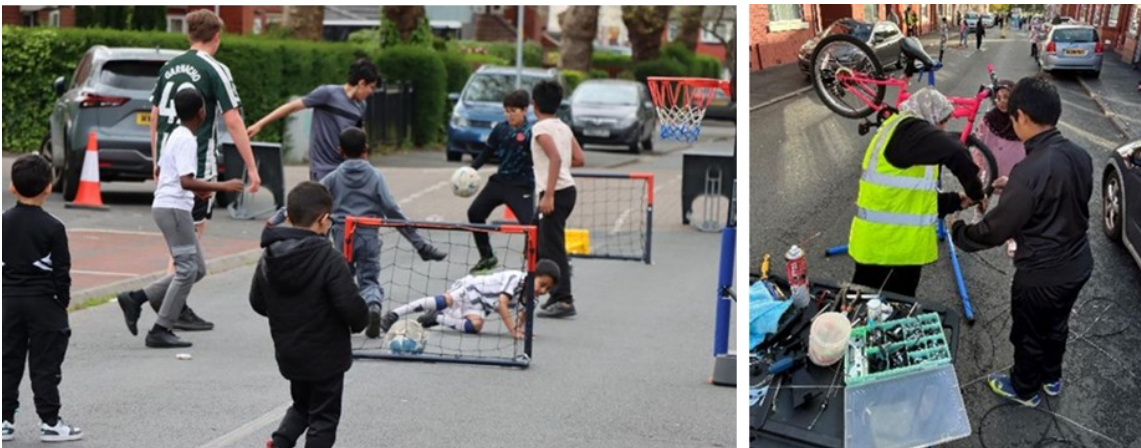
MCC’s Sustainable Transport team have developed a citywide 20 mph Strategy, which sets out an ambitious, evidence led approach to expanding 20 mph speed limits across the city, assigning appropriate speed limits to road alignments based on their movement and place function. The strategy aligns with the Manchester Active Travel Strategy and Vision Zero ambitions, recognising that lower traffic speeds contribute to improved road safety, increased walking and cycling, improved neighbourhood liveability, and potential air quality benefits through smoother driving behaviour.

Approximately 70% of Manchester’s road network is already 20 mph, though areas in the north and in Wythenshawe have a lower coverage than elsewhere in the city. Through the City Region Sustainable Transport Settlement, MCC is progressing with delivering an expansion of the 20 mph network across Wythenshawe (to be delivered by March 2027) and work is underway to identify funding to deliver similar ambitions in the north of the city.

The strategy focuses on reducing driver speeds through sign-and-line only speed limit changes. The impact of this will be monitored and evaluated, and where speeding hotspots prevail, additional infrastructure will be delivered to reduce the design speeds of roads. This risk-based approach to speed limit changes is in line with the safe-system approach adopted as a part of Greater Manchester's Vision Zero Strategy and will deliver road safety benefits to a vast proportion of Manchester's population, challenging the existing road safety inequality across the city, and enabling additional infrastructure to be targeted in the locations where it is needed most.

During 2025, MCC's Active Streets initiative surpassed previous achievements, marking a significant milestone in its development. A record-breaking 53 events were delivered across 31 wards, with more than 1,800 Manchester residents taking part. The report is available here, [MCRactive 2025 Report \(link in text\)](#).

MCC helped the community to put on 9 Play Street events. Two of these were on Clean Air Day. Another two were during Road Safety Action week where there was a "Bling your Bike" walk/cycle safety pop-up stall. Examples are shown in Figure 2-17.



**Figure 2-17 - Play Street and "Bling your Bike" pop-up stall in Manchester.**

### **AQAP 1.6 – Encouraging Travel Planning**

The Planning Team at Manchester City Council continued to work with developers to secure sustainable transport strategies for new developments and reduce car parking where possible.

MCC continued implementation of the [Manchester Active Travel Strategy \(link in text\)](#) to enable residents to have more and safer places to walk, wheel and cycle. The target is to convert existing and future short journeys to walking, wheeling and cycling. To do this MCC support a pipeline of projects and initiatives, more details are included in the strategy.

In 2025, two major highways schemes were constructed with the aim of improving traffic flows, increasing active travel trips and subsequently improving air quality within the area:

- The Withington Public Realm scheme, which covered Rutherford Place and Copson Street, was successful in improving areas of public realm within the local area. The scheme involved pedestrianising part of Copson Street as well as a road closure in Rutherford Place. The purpose of this was to improve pedestrianised space by reducing traffic flows and to incorporate green infrastructure within the area. To achieve this, trees were installed within both areas (22 new trees were installed).
- Manchester City Council is delivering a citywide programme of secure, on-street cycle hangars, in line with the Manchester Active Travel Strategy and Investment Plan, to address the lack of secure cycle storage for households without access to off-street parking and reduce barriers to everyday cycling. During the reporting period, MCC completed delivery of a pilot scheme of 10 cycle hangars in residential locations identified through an evidence-led approach based on resident demand, dwelling type, street layout and highway safety considerations. The pilot demonstrated strong demand, with high occupancy levels and waiting lists, providing a clear evidence-base for expansion. As a result, MCC has secured funding to deliver further phases of cycle hangars across the city with plans to install a further 30 hangars during 2026.
- The City Centre ATF (Active Travel Fund) scheme, which ran from the southern section of Deansgate to Chester Road, was finalised in 2025. The scheme's focus was to support a reduction in private vehicle trips and increase the uptake of active travel. The scheme has improved cycle infrastructure through segregated cycle lanes, as well as creating a one-way system along parts of Deansgate. These types of intervention are intended to help reduce private vehicle usage and can contribute to air quality improvements. The scheme's design incorporated green infrastructure, and a total of 350 m<sup>2</sup> of additional green space was added to the area to provide biodiversity, drainage and additional potential air quality benefits. Air quality for this scheme was formally monitored and primarily commissioned to assess whether the scheme would cause traffic displacement and any negative impacts on air quality in nearby areas. The study period (over 18 months) included monitored pre, during and post construction air quality levels within the local area. The results showed no significant change to air quality within potential displacement areas, and levels remained well within legal limits throughout the monitoring period.

## AQAP 1.8 – Green Infrastructure

### Urban trees and canopy cover:

- Continued delivery of Manchester’s Tree and Woodland Action Plan, supporting long-term improvements to air quality through increased tree canopy and improved urban forest management.
- Progress towards a 21.8% tree canopy cover target, using an evidence-led, partnership-driven approach that strengthens both planting and maintenance of existing trees.
- Approximately 2,830 new trees planted in the 2025/26 planting season (including hedge trees and orchards), contributing to pollutant interception and local micro-climate benefits.
- Ongoing Ash Dieback management, with £145,000 spent in 2025/26 to maintain tree cover and reduce long-term canopy loss that could otherwise undermine air quality benefits.

### Green and blue infrastructure (active travel, exposure reduction):

- Launch of CyanLines (September 2025), creating connected green and blue corridors for walking and cycling across Greater Manchester, supporting:
  - Mode shift away from car use
  - Reduced exposure to traffic-related air pollution
  - Health co-benefits aligned with air quality objectives
- Progression of the Mersey Valley Way River walk (funding agreement signed September 2025), promoting low-pollution active travel routes and enhanced natural environments through Manchester.

### Active travel infrastructure in green corridors:

- Completion and reopening of the Bee Network Yellow Brick Road in July 2025:
  - Improved surfacing, lighting, and accessibility
  - Better connectivity between green spaces
  - Supports walking and cycling as alternatives to motorised travel, with indirect air quality benefits

### Urban greening and community spaces:

- Ongoing operation and expansion planning for Castlefield Viaduct Sky Park, increasing access to high-quality green space in the city centre and contributing to local environmental quality.

- Six community green space projects funded via the Greater Manchester Green Spaces Fund in 2025, delivering localised greening and environmental improvements that support neighbourhood-level air quality resilience.

#### **2.2.4.2 Freight & Heavy Goods Vehicles**

##### **AQAP 2.7 – Engine Idling**

The council continued to have regard to the anti-idling options report previously produced for GM AQ officers and continued to seek to resolve issues informally and via an education & awareness-raising approach.

The council continued to tackle idling around schools with an education and awareness-raising approach via the Neighbourhood teams' school engagement activities.

#### **2.2.4.3 Travel Choices**

##### **AQAP 5.1 – Car Clubs**

MCC continues to partner with Enterprise Car Club to provide staff with a flexible way to hire a low-emission car for in-work travel. Development of a GM-wide car club continued, with MCC involvement. The council promote sustainable travel and air quality over staff communications, via community engagement and university projects, and to the public via Council web pages.

#### **2.2.4.4 Cars**

##### **AQAP 6.2 – Car Use Allowance**

MCC have continued to review, develop and promote sustainable and active travel options for staff, including cycle mileage and EV purchase via a salary sacrifice scheme.

##### **AQAP 6.3 – Local Authority Parking Charges**

MCC does not currently charge staff for parking in council office car parks.

##### **AQAP 6.4 – School Travel**

MCC expanded its School Streets programme, in line with the Manchester Active Travel Strategy and Investment Plan commitment, to deliver a School Street in every ward by 2028, with the aim of reducing traffic levels, vehicle idling and children's exposure to air pollution at peak school drop off and pick up times. During the reporting period, MCC progressed the delivery of pilot and permanent School Streets schemes, supported by targeted engagement with schools, local communities and ward members.

MCC completed a citywide School Streets prioritisation exercise, assessing all schools across Manchester to identify locations most in need of, and suitable for, School Streets interventions. This assessment considered:

- Demographic indicators (including deprivation and childhood obesity)
- Street layout and traffic conditions
- Feasibility of enforcement and long-term operation

The prioritisation work has informed a rolling pipeline of schemes, supporting more consistent and equitable delivery across the city, and has helped secure funding to deliver a further four School Streets over the next 12 months. A new trial School Street is scheduled to commence in April 2026.

In parallel, MCC is transitioning the eight existing School Streets from volunteer-led operation to ANPR enforcement to remove reliance on volunteers and ensure long-term scheme sustainability. The transition should be complete by January 2027.

MCC is supporting the delivery of a Walking and Cycling Bus pilot led by Walk Ride GM CIC, funded through the Active Travel England Active Travel Innovation Fund. The pilot is establishing the UK's first coordinated model for walking and cycling buses, initially focused on Manchester and Trafford, to help more children travel to school actively, safely and sustainably, complementing the School Streets programme.

During 2025 MCC's Neighbourhood teams undertook the following activities together with Manchester schools:

- School Streets / Play Streets
  - Piloted at St Kentigern's Primary School (Fallowfield), including Clean Air Day and Road Safety Week
  - Temporary road closures reduced through-traffic at peak school times
- Clean Air Day school events, with a focus on clean air, road safety and active travel choices, were delivered at:
  - St Kentigern's Primary School (Fallowfield)
  - St Margaret's Primary School (Whalley Range)
  - Prospect House Primary School (Higher Blackley)
- Active Travel assemblies - reaching whole-school audiences in a single session large-scale assemblies - delivered at:
  - Higher Openshaw Primary School (Harpurhey)
  - Crosslee Primary School (Charlestown)
  - Holy Trinity Primary School (Harpurhey)

- Targeted youth engagement:
  - Junior PCSO launch at Acacias Community Primary School
  - Eco-school engagement with students at The Manchester College
- Reach and impact:
  - Direct engagements: ~2,400 children and young people
  - Attendance: ~2,400 pupils reached through events and assemblies
  - All activities were youth focused, embedding early behaviour change
  - 100 plants/bulbs planted at Prospect House Primary School as part of Clean Air Day activity

Anti-idling: the council continued to tackle idling with an education and awareness-raising approach via the Neighbourhood teams' school engagement activities.

#### **2.2.4.5 Information & Resources**

##### **AQAP 7.9 – Awareness Raising**

Active Travel – see **AQAP 1.5**

Schools – see **AQAP 6.4**

##### Clean Air GP Practices:

The MCC Public Health team continued to distribute a 'Clean Air Practices' toolkit to Manchester GP surgeries. The scheme aims to promote awareness of air pollution and encourage sign-up to the Clean Air GM pollution alert service for patients with respiratory conditions. The toolkit includes an overview document with social media templates, posters, a booklet including easy read materials, and details on how surgeries can place orders for printed materials.

##### Domestic Burning campaign:

The council continues to be involved with the Defra-funded GM campaign aiming to reduce particulate pollution from domestic solid fuel burning and raise awareness of the health and environmental impacts of stoves use.

## **2.2.5 Progress on actions for Oldham Metropolitan Borough Council**

### **2.2.5.1 Development Control and Planning Regulation**

#### **AQAP 1.1 – Construction Management Guidance**

Construction Environmental Management Plans (CEMP) are regularly requested as conditions by Environmental Health when they are consulted on planning applications. CEMPs submitted as part of the planning process are reviewed by Environmental Health and the impacts of particulates and dust are reviewed against the Institute of Air Quality Management (IAQM) construction management guidance to ensure the impacts are properly considered and suitable mitigation measures are carried out to reduce these impacts on Air Quality during construction and demolition. The same document is used by Environmental Health to review proposals and proposed mitigation of particulates and dust when reviewing and commenting on demolition notices.

#### **AQAP 1.2 – Development Planning Guidance**

In 2025, Environmental Health at Oldham Council were consulted on 393 planning applications. All planning applications consulted on by Environmental Health are considered for their air quality impacts and assessed against the latest IAQM Planning guidance, and where appropriate, relevant conditions relating to air quality were recommended to planning. Many applications were submitted with air quality assessments which were reviewed by Environmental Health and commented on using the same guidance. Environmental Health continues to offer support and advice to developers at the preapplication stage of the planning process, helping to ensure the correct reports, including air quality and CEMPS (which include an assessment of air quality) are submitted as part of the application. Environmental Health now hold weekly meetings with planning colleagues to ensure these processes run smoothly.

#### **AQAP 1.5 – 20 mph Zones**

20 mph zones were introduced in parts of Saddleworth in 2020 due to an increase in footfall, leading to streets crowded with pedestrians. Since then, levels of NO<sub>2</sub> have been monitored and seen to be consistently less than the measured levels pre-2020. However, it is still uncertain if this reduction is due to traffic speed, improvements to the fleet or overall reductions in traffic, or a combination of the three, however the 20 mph zone will remain in force.

### **AQAP 1.6 – Encouraging Travel Planning**

The council employed a full-time activation officer whose job it is to get people to walk and cycle more and promote green travel. They work with communities to do this and look to secure funding for projects.

The council promoted drop-in sessions for members of the public to have their say in what they wanted to improve bus routes as well as walking and cycling links.

Oldham continues to engage with TfGM Travel Choices and Active Travel Teams to promote active travel, travel choice programmes and journey planning across Oldham. The council's transport, parking and travel website links directly to TfGM's "Every Journey. Every day" travel planning website. In addition, it encourages residents to cycle as an alternative to other more polluting forms of transport. The council's website promotes the Bikeability Trust, Cycling UK, TfGM Bee Network, Love to Ride and Sustrans. Travel plans are considered as part of the planning application regime. Oldham reviewed numerous travel plans as part of this process.

### **AQAP 1.7 – Taxi & Private Hire Licensing**

All taxi and private hire vehicle must be Euro 6 emission standard for diesel and Euro 4 for petrol.

### **AQAP 1.8 – Green Infrastructure**

The council has been working with Groundwork Greater Manchester to bring more rain gardens into Oldham Town Centre. They help manage heavy rain, improve air quality and support local wildlife.

A number of new electric vehicle charge points were either granted planning permission in Oldham in 2025 or installed. Amongst these included 6 electric vehicle charge points for public use off Broadway, and another in Springhead, 18 industrial units in Chadderton, each with its own EV charge point was granted planning permission in 2025, as well as 41 homes each with their own EV charge point in Failsworth. A supermarket, at junction 22 of the M60, was constructed along with EV charge points for its customers use and a new electric bus charging facility was constructed and opened at an existing bus depot in Chadderton.

In 2023, Northern Roots established the first phase of an Urban Farm. The scheme has to date created 80 volunteering opportunities, delivered activities for more than 600 children and young people, and engaged around 6,000 local residents through cultural and

environmental activities. And to date, there have been 2,000 trees planted, six ponds created to support local wildlife, and the establishment of a community garden and wildflower meadow. Construction works began March 2025 with a Practical Completion currently programmed for Summer 2026.

### **2.2.5.2 Freight & Heavy Goods Vehicles**

#### **AQAP 2.8 – Alternative Fuels**

Work to build a new environmentally friendly depot at Alexandra Park is now complete providing a modern working space for the council's Environmental Services teams and will play an active role in the community through a range of uses such as spaces for events, education and recreation. The new Eco-Centre does not use fossil fuels and is heated by two Air Source Heat Pumps, funded by the Public Sector Decarbonisation Scheme.

As part of the overall renovation of the Spindles complex, the building has had all fossil fuel heating systems removed and replaced with high efficiency electrical heating systems. Combined with extra thermal insulation and an electricity tariff sourced completely from renewable energy sources and backed with Renewable Energy Guarantees of Origin, the Spindles is now completely carbon neutral and the only known example of a carbon neutral shopping centre in Greater Manchester.

### **2.2.5.3 Cycling**

#### **AQAP 4.1 – Cycling Programmes**

The council, through social media channels promoted walking and cycling to school throughout 2025, emphasising how this promotes safer streets, health benefits and improves air quality. Parents and children were encouraged to walk or cycle the whole way to school or park 5 minutes away and walk the last leg in the "park and stride" campaign. Cycle to school week (13-17 October) was promoted through the council's social media channels.

The council, as part of International Women's Day promoted a women-only cycling and maintenance course.

### **2.2.5.4 Cars**

#### **AQAP 6.2 – Car Use Allowance**

The council has a travel plan and policies that aim to widen travel choice for employees both commuting and travelling for business purposes, which will then help to limit the

Council's impact on the environment by encouraging more sustainable travel. The council discourages non-essential car use by staff for work to reduce congestion, improve air quality and road safety. Staff cannot claim car mileage for Oldham for travel to Manchester, Failsworth, Royton, Rochdale or Ashton, (unless specific circumstances dictate) as staff are expected to use public transport. The council offers a generous 32p per mile allowance for pedal cycle use for staff on work journeys. A staff salary sacrifice scheme for the purchase of tax-free pedal cycles, safety equipment and accessories to encourage staff to cycle to work, and on work duties is offered. The council offers a loan scheme to help staff pay for annual public transport season tickets to encourage staff to use public transport instead of their own cars to commute to work.

### **AQAP 6.4 – School Travel**

In 2025, St Lukes Church of England school became the fourth school in the area to take part in Oldham School Streets. The scheme limits traffic outside schools during drop off and pick up times. Oldham was the first council in Greater Manchester to use ANPR cameras as part of the School Streets scheme. At other schools in the area which operate the scheme, they have noticed cars dropping children off down between 21% and 33%. Active travel has doubled, with more families choosing to walk, scoot, or use park and stride to get to school. Park and Stride is up 26%. The council won an ICE Northwest Future resilience award due to the school streets scheme with judges calling the scheme a simple but effective blueprint for future schools.

### **2.2.5.5 Information & Resources**

#### **AQAP 7.9 – Awareness-Raising**

Throughout 2025 social media platforms of the council encourage residents and groups to apply for greater Manchester's Walking and Wheeling fund which provides grants of up to £7,00 to support projects that promote cycling and walking.

It also promoted the Greater Manchester Burn better campaign which encourages residents who use solid fuels to heat their home to choose the best fuels to reduce air pollution, particularly from particulates.

Finally, the council, in 2025 promoted, via social media, Cycling Ride Anywhere week, encouraging residents to sign up and promise to cycle more and extolling the virtues of cycling, including better health and improved air quality.

## 2.2.6 Progress on actions for Rochdale Metropolitan Borough Council

### 2.2.6.1 Development Control and Planning Regulation

#### AQAP 1.1 - Construction Management Guidance

All new developments in the borough are required to submit air quality assessments if located within the air quality management area. Any demolition must be assessed in line with the relevant guidance to minimise dust emissions.

#### AQAP 1.2 - Development Planning Guidance

Rochdale BC requires all developments to submit an assessment of the use of solar panels, use of sustainable building methods, reuse of wastewater and install electric vehicle charge points.

#### AQAP 1.5 - 20 mph zones

The Council continues its roll-out of making all residential streets in the Borough 20 mph with physical traffic calming features. In 2025, over 100 streets were added to 20 mph zones and more will continue to be added in 2026.

#### AQAP 1.6 - Encouraging Travel Planning

Rochdale Borough Council's transport strategy aims to deliver a safe, affordable, and sustainable network by 2026, focusing on supporting regeneration, tackling climate change, and improving air quality. The Local Implementation Plan aligns with the Greater Manchester Transport Strategy 2040, highlighting key projects like the Bee Network integration, active travel (walking/cycling), and improving local highway networks, such as the Smithy Bridge Residential Relief Road. Rochdale BC is working on the local implementation plan which forms part of the Greater Manchester Delivery Plan which runs alongside the Greater Manchester Transport strategy 2050.

Rochdale Council has been involved in the Greater Manchester's Bee Network project aiming to make it easier for everyone to get around by:

- Providing better public transport
- Creating more facilities for cyclists and pedestrians
- Improving roads and public highways
- The scheme features new segregated cycle lanes, improved footpaths, crossing points, and public realm enhancements (including a play park).

The scheme creates a, roughly, 2 mile (3.5 km) active travel route connecting Castleton railway station area to Rochdale town centre. The works aim to make it safer and easier to get around, boost public health, and upgrade public spaces while reducing traffic and flood risks. Phase 1 of the Castleton Bee Network was completed in January 2025 which included improvements to Manchester Road from Castleton Railway Station to The Royal Toby Hotel including:

- New footpaths
- New segregated cycle lanes
- New crossing points
- New car parks
- A new community play park on land opposite Nixon Street

Phase 2 began in March 2025 and is expected to be completed by 2027. This will see improvements made to Manchester Road from its junction with Dane Street and The Esplanade to The Royal Toby Hotel, including:

- New landscaping, planting and opportunities for people to help plant landscaped areas
- Improved footpaths and cycle lanes
- New crossings at major junctions
- Road re-surfacing
- Traffic calming measures on quiet streets to improve the safety and experience of all road users
- New benches and seating
- Replacing the New Barn Lane subway with a new road crossing

### **AQAP 1.7 - Taxi and Private Hire**

In 2025, Rochdale council brought in a minimum emission standard for all private hire vehicles to be implemented by 2030 in alignment with the targets within the GM CAP. There has been a significant number of hackney carriages applying for funding through the GM Clean Taxi Fund, with 50% having applied and approved. The PHV fund grant option and interest free loan scheme has been approved up to 2031.

### **AQAP 1.8 - Green Infrastructure**

Rochdale council is working on various schemes to improve biodiversity and green infrastructure in the borough including work in Bank Top in Heywood, Figure 2-18. This is an example of the work the Council is doing through the transformation scheme which

aims to increase biodiversity and reduce CO<sub>2</sub> emissions through altered maintenance regimes.

Additional work includes:

- Hedge and woodland planting with Ashworth Valley Scout Camp/Rochdale Company of Archers in partnership with City of Trees
- Tree planting at Summit quarry, Littleborough
- Tree and hedge planting at Kingsway Business Park
- Tree planting at Balderstone Park, Queens Park and King George V Playing fields, in partnership with City of Trees
- A scheme to plant over 100 large trees through Rochdale's climate emergency fund was approved in 2025 and will be fully implemented in 2026
- Works to ponds in Heywood to create habitat for great crested newts through the District Level Licensing scheme.



**Figure 2-18 - Improved biodiversity and green infrastructure at Bank Top, Heywood**

### 2.2.6.2 Cycling

#### AQAP 4.1 – Cycle Programmes

Rochdale council and its partner Your Trust actively support and promote cycling and walking throughout the borough and offers cycle parking in Rochdale town centre and at railway hubs around the borough. Cycle clubs and training courses are available via the council website, residents can also borrow a bicycle from the bike library on Kirkholt. Find more information at [this link to the Rochdale Borough Council website Cycling pages](#).

### 2.2.6.3 Cars

#### AQAP 6.3 – Local Authority Parking Charges

Rochdale council has council owned car parking, some of which are available for council staff to buy permits for parking. The rate payable is related to the emissions from the vehicle, with lower emission vehicles paying a reduced rate. There is no designated staff parking for any council employees. The council only offers a car allowance to a limited number of staff, based on service demand.

#### **2.2.6.4 Information & Resources**

##### **AQAP 7.9 – Awareness Raising**

Rochdale Borough Council declared a Climate Emergency in July 2019 and set a target for both the council and the borough to become carbon neutral in line with the Greater Manchester target of 2038.

The council approved both the Climate Change Strategy for Rochdale “Protecting the planet for our people and places 2025-2030” and the “Climate Change Action Plan 2025-2026” in August 2025. They include action to help with climate change measures and improving air quality through sustainable long-term methods.

The strategy aligns the approach with the GM Five-year Environment Plan 2025-30, the 17 United Nations Sustainable Development Goals and the corporate priorities for Rochdale Borough Council set out in the People, Place and Planet Council Plan.

#### **2.2.7 Progress on actions for Salford City Council**

##### **2.2.7.1 Development Control and Planning Regulation**

##### **AQAP 1.1 & 1.2 – Construction Management Guidance & Development Planning Guidance**

Salford [Local Plan policy PH1: Pollution control \(link in text\)](#) sets out the local approach to the relationship between planning and air quality and requires new developments to minimise and mitigate pollution during both the construction and operational phases of development.

An online planning application [Validation Checklist \(link in text\)](#) has been developed to replicate criteria used in the IAQM/EPUK guidance as to when an air quality assessment may be necessary. This will be updated to align with future updates of the IAQM guidance.

The Salford City Council (SCC) environmental consultant team recommend that baseline good design standards from the IAQM/EPUK guidance should be adopted for major developments. IAQM guidance is being incorporated into planning decisions.

On major developments, a condition would normally be placed on the application to include where appropriate:

- Construction Environmental Management Plan, which would include measures to prevent the deposition of dirt on the public highway and measures to control the emission of dust and dirt during demolition/construction.
- Travel plans.
- Damage cost calculation, to determine a proportionate financial contribution towards, or provision of, additional mitigation (e.g. for developments in areas where there is cumulative impact or where a significant air quality impact is likely).

The adoption of Local Plan Policy A10 ([Link to Salford Local Plan](#)) requires the provision of Electric Vehicle Charging Points. The standard of provision equals or exceeds the IAQM guidance.

### **AQAP 1.6 – Encouraging Travel Planning**

Travel plans for certain developments are required to be submitted as part of the planning application process. An online planning application [Validation Checklist \(link in text\)](#) is used, in line with the National Planning Policy Framework to promote the most sustainable forms of transport, such as active travel.

### **AQAP 1.7 – Taxi & Private Hire Licensing**

All newly licensed taxi and private hire vehicles in Greater Manchester must meet a minimum emissions standard of Euro 4 (petrol) or Euro 6 (diesel).

As part of the GM Clean Air Plan, government committed £8 million (January 2025) to establish the GM Clean Taxi Fund, supporting upgrades of non-compliant hackney carriages, with the highest grants available for zero-emission capable vehicles.

In February 2026, the GM Mayor announced a further £4.45 million for a Private Hire Vehicle Support Fund to assist upgrades of non-compliant private hire vehicles.

All GM licensing authorities have agreed that all GM licensed vehicles must comply with the minimum emissions standard by 31 December 2026, or by the relevant upper age limit where this extends beyond 2026 for non-compliant vehicles not accessing funding.

In Salford, the upper age limits for currently licensed non-compliant vehicles not accessing the GM Clean Taxi Fund are:

- 10 years from date of first registration for non-wheelchair accessible vehicles.
- 15 years from date of first registration for wheelchair accessible vehicles.

GM districts without maximum age policies for currently licensed vehicles will ensure compliance by 31 August 2030, aligning with 15 years from the mandatory introduction of Euro 6 for diesel vehicles.

The end of the transition period for currently licensed non-compliant vehicles is under review to reflect the timing and delivery of the available funding. Additional time beyond December 2026 may be required depending on progress of the private hire support fund, continued delivery of the hackney carriage fund, and wider factors such as vehicle availability.

In Salford, as of February 2026, 92% of the 890 licensed vehicles meet the minimum emissions standards, with 70 non-compliant vehicles remaining to be upgraded or removed in line with transition arrangements.

### **AQAP 1.8 – Green Infrastructure**

In August 2025, Salford City Council secured £999,476 from the National Lottery Heritage Fund's Nature Towns and Cities programme to support the Community Greenways Project, delivered jointly with Manchester City Council. The funding will provide for eight new posts across the two authorities and will enable a programme of commissioned micro-projects delivered by specialist partner organisations, including RHS, Sow the City, City of Trees, the GM Environment Fund, Groundwork, the Canal & River Trust, and two further consultancies to be appointed. The project aims to enhance green and blue spaces, promote environmental sustainability, and encourage active, healthy lifestyles across both cities.

The City Council will continue with developers in the planning process to plant new trees as part of new development. Salford Local Plan policy G11 sets out the overarching local approach to protecting and enhancing the green infrastructure network in Salford. Specific

Local Plan policies are in place to protect and enhance strategic green infrastructure in Salford - Chat Moss (a lowland raised bog providing an important carbon sink and a biodiversity heartland); Irwell Valley (home to a varied range of environmental and historic assets); West Salford Greenway (containing conservation areas and strategic recreation routes); Local Green Space and Trees; and woodland and hedgerows.

### **2.2.7.2 Freight & Heavy Goods Vehicles**

#### **AQAP 2.7 – Engine Idling**

Salford City Council continues to have regard for the report 'Tackling Vehicle Idling – Options' produced by the Greater Manchester Air Quality Working Group in 2022, that set out options for enforcement of idling vehicles and raising awareness of the issue.

#### **AQAP 2.8 – Alternative Fuels**

Electrification of the Council vehicle fleet:

- The City Council continues to implement a phased programme to replace petrol and diesel fleet vehicles with low-emission alternatives. Initiated in 2020, the programme has delivered significant progress across key operational services, including pest control, trading standards, waste and recycling.
- Nearly 30 electric vehicles have now been integrated into the fleet, with deployment expanding into grounds maintenance, waste services and highways. A range of new vehicle types has been trialled, procured and brought into operation, including:
  - Electric pick-up trucks with 3.5-tonne towing capacity
  - A 26-tonne electric refuse collection vehicle
  - 5-tonne electric sweepers

To support the transition, 25 new charge points have been installed across four council sites. This includes major upgrades at Turnpike Depot and Swinton Hall Road Depot, both of which now benefit from on-site solar generation through large solar car ports and supplementary roof-mounted solar installations.

The Council continues to work with industry partners to explore alternative fuel options and ensure compliance with Euro 6 emissions standards. This includes the use of AdBlue in diesel vehicles equipped with selective catalytic reduction technology to reduce NO<sub>x</sub> emissions.

Positive outcomes of the programme include:

- Reduction in petrol and diesel vehicle use on residential roads, lowering associated emissions
- Improved working conditions for council operatives using electric vehicles
- Contribution to wider citywide emission reductions through cleaner fleet operations

The introduction of electric vehicles and supporting infrastructure is aligned with the Council's capital fleet replacement programme, enabling a phased and financially sustainable transition to a low-emission fleet.

### Salford e-scooter trial

A Department for Transport (DfT) e-scooter trial started at the University of Salford Peel Park and Fredrick Road campuses in October 2020. Subsequent extensions were:

- A route to Media City UK in November 2020
- A further phase covering Ordsall and the City Centre in April 2021
- A further expansion to connect Salford Royal Hospital in winter 2021
- An expansion to include parts of Pendleton and Weaste in 2022
- An extension to Eccles and Patricroft in 2024
- Extending the operational area to Swinton town Centre is currently being considered
- DfT have extended the trial until 2027.

Initially 200 e-scooters were deployed, and this has now grown to 300 with the expansion to Salford Royal Hospital and Pendleton. Scooters are monitored for usage and trip destinations. On a monthly basis, the total mileage of the e-scooter fleet is over 44,500.

The trial has been successful with over 2 million trips undertaken and 3.5 million km ridden since launch. The trial is providing a valuable first/last mile option for users.

A lot of interest has been shown in e-scooters and it is hoped that this will shift more short journeys from car use to e-scooters. While the trial is ongoing work will continue with DfT to look at whether e-scooters can be legalised to provide an alternative to car use and a greener mode of travel for short journeys. Further information is available from the City Council website [e-Scooter trial page \(link in text\)](#).

### **2.2.7.3 Cycling**

#### **AQAP 4.1 – Cycling Programmes**

The City Council is continuing to expand its network of on and off road routes with new cycle routes recently completed in and around Salford. Recently completed routes are:

- Chapel Street East Phase 1 / New Bailey Gateway Phase 2

Funding has been secured to deliver the following routes in 2026/27:

- Oldfield Road – Provision of segregated cycle routes connecting Chapel Street to Regent Road via Oldfield Rd.
- Islington Neighbourhood. Improvement to public realm / walking and cycling. Expected to start Summer 2026.

More routes are being planned and developed and are outlined on the City Council website [this link to the City Council Cycling and Walking webpages](#).

In addition to new cycle routes, the [Salford Youth Service bike project \(link in text\)](#) has provided over 300 bikes to Salford families. Over 1000 bikes have been repaired as part of a recycling project. The aim of the project is to help young people living in Salford get to school, college or work without having to rely on car journeys.

Salford City Council has invested in cycle hangars to enable residents to have secure cycle parking close to their home. There are 13 cycle hangars with 80% occupancy.

#### **AQAP 4.2 – Public Cycle Hire**

Salford City Council have worked with Beryl, TfGM, Manchester City Council & Trafford Council to provide a public cycle hire scheme. This was launched within selected locations in Salford in November 2021. The scheme has rolled out to further parts of Salford and covers parts of Manchester and Trafford. The cycle hire scheme provides a low cost form of transport for users travelling within Salford, Manchester and Trafford.

Further information on the cycle hire scheme is available from the Salford City Council [Public cycle hire webpage \(link in text\)](#) and through [this link to the Transport for Greater Manchester website](#).

#### **AQAP 4.3 – Cycle Logistics**

A 'bike library' providing e cargo bike hire for businesses to make sustainable deliveries is operational and managed by Manchester Bikes of Chapel St on behalf of the City Council. A number of small business and large organisations have received e cargo bikes as direct loans to utilise for their business travel.

The project was initially supported by funding from the DfT in conjunction with the Energy Savings Trust. Although this funding has now finished, Manchester Bikes continue to operate it and usage is being monitored to increase take up amongst local businesses. Further information on the cargo bike hire scheme is available via [this link to the Greener Salford website](#).

#### **2.2.7.4 Travel Choices**

##### **AQAP 5.1 – Car Clubs**

The Salford Co-Wheels car club provides an alternative to 'grey fleet' travel for employees, elected members and partner organisations to conduct business travel in fully maintained, low and no emission vehicles. The vehicles are available to hire by members of the public outside of core business hours.

The car club currently covers seven sites across the city (Merchants Quay, Everard Street, Browncross Street, Greengate, Rigby Street, Paddington Close, Civic Centre) with a total of 22 vehicles, including 4 fully electric vehicles and 13 hybrid petrol vehicles. Data including mileage, trip data, fleet make up data for the car club has been collected and shared with TfGM.

#### **2.2.7.5 Cars**

##### **AQAP 6.1 – Plugged-in Places EV Charging Network**

Conditions are applied to all planning applications where an air quality assessment is necessary, requiring type 2 charging facilities on all properties with dedicated off road parking, and a proportion of spaces (to be agreed) for apartments/high-rise. Planning conditions are applied requiring fast or rapid charging for retail floorspace in accordance with Salford [Local Plan Policy A10 \(link in text\)](#). This policy is more stringent than electric vehicle charging provision standards suggested by IAQM/EPUK guidance.

EV charging infrastructure requirements for new buildings and buildings undergoing major renovations are now specified in Building Regulations ([Approved Document S, link in text](#)), which took effect in June 2022. Local plan EV charging point standards will be superseded by any higher Building Regulations standards.

As part of the GM Clean Air Plan proposals 28-30 taxi only rapid charge points have been installed across Greater Manchester tailored to locations to support zero emissions capable taxis to operate across GM. EV chargers for taxi's have been successfully

installed at Church St car park Swinton, Hankinson Way, Pendleton and John William St, Eccles. Locations of publicly accessible charging points are available via [this link to the Zap Map website](#).

## **AQAP 6.2 – Car Use Allowance**

Salford City Council has transitioned to a more hybrid way of working, underpinned by a digital first approach to work smarter and bring choice, flexibility and opportunities for individuals and to help reduce environmental impact.

A flexible travel hierarchy has been introduced to allow managers and employees to make informed decisions on the most efficient, effective & sustainable ways to travel for business to achieve the best outcomes:

1. Digital first approach - Can outcomes be achieved without the need to travel using online collaboration tools?
2. Walking and cycling - for short journeys.
3. Public transport - for longer journeys on major routes and rail for out of area long journeys.
4. Co-Wheels car club vehicles - first choice for most business trips by car, with preference to using an electric or hybrid vehicle.
5. Car hire - for long journeys or out of area journeys not easily accessible by public transport.
6. Private/grey fleet vehicle - last resort where circumstances mean it is more efficient and effective.

When travelling for business, claims can only be made for mileage or travel expenses when remote attendance, active travel or using a car club vehicle is not possible or appropriate. Claims can then be made for journeys that begin and end at an administrative base.

On site active travel facilities e.g. bike shelters, lockers and shower facilities are available at various City Council buildings and Gateway centres.

## **AQAP 6.3 – Local Authority Parking Charges**

A digital car parking permit scheme is in place at the Civic Centre and Gateway car parks. Specific parking spaces are allocated for pool vehicles, electric vehicles and car share vehicles encourage their use. Car parks are regularly patrolled by Parking Wardens, a Penalty Charge Notice may be issued for vehicles that have not been issued with a permit.

## **AQAP 6.4 – School Travel**

Salford City Council have membership to Modeshift STARS, which is a national organisation and software that allows users to engage with schools on a larger scale and schools can receive awards and accreditation for their Travel Plan work. Three schools currently have approved travel plan status and work is on-going to engage with these schools and others to increase sign-up.

Salford City Council work with Living Streets and other organisations to promote active travel and reduce journeys by car to schools. Eight schools have signed up to Living Streets' WOW Walk Once a Week, with 2,500 pupils logging their journeys.

A school street was implemented at Godfrey Ermen Primary School, Eccles in 2024. Salford's first ANPR camera-enforced School Street was launched in February 2026 at Peel Hall Primary School in Little Hulton, helping to reduce motorised traffic and inconsiderate parking during drop-off and pick-up times. The scheme will create a safer, healthier environment by enabling children and accompanying adults to walk, wheel, scoot or cycle to school.

More school street trials are planned for Spring 2026 at Grosvenor Road Primary School in Swinton and Monton Green Primary School. Funding has been secured to launch further school streets in 2027.

### **2.2.7.6 Information & Resources**

## **AQAP 7.3 – Air Pollution Alert**

The GM air quality forecasting & alert service is promoted via the Salford City Council website air quality pages and the Clean Air GM website. The number of days that have received at least one 'moderate' or higher forecast in Salford:

- 2019: 22 days
- 2020: 10 days
- 2021: 9 days
- 2022: 16 days
- 2023: 15 days
- 2024: 10 days

As of December 2025, there were 56 subscribers to the service in Salford.

## **AQAP 7.9 – Awareness Raising**

The SCC website air quality and smoke control pages are reviewed and updated regularly. These aim to raise awareness and provide guidance regarding the role stakeholders can play in improving air quality.

Social media campaigns to raise public awareness of the Greater Manchester Clean Air Plan have continued during 2025.

Social media campaigns on raising awareness of smoke control area rules, using wood burning stoves correctly and awareness of garden bonfire issues were carried out in the winter of 2025/6.

In March 2025, Environmental Protection Officers gave an air quality presentation to local residents and councillors at a community committee meeting to raise awareness of local issues and the role and responsibilities of the local authority.

SCC investigated 83 complaints related to smoke nuisance and 12 complaints related to dust nuisance in 2025. Smoke complaints received were related to domestic burning (e.g. garden bonfires) (69%), smoke from commercial premises (24%), smoke from domestic chimneys (6%) and smoke from industrial chimneys (1%). Dust complaints received were related to construction/ demolition (42%) and commercial industrial sites (58%).

Contact was made with both the complainant and in some cases the alleged source, and therefore this will have a beneficial effect on raising awareness of local air quality issues and reducing air pollution.

### **2.2.8 Progress on actions for Stockport Metropolitan Borough Council**

#### **2.2.8.1 Development Control and Planning Regulation**

During 2025, the Council's Environmental Regulation Team undertook a substantial programme of work reviewing planning applications with potential implications for local air quality. Over 90 applications were assessed, covering a wide range of proposed developments including small, medium and large scale residential schemes, as well as commercial and industrial installations. Reviews encompassed all relevant phases of development activity, including construction, operational use, and, where applicable, demolition.

A key focus of the assessment process is to determine the potential impact of new developments on local air quality, particularly in relation to the GM AQMA and locations identified within the GM CAP as having projected exceedances of legal NO<sub>2</sub> limits. Applications were evaluated to ensure that proposed developments would not worsen air quality in these sensitive areas or hinder progress toward compliance with statutory air quality objectives.

In addition to assessing emissions from developments, the team reviewed applications that involve introducing new sensitive receptors, such as residential properties, schools, and healthcare facilities, to ensure exposure to air pollutants are robustly and appropriately considered. This ensures that public health considerations remain central to the planning process and that future occupants are not exposed to unacceptable air pollution levels.

The Environmental Regulation Team continues to play a vital role in integrating air quality considerations into the planning framework, supporting sustainable development, and protecting the health and wellbeing of Stockport residents.

### **AQAP 1.1 – Construction Management Guidance**

The Council's Planning Application Validation Checklist confirms that applicants for major developments, as well as other relevant schemes, are required to assess potential impacts on local air quality arising from construction and demolition activities. This ensures that air quality considerations are integrated from the earliest stages of the planning process.

All planning applications submitted to the Council are reviewed with reference to the technical guidance issued by the IAQM, including Planning for Air Quality and Assessment of Dust from Demolition and Construction.

Construction and demolition activities have the potential to generate elevated particulate matter levels in the vicinity of development sites. To mitigate these impacts, the Environmental Regulation Team routinely imposes planning conditions requiring the submission and implementation of Construction Management Plans. These plans set out site-specific controls and best-practice measures designed to minimise dust and emissions during all phases of construction and demolition.

In addition to the proactive measures embedded within the planning process, the Neighbourhoods Team responds to community reports and complaints regarding dust, smoke, and other pollution issues arising from construction and demolition sites. This

reactive enforcement role complements the planning process ensuring that appropriate mitigation measures are implemented and maintained throughout on-site activities.

Through these combined approaches, the Council continues to safeguard local air quality and protect the amenity of residents during periods of development and regeneration.

### **AQAP 1.2 – Development Planning Guidance**

The Council's planning application validation checklist provides the following guidance to applicants confirming when an air quality assessment is required:

Where the proposal may potentially have a significant impact on air quality either by emitting air quality pollutants (including during construction and demolition phases) or by introducing receptors to areas where there are existing sources of air quality pollutants and will include:

- All major development
- Proposals that could result in significant vehicle movements through the AQMA
- Proposals that include potentially air pollution generating uses or combustion-based technologies
- Proposals incorporating sensitive uses
- Developments that create new residential units within the AQMA.

The planning application validation checklist provides guidance when travel plans are required for new developments and acceptable guidance and methodology which is available.

The Council provides guidance and minimum standards for developers on the requirements for electric vehicle charging for new development.

Further to this guidance for applicants, planning applications are reviewed to assess potential impacts of new developments on local air quality. Council officers undertake technical reviews of submitted air quality assessments and supporting transport assessments to confirm potential impacts of development on local air quality and sensitive receptors.

### **AQAP 1.3 - Cumulative Development Database**

The Council requires that cumulative air quality impacts arising from vehicle movements associated with significant developments are fully considered and assessed as part of any detailed planning application. This ensures that the combined effects of increased traffic,

when added to existing baseline conditions, are properly evaluated and that appropriate mitigation measures can be identified where necessary.

### **AQAP 1.5 – 20 mph Zones**

Stockport Council continues to progress the borough wide expansion of 20 mph speed limits, with a particular focus on residential streets and local district centres where lower speeds can deliver improvements in road safety, active travel, and local air quality.

During 2025, new 20 mph zones were implemented in Reddish District Centre and Romiley. These schemes form part of the ongoing programme to create safer, more liveable neighbourhoods, support modal shift towards walking and cycling, and contribute to wider environmental and public health objectives.

In 2025, there was an addition of 11.42 miles of 20 mph Zones within Stockport.

### **AQAP 1.6 – Encouraging Travel Planning**

Stockport has continued to work with TfGM and businesses/developers via the Travel Plan Toolkit.

Stockport continues the process of reviewing its Local Plan, including identifying the best way to integrate new transport developments such as EV Charging and Car Share into the Council's planning policies and guidance. This is separate to Places for Everyone. The Local Plan is being supported by an updated Stockport Transport Plan which will identify the key transport priorities in the borough to support 'Our Local Borough Plan' and the Local Plan.

The guidance note on the delivery of EV in new developments continues to support the promotion of adequate charging and zero-exhaust emission vehicle charging infrastructure. An interim policy statement which clarifies the aims of the borough regarding delivery of supporting infrastructure for the changing car market is being utilised to support actions regarding EV.

The Council require applications for development which are likely to have significant or specific transport implications to be supported by a Travel Plan or Travel Plan Statement. These plans will detail the measures to be implemented to encourage and allow staff and visitors to travel to the site in a more environmentally sustainable manner, improve safety, reduce the impact of the development on the local highway network, reduce car parking demand and deal with freight movements so that environmental impacts are minimised.

### **AQAP 1.7 – Taxi & Private Hire Licensing**

Stockport Council has fully adopted the Greater Manchester minimum vehicle emission standard across the fleet of Euro 4 petrol or Euro 6 diesel. All new licensees must meet the approved emissions standards to be licensed in Stockport.

### **AQAP 1.8 – Green Infrastructure**

1,184 individual trees and 250 fruit trees were planted between December 2024 – March 2025. The Council's tree planting initiative aims to significantly increase Stockport's tree cover as part of the climate action strategy. The orchard planting and meadow enhancement initiatives were designed to create new green spaces and support community engagement.

The Council are currently working on enhancing the existing orchards and meadows and establishing new ones across the borough.

Stockport Council is developing a tree strategy by the end of 2026 that will govern how these assets are managed in the future.

### **2.2.8.2 Freight & Heavy Goods Vehicles**

#### **AQAP 2.7 – Engine Idling**

Work is continuing to encourage vehicles to not be left idling when parked. The focus for this is around our educational locations, with Stockport's "Turn It Off" campaign, where banners have been put up around schools to encourage engines to be switched off. There has also been social media promotion of the message using council social media accounts and the information was released in a press release to local media. Stockport have continued to promote this message as part of School Street locations.

#### **AQAP 2.8 – Alternative Fuels**

A comprehensive review was undertaken to identify options for reducing emissions from the Council's fleet managed by the Totally Local Company (TLC). The assessment compared the feasibility of transitioning to EVs against the adoption of Hydrotreated Vegetable Oil (HVO) fuel. TLC concluded that the majority of existing service vehicles could switch to HVO immediately, without the significant costs and operational challenges associated with procuring EVs and installing the required charging infrastructure.

Following successful trials of HVO across several service areas, a dedicated HVO fuel tank was installed at Endeavour House, where most of the fleet is based. This investment has enabled a phased transition to HVO throughout 2025 for all suitable vehicles. To date,

77% of service vehicles operating from Endeavour House are now running on HVO, with future procurement programmes focused on converting the remaining 23%.

### **2.2.8.3 Buses**

#### **AQAP 3.2 – Bus Improvements**

Now part of the Bee Network in the third and final tranche of bus franchising, Stockport continues to support the work of TfGM to access funding and retrofit or replace buses in the fleet used in the borough to reduce the impact on air quality in Stockport. This has been seen to improve patronage in a similar way to that seen in the wider bee network.

The Stockport Interchange and the Viaduct Park on its roof were successfully opened in 2024 alongside the improved connection to the railway station for both pedestrians and cyclists. This provides connectivity between bus and rail for passengers and so improves the ease and attractiveness of public transport. The walking and cycling connections increase the connectivity of different areas of the Town Centre and the Trans Pennine Trail route through the Town Centre. These improvements will be further supported by wider improvements in the future for buses on the A6.

### **2.2.8.4 Cycling**

#### **AQAP 4.1 – Cycling Programmes**

Stockport is delivering activities for walking and cycling improvements including activation of 'Phase 2' of the Heaton's Cycle Link in Heaton Mersey which provides approximately 2 km of path improvements to the area. These activities included a family bike ride event, the production of maps and leaflets, and working with local schools to encourage the use of this infrastructure. The borough continues to deliver cycle schemes including Ladybrook Valley which will provide an upgrade to the route along the river between Bramhall Park Road and Ladybridge Road to a bridleway and improvements to cycling facilities in Romiley. A comprehensive annual review of cycling and walking improvements in Stockport can be found via [this link to the Walking and Cycling Update Report](#).

#### **AQAP 4.2 – Public Cycle Hire**

Stockport continues to be open to discussions with TfGM regarding the expansion of cycle hire into the borough as part of the Bee Network. Stockport has encouraged groups who have expressed interest in developing their own bike hire schemes (bike libraries) to apply for any available funding that existed.

### 2.2.8.5 Cars

#### **AQAP 6.1 – Plugged-in Places EV Charging Network**

Stockport continues to support the work being undertaken by TfGM to address the need to reduce the pollution caused by vehicles. Beyond the Be.EV network support; this includes working with a private supplier to address the need to expand the public charging network. This has resulted in the following bays being implemented:

- Romiley Precinct Car Park (4 off-street bays)
- Church Road, Gatley (4 off-street bays)
- Ashbrook Lane, Reddish (4 off-street bays)
- Commercial Road East Car Park, Hazel Grove (4 off-street bays)
- Massie Street Car Park, Cheadle (10 off-street bays)
- Banks Lane (2 off-street bays)
- Mellor Road Car Park, Cheadle Hulme (8 off-street bays)
- Church Road/Woods Lane Car Park, Cheadle Hulme (4 off-street bays).

A further location at Caroline Street in Edgeley is planned to be delivered in the coming year (2026/27).

Stockport is committed to being a part of the Local Electric Vehicle Infrastructure fund through TfGM and other EV delivery opportunities as they are developed.

#### **AQAP 6.2 – Car Use Allowance**

The Council offers a car use allowance for essential car users, and a payment for fuel based mileage for essential and casual car users who have to use their vehicles for work. This is not the only travel support given to staff, cyclists choosing to use their own bicycle are able to reclaim a mileage contribution through the Council's reimbursement scheme. The Council continues to offer salary sacrifice options for bus and rail season tickets. There are pool bicycles that can be borrowed for staff use along with the necessary safety equipment, including electric bikes for less able users and longer trips.

#### **AQAP 6.3 – Local Authority Parking Charges**

With a greater move to working from home, staff parking in the Civic Complex is charged for via a mobile payment app provided by Ringo. The Council continues to offer permits for low and no emission vehicles to park cheaper across the borough to encourage uptake of these technologies. A loading facility for staff who are only at the office to access equipment has been provided to support journeys. The use of the Council car park by staff

now requires that, along with payment, a correct parking permit is displayed. To encourage only those most in need to park at the civic complex nearby town centre car parks now provide parking opportunities for staff.

### **AQAP 6.4 – School Travel**

Stockport has continued to work with colleagues in education to develop travel plans with regards to schools and other education facilities when they are submitting planning applications.

Bikeability training continues to be delivered at all schools who accept the offer for this training. For the school year 2024-2025 103 children in years 3 to 6 received Learn to Ride training, 2154 children in years 5 and 6 received Level 1/2 training and 89 children in year 6 received Level 3 training.

The Council has continued to deliver School Streets. There are currently four School Streets running in Stockport all of which now have permanent Traffic Regulation Orders in place to allow them to continue. Funding from TfGM will be used to install permanent signage at all 4 permanent school streets sites, replacement of temporary equipment, and further officer support. TfGM has provided further small revenue funding to develop new School Streets aimed at improving safety and air quality around schools in line with the GM Mayoral Manifesto to implement 100 school streets across GM by 2028. St Mary's Catholic Voluntary Academy were consulted in October and November 2025 and are currently working to launch the trial of this School Street this year. Stockport are currently in the process of consulting on a joint school street between St Phillips and Dial Park primary schools.

### **2.2.8.6 Information & Resources**

#### **AQAP 7.9 – Awareness Raising**

Stockport has continued to promote the use of sustainable modes of travel during the last year and encouraged walking and cycling via social media. This has included activation work of completed schemes such as the provision of Dr Bike events and led rides and walks where new routes have been completed. Stockport continues to support walking groups such as wellbeing walks (formally health walks), 'Walkaday', which celebrates its 30<sup>th</sup> anniversary in 2026, and confidence walks which are designed to build people's ability to walk increased distance in a safe environment and facilitate the ability to use walking as a mode of transport in the future, [link to Ways to get walking, Stockport Council](#).

The Council provides access to resources in relation to air quality and active travel:

- Detailed online resource for cycling within Stockport via the Council's website.
- Engine idling information available via the Council's website.
- Access to air quality monitoring data is available via the Council's website.
- Provision of information and advice regarding solid fuel burning via the Council's website.

The Council's social media channels were used in 2025 as part of a wider GM campaign to promote responsible use of solid fuel burners within Stockport.

## **2.2.9 Progress on actions for Tameside Metropolitan Borough Council**

### **2.2.9.1 Development Control and Planning Regulation**

#### **AQAP 1.1 – Construction Management Guidance**

Where planning applications are received for developments which involve a substantial amount of building work conditions are imposed requiring the submission and implementation of a construction management plan in line with the latest IAQM guidance . The construction management plans require measures to reduce emissions from the building works, including measures such as wheel cleaning/wheel washes, damping down of haul roads and stockpiles and inspections off-site to ensure that there are no visible emissions from the site.

#### **AQAP 1.2 – Development Planning Guidance**

Tameside Council requires air quality assessments for larger planning applications in line with the latest IAQM planning guidance. Even where the air quality impact is assessed as negligible mitigation is requested, including measures such as electric vehicle charging provision where parking is provided.

#### **AQAP 1.6 – Encouraging Travel Planning**

Conditions are imposed on major planning applications requiring the implementation of travel plans. The types of development that would require travel plans include schools, industrial estates and some residential developments.

There has been continued engagement with the TfGM Travel Choices and Active Travel Teams to promote the active travel, travel choice programmes and journey planning across Tameside.

### Active Travel Funding

The objectives of the Active Travel Funding phase 2 programme are to help create an environment that is safe and attractive for both walking and cycling to replace journeys previously made by car and public transport. Longer term, the plans will help to deliver significant health, environment and congestion benefits by contributing to the development and roll out of the Bee Network.

ATF4e – The Ladbroke Road scheme will introduce a new signalised toucan crossing between the Hurst Knoll primary school and the King George V playing fields. Some footway widening will support shared footway/cycleway areas. Some traffic calming and side road treatments are proposed to support reduced vehicle speeds on this existing 20 mph section of road. Detailed design drawings are now being finalised.

Stamford Street/Clarence Street – This is to support TfGM in developing a proposal to accommodate controlled pedestrian crossings as part of the signalised junction at Stamford Street/Clarence Street. This will include a public consultation exercise and to develop the required business case submission.

#### **2.2.9.2 Freight & Heavy Goods Vehicles**

##### **AQAP 2.7 – Engine Idling**

The Council continues to have regard for the report ‘Tackling Vehicle Idling – Options’ produced by the GM Air Quality Working Group in 2022, that sets out options for enforcement of idling vehicles and raising awareness of the issue. In 2025, four complaints were received by the Council relating to idling vehicles. These were resolved informally by providing appropriate advice and guidance.

#### **2.2.9.3 Buses**

##### **AQAP 3.1 – Bus Priority Programmes**

Quality Bus Transit Ashton to Stockport. Work undertaken by the council in providing technical reviews, consultation and technical support to TfGM on their promoted scheme for improvements to the Ashton-under-Lyne to Stockport bus corridor. The scheme includes bus stop upgrade work as follows:

- King Street/Chapel Street junction modifications, including footway build outs and making the western arm one-way.
- Dowson Road pedestrian crossing and bus stop modifications.
- Bus Stop Upgrades (developed largely in-house by TfGM).

Design and consultation are currently under way.

Quality Bus Transit Ashton, Oldham and Rochdale. Work undertaken by the council in providing technical reviews, consultation and technical support to TfGM on their promoted scheme for improvements to the Ashton-under-Lyne – Oldham – Rochdale bus corridor.

The scheme mainly comprises three separate schemes, as follows:

- Turner Lane Active Travel Scheme, from Albion Way to Lord Street
- Springwood Way - Off-highway connection to the old railway line and modified crossing on Oldham Rd
- Oldham Road Bus Lane extension from Langham Street to Wilshaw Lane

The schemes are currently being designed, and works are expected to commence in Autumn 2026 at the latest.

#### **2.2.9.4 Cycling**

##### **AQAP 4.1 – Cycling Programmes**

The Council has delivered a campaign of ‘Cycle Sundays’ for the community, including ‘Doctor Bike’ services and cycle training for new riders, helping to get more residents onto active travel infrastructure.

##### Cycle Lane Upgrades

These schemes introduce improved, segregated facilities for cyclists, including treatments at bus stops, to allow cyclists to pass behind a bus platform, treatments at some side roads to improve pedestrian and cycle priority. Oldham Road and Newman Street, Ashton-under-Lyne - Oldham Road, between Dean Street and Burlington Street, and Newman Street, between Oldham Road and Cavendish Street. Stockport Road, Ashton-under-Lyne - Stockport Road, between Hamilton Street and Guide Lane. The scheme includes the replacement of two existing, two-stage pedestrian crossings, to enable people to cross in a single stage. Guide Lane, Audenshaw - Guide Lane (Scott Gate to Stamford Rd/Shepley Rd), includes revised priorities at Enville Street/Poplar Street, and a modified southbound approach to the B6169 Shepley Road junction making this safer for all traffic. Some resurfacing work on Guide Lane is outstanding.

#### **2.2.9.5 Travel Choices**

As part of the Active Neighbourhoods initiative, Tameside Council introduced a resident led “Quiet Streets” scheme giving pedestrian and cycle only access to designated routes.

Work on the design and implementation of eight walking and cycling routes across the borough (listed below) has progressed.

Rayner Lane, Droylsden and Audenshaw – improved off-highway cycle and pedestrian route between the Ashton Moss Metrolink stop on Lord Sheldon Way and Heron Drive and a cycle/pedestrian route on the Audenshaw old railway line via filtered access points. This is part of the same scheme as Stamford Drive below (Active Neighbourhoods Phase 2).

Works were completed in March 2025

Stamford Drive to Granville Street, Stalybridge and Ashton. The Stamford Drive to Granville Street scheme was completed in April 2025. It aims to improve the environment for neighbourhoods south of A635 Stamford Street between Ashton and Stalybridge. It aims to reduce the volume and speed of vehicles on the residential streets, where a significant number of vehicles currently reroute to avoid queues on the main road, and to promote cycling by providing safe crossings and a direct quiet route.

A57 Crown Point, Denton A package of work is now being developed between St Anne's Road, Denton and Great Norbury Street, Hyde, building on the previous work. This incorporates three new crossings of the A57 and active travel connectivity to the newly constructed St Anne's Rd bridge across the M67. Phase 1 will comprise the crossings and to provide cycle connectivity from St Anne's Rd to Watson St, crossing the River Tame. This will connect existing communities, bridleways and areas of greenspace, including improved access to bus stops. Cycle facilities along the A57, to either side of the River Tame, will tackle an important length of this heavily trafficked route, dropping 20 m to meet the river and back up at gradients in excess of 5%.

Albion Way and Wellington Road, Ashton. The scope of the scheme is still in development. There will be a phased approach to delivery to incorporate placemaking, centred on a Streets4All approach to create a welcoming and inclusive environment, supporting a growth agenda, public transport integration and Vision Zero.

## **AQAP 5.2 – Dynamic Road Network Efficiency and Travel Information Systems**

### Bee Network Crossings

A627 Cavendish Street crossing. This scheme was completed in March 2025.

### CRSTS

A560 Stockport Road Hattersley Viaduct. Full Business Case is now being developed. This scheme includes the introduction of cycle lanes

## Highway Safety Schemes

Highway Safety Schemes currently being developed include:

- Market Street, Droylsden: work to tackle an accident blackspot between Chapel Street and Church Street.
- A635 Manchester Road, Audenshaw: traffic calming to tackle speeding and an accident blackspot.
- Ashton Road, Denton: work to tackle an accident blackspot between Lake Road and Manchester Road.
- Chapel Street and King Street, Dukinfield: work to tackle accident blackspots.
- Darnton Road, Ashton: traffic calming to tackle speeding following an accident.
- Manor Road, Droylsden: traffic calming following speeding concerns.
- Newmarket Road, Ashton: new pedestrian crossings.
- Lees Road, Ashton: work to tackle speeding and red light jumping.
- Market Street/Manchester Road, Droylsden: work to tackle an accident blackspot.
- Beaufort Road, Ashton: work to tackle speeding.

In addition to the above schemes, there are several ongoing Public Rights of Way improvements and Section 106 schemes which include resurfacing work and improvements to both pedestrian and cycle access.

### **2.2.9.6 Information & Resources**

#### **AQAP 7.1 – Website and Online Resources**

The Council has promoted walking and cycling routes and green space use across the borough including links to the GMWalking website. The website hosts information around Local Air Quality Management, Smoke Control Areas and the burning of waste.

#### **AQAP 7.9 – Awareness Raising**

Greater Manchester-wide awareness raising campaigns have been run on the council's social media accounts around the environmental impact of bonfires and burning waste and the correct use of wood burning stoves.

## 2.2.10 Progress on actions for Trafford Metropolitan Borough Council

### 2.2.10.1 Development Control and Planning Regulation

#### AQAP 1.1 – Construction Management Guidance

In 2025, the council's Pollution team reviewed 647 planning applications within Trafford, with 110 of these reviewed in relation to potential air quality impacts. Further 13 enquiries were received from consultants relating to undertake Air Quality Assessments within the Trafford area.

Applications received include developments for small, medium and large residential, commercial and industrial installations. Planning applications are reviewed to assess potential impacts of new developments on local air quality including the AQMA and locations that are included within the GM Clean Air Plan (projected exceedances of legal limits for nitrogen dioxide). Planning applications are reviewed for impacts of bringing sensitive receptors to locations where levels of nitrogen dioxide exceed or are close to exceeding legal limit values.

The following developments include works to improve safety for pedestrians:

- Seymour Grove Phase 2: A Street for All Sustainable Travel Scheme - <https://www.trafford.gov.uk/streets-roads-and-transport/major-highways-projects/seymour-grove-phase-2-street-all-sustainable-travel-scheme>
- Sale Town Centre pedestrian improvements.
- A56 surfacing, bus stops and pedestrian crossings.
- Sale West to Altrincham: Key safety installations include a new crossing at Firsway (near the Health Centre) and modernised signals at the Sinderland Road and Barrington Road junctions completed. Future schemes identified at the Cross Street/A56 junction and with new crossings at two strategic Sale Town Centre junctions.
- Connection Partington: This scheme is moving into its next phase, finalising business case and if successful to be on site in Summer 2026. It aims to link schools and shops via segregated lanes and improved crossings.

#### AQAP 1.2 – Development Planning Guidance

Details of air quality requirements as part of planning applications to the council is provided in the Trafford Planning Validation Checklist. Planning conditions for installation

of EV charging points in new residential and commercial installations are routinely included. The council requires applicants to provide a scheme detailing provision of low emission vehicle charging infrastructure which is subject to review and approval.

Significant applications received in 2025 in relation to air quality impacts include:

- Residential development within Air Quality Management Areas.
- Event City in Trafford Park, a wellbeing resort including logistics hub.
- HS2.
- Small energy reserve facilities.

### **AQAP 1.5 – 20 mph Zones**

Trafford currently has 26 existing 20 mph zones. The schemes were implemented in the 1990's following the council being in receipt of government funding relating to local road safety schemes, and as part traffic calming schemes introduced across the borough.

The One Trafford Partnership have developed a priority matrix to manage requests received via members of the public. The matrix consists of weighted questions that provide a score which will be used to prioritise the request. The matrix ensures that requests are treated in a fair and equitable manner. It will be used to generate a cost estimate of the scheme, as cost will vary depending on the size of the area etc.

Roads are more likely to qualify for 20 mph limits if they meet criteria such as:

- High levels of on-street parking
- The presence of a school
- A history of fatal/serious collisions
- Locations near community centres, shops, places of worship, nurseries, or care homes
- Residents can request a zone or demonstrate community support or petitions.

One example of a grassroots campaign (a community petition for Park Road, Sale) highlighted recurring public concerns:

- Child pedestrian safety near busy school routes,
- High vehicle speeds from rat-running,
- Insufficient signage or traffic calming.

### **AQAP 1.6 – Encouraging Travel Planning**

Trafford Council strongly promotes sustainable travel planning as part of its wider strategy for reducing car dependency, improving public health, and addressing the climate crisis.

Under the Council's Planning Application Validation Process, guidance is provided to applicants and developers as to when sustainable plans will be required. This is dependent upon the size and type of the development. Travel plans are reviewed and conditions imposed to ensure suitable provisions are made.

### **AQAP 1.8 – Green Infrastructure**

Trafford continued its programme of tree planting and woodland expansion in partnership with City of Trees. A key initiative scheduled for the 2025/26 planting season is the Nansen Park scheme, where semi mature trees are planned for installation between December 2025 and April 2026 as part of a government funded project delivered with the GM Green Spaces Fund. Trafford's commitment to increasing canopy cover and woodland creation remains central to its green infrastructure strategy, supported by ongoing policy measures that protect and enhance trees, woodlands and hedgerows across the borough.

#### **2.2.10.2 Freight & Heavy Goods Vehicles**

##### **AQAP 2.7 – Engine Idling**

The Environmental Protection Team responded to complaints from residents and businesses relating to engine idling associated with freight and heavy good vehicles. Officers investigated complaints and contacted businesses located within the borough where vehicles regularly leave engines idling and where drivers associated with the business have been identified as leaving engines idling for extended periods.

#### **2.2.10.3 Buses**

##### **AQAP 3.1 – Bus Priority Programmes**

A new Red Route and Red Route Clearway have been introduced on the A56 to specifically improve bus reliability and reduce congestion.

##### **AQAP 3.2 – Bus Improvements**

12 "pole-only" stops have been upgraded borough-wide to meet TfGM accessibility standards, including tactile paving for the visually impaired. Over 100 other schemes comprising bus stops upgrades and crossings are in the pipeline for 2026/27.

#### **2.2.10.4 Travel Choices**

##### **AQAP 5.1 – Car Clubs**

Trafford has been working on a car club scheme with two centres, one in Altrincham on Regent Road and one at the Civic Quarter.

## 2.2.10.5 Cars

### AQAP 6.1 - Plugged-in Places EV Charging Network

EV charging in Trafford is provided by Be.EV. Parking is currently free for charging vehicles in an EV bay; vehicles parked in EV bays and not charging are eligible for a Penalty Charge Notice. There are a range of charging types across 77 bays in Trafford car parks, Table 2-2. The partnership helps ensure residents and visitors can access reliable infrastructure, competitively priced and with transactions managed through a phone app.

**Table 2-2 – Car Park EV Charging in Trafford**

Site Name	Fast Charging	Rapid Charging	Ultra-Rapid Charging	Total Bays
Greenbank Car Park	2	2	0	4
Flixton Road Car Park	4	2	0	6
James Street Car Park	2	2	0	4
Brown Street Car Park	4	0	0	4
Longford Park Car Park	1	1	0	2
Thorley Lane Car Park	5	2	0	7
Regent Road Car Park	10	0	0	10
Altrincham Leisure Centre	0	0	2	2
Balmoral Road Car Park	1	1	2	4
Trafford Town Hall Car Park	1	1	2	4
Golden Hill	0	0	6	6
Cecil Road Car Park	0	0	8	8
Sale Water Park	0	0	16	16
<b>Grand Total</b>	<b>30</b>	<b>11</b>	<b>36</b>	<b>77</b>

### City Region Sustainable Travel Settlement (approx. £1m project)

- Working in collaboration with Amey, the match funded project (£500k CRSTS + £500k Amey contribution), continuing to rollout on street EV infrastructure.
- 40 bays across 23 sites now activated.
- Target of 100 bays upon project completion
- Charge point utilisation is continuing to build, evidenced through usage statistics.

### **Local EV Infrastructure Fund (LEVI)**

- Transport for Greater Manchester (TfGM) are leading the procurement exercise for the region.
- Upon contract award, Trafford, like all GM districts will benefit from further on-street electric vehicle infrastructure.
- Further information will be made available upon contract award and mobilisation on the number of assets to be installed, type and location etc.

Trafford is developing a policy framework that may permit households (with no off-street parking) to deploy EV cable gullies to enable them to charge on street where it is safe to do so. A public update will be made later in 2026.

### **AQAP 6.2 – Car Use Allowance**

Council staff are incentivised to use bicycles for work through provision of the cycle to work scheme and infrastructure at council buildings. Staff can claim payment for miles travelled on bicycles for work visits as an alternative to car usage.

### **AQAP 6.3 – Local Authority Parking Charges**

Parking charges apply during operational hours including bank holidays. This also applies to parking restrictions shown on the street and in off-street car parks. Payment can be made at the machine, or cashless parking via the Ringo App. Parking is free outside of chargeable hours in Trafford car parks and for on-street parking. Blue Badge holders can park for free in designated disabled bays, some of these bays have a time limit which will be signposted, badge holders can park for free in Pay and Display bays on street. There is no exemption for Blue Badge holders where the area is restricted to permit holders.

### **AQAP 6.4 – School Travel**

Consultation and enabling work are ongoing for to introduce ‘School Streets’ within Trafford, to reduce the impact of traffic at school gates creating safer environments to encourage walking and cycling. The first primary schools taking part were Flixton Primary School, Urmston Primary School and English Martyrs RC Primary School. The scheme introduces a temporary restriction on motor traffic at school drop-off and pick-up times. Temporary road closures allow parents and children the freedom to walk or cycle safely in the streets at the beginning and end of the school day, in a traffic-free environment.

The street is only open to vehicles driven by residents, local businesses, and blue badge holders, meaning that children can enjoy a less polluted and less congested journey into

school, encouraging children and their parents to cycle or walk to school. Trials will now continue at each of the schools involved with the aim of making them permanent. Data collection and resident consultation will remain a part of all future trials. Trafford has school streets running at the following schools:

- St Hugh of Lincoln, Stretford
- Seymour Park, Stretford
- Tyntesfield, Sale
- Flixton Primary
- English Martyrs
- Urmston Grammar
- Urmston Primary
- The Willows
- St Matthews

School Support has included launching "Transition Rides" for students moving from primary to secondary school and established a "Bike Bus" for Victoria Park Junior School.

In 2025, Trafford received one enquiry about monitoring air quality at a school. There are already two such locations at schools within Trafford.

#### **2.2.10.6 Information & Resources**

##### **AQAP 7.9 – Awareness Raising**

Trafford Council website provides resources in relation to air quality and active travel:

- Detailed online resource for cycling within Trafford.
- Engine idling information.
- Access to air quality monitoring data.
- Information and advice regarding solid fuel burning.
- The council social media channels have been used as part of a wider GM campaign to promote responsible solid fuel burning within Trafford.

Trafford Council continues to make significant strides in delivering a comprehensive network of walking, wheeling, and cycling infrastructure. These projects underscore a commitment to healthier, low-carbon transport, ensuring active travel is a safe and attractive reality for all residents

## 2.2.11 Progress on actions for Wigan Metropolitan Borough Council

### 2.2.11.1 Development Control and Planning Regulation

#### AQAP 1.1 – Construction Management Guidance

Wigan Council has a Construction Environment Management Plan (CEMP) guidance document. CEMPs are recommended on the majority of major planning applications.

#### AQAP 1.2 – Development Planning Guidance

The Council's Development & Air Quality Supplementary Planning Document was published in 2021 and is still current.

#### AQAP 1.5 – 20 mph Zones

Wigan Council's aim in dealing with inappropriate driving is to change driver's attitudes and behaviours when travelling on residential streets to ensure that travelling at 20 mph or lower is the norm. To assist this approach 20 mph speed limits have been introduced on the majority of residential streets across the borough.

#### AQAP 1.6 – Encouraging Travel Planning

Travel Plans are required to be submitted to support planning applications for certain types of developments. Major schemes delivered in 2025 to deliver 6.5 km of new walking and cycling routes include:

- St Helens Road, Leigh
- Traffic Reduction Scheme, Leigh
- Standish Western Route
- Whelley Loop Line

Data counters have shown a 45% increase in walking and 11% increase in cycling across the borough in 2025 compared to 2024.

#### AQAP 1.8 – Green Infrastructure

Wigan Council's Climate Response team works with schools and colleges to address green infrastructure as part of their Climate Action Plan (a government requirement for all education establishments). Schools and colleges are encouraged to explore options such as living walls, rain gardens and tree/hedge planting. As well as improving air quality, these actions help to increase biodiversity net gain, mitigate climate change and adapt to its effects (flooding, heat).

### 2.2.11.2 Buses

#### AQAP 3.1 – Bus Priority Programmes

The Bird l'th Hand junction improvements form part of Transport for Greater Manchester's Wigan to Leigh Improving Journeys scheme and works completed in December 2025.

The completed upgrades include:

- Widened road and an extended right-turn lane from Wigan Road (A577) into Liverpool Road (A58) to reduce delays and congestion in the area
- Upgraded two existing crossings to improve safety, making active travel journeys to and from the bus corridor more accessible
- Relocated the northbound bus stop on Wigan Road to improve journey times and the reliability of bus services operating on the corridor.

### 2.2.11.3 Cycling

#### AQAP 4.1 – Cycling Programmes

Wigan Council's Be Well Team deliver a range of cycle interventions/programmes that encourage cycling both as a means of active travel and for leisure. Programmes include:

- Be Well cycle programme – Weekly led cycle rides for adults from 7 'cycle pods' located across the borough. Wigan offer a range of family friendly cycle rides/events and girls only rides.
- Bike Libraries – The borough has five bike libraries offering free bike loans. The two flagship libraries at Leigh Youth Hub and Gearing Up cycle workshop provide the opportunity to buy the bike after the loan at a heavily subsidised cost.
- Cycle Training – Be Well provide cycle training for all ages from balance bike training for 2-6 year olds through to 1 2 1 and small group learn to ride sessions for adults. All sessions are either free or £1.
- Cycle Three Sisters cycle event – Cycle Three Sisters is Wigan's flagship cycle event that regularly attracts 1,000+ people. The inclusive event is held twice annually at Three Sisters Race Circuit.

#### AQAP 4.2 – Public Cycle Hire

Although there is no public cycle hire scheme in Wigan, the council operates the two largest bike libraries as highlighted above.

#### **2.2.11.4 Cars**

##### **AQAP 6.4 – School Travel**

Wigan Council offer support to schools to help them complete and update School Travel Plans, the purpose of which is to increase walking and cycling, which in turn will reduce car use around schools, improve road safety and air quality. School Streets, Walking Bubble Schemes and Park and Stride Schemes are some of the initiatives launched in schools as part of the School Travel Plans, which then contribute to improved air quality.

#### **2.2.11.5 Information & Resources**

##### **AQAP 7.9 – Awareness Raising**

Wigan Council's Climate Response team delivers Climate Awareness Training to all council staff as well as several external organisations, which discuss the link between climate change and air quality. The Climate Response team offers advice to schools and colleges on all environmental issues including air quality. Support includes addressing infrastructure, educational workshops and encouraging positive behaviour change. The team hosts an annual Youth Climate Summit, which is attended by the borough's schools and colleges, as well as numerous environmental organisations, with the aim of sharing the latest advice and guidance on all 'eco' related issues.

**Table 2-3 – Progress on Measures to Improve Air Quality**

The top three measures to bring to the attention of residents are presented at the top of Table 2.2 (yellow-shaded section within the black outline). The wider table lists individual AQAP Objectives as reported above, with a brief progress summary for GM as a whole. Where actions have been achieved, that measure is highlighted in green.

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
4	AQAP 1.4 – Clean Air Zone Feasibility Study.  Assessing implementation of the GM-wide Clean Air Plan.	Traffic Management	Urban Traffic Control, Congestion Management, Traffic Reduction	2017	2027	Transport for Greater Manchester (TfGM) & Local Authorities	Joint Air Quality Unit (JAQU)	Partially Funded	>£10 million	Planning	Reduction in NO <sub>2</sub> across GM to bring about compliance with legal limit	Reduce Traffic; Increase Efficiency; Improve Fleet	Jan 2025, government approved investment-led, non-charging Clean Air Plan. Majority of NO <sub>2</sub> exceedances are in regional centre. E.g., Oxford St, Manchester – high NO <sub>2</sub> levels recorded in 2024, correlating with older buses running before completion of franchising.	Since Jan 2025, all buses are under local control and early indications show cleaner buses on these routes are reducing NO <sub>2</sub> .
7	(AQAP 1.7) Taxi and Private Hire	Promoting Low Emission Transport	Taxi Licensing Conditions	N/A	2027	LAs	Local Authority – BAU Activity	Funded	£50k - £100k	Implementation	To bring about compliance with the legal limit for NO <sub>2</sub>	Reduce Traffic; Increase Efficiency	The Hackney support fund opened in December 2025. All GM Authorities adopted emissions standard, requiring licensed hackneys and PHVs to be a minimum of Euro 6 (diesel) or Euro 4 (petrol). GM leaders endorsed plans to allow drivers more time to upgrade their vehicles to 31 December 2026 and allowing licensed vehicles to remain in service up to each authority's maximum age limit.	Work has begun in Greater Manchester to explore how Private Hire Vehicles can be supported to make the switch to cleaner vehicles.
39	AQAP 7.9 – Awareness Raising.  Work with residents,	Public Information	Via Other Mechanisms	2017	Ongoing	TfGM, Local Authorities & Directors of Public Health	TfGM & Local Authorities Business as Usual Activity (BAU)/Defra Grant	Funded	£10k - £50k	Implementation	An estimated reduction in PM <sub>2.5</sub> of 1-2 µg/m <sup>3</sup>	Reduce Traffic; Increase Efficiency; Improve Fleet; Increase awareness of	Research undertaken by University of Manchester into behaviours behind burning solid fuel. Communications and	Monitoring and evaluation of domestic burning project extended to mid-2026.

	vulnerable groups and hard to reach communities to raise awareness of air pollution and actions to improve.											health impact from solid fuel burning	winter fuel marketing campaign developed and ran across social media, print, radio and TV.	
1	(AQAP 1.1) Construction Management Guidance	Policy Guidance & Development Control	Air Quality Planning & Policy Guidance	2017	2017	LA's	LA – BAU Activity	Funded	< £10k	Completed	N/A	Reduce Traffic; Increase Efficiency; Improve Fleet	GM Task & Finish Group is improving standardisation of conditions across GM. Construction management guidance referred to by local authority environmental management teams. District specific details are in updates above.	N/A
2	(AQAP 1.2) Development Planning Guidance	Policy Guidance & Development Control	Air Quality Planning & Policy Guidance	2017	2017	LA's	LA – BAU Activity	Funded	< £10k	Completed	N/A	Reduce Traffic; Increase Efficiency; Improve Fleet	Guidance now referred to by LA environmental management teams. District specific details are in updates above.	N/A
3	(AQAP 1.3) Cumulative Development Database	Policy Guidance & Development Control	Air Quality Planning & Policy Guidance	2017	2017	TfGM	TfGM – BAU Activity	Funded	< £10k	Completed	N/A	Reduce Traffic; Increase Efficiency; Improve Fleet	Updates to database have been paused. Utility was found to be of limited value to Local Authorities. No further progress has been reported on to date and the objective has since ended.	Limited Use hence the completion of this objective.
4	(AQAP 1.4) Clean Air Zone Feasibility Study	Traffic Management	UTC, Congestion Management, Traffic Reduction	2017	2027	TfGM & LA's	JAQU	Partially Funded	> £10 million	Implementation	Reduction in NO <sub>2</sub> across GM to bring about compliance with legal limit	Reduce Traffic; Increase Efficiency; Improve Fleet	Jan 2025, government approved investment-led, non-charging Clean Air Plan. Majority of NO <sub>2</sub> exceedances are in regional centre. E.g., Oxford St, Manchester – high NO <sub>2</sub> levels recorded in 2024, correlating with older buses running before completion of franchising.	Since Jan 2025, all buses are under local control and early indications show cleaner buses on these routes are reducing NO <sub>2</sub> .
5	(AQAP 1.5) 20 mph zones	Traffic Management	Reduction of speed limits, 20 mph zones	2018	Ongoing	TfGM & LA's	LA – Various Funding Sources	Not Funded	< £10k	Implementation	N/A	Increase Efficiency	More 20 mph zone schemes and traffic calming measures are	N/A

													being explored or introduced. The schemes were found to reduce speeding in residential areas, encourage active travel and improve air quality. District specific details are in updates above.	
6	(AQAP 1.6) Encouraging Travel Planning	Promoting Alternative Travel	Personalised Travel Planning	2017	Ongoing	TfGM	TfGM – BAU Activity	Funded	£50k - £100k	Implementation	N/A	Reduce Traffic; Increase Efficiency; Improve Fleet	Work ongoing to help employers assess the travel habits of workforce, through toolkits on TfGM website. Each authority has noted work they are doing to encourage travel planning.	N/A
7	(AQAP 1.7) Taxi and Private Hire	Promoting Low Emission Transport	Taxi Licensing Conditions	N/A	2027	LAs	Local Authority – BAU Activity	Funded	£50k - £100k	Implementation	To bring about compliance with the legal limit for NO <sub>2</sub>	Reduce Traffic; Increase Efficiency	The Hackney support fund opened in December 2025. All GM Authorities adopted emissions standard, requiring licensed hackneys and PHVs to be a minimum of Euro 6 (diesel) or Euro 4 (petrol). GM leaders endorsed plans to allow drivers more time to upgrade their vehicles to 31 December 2026 and allowing licensed vehicles to remain in service up to each authority's maximum age limit.	Work has begun in Greater Manchester to explore how Private Hire Vehicles can be supported to make the switch to cleaner vehicles.
8	(AQAP 1.8) Green Infrastructure	Transport Planning & Infrastructure	Other	2019	Ongoing	TfGM	TfGM – BAU Activity	Funded	£10k - £50k	Implementation	N/A	Increase Efficiency	Local authorities have provided updates on progress of work in 2025. This includes integrating green infrastructure into planning developments, developing strategy and biodiversity improvement works.	N/A

9	(AQAP 2.1) Delivery & Servicing Plan Toolkit	Freight & Delivery Management	Delivery & Service Plan	2017	2022	TfGM	TfGM – BAU Activity	Funded	£10k - £50k	Completed	N/A	Reduce Traffic; Increase Efficiency; Improve Fleet	Limited progress at GM-wide level.	TfGM dedicated resource no longer funded. Currently considering role and resourcing for freight activity. Local Authorities continue to use Delivery and Servicing Plan guidance with businesses and public bodies.
10	(AQAP 2.2) Urban Distribution Centres	Freight & Delivery Management	Freight Consolidation Centre	2020	TBC	TfGM	TfGM – BAU Activity	Partially Funded	£10k - £50k	Planning	N/A	Reduce Traffic; Increase Efficiency; Improve Fleet	Worked with businesses/couriers on facilitation of sustainable travel and e-cargo bikes solutions. Couriers happy to trial in GM due to high quality cycling network. TfGM has dedicated webpage with information on deploying eCargo bikes. Businesses continue to deploy eCargo bikes in their fleet and GM predicts this will continue.	This topic was discussed at the 2026 GM Freight Forum.
11	(AQAP 2.3) Urban Consolidation	Freight & Delivery Management	Other	2019	TBC	TfGM	TfGM – BAU Activity	Funded	£10k - £50k	Implementation	N/A	Reduce Traffic; Increase Efficiency; Improve Fleet	GM expects further investment into sustainable distribution and consolidation centres. Plans to be set out in Local Transport Plan.	Draft Local Transport Plan consultation ended in March 2026.
12	(AQAP 2.4) Access for Freight to Key Economic Centres and Sub-regional Freight Facilities	Promoting Travel Alternatives	Promote use of rail and inland waterways	2018	TBC	TfGM	TfGM – BAU Activity	Not Funded	N/A	Planning	N/A	Reduce Traffic; Increase Efficiency	Updating GM Freight Strategy 2050. TfGM are currently analysing consultation responses the resultant freight policy and strategic direction will be incorporated into the forthcoming GM Local Transport Plan.	N/A

13	(AQAP 2.5) Freight Information Channels	Freight & Delivery Management	Other	2017	Ongoing	TfGM	TfGM – BAU Activity	Funded	£10k - £50k	Implementation	TBC	Reduce Traffic; Increase Efficiency	TfGM are partner organisation in CLOCS and FORS to bring benefits to safety and environment. TfGM have reinvigorated the GM Freight Forum to bolster two-way engagement with the industry on environmental matters.	N/A
14	(AQAP 2.6) Diesel Transport Refrigeration Units (TRUs)	Freight & Delivery Management	Other	N/A	TBC	TfGM	TfGM – BAU Activity	Not Funded	N/A	Paused	N/A	Increase Efficiency; Improve Fleet	No progress to date.	Work suspended due to GM priorities. However, this will be reconsidered as part of the GM 5YEP
15	(AQAP 2.7) Engine Idling	Promoting Low Emission Transport	Other	2017	Ongoing	TfGM & LA's	TfGM & LA's – BAU Activity	Not Funded	< £10k	Implementation	N/A	Increase Efficiency	Building on 2022 report 'Tackling Vehicle Idling – Options', LAs have continued work and have reported on this above.	Enforcement challenges obtaining driver/owner details, FPN will not cover cost of enforcement action. Concluded government should review legislation for significant progress to be achieved.
16	(AQAP 2.8) Alternative Fuels	Promoting Low Emission Transport	Other	2017	Ongoing	TfGM	TfGM – BAU Activity, Office for Zero Emission Vehicles, Early Measures	Partially Funded	£1 million - £10 million	Implementation	N/A	Increase Efficiency; Improve Fleet	GM continues to promote Electric Vehicles as part of 'Electric Travel' website. GM continues to roll out EV chargers across the region, through funding streams such as CRSTS & LEVI. GM expects an increase of charge points into the near future. Investing in infrastructure makes	Demand and supply. For Hydrogen, infrastructure needed to deliver the fuel to the end user and the availability of H2 vehicles in the market. EV usage expected to increase in the coming years. Challenges around cost and

													transitioning easier for our residents. Many LAs are introducing EV's to their fleet	access to home charging.
17	(AQAP 3.1) Bus Priority Programmes	Transport Planning & Infrastructure	Bus Route Improvements	2017	Ongoing	TfGM	TfGM – CRSTS	Funded	£500k - £1 million	Implementation	To bring about compliance with the legal limit for NO <sub>2</sub> by 2025	Reduce Traffic; Increase Efficiency	At GM-wide level, bus infrastructure a core element of the CRSTS programme. Junction upgrades and real-time traffic monitoring allow bus and tram prioritisation.	Business cases are currently being progressed on a further 15 schemes to enable delivery of further bus priority measures.
18	(AQAP 3.2) Bus Improvements	Vehicle Fleet Efficiency	Promoting Low Emission Public Transport	2017	Ongoing	TfGM	Mixed	Not Funded	>£10 million	Implementation	Reduction in NO <sub>2</sub> to bring about compliance with legal limit	Improve Fleet	Bus franchising completed January 2025. Increase number of EV/Euro VI buses in service.	Availability of vehicles and charging infrastructure at depots.
19	(AQAP 3.3) Hybrid Bus Improvements	Vehicle Fleet Efficiency	Promoting Low Emission Transport	2017	2023	TfGM	TfGM – BAU Activity	Funded	£500k - £1 million	Complete	N/A	Increase Efficiency	In 2023 government advised TfGM to pause new spending on bus retrofit due to evidence of poor and highly variable in-use performance. Government advised of a six-month research programme to investigate causes of poor bus retrofit performance. GM has incorporated revised guidance from JAQU, into CAP modelling. Further work will be referenced in CAP narrative.	To date the outputs of the government research programme have not been made available to GM.
20	(AQAP 3.4) Trial of Low Emission Vehicles	Vehicle Fleet Efficiency	Promoting Low Emission Public Transport	2017	2023	TfGM	TfGM – BAU Activity	Funded	> £1 million	Complete	N/A	Improve Fleet	Franchising and CRSTS funding are prioritising electrification of bus fleet, no other trials of Low Emission Vehicles were conducted in the last two years. Zero	N/A

													emission bus data will be analysed to identify opportunities for optimisation. Further work will be referenced in CAP narrative.	
21	(AQAP 4.1) Cycle Programmes	Promoting Travel Alternatives	Promotion of Cycling	2017	Ongoing	TfGM & LAs	Mixed	Partially Funded	> £10 million	Implementation	Reduction in NO <sub>2</sub> and PM	Reduce Traffic	Cycle network across GM continued to grow. Further investment in new infrastructure and schemes like bike libraries. Specific details are in the updates above.	N/A
22	(AQAP 4.2) Public Cycle Hire	Transport Planning & Infrastructure	Public Cycle Hire Scheme	2017	Ongoing	TfGM	Mayor's Challenge Fund	Funded	> £10 million	Implementing	Reduction in NO <sub>2</sub> and PM	Reduce Traffic	Ridership continued to increase in 2025. New e-bikes, with a new design, were introduced to the scheme in the spring/summer of 2025 and take the percentage of e-cycles from 20% to 50% Specific details are in updates above.	Usage is mainly driven by seasonal and weather conditions although October 2025 saw a sharp increase which can be linked to the bus operator industrial action. Vandalism and theft have been challenging but kept under control in 2025.
23	(AQAP 4.3) Cycle Logistics	Promoting Travel Alternatives	Promotion of Cycling	2017	Ongoing	TfGM	TfGM – BAU Activity, INTERREG	Funded	£500k - £1 million	Implementation	Reduction in NO <sub>2</sub> and PM	Reduce Traffic	During 2022-2025, TfGM's Community Access Grant offered grant funding to community organisations, small businesses, NHS healthcare providers and education providers to deliver cargo cycle solutions, accessible/adaptive cycles and/or community innovation.	157 groups applied (bids totalled more than £1.1m) with £530k allocated to 78 organisations. The project expects to deliver 67 new cargo cycles.
24	(AQAP 4.4) Walking & Wheeling to 2040	Promoting Travel Alternatives	Promotion of Cycle & Walking	2017	Ongoing	TfGM	TfGM – BAU Activity and range of DfT Funding	Partially Funded	> £10 million	Implementation	Reduction in NO <sub>2</sub> and PM	Reduce Traffic	Work ongoing on Active Travel Mission set out by Dame Sarah Storey. Active Travel in GM Annual Report (2025).	The Local Transport Plan and Delivery Plan are scheduled to be agreed and published in

														2026, along with the Active Travel Action Plan.
25	(AQAP 5.1) Car Clubs	Alternatives to Private Vehicle Use	Car Clubs	2017	Ongoing	LAs	TfGM & LA – BAU Activity INTERREG	Partially Funded	£500k - £1 million	Implementation	Reduction in NO <sub>2</sub> and PM	Reduce Traffic; Improve Fleet	Each LA has reported on progress. TfGM have paused their plans to develop a scheme.	Low usage, lack of bids from operators to run contract and vandalism.
26	(AQAP 5.2) Dynamic Road Network Efficiency and Travel System Information	Public Information	Via other mechanisms	2017	Ongoing	TfGM	TfGM – BAU Activity	Funded	£1 million - £10 million	Implementation	N/A	Increase Efficiency	TfGM continues to manage the road network efficiently. Details are in updates above.	N/A
27	(AQAP 6.1) Plugged in Places EV Charging Network	Promoting Low Emission Transport	Other	2018	Ongoing	TfGM	TfGM – BAU Activity, Early Measures Funding, OLEV Funding	Partially Funded	£1 million - £10 million	Implementation	Reduction in NO <sub>2</sub>	Improve Fleet	Ongoing work on EV charging network. TfGM's POI delivered over 1 million kWh, and 76,500 charging events were recorded. TfGM developed procurement documentation for LEVI scheme, with support of the 10 LAs.	Further investment in 2026, which will be accompanied by the development of the LEVI scheme and Local Authorities progressing programmes using CRSTS funding.
28	(AQAP 6.2) Car Use Allowances	Alternatives to private vehicle use	Other	2017	Local authorities have provided updates where applicable.	LA's	District Budgets TBC	Partially Funded		Planning	N/A	Reduce Traffic	Local authorities have provided updates where applicable.	N/A
29	(AQAP 6.3) Local Authority Parking Charges	Traffic Management	Workplace Parking Levy, Parking Enforcement on Highway	2017	Local authorities have provided updates where applicable.	LA's	LA's	Partially Funded		Planning	N/A	Reduce Traffic	Local authorities have provided updates where applicable.	N/A
30	(AQAP 6.4) School Travel	Promoting Travel Alternatives	School Travel Plans	2017	Ongoing	TfGM & LA's	TfGM & LA – BAU Activity	Partially Funded	£10k - £50k	Implementation	Reduces NO <sub>2</sub> and PM	Reduce Traffic; Increase Efficiency	TfGM continues to work with 10 Local Authorities to achieve the target of 100 School Streets by 2028, through the facilitation of robust monitoring and evaluation, qualitative impact and safer experiences for schoolchildren.	Resistance from parents
31	(AQAP 7.1) Website & Online Resources	Website & Online Resources	Via the Internet	2017	2019	TfGM	TfGM – BAU Activity	Funded		Implementation	N/A	Reduce Traffic; Increase	Continued use of online resources to promote air quality	Promotional activity for the Clean Air Plan

												Efficiency; Improve Fleet	messages. Clean Air GM website updated and Burn Better campaign 2025/26.	was scaled back, with efforts directed towards implementing the government-funded Clean Air Plan measures.
32	(AQAP 7.2) Online Route Finding	Promoting Travel Alternatives	Personalised Travel Planning	N/A	Ongoing	TfGM	TfGM – BAU Activity	Funded		Implementation	Reduction in NO <sub>2</sub> and PM	Reduce Traffic; Increase Efficiency	The Bee Network is trialling wayfinding technology to help visually impaired passengers access and navigate public transport spaces more easily through GoodMaps technology.	N/A
33	(AQAP 7.3) Air Pollution Alert	Public Information	Via other mechanisms	2018	Ongoing	TfGM	TfGM – BAU Activity	Funded	£10k to £50k	Complete	N/A	Reduce Traffic; Increase Efficiency; Improve Fleet	GM Pollution alert service set up. There were 755 users as of Dec 2025. Work has been started to refresh the service.	Due to low numbers using the service, it will be reviewed to assess whether it is meeting the needs of those who may benefit from receiving this information.
34	(AQAP 7.4) Health Effects of Air Pollution in Greater Manchester	Public Information	Via the internet	2017	2024	TfGM	UKHSA BAU	Funded		Implementation	N/A	Reduce Traffic; Increase Efficiency; Improve Fleet	A Health-based Air Quality Working Group has been created including representatives from TfGM, UKHSA, Public Health and NHS.	N/A
35	(AQAP 7.5) Contingency Report Plan	Public Information	Other	N/A	Ongoing	TfGM	PHE BAU	Partially Funded		Implementation	N/A	Reduce Traffic; Increase Efficiency; Improve Fleet	Reported at GM level only. GM Resilience Forum has plans in place to respond to major incidents within Greater Manchester impacting air quality.	N/A
36	(AQAP 7.6) TfGM Air Quality Team	Other	Other	2017	Ongoing	TfGM	TfGM – BAU Activity	Funded	£10k - £50k	Completed	N/A	Reduce Traffic; Increase Efficiency; Improve Fleet	TfGM and the 10 LA's maintain good working relationships and work together. The GM Air Quality Working Group meet every quarter. TfGM air quality officers attended meetings with community groups, local business	N/A

													and stakeholders. GM AQ Network completed re-tendering.	
37	(AQAP 7.7) Air Quality Monitoring Database	Other	Other	2017	Ongoing	TfGM & LA's	TfGM & LA's – BAU Activity	Funded	< £10k	Implementation	N/A	Reduce Traffic; Increase Efficiency; Improve Fleet	TfGM publish air quality data on <a href="#">Clean Air GM</a> website.	N/A
38	(AQAP 7.8) Traffic Flow Data	Other	Other	2017	Ongoing	TfGM	TfGM – BAU Activity	Funded		Implementation	N/A	Reduce Traffic; Increase Efficiency; Improve Fleet	Utilising ANPR data to understand vehicle emission data in more detail and the effect on parts of the region. The data will be used for the monitoring and evaluation of CAP.	N/A
39	(AQAP 7.9) Awareness Raising	Public Information	Via other mechanisms	2017	Ongoing	TfGM & LA's	TfGM & LA's – BAU Activity	Funded	£10k - £50k	Implementation	Reduction in NO <sub>2</sub> and PM <sub>2.5</sub>	Reduce Traffic; Increase Efficiency; Improve Fleet	Research undertaken by University of Manchester into behaviours behind burning solid fuel. Communications and winter fuel marketing campaign developed and ran across social media, print, radio and TV. Additional LA updates are in respective section.	Monitoring and evaluation of domestic burning project extended to mid-2026.

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

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

As a Breathe Life City Region since 2017 ([Link to Breathe Life website](#)) it is our intention to work towards the WHO (World Health Organisation) air quality guidelines, while recognising that a significant proportion of PM<sub>2.5</sub> comes from outside of GM. Nine GM authorities have incorporated these targets in the Places for Everyone Plan statutory development plan ([Link to Places For Everyone, GMCA](#)). There are concerted efforts through the GM 5YEP to further reduce the proportion of PM<sub>2.5</sub> emissions over which GM authorities have an influence working towards population exposure reductions and the WHO guideline annual mean of 5 µg/m<sup>3</sup> by 2030.

The GM AQAP focusses on reducing concentrations of NO<sub>2</sub> (as the pollutant for which the AQMA is declared), however it contains measures to address PM<sub>2.5</sub> either directly or as a co-benefit. Some examples of which are listed below:

- Continued implementation of the AQAP and individual local authority air quality and climate change works containing actions that have co-benefits for reducing PM<sub>2.5</sub> (e.g. decarbonisation of heating and increasing active travel).
- Recognising that while electric and alternative fuel vehicles can offer reductions in NO<sub>2</sub> and CO<sub>2</sub>, they can still be a source of PM from tyre and brake dust or road surface wear. This is under constant review and responsive to national guidance.
- Working with public health partners and universities to better understand the effects of PM<sub>2.5</sub> on the health of residents in Greater Manchester.
- Public engagement to support the air quality agenda, raising awareness with residents on making better choices to prevent PM<sub>2.5</sub> (e.g. reducing solid fuel burning, choosing active travel etc.), including health-based messaging.

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

- Using indicative monitors across the city region with computer modelling to identify yearly trends in PM, to better understand source contribution, background concentrations and to assess the effectiveness of the 'Burn Better' campaign.
- Greater Manchester has an Information Hub on the Green City website to educate residents about health impacts and regulations ([Link to Burn Better GM on GM Green City website](#)).
- Investing in the Bee Network to provide an attractive and low-cost alternative to personal car use.
- Greater Manchester promotes national campaigns such as "Clean Air Day/Night," "Ready to Burn," Defra's "Burn Better" and "Burnright."
- Members of the Defra AQ Hub to share knowledge and best practice with other local authorities.
- Meet with community groups and campaigners to better understand local concerns and how we can work together on air quality issues.

Details of further work Greater Manchester is taking to address PM<sub>2.5</sub> is detailed below.

### 2.3.1 PM<sub>2.5</sub> in Greater Manchester

GM has a network of 10 PM<sub>2.5</sub> automatic monitors across the city region, detailed results are presented in Section 3.2.3 **Particulate Matter (PM<sub>2.5</sub>)**. Monitored concentrations are below both the 20 µg/m<sup>3</sup> annual objective concentration and the 10 µg/m<sup>3</sup> 2030 interim target value.

Defra background maps (2021 reference year) for 2025 suggest PM<sub>2.5</sub> concentrations of 5.3 - 9.7 µg/m<sup>3</sup> across the GM city region, of which approximately 52% is from secondary sources, 17% residual and salt sources, 12% from domestic sources, 8% from industry, 5% from transport sources and 3% point sources.

Additionally, forty indicative low-cost monitors are installed as part of a Defra funded Domestic Burning project which, although not approved for inclusion in the ASR, give general trends in PM<sub>2.5</sub> across the region. A summary of the first year of monitoring are presented in Section 2.3.6, with a more complete interim report of the project, including behavioural research, in **Appendix F: GM Domestic Burning PM<sub>2.5</sub> Monitoring and Behaviour Research - 2025 Interim Update**.

### 2.3.2 Public Health Outcomes Framework

The Public Health Outcomes Framework (PHOF) sets out indicators of the state of public health. One indicator relates to the fraction of annual all-cause adult mortality attributable to PM<sub>2.5</sub> pollution ([D01 - Fraction of mortality attributable to particulate air pollution, link in text](#)). Long-term exposure to air pollution is understood to contribute to the risk of dying from certain conditions and is one of many contributory risk factors but is unlikely to be the sole cause of deaths of individuals. Estimates of deaths attributable to air pollution are often used to compare the public health importance of air pollution with other risk factors.

The Committee on the Medical Effects of Air Pollutants (COMEAP) estimated mortality burden attributable to current levels of air pollution by calculating a figure of “attributable deaths”. Such burden estimates require simplifying assumptions to be made, but can be regarded as the effect on mortality, in a given year, of long-term exposure of the current population to current levels of air pollution.

They are calculated as the difference in annual deaths between a baseline of actual (observed) age-specific death rates (influenced by current levels of pollution) and a scenario, in which age-specific death rates are reduced by an amount attributable to current levels of pollution. Mortality burden attributable to long-term exposure to air pollution should not be interpreted as causing the deaths of “X” individuals, equal to the calculated number of attributable deaths. The “attributable deaths” represent the total mortality effect across the population, the distribution of the mortality effect within the population, and the number of individuals affected, is unknown.

Table 2-4 shows the 2024 estimated mortality fraction attributable to PM<sub>2.5</sub> for GM local authorities, with averages for the North West region and England. Figure 2-19 shows the trend in estimated fraction of mortality since 2018 for GM and England. It represents the mortality effect across the population, but the number of individuals affected is unknown. This is the burden associated with long-term exposure to PM<sub>2.5</sub> at current levels, expressed as the percentage of annual deaths from all causes in those aged 30 and over.

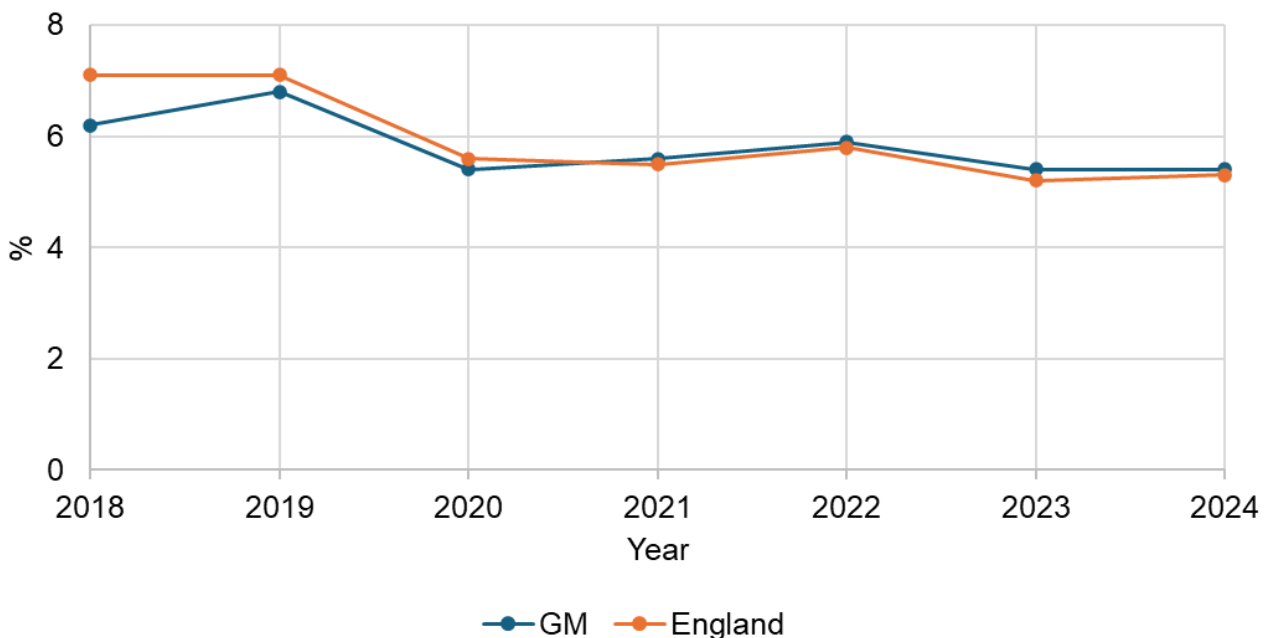
Consideration is also given to data from the [UKHSA Air Quality and Health Dashboard for England dashboard](#) (link in text), which includes public health profiles/air quality related indicators (sourced from the PHOF) but further encompasses related health outcomes and wider determinants. This offers broader evidence base than solely the fraction of annual all-cause adult mortality attributable to PM<sub>2.5</sub> pollution. The vulnerability indicator allows further work to identify and contextualise the most at risk groups across areas, with health

economic indicators that estimate the impact of pollutants on disease prevalence and costs to the NHS and social care system.

**Table 2-4 - Estimated Annual Mortality in 2024 attributable to PM<sub>2.5</sub> for HM Districts**

Authority	Attributable Fraction (%)
Bolton	5.1
Bury	5.3
Manchester	5.8
Oldham	5.6
Rochdale	5.3
Salford	5.6
Stockport	5.5
Tameside	5.7
Trafford	5.3
Wigan	5.0
<i>All North West</i>	<i>4.9</i>
<i>All England</i>	<i>5.3</i>

**Air pollution: estimated fraction of mortality attributable to particulate air pollution 2018-2024**



**Figure 2-19 – Trend in Estimated Fraction of Mortality Over Time**

GM continues to collaborate with local and national partners in this area. A Health-based Air Quality Working Group has been established including representatives from TfGM, UKHSA, Public Health, and NHS GM. The group meet bi-monthly to ensure workstreams are aligned and air quality messaging is evidence-based and consistent across partners.

### 2.3.3 Actions to Reduce PM<sub>2.5</sub>

The GM 5YEP 2025-2030 contains objectives and targets to improve general air quality and PM<sub>2.5</sub> specifically. The region is already meeting both the 2030 interim and long term 2040 UK air quality objective of 10 µg/m<sup>3</sup> and WHO Interim Target 4 for PM<sub>2.5</sub>.

There is a local target to achieve a 22% population exposure reduction in PM<sub>2.5</sub> exposure by January 2028 compared to 2018 (measured using Defra's Criteria). For 2025 the cumulative exposure reduction was maintained at 17% compared to 2024.

### 2.3.4 Smoke Control

GM has smoke control areas covering most local authorities, details can be found at this [link to the UK Air Local Air Quality Dashboard](#) or via the relevant local authority website.

In 2025, GM local authorities responded to smoke control complaints using the Smoke Emissions Enforcement Toolkit. Upon further investigation, only a small proportion required warning letters and advice issued about responsible burning and burning better. Following this, no further reports were received to suggest ongoing problems and no further action or financial penalties were required. Residents are encouraged to use authorised fuels, burn better and improve home energy efficiency before financial penalties are considered.

As part of 5YEP reporting the number of smoke nuisance complaints received per local authority are collated to identify trends and potential problem areas. They are categorised according to the type of complaint: Domestic chimney (Smoke control or Smoke control-type complaints), Domestic outdoors (Bonfires etc.) and those relating to Industrial, Commercial or Agricultural sources. The figures for 2025 are presented in Table 2-5.

**Table 2-5 – Smoke Nuisance Complaints Received Across GM in 2025**

Smoke Complaint Type	Total Across GM
Domestic Chimney	155
Domestic Outdoors (Bonfire etc.)	915
Industrial/Commercial/Agriculture	267

### 2.3.5 Greater Manchester Smoke Emissions Enforcement Toolkit

The GM Air Quality Working Group (led by Manchester) produced a Smoke Emission Enforcement Toolkit in 2023 which was shared with the Defra Air Quality Hub for use nationally by other local authorities. The pack contains a briefing note, a policy protocol, procedural flowchart, template documents and letters for use with smoke enforcement work, which have been updated with the statutory guidance revisions. The aim is to ensure effective enforcement and consistency in enforcement measures. Figure 2-20 shows an example of the procedural flowchart created for the toolkit.

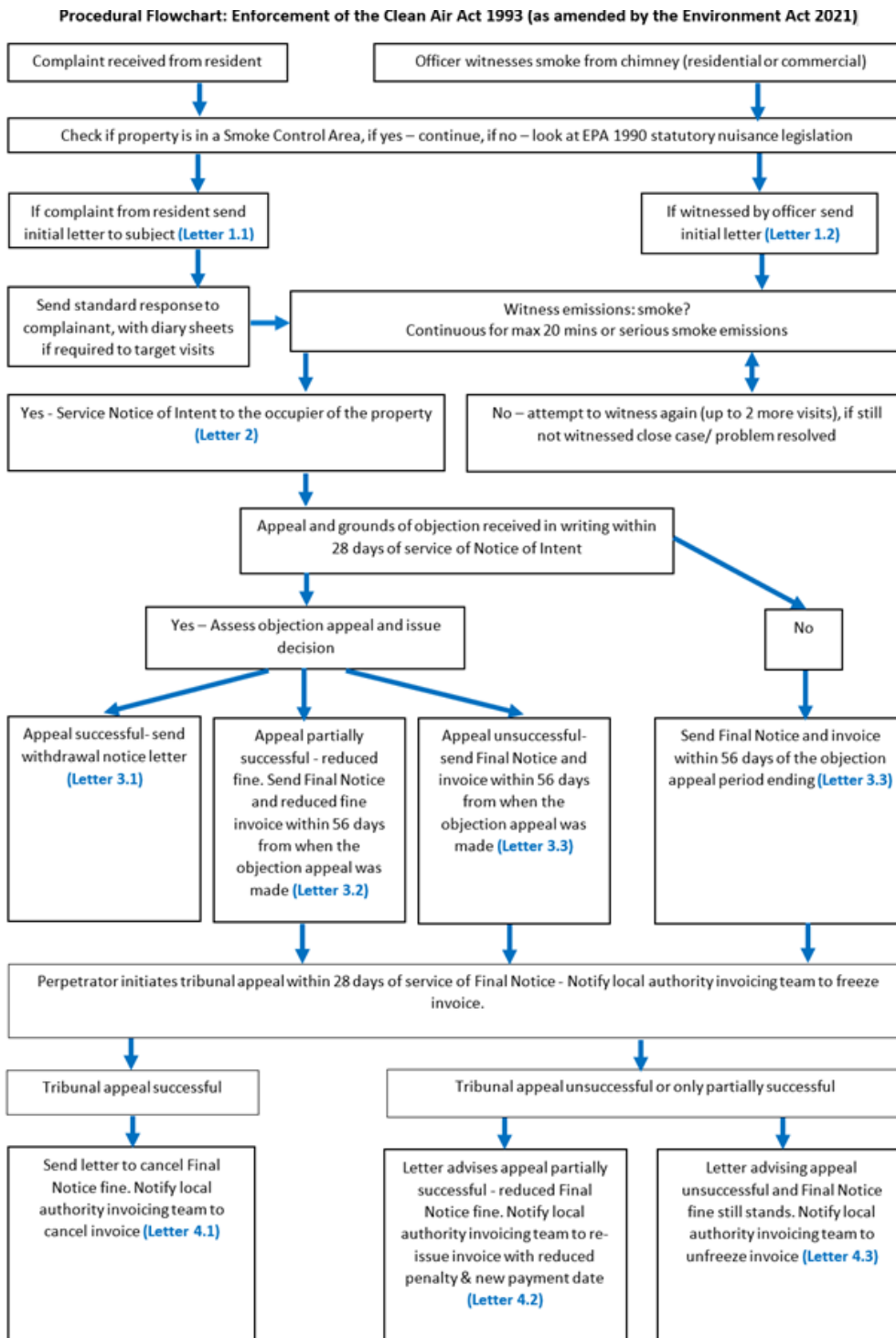


Figure 2-20 - GM Smoke Emissions Enforcement Toolkit Procedural Flowchart

### 2.3.6 Domestic Burning Awareness

#### Background

On behalf of the 10 GM local authorities and Greater Manchester Combined Authority, TfGM secured a £570,000 Air Quality Grant from Defra in March 2022 to fund a multi-year scientific research and behaviour change project in relation to the risks of fine particulate air pollution (PM<sub>10</sub> and PM<sub>2.5</sub>) from domestic solid fuel burning including indoor woodburning stoves, open fires, and garden bonfires or barbeques.

Communication campaigns were undertaken during the winter burning seasons in 2022/23, 2023/24, 2024/25 and 2025/26. The most recent campaign ran from October 2025 until February 2026. Highlights of these campaigns are summarised below:

- **Winter 22/23:** The first campaign ran between December - February targeting areas with known domestic burning equipment users to increase awareness of the health/environmental impact and encourage the use of cleaner fuels. This directed people to Defra's 'Burn Better' campaign website. Through a mix of organic and paid activity, this generated 12 million opportunities for people to see or hear campaign messaging, driving over 10,000 visits to the Defra site, and 15,000 video views through communications and marketing activity.
- **Winter 23/24:** Alongside supporting the Defra 'Burn Better, Breathe Better' campaign up to December 2023, GM ran a second campaign. Between January – March, Burn Better GM was an organically-led campaign targeting areas with known users of domestic burning appliances. It directed people to a new local Information Hub on the GM Green City website to educate residents about the health impacts and regulations surrounding domestic burning. The website can be found via [this link to the Burn Better GM website](#).
- **Winter 24/25:** Using new research and data from focus groups run by the University of Manchester, and early results from a network of over 40 indicative air quality monitors, a multi-channel campaign was delivered. This targeted existing users of domestic burning equipment in areas with a high amount of domestic solid fuel burning activity and people who may consider installing equipment in the future. The campaign considered the ongoing cost-of-living crisis and likelihood that some people might be reliant on domestic burning to supplement or provide an alternative to conventional heating sources (gas, electricity).

- **Winter 25/26:** In 2025, TfGM coordinated a fourth GM-wide information campaign, providing GMCA and the 10 local authorities with content to raise awareness of the harmful effects to human health and pollution emitted from solid fuel burning, with a particular focus on woodburning stoves. The communications pack included social media content and newsletter/website copy for GM communications colleagues, partners and stakeholders to share, supported by an updated Burn Better information hub at [www.burnbettergm.co.uk](http://www.burnbettergm.co.uk) and #BurnBetterGM for use with social media posts.

### **Campaign objectives**

The 2025/26 campaign aimed to:



- Raise awareness of the health impacts of air pollution from domestic solid fuel burning.
- Raise awareness of 'Ready to Burn' resources and how to 'burn better.'
- Raise awareness of smoke control areas.
- Influence behaviour to reduce the number of households burning solid or incorrect fuel.



### **2025/26 Campaign overview**

The 2025/26 campaign launched in October 2025 and ran until the end of February 2026. It was a supplementary campaign to coincide with the extension of the monitoring over a further winter period and to promote the toolkit produced as part of the main campaigns in 24/25 and 25/26. As such, it was an organic only campaign this year with no paid promotion.

Organic channels included social media and newsletters, with stakeholder toolkits provided to the GMCA, all 10 local authorities, and wider GM partners to encourage sharing of campaign materials via social media and newsletter channels, adding any borough-specific messaging as required. Examples of the Burn Better media assets and messaging are shown in Table 2-6.

**Table 2-6 - GM Burn Better Winter 2025/26 Campaign Social Media Resources**

Graphic	Social media messaging
 <p>Did you know? Burning the wrong fuel to heat your home can damage your health.</p> <p>Think Twice! BURN BETTER.</p> <p>Visit <a href="http://burnbettergm.co.uk">burnbettergm.co.uk</a> for information and advice</p>	<p>Pollution from burning at home affects us all but particularly children, older and more vulnerable people.</p> <p>Protect us all this winter by burning better:</p> <ul style="list-style-type: none"> <li>Seasoned dry wood</li> <li>Bagged fuels with Ready to Burn logo</li> </ul> <p>More: <a href="http://www.burnbettergm.co.uk">www.burnbettergm.co.uk</a> #BurnBetterGM</p>
 <p>Did you know? In most areas there are rules about what you can burn at home.</p> <p>Think Twice! BURN BETTER.</p> <p>Visit <a href="http://burnbettergm.co.uk">burnbettergm.co.uk</a> for information and advice</p>	<p>Most of Greater Manchester is covered by Smoke Control Areas.</p> <p>Rules are in place about what you can burn at home to help reduce air pollution, making the air safer for everyone.</p> <p>Find out what you can and can't burn where you live: <a href="http://www.burnbettergm.co.uk">www.burnbettergm.co.uk</a> #BurnBetterGM</p>

	<p>Keep it clean. Get your chimney swept each year and your stove checked and cleaned regularly to:</p> <ul style="list-style-type: none"> <li>• Help produce more heat</li> <li>• Reduce pollution</li> <li>• Save you money in the long run</li> </ul> <p>Find out how to burn better this winter:  <a href="http://www.burnbettergm.co.uk">www.burnbettergm.co.uk</a>  #BurnBetterGM</p>
	<p>Log burners might seem cosy, but stove &amp; fire smoke produces tiny particles that can damage health.</p> <p>There may be more affordable and greener ways to heat your home.</p> <p>Protect your health &amp; your wallet this winter by burning better: <a href="http://www.burnbettergm.co.uk">www.burnbettergm.co.uk</a>  #BurnBetterGM</p>

Local authorities incorporated the materials into other communications released by them, including in resident newsletters, Figure 2-21, social media channels and printed versions were made available for libraries and other public buildings.

The Burn Better GM webpages on the GM Green City website and information on the main Clean Air GM websites were checked for relevance and updated, replacing outdated content. The social media resources included links directing people to these webpages for further information and advice.



**Figure 2-21 – Excerpt from Oldham Council Weekly Newsletter**

### **Future phases and next steps**

A decision is still to be confirmed on whether a future campaign will run over winter 2026/27.

### **Indicative Monitoring**

The project installed 43 MCERTs<sup>2</sup> low-cost indicative monitors across the city region from January 2024, including an equal number of background locations and sites thought to have high rates of domestic burning, with a further three collocated with the real-time analyser in Piccadilly Gardens for Quality Assurance/Quality Control purposes.

Performance issues were experienced with the low-cost sensors over the 2024/25 period. As such, the monitoring programme will run to May 2026 and includes data collection and analysis of the 25/26 winter burning season. A final project report will be appended to next year's ASR submission, comprising indicative monitoring to Spring 2026. A summary of the key findings is provided below. A more detailed interim annual report covering

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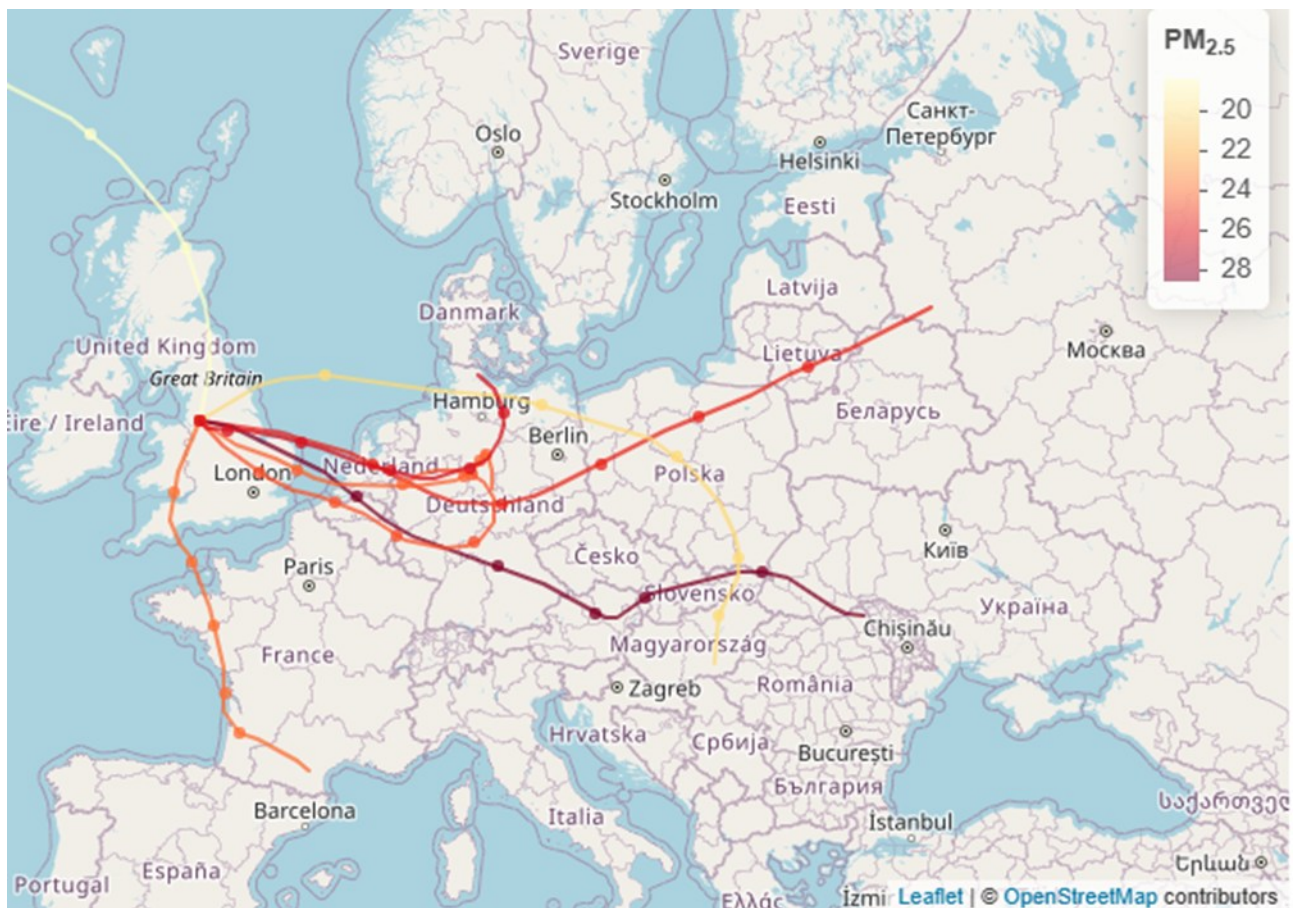
<sup>2</sup> MCERTs is the Monitoring Certification Scheme, an Environment Agency accreditation scheme for monitoring emissions to air, land and water. It provides a framework for making environmental measurements that meet quality requirements.

monitoring undertaken during 2024 with results from the behavioural studies can be found in [Appendix F: GM Domestic Burning PM<sub>2.5</sub> Monitoring and Behaviour Research - 2025 Interim Update](#).

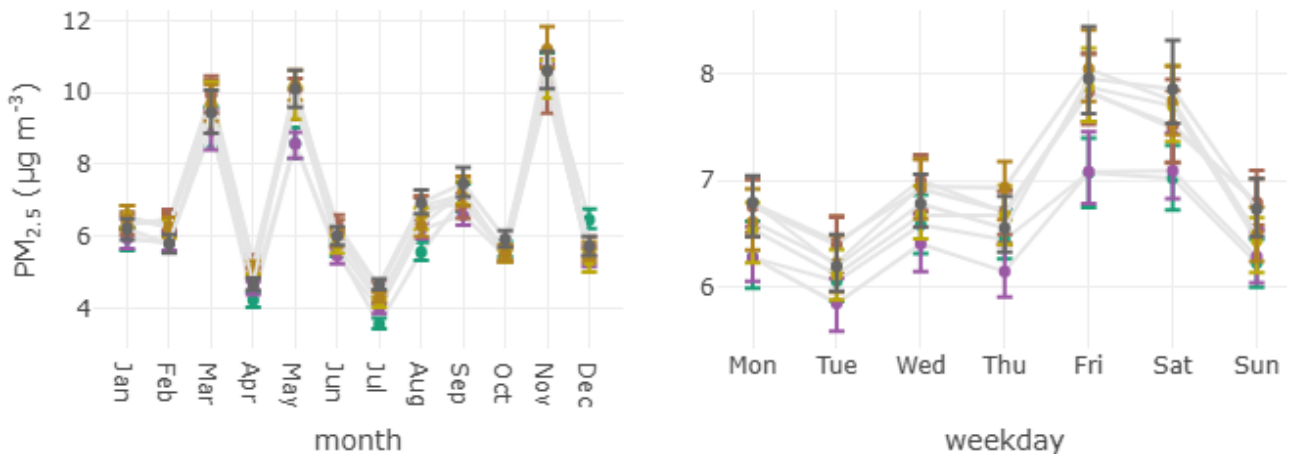
### 2024 Annual Summary

Indicative monitoring undertaken in 2024 showed:

**Regional and Transboundary Influences:** Most PM<sub>10</sub> and PM<sub>2.5</sub> episodes in 2024 were predominantly associated with easterly winds, indicating they were strongly influenced by regional or transboundary sources rather than solely local emissions, Figure 2-22. Notable PM<sub>2.5</sub> spikes in March, May, and November, show possible links to European air masses and Diwali and Bonfire Night celebrations, Figure 2-23.

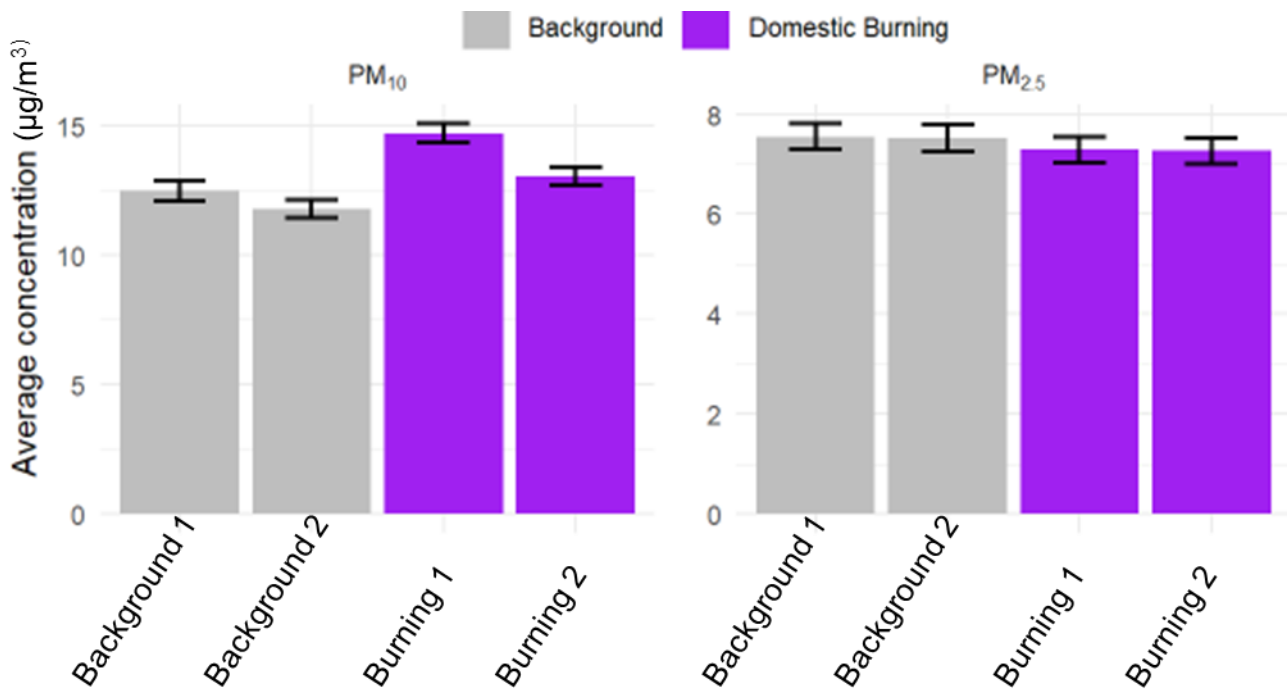


**Figure 2-22 - Back trajectory plot for the top ten highest daily PM<sub>2.5</sub> concentrations in 2024**



**Figure 2-23 - 2024 Average time variation plot of PM<sub>2.5</sub> concentration for Manchester locations though the year and weekly**

**Domestic Burning Sites:** Using the available data, annual averages showed limited differences between background and domestic burning locations. As domestic burning for heating typically occurs during the evening, the annual average concentrations between 6:00 pm and 10:00 pm were compared for each district. An example for Manchester sites is shown in Figure 2-24.



**Figure 2-24 - 2024 Annual average PM concentration between 6:00 pm and 10:00 pm for Manchester Sites**

Seasonal analysis suggested there may be higher PM<sub>10</sub> and PM<sub>2.5</sub> levels at domestic burning sites during colder months in some districts (e.g. Manchester, Oldham, Bolton), consistent with increased heating demand. The concentration differences between domestic burning sites and background sites can be found by subtracting background

concentrations; districts showing positive differences during colder months, where concentrations at domestic burning sites are higher, are likely to be influenced by domestic burning or other seasonal activities. This was not replicated across all GM areas, with some districts showing no clear evidence of domestic burning influence.

It should be noted that these interpretations are based on variable data coverage across the network and the absence of validated readings from October to December 2024 at several districts, which introduces uncertainty into the assessment.

At a regional GM level, there was very little difference in the aggregated annual averages for PM<sub>10</sub> and PM<sub>2.5</sub> across all background and burning locations, Table 2-7.

**Table 2-7 – Annual Mean PM<sub>10</sub>/PM<sub>2.5</sub> Concentrations Recorded in GM Comparing All Background and Domestic Burning Sites**

Pollutant	Background sites	Domestic burning sites
PM <sub>10</sub>	11.6 µg/m <sup>3</sup>	11.8 µg/m <sup>3</sup>
PM <sub>2.5</sub>	7 µg/m <sup>3</sup>	2.2 µg/m <sup>3</sup>

**Regional Comparisons:** Diurnal and seasonal trends highlighted that Greater Manchester experiences more pronounced peaks and seasonal variability in PM concentrations than other European cities such as Amsterdam and Paris, with a similar pattern, broadly comparable, to Greater London. This could be explained through back trajectory analysis for PM during the top ten highest daily concentrations. It shows that air masses predominantly originated from the east. This aligns closely with PM<sub>2.5</sub> polar plots, further supporting the interpretation that elevated concentrations were strongly influenced by regional or transboundary sources transported from the east, which may not affect Paris and Amsterdam as much as UK sites.

### Behavioural Research

In 2023, the University of Manchester hosted a Civic Panel with two groups of participants. The focus group findings demonstrated a low level of knowledge or understanding of the environmental and health impacts of domestic burning across different income groups. The outcomes fed into developing the later media campaigns.

An appraisal following the 2024/2025 Burn Better GM campaign was undertaken to better understand how people burn at home, and the impact it has on local air quality in Greater Manchester. Results were then compared to the baseline survey from Winter 2023/24. Among those who engaged with the campaign:

- 24% reported burning less frequently.
- 28% intended to improve appliance maintenance.
- Many people reported already following burning best practice.
- While respondents acknowledged the harms of domestic burning, few recognised their own contributions to air pollution.

Barriers to change were noted by survey respondents, such as financial constraints, the cost of cleaner fuels and alternative heating were the most cited barriers, even among affluent households. Reduced green waste collection and limited recycling access, were also given as reasons for continuing domestic burning of all types (including bonfires).

GMFRS (Fire and Rescue Service), academics and local councils were identified as the most credible sources of information.

In the baseline survey (2023/24), nearly half of respondents were unaware or unsure if they lived in a Smoke Control Area (SCA), highlighting a significant knowledge gap. In the follow-up survey (2024/25) awareness improved slightly among those who had engaged with the campaign.

60% of previously engaged respondents correctly identified living in an SCA. 43% of those with no prior engagement knew their SCA status, 25–34% of respondents remained unsure, and some didn't know what an SCA was. Postcode analysis showed 89% of respondents who answered the SCA question correctly identified their status.

Conclusions were reviewed, and findings regarding the use of positive messaging and concerns about cost of living (relating to home heating across various social groups) have been communicated to other partners to assist in shaping retrofit and home energy efficiency programmes.

## 2.4 CAP NO<sub>2</sub> Monitoring Results 2025

### 2.4.1 Legislative Context

Legislation	Description
The European Union Directive 2008/50/EC Ambient Air Quality and Cleaner Air for Europe.	<p>This forms the basis of UK air quality legislation. Although published in 2007, the Air Quality Strategy is consistent with The Air Quality Standards Regulations (England) 2010 (2010 Regulations). The European Directive is transposed into UK law through the 2010 Regulations which remain binding post withdrawal from the EU.</p> <p>The UK government is responsible for compliance with provisions of the transposed EU Directives. The UK currently is in breach of limit values for nitrogen dioxide and PM<sub>10</sub> (particulate matter with an aerodynamic diameter less than 10 µm).</p>
Air Quality (Amendment of Domestic Regulations) (EU Exit) Regulations 2019	<p>EU limit values were transposed into UK law by the Air Quality Standards Regulations 2010 and modified to account for EU exit by the Air Quality (Amendment of Domestic Regulations) (EU Exit) Regulations 2019, so the legal limits still stand.</p> <p>On the UK government's behalf, the Department for Transport and Defra have Public Service Agreements relating to the limit values.</p>
The Air Quality (England) (Amendment) 2000/2002 Regulations.	<p>Legislates for UK air quality objectives (AQOs) for pollutants set out in the 2000 Air Quality Strategy, which was revised in 2007.</p> <p>AQOs exist for a variety of pollutants including NO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>. They are established to protect human health, vegetation and ecosystems.</p>
Environment Act 1995, Part IV	<p>Introduced a system of local air quality management in the UK, requiring local authorities to review and assess air quality within their boundaries regularly and systematically against AQOs. Local authorities must appraise development and transport plans against these objectives and make plans to meet the AQOs where they are exceeded.</p>
The Air Quality Standards Regulations 2010	<p>These regulations set out the assessment criteria of ambient air quality and contain a duty of the Secretary of State to meet limit values. The secretary of state has powers to give directions to local authorities under the Environment Act 1995.</p>

## 2.4.2 Differences between monitoring undertaken for the Clean Air Plan and LAQM

Monitoring is undertaken to determine compliance with the NO<sub>2</sub> legal limit values in accordance with the Clean Air Plan and government direction, under section 85 of the Environment Act 1995. Additionally, the 10 districts monitor NO<sub>2</sub> in accordance with the requirements of Part IV of the Environment Act 1995 and associated statutory guidance, this is Local Air Quality Management (LAQM).

The two monitoring regimes use separate siting criteria to assess exposure which often leads to different types of monitoring locations. CAP monitoring assesses exposure as defined by the Air Quality Standards Regulations (England) 2010 legal limit values, with roadside being typically worst-case and hence the focus for monitoring. LAQM monitoring is concerned with exposure at locations of relevant public exposure where the Air Quality Objectives apply, this can include roadside but only in exceptional circumstances.<sup>3</sup> LAQM monitoring includes measurements at background and industrial locations and is not limited to road traffic sources.<sup>4</sup>

The regimes have different criteria to determine exceedances. LAQM defines values over 39.9 µg/m<sup>3</sup> as exceeding the 40 µg/m<sup>3</sup> legal limit.<sup>5</sup> For CAP, the government Joint Air Quality Unit defines results over 40.4 µg/m<sup>3</sup> as an exceedance.<sup>6</sup> These definitions should be considered when comparing results from individual monitoring locations.

Two legal limits for NO<sub>2</sub> apply to both regimes:

- Short-term 1-hour limit - 200 µg/m<sup>3</sup> (not to be exceeded more than 18 times a calendar year).
- Long-term annual average limit - 40 µg/m<sup>3</sup>.

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<sup>3</sup> Locations where the public might be regularly exposed. Façades of residences, schools, hospitals, care homes etc. Kerbside locations are usually excluded, unless the public are likely to be exposed for longer periods. More details can be found via [this link to the Technical Guidance document](#).

<sup>4</sup> Background sites provide useful information, i.e. long-term trends, general population exposure and an indication of pollution reduction away from roadside sources, as opposed to measuring exceedances.

<sup>5</sup> An exceedance defines a time period during which the concentration of a pollutant is greater than, or equal to, the appropriate air quality criteria. <https://uk-air.defra.gov.uk/air-pollution/glossary#E>

<sup>6</sup> IPR guidance underpinning Air Quality Standards Regulations 2010 stipulates compliance should be assessed using data of 'the same numeric accuracy' as the limit value. Therefore, 40.4 µg/m<sup>3</sup> is rounded down to 40 µg/m<sup>3</sup> and is not an exceedance. [Link to IPR guidance](#).

To determine compliance with 1-hour mean limit values, research undertaken for Defra, outlined in LAQM.TG22, identified that road traffic emission related exceedances are unlikely to occur where the annual mean concentration is below  $60 \mu\text{g}/\text{m}^3$ .

For CAP, government has directed GM (and other areas) under UK law to address  $\text{NO}_2$  exceedances at the roadside in the shortest possible time. In GM, this direction specifically focuses on the long-term annual average legal limit ( $40 \mu\text{g}/\text{m}^3$ ).<sup>7</sup>

### 2.4.3 Clean Air Plan monitoring 2025

In 2025, monitoring for the CAP was carried out at 273 diffusion tube locations (up from 270 in 2024) which met the legal Limit Value siting criteria and three continuous analysers, with 11 sites of exceedance (down from 38 in 2024). A further 39 locations were considered to be at risk of exceedance (down from 73 in 2024).<sup>8</sup>

- Monitoring data for 2025 shows air pollution has continued to improve in GM compared to 2024 and is significantly lower than levels recorded pre-pandemic.
- In 2019, there were 129 exceedance locations, compared to 11 in 2025.
- There are now seven districts across the city region with no exceedances of the  $\text{NO}_2$  legal limit: Bolton, Bury, Rochdale, Salford, Tameside, Trafford and Wigan.
- This latest air quality monitoring data continues a really encouraging trend and indicates that the steps Greater Manchester is taking to invest in cleaner buses through the Bee Network is helping clean up the air we all breathe.
- By taking back control of local buses, the city region is delivering cleaner, greener and more reliable services, with nearly 400 electric buses running across the Bee Network. Prior to bus franchising fewer than 2% of buses in GM were electric, now nearly a third of the fleet is zero exhaust emission.
- The Clean Air Plan will see further investment in zero exhaust emission buses, as well as funding for cleaner taxis and targeted traffic measures to reduce pollution.

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<sup>7</sup> The short-term hourly limit was only exceeded in GM in 2016 at one site on Oxford Road.

<sup>8</sup> 'At risk of exceedance' for the CAP appraisal process refers to values between  $35\text{--}40 \mu\text{g}/\text{m}^3$ , reflecting uncertainty in modelling and forecasting. This was used to categorise monitoring data in published datasets for the CAP. For the Adaptive Planning process, separate from LAQM ASR reporting, monitoring data is reviewed to identify further measures that may need to be deployed rapidly to deliver compliance as quickly as possible. In this process, an 'at risk' threshold of  $38 \mu\text{g}/\text{m}^3$  is used instead of  $35 \mu\text{g}/\text{m}^3$ . As Adaptive Planning is based only on monitoring data from the most recent year, forecast uncertainty is lower; this is considered more pragmatic and proportionate for efficiently developing location-specific potential measures.

- Our bus depots are being electrified as we work to deliver a fully electric fleet by 2030. Middleton and Ashton bus depots have been fully electrified, with further upgrades taking place at Bolton, Oldham and Hyde Road depots in Manchester.
- The majority of NO<sub>2</sub> exceedances (8) are in the regional centre. The continuing electrification of the bus fleet, on routes serving the central transport hubs with high bus flows, has driven significant reductions in bus emissions and improvements to measured concentrations. For example, at Oxford Street in Manchester city centre, monitoring showed high levels of NO<sub>2</sub> were recorded in 2024 associated with a mix of older retrofitted buses were running before the completion of bus franchising. Since January 2025, fully electric and cleaner Euro VI buses now on the Oxford Road corridor are reducing NO<sub>2</sub> levels.
- Maximum concentrations have reduced from 59 µg/m<sup>3</sup> in 2024 to 43 µg/m<sup>3</sup> in 2025. This also includes large reductions in concentrations at other roads where bus emissions are less prevalent and indicates natural upgrades to the wider vehicle fleet are also leading to improvements across the wider GM road network.

Tables 2-8 to 2-12 summarise the 2025 CAP results. Details of CAP automatic sites can be found in Table A.1 in Appendix A.

**Table 2-8 - CAP Monitoring Site Data across Greater Manchester 2025**

Authority	Non-automatic sites (with valid data capture)	Concentration range (all sites) (µg/m <sup>3</sup> )	Exceedances of NO <sub>2</sub> Annual Mean Limit (non-automatic sites)
Bolton MBC	19	23.0 - 38.5	0
Bury MBC	25	21.5 - 37.4	0
Manchester CC	128	21.1 - <b>42.5</b>	9 <sup>(1)</sup>
Oldham MBC	10	23.6 – <b>41.0</b>	1
Rochdale MBC	6	24.2 - 31.1	0
Salford CC	33	19.9 - 37.5	0
Stockport MBC	23	24.4 - <b>41.9</b>	1
Tameside MBC	19	17.5 - 38.2	0
Trafford MBC	4	21.7 - 26.9	0
Wigan MBC	6	25.7 - 36.1	0
<b>Total</b>	<b>273</b>	<b>17.5 - 42.5</b>	<b>11<sup>(1)</sup></b>

**Note:** (1) Includes the A34 Bridge St Manchester continuous monitoring site which records an exceedance, but nearby diffusion tube sites no longer in exceedance

**Table 2-9 - Number of GM CAP Monitoring Sites, 2018 - 2025**

Authority	2018	2019	2020	2021	2022	2023	2024	2025
Bolton	5	14	14	14	32	19	19	19
Bury	5	16	16	16	36	19	20	25
Manchester	20	91	91	91	160	109	123	128
Oldham	0	9	9	9	19	13	10	10
Rochdale	0	12	12	12	15	6	6	6
Salford	5	27	27	27	60	32	31	33
Stockport	10	19	19	19	47	24	22	23
Tameside	5	14	14	14	32	19	19	19
Trafford	5	14	14	14	18	4	4	4
Wigan	0	6	6	6	13	3	4	6
<b>Total</b>	<b>55</b>	<b>222</b>	<b>222</b>	<b>222</b>	<b>432</b>	<b>248</b>	<b>270</b>	<b>273</b>

**Table 2-10 - Number of GM CAP Exceedances (>40.4 µg/m<sup>3</sup>), 2018 - 2025**

Authority	2018	2019	2020	2021	2022	2023	2024	2025
Bolton	1	4	1	2	4	2	0	0
Bury	2	10	0	2	6	3	0	0
Manchester	14	65	8	25	49	39	31	9 <sup>(1)</sup>
Oldham	0	5	0	1	5	1	1	1
Rochdale	0	4	1	1	1	0	0	0
Salford	1	16	0	7	13	4	0	0
Stockport	6	15	2	3	8	7	3	1
Tameside	4	6	4	4	8	7	2	0
Trafford	1	3	0	0	0	0	0	0
Wigan	0	1	0	0	1	1	1	0
<b>Total</b>	<b>29</b>	<b>129</b>	<b>16</b>	<b>45</b>	<b>95</b>	<b>64</b>	<b>38</b>	<b>11<sup>(1)</sup></b>

**Note:** (1) Includes the A34 Bridge St Manchester continuous monitoring site which records an exceedance, but nearby diffusion tube sites no longer in exceedance

**Table 2-11 - Number of CAP sites at Risk of Exceedance (35 - 40.4 µg/m<sup>3</sup>), 2018–2025**

Authority	2018	2019	2020	2021	2022	2023	2024	2025
Bolton	3	2	3	3	4	3	3	2
Bury	3	2	3	4	10	6	9	3
Manchester	1	6	22	18	49	31	31	18
Oldham	0	1	4	4	5	4	1	0
Rochdale	0	3	0	2	4	3	1	0
Salford	0	0	6	7	15	17	15	7
Stockport	2	2	4	5	10	7	7	4
Tameside	1	3	1	1	8	7	6	4
Trafford	3	7	1	1	1	0	0	0
Wigan	0	1	0	0	2	0	0	1
<b>Total</b>	<b>13</b>	<b>27</b>	<b>44</b>	<b>45</b>	<b>108</b>	<b>78</b>	<b>73</b>	<b>39</b>

**Table 2-12 - Max CAP NO<sub>2</sub> Concentrations (µg/m<sup>3</sup>), 2018 – 2025**

Authority	2018	2019	2020	2021	2022	2023	2024	2025
Bolton	54	64	46	48	44	43	40	39
Bury	48	62	38	44	45	43	40	37
Manchester	71	76	50	56	65	59	59	43
Oldham	0	54	39	45	45	42	42	41
Rochdale	0	61	49	45	41	39	36	31
Salford	47	67	40	45	45	43	39	38
Stockport	62	75	46	52	51	50	48	42
Tameside	56	56	43	48	48	47	41	38
Trafford	47	47	35	37	35	34	30	27
Wigan	0	45	31	33	45	47	42	36
<b>Max</b>	<b>71</b>	<b>75</b>	<b>50</b>	<b>56</b>	<b>65</b>	<b>59</b>	<b>59</b>	<b>43</b>

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

This section sets out the monitoring undertaken within 2025 by the 10 GM authorities 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

During 2025, Greater Manchester undertook automatic (continuous) monitoring at:

Number of Sites	Pollutant
24	Nitrogen dioxide (NO <sub>2</sub> )
20	PM <sub>10</sub>
10	PM <sub>2.5</sub>
2	Sulphur dioxide (SO <sub>2</sub> )

Table A.1 in Appendix A shows the full details of the automatic monitoring sites. Local authorities do not have to report annually on the following pollutants: 1,3 butadiene, benzene, carbon monoxide and lead, unless local circumstances indicate there is a problem. The [Clean Air GM Data Hub \(link in text\)](#) presents automatic monitoring results for GM, with automatic monitoring results available through Air Quality England ([Link to Air quality in England](#)) and the UK Air website ([Link to UK Air website](#)).

Maps showing the location of the monitoring sites are provided in Appendix D and in more detail on [the Clean Air GM website here](#), where the locations of the CAP monitoring sites can also be found. Further details on how the monitors are calibrated and how the data have been adjusted are included in Appendix C.

### 3.1.2 Non-Automatic Monitoring Sites

GM undertook non-automatic (i.e. passive) monitoring of NO<sub>2</sub> at 376 sites (336 unique locations) during 2025. Table A.2 in Appendix A presents the details of the non-automatic sites.

The NO<sub>2</sub> monitoring programme is subject to continual review to ensure the most comprehensive coverage and representative data collection. As part of this process, the number of NO<sub>2</sub> diffusion tube monitoring locations can vary between years.

Where a local authority has made a change to the number of non-automatic monitoring locations since the last ASR, it is summarised in Table 3-1 with further detail provided in Section 3.2.

**Table 3-1 – Summary of Changes in Non-automatic Monitoring Locations for 2025**

District	New Locations	Reason	Retired Locations	Reason
Salford	SA39NO	Reinstated following completion of local construction works.	N/A	N/A
Stockport	N/A	N/A	ST4, ST5, ST8, ST10	Long-term compliance with NO <sub>2</sub> AQO

Maps showing the location of the monitoring sites are provided in Appendix D: Map(s) of Monitoring Locations and AQMAs and in more detail on [the Clean Air GM website here](#), under the Local Air Quality Management tab. Further details on Quality Assurance/Quality Control (QA/QC) for the diffusion tubes, including bias adjustments and any other adjustments applied (e.g. annualisation and/or distance correction), are included in Appendix C.

## 3.2 Individual Pollutants

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

### 3.2.1 Nitrogen Dioxide (NO<sub>2</sub>)

Table A.3 and Table A.4 in Appendix A compare the ratified and adjusted monitored NO<sub>2</sub> annual mean concentrations for the past five years with the air quality objective of 40 µg/m<sup>3</sup>. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

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 NO<sub>2</sub> hourly mean concentrations for the past five years with the air quality objective of 200 µg/m<sup>3</sup>, not to be exceeded more than 18 times per year.

The five-year data comparison includes 2021, which was affected by COVID-19 pandemic travel restrictions. NO<sub>2</sub> concentrations during the lockdown period were lower than would be expected with no restrictions in place. As travel restrictions eased from late 2021, transport emissions began to rise back to normal levels, explaining increases in concentrations in following years. Since the implementation of GM CAP measures, NO<sub>2</sub> concentrations have been decreasing. Data for discontinued locations and from prior to 2020 is available in previous ASRs published on [the Clean Air GM Data Hub \(link in text\)](#).

#### 3.2.1.1 Bolton Metropolitan Borough Council

##### Automatic Monitoring

Bolton Council operate one automatic monitoring station at A579, Derby Street near the University of Bolton (BOL03), a roadside location.

NO<sub>2</sub> concentrations measured at the automatic site are well below the NO<sub>2</sub> annual mean objective and have shown a decrease over the past five years.

The Derby Street monitoring site 2025 annual mean NO<sub>2</sub> concentration increased by 0.5 µg/m<sup>3</sup> compared to 2024 (2024 = 19.9 µg/m<sup>3</sup>, 2025 = 20.4 µg/m<sup>3</sup>), data capture = 96.9%.

There were no hourly mean concentrations above 200 µg/m<sup>3</sup> and no exceedances of the NO<sub>2</sub> air quality objectives in 2025.

### Diffusion Tubes

In 2025, there were 54 diffusion tubes (49 unique locations with duplicate/triplicate tubes). 37 locations are within the AQMA, with 12 locations outside it. The network includes six co-located diffusion tubes at the automatic monitoring sites.

No issues were reported during the data collection period, which was completed in line with the diffusion tube monitoring calendar. There were some missing tubes noted at collection time and some anomalous values during the analysis. Results from these tubes were removed from the dataset and, where appropriate, two locations have been annualised (BO75NO and BOA104). Further details are provided in Appendix C.

In 2025, no diffusion tube sites measured annual mean NO<sub>2</sub> concentrations that exceeded the air quality objective of 40 µg/m<sup>3</sup>.

No sites recorded annual concentrations greater than 35 µg/m<sup>3</sup>, after distance correction Bolton has recorded **three year's compliance**.

Overall, there has been a long-term reduction in NO<sub>2</sub> concentrations over the past five years.

BO3NO (Quintins, Derby St) recorded the highest measured concentration with a concentration of 30.7 µg/m<sup>3</sup>, in 2024 the measured concentration was 31.1 µg/m<sup>3</sup>. The previous highest in 2024, BO71 located at M61 Junction 4 northbound traffic lights, recorded 29.3 in 2025 µg/m<sup>3</sup>.

Where results are available for 2025 and 2024, there was a reduction in concentrations at most sites, with increases at 15 locations (range of increase 0.1 – 5.6 µg/m<sup>3</sup>).

BO66NO (Blackburn Road) increased from 20.4 µg/m<sup>3</sup> (2024) to 26.0 µg/m<sup>3</sup> (2025), though the long-term trend is still a reduction in NO<sub>2</sub> concentration. As noted in last year's

ASR, some sites experienced data collection issues, which could account for part of this increase.

The largest decrease was observed at Marsden Road (BOA119), which recorded a concentration of 25.6  $\mu\text{g}/\text{m}^3$  (2024 = 29.0  $\mu\text{g}/\text{m}^3$ ).

### 3.2.1.2 Bury Metropolitan Borough Council

#### Automatic Monitoring

Bury Council operate four automatic monitoring stations at:

- Whitefield (BURW - A56, Bury New Road)
- Radcliffe (BUR1 - A665 Water Street)
- Prestwich (BUR2 - A56 Bury New Road)
- Bury Bridge (BUR03 - A58 Bolton Street, funded by TFGM for CAP monitoring).

All Bury's automatic sites are located within the Air Quality Management Area and in roadside locations.

NO<sub>2</sub> concentrations measured at the automatic sites are well below the NO<sub>2</sub> annual mean objective and have shown a decrease over the past five years.

The Whitefield monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 2.6  $\mu\text{g}/\text{m}^3$  compared to 2024 (2024 = 18.6  $\mu\text{g}/\text{m}^3$ , 2025 = 16.0  $\mu\text{g}/\text{m}^3$ ), data capture = 99.2%.

The Radcliffe monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 0.9  $\mu\text{g}/\text{m}^3$  compared to 2024 (2024 = 17.8  $\mu\text{g}/\text{m}^3$ , 2025 = 16.9  $\mu\text{g}/\text{m}^3$ ), data capture = 83.2%.

The Prestwich monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 1.2  $\mu\text{g}/\text{m}^3$  compared to 2024 (2024 = 26.7  $\mu\text{g}/\text{m}^3$ , 2025 = 22.5  $\mu\text{g}/\text{m}^3$ ), data capture = 99.5%.

The Bury Bridge monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 1.2  $\mu\text{g}/\text{m}^3$  compared to 2024 (2024 = 20.7  $\mu\text{g}/\text{m}^3$ , 2025 = 19.6  $\mu\text{g}/\text{m}^3$ ), data capture = 95.8%.

There were no hourly mean concentrations above 200  $\mu\text{g}/\text{m}^3$  for any of the sites and no exceedances of the NO<sub>2</sub> air quality objectives in 2025.

#### Diffusion Tubes

In 2025, there were 21 diffusion tubes (19 unique locations). 17 locations are within the AQMA, with 2 locations outside it. The network includes three co-located diffusion tubes at the automatic monitoring site at Whitefield.

Most months were completed in line with the diffusion tube monitoring calendar. There were issues noted in May/June and November/December, which resulted in tubes being exposed for longer than the recommended period. Results from these tubes were removed from the dataset and all diffusion tubes have been annualised. Further details are provided in Appendix C.

In 2025, no diffusion tube sites measured annual mean NO<sub>2</sub> concentrations that exceeded the air quality objective of 40 µg/m<sup>3</sup>.

No sites recorded annual concentrations greater than 35 µg/m<sup>3</sup>, after distance correction Bury has recorded **three year's compliance**.

Overall, there has been a long-term reduction in NO<sub>2</sub> concentrations over the past five years.

BU12NO (Rochdale Road) recorded the highest measured concentration with a concentration of 33.1 µg/m<sup>3</sup>, in 2024 the measured concentration was 36.4 µg/m<sup>3</sup>. This location also recorded the highest concentration in 2024.

Where results are available for 2025 and 2024, there was a reduction in concentrations at almost all sites, with one increase at BU10 (Bury Bridge, increase: 0.4 µg/m<sup>3</sup>). The largest decreases were observed at Ramsbottom Lane (BU2NO) and Bury New Road/Bury Old Road (BU15NO), which recorded concentrations of 21.1 µg/m<sup>3</sup> (2024 = 27.3 µg/m<sup>3</sup>) and 27.0 µg/m<sup>3</sup> (2024 = 33.4 µg/m<sup>3</sup>) respectively.

### 3.2.1.3 Manchester City Council

#### Automatic Monitoring

Manchester City Council operate four automatic monitoring stations at:

- Piccadilly Gardens (MAN3, Urban Centre – maintained by MCC for Defra's Automatic Urban and Rural Network - AURN)
- Oxford Road (MAN1, Kerbside)
- Manchester Sharston (MAHG, Suburban Industrial)
- Bridge Street (MAN09, Kerbside - City centre site added Sept 2022 to support the CAP)

Long-term concentrations of NO<sub>2</sub> have fallen at all Manchester automatic monitoring sites. During 2025, Oxford Road, Piccadilly Gardens and Sharston were below the NO<sub>2</sub> annual average air quality objective (40 µg/m<sup>3</sup>); Bridge Street (CAP) exceeded at 42.4 µg/m<sup>3</sup>.

The Piccadilly Gardens monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 3.4 µg/m<sup>3</sup> compared to 2024 (2024 = 27.0 µg/m<sup>3</sup>, 2025 = 23.6 µg/m<sup>3</sup>), data capture = 98.3%.

The Oxford Road monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 9.6 µg/m<sup>3</sup> compared to 2024 (2024 = 44.2 µg/m<sup>3</sup>, 2025 = 34.6 µg/m<sup>3</sup>), data capture = 95.0%.

The Sharston monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 0.4 µg/m<sup>3</sup> compared to 2024 (2024 = 14.2 µg/m<sup>3</sup>, 2025 = 13.8 µg/m<sup>3</sup>), data capture = 92.2%.

The Bridge Street monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 9.5 µg/m<sup>3</sup> compared to 2024 (2024 = 51.9 µg/m<sup>3</sup>, 2025 = 42.4 µg/m<sup>3</sup>), data capture = 96.6%.

The automatic monitor on Oxford Road is located at section of the road which has daytime traffic restrictions, permitting only buses and taxis. This increases confidence that the significant improvements in air quality can be attributed to investment in zero-exhaust and low emission buses through the Bee Network.

Similarly, the Bridge Street monitor is located on a heavily used bus route. Although there are no traffic restrictions here, cleaner buses are likely to have contributed significantly to the reduction in NO<sub>2</sub> concentration. Work is on-going to identify further improvements that can be made.

There were no hourly mean concentrations above 200 µg/m<sup>3</sup> for any of the sites and no exceedances of the NO<sub>2</sub> LAQM air quality objectives in 2025.

### **Diffusion Tubes**

In 2025, there were 33 diffusion tubes (27 unique locations with duplicate/triplicate tubes). 25 locations are within the AQMA, with 2 locations outside it. The network includes nine co-located diffusion tubes at the automatic monitoring sites.

No issues were reported during the data collection period, which was completed in line with the diffusion tube monitoring calendar and no diffusion tubes required annualisation.

In 2025, no diffusion tube sites measured annual mean NO<sub>2</sub> concentrations that exceeded the air quality objective of 40 µg/m<sup>3</sup>.

One site recorded an annual concentration greater than 35 µg/m<sup>3</sup>, after distance correction Manchester has recorded **one year's compliance**.

Overall, there has been a long-term reduction in NO<sub>2</sub> concentrations over the past five years.

MA29ANO (Oxford Street) recorded the highest measured concentration with a concentration of 38.6 µg/m<sup>3</sup> (distance corrected = 35.8 µg/m<sup>3</sup>), a reduction of 12.7 µg/m<sup>3</sup>. In 2024 this location also recorded the highest measured concentration at 51.3 µg/m<sup>3</sup>. As with the automatic monitoring locations, although there are no traffic restrictions here, cleaner buses are likely to have contributed significantly to the reduction in NO<sub>2</sub> concentrations at Oxford Street. Further assessments will be undertaken to determine whether additional measures, such as reviewing parking arrangements and vehicle idling in the area, could support further reductions at this location.

Where results are available for 2025 and 2024, there was a reduction in concentrations at all sites (0.6 – 12.7 µg/m<sup>3</sup>). The largest decreases were observed at Oxford Street (MA29ANO, 51.3 down to 38.6 µg/m<sup>3</sup>), Oxford Road (MA82NO, 41.5 to 31.4 µg/m<sup>3</sup>), and Ardwick Green (MA96BNO, 36.4 to 30.8 µg/m<sup>3</sup>).

### 3.2.1.4 Oldham Metropolitan Borough Council

#### Automatic Monitoring

Oldham Council operate one automatic monitoring station at Crompton Way, Shaw (CW), at a roadside location.

NO<sub>2</sub> concentrations measured at the automatic site are well below the NO<sub>2</sub> annual mean objective and have shown a decrease over the past five years.

The Crompton Way monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 2.3 µg/m<sup>3</sup> compared to 2024 (2024 = 20.2 µg/m<sup>3</sup>, 2025 = 18.0 µg/m<sup>3</sup>), data capture = 99.4%.

There were no hourly mean concentrations above 200 µg/m<sup>3</sup> and no exceedances of the NO<sub>2</sub> air quality objectives in 2025.

#### Diffusion Tubes

In 2025, there were 32 diffusion tubes (30 unique locations with duplicate/triplicate tubes). 17 locations are within the AQMA, with 13 locations outside it. The network includes three co-located diffusion tubes at the automatic monitoring site.

No issues were reported during the data collection period, which was completed in line with the diffusion tube monitoring calendar. There were some missing tubes noted at collection time and some anomalous values during the analysis. Some locations also showed signs of antisocial behaviour affecting results. Results from these tubes were removed from the dataset and, where appropriate, three locations have been annualised (OLMRNO, OL17SRNO and OLSMWNO). Further details are provided in Appendix C.

In 2025, no diffusion tube sites measured annual mean NO<sub>2</sub> concentrations that exceeded the air quality objective of 40 µg/m<sup>3</sup>.

One site recorded an annual concentration greater than 35 µg/m<sup>3</sup>, after distance correction Oldham has recorded **one year's compliance**.

Overall, there has been a long-term reduction in NO<sub>2</sub> concentrations over the past five years.

OL21SRNO (Shaw Rd, Royton) recorded the highest measured concentration with a concentration of 36.5 µg/m<sup>3</sup> (distance corrected = 35.3 µg/m<sup>3</sup>), a reduction of 4.8 µg/m<sup>3</sup>. In 2024 this location also recorded the highest measured concentration at 41.3 µg/m<sup>3</sup>. This location is in the AQMA. This section of road is used by HGVs accessing industrial areas off Salmon Fields and Higginshaw Lane in Royton and frequently has standing traffic at lights in the area.

As noted in last year's ASR, the Broadway location (OLOBNO), which was re-sited due to antisocial behaviour and low data collection during the 2023-2024 monitoring periods, has been kept under review for 2025. Data collection has improved and the concentrations remained similar to the previous year at 23.5 µg/m<sup>3</sup>.

Where results are available for 2025 and 2024, there was a reduction in concentrations at most sites, with increases at 4 locations (range of increase 0.9 – 5.3 µg/m<sup>3</sup>). OLMRNO (Chadderton Precinct) increased from 22.1 µg/m<sup>3</sup> (2024) to 27.4 µg/m<sup>3</sup> (2025), though the long-term trend is still a reduction in NO<sub>2</sub> concentration. This location is near to a bus stop bay which occasionally has idling buses, this could affect readings here.

The largest decrease was observed at Oldham Rd, Royton (OL12ORNO) which recorded a concentration of 32.1  $\mu\text{g}/\text{m}^3$  (2024 = 37.4  $\mu\text{g}/\text{m}^3$ ). Shaw Rd, Derker (OL17SRNO) looked to have a greater year-on-year decrease (8.9  $\mu\text{g}/\text{m}^3$ ) but suffered from number of missing months in 2025.

### 3.2.1.5 Rochdale Metropolitan Borough Council

#### Automatic Monitoring

Rochdale Council operate one automatic monitoring station adjacent to A664 Queensway, close to the A627(M) leading to the M62 and A664 Edinburgh Way (RDL001), a roadside location.

NO<sub>2</sub> concentrations measured at the automatic site are well below the NO<sub>2</sub> annual mean objective and have shown a decrease over the past five years.

The Queensway monitoring site 2025 annual mean NO<sub>2</sub> concentration increased slightly by 2.3  $\mu\text{g}/\text{m}^3$  compared to 2024 (2024 = 23.2  $\mu\text{g}/\text{m}^3$ , 2025 = 24.2  $\mu\text{g}/\text{m}^3$ ), data capture = 97.5%.

There were no hourly mean concentrations above 200  $\mu\text{g}/\text{m}^3$  and no exceedances of the NO<sub>2</sub> air quality objectives in 2025.

#### Diffusion Tubes

In 2025, there were 29 diffusion tubes (27 unique locations with duplicate/triplicate tubes). 18 locations are within the AQMA, with 9 locations outside it. The network includes three co-located diffusion tubes at the automatic monitoring site.

No issues were reported during the data collection period, which was completed in line with the diffusion tube monitoring calendar. There were some missing tubes noted at collection time and some anomalous values during the analysis. Results from these tubes were removed from the dataset and, where appropriate, four locations have been annualised (RO3ANO, RO8ANO, RO13ANO and RO32ANO). Further details are provided in Appendix C.

In 2025, no diffusion tube sites measured annual mean NO<sub>2</sub> concentrations that exceeded the air quality objective of 40  $\mu\text{g}/\text{m}^3$ .

No sites recorded annual concentrations greater than 35  $\mu\text{g}/\text{m}^3$ , after distance correction Rochdale has recorded **three year's compliance**.

Overall, there has been a long-term reduction in NO<sub>2</sub> concentrations over the past five years.

RO6ANO (Heywood Old Rd) recorded the highest measured concentration with a concentration of 27.7 µg/m<sup>3</sup>, in 2024 the measured concentration was 24.3 µg/m<sup>3</sup>. The location with the highest concentration in 2024, RO20ANO (Manchester Road, Heywood), recorded 26.0 µg/m<sup>3</sup> in 2025, showing the largest year-on-year reduction of 4.2 µg/m<sup>3</sup> (2024 = 30.2 µg/m<sup>3</sup>).

Where results are available for 2025 and 2024, there was a reduction in concentrations at almost all sites, with three increases (range of increase 0.1 – 3.4 µg/m<sup>3</sup>). RO6ANO saw the greatest increase at 3.4 µg/m<sup>3</sup>, though this is lower than 2021-2023.

### 3.2.1.6 Salford City Council

#### Automatic Monitoring

Salford City Council operate four automatic monitoring stations at:

- Eccles – an urban background site forming part of the UK AURN located close to Eccles town centre, operational since 1997 (ECCL).
- M60 – a roadside monitoring site located close to the M60 in Worsley, operational since 1999 (M60).
- Glazebury – a rural background site forming part of the UK AURN, operational since 2004 (GLAZ).
- Regent Road – a roadside site located close to the A57 Regent Road and set up to monitor the success of the GM Clean Air Plan at a critical point of exceedance, operational since September 2023 (SAL001).

The Eccles monitoring site 2025 annual mean NO<sub>2</sub> concentration was the same as for 2024 (2024 = 18.0 µg/m<sup>3</sup>, 2025 = 18.0 µg/m<sup>3</sup>), data capture = 95.6%.

The M60 monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 0.9 µg/m<sup>3</sup> (3%) compared to 2024 (2024 = 31.5 µg/m<sup>3</sup>, 2025 = 30.6 µg/m<sup>3</sup>), data capture = 99.4%.

The Glazebury monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 1.3 µg/m<sup>3</sup> (11%) compared to 2024 (2024 = 11.2 µg/m<sup>3</sup>, 2025 = 9.9 µg/m<sup>3</sup>), data capture = 97.7%.

The Regent Road monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 2.4 µg/m<sup>3</sup> (7%) compared to 2024 (2024 = 32.0 µg/m<sup>3</sup>, 2025 = 29.6 µg/m<sup>3</sup>), data capture = 99.4%.

The Glazebury site showed the biggest percentage decrease and Regent Road the biggest absolute decrease in terms of NO<sub>2</sub> annual mean concentration in 2025 compared to 2024.

Monitoring data have shown an overall downward trend in annual mean NO<sub>2</sub> concentrations at the Eccles, M60 and Glazebury automatic monitoring sites in recent years. This downward trend has been particularly noticeable at the M60 site (2019 annual mean NO<sub>2</sub> concentration = 44 µg/m<sup>3</sup>).

There were no hourly mean concentrations above 200 µg/m<sup>3</sup> for any of the sites and no exceedances of the NO<sub>2</sub> air quality objectives in 2025.

All Salford automatic monitoring sites had very high rates of NO<sub>2</sub> data capture during 2025 (all achieved 95% or above) and there were no prolonged, significant technical issues.

### **Diffusion Tubes**

In 2025, there were 54 diffusion tubes (46 unique locations with duplicate/triplicate tubes). 34 locations are within the AQMA, with 12 locations outside it. The network includes twelve co-located diffusion tubes at the automatic monitoring sites. There were no changes to the Salford City Council diffusion tube network compared to 2024. The SA39 Trinity Way/Chapel Street monitoring site was reinstated in 2025 following the completion of local construction works.

No issues were reported during the data collection period, which was completed in line with the diffusion tube monitoring calendar. There were some missing tubes noted at collection time and some anomalous values during the analysis. Results from these tubes were removed from the dataset and, where appropriate, one location has been annualised (SA90NO). Further details are provided in Appendix C.

In 2025, no diffusion tube sites measured annual mean NO<sub>2</sub> concentrations that exceeded the air quality objective of 40 µg/m<sup>3</sup>.

No sites recorded an annual concentration greater than 35 µg/m<sup>3</sup>, after distance correction Salford has recorded **three year's compliance**.

Overall, there has been a long-term reduction in NO<sub>2</sub> concentrations over the past five years.

42 diffusion tube monitoring sites that were not co-located with an automatic monitoring site had annual mean results available for 2025. 41 of these sites had data from 2024 to make a comparison between 2024 and 2025 annual mean monitoring results. Most of these sites (37) had decreased annual mean concentrations in 2025 compared to 2024.

Only four sites had a slightly increased annual mean NO<sub>2</sub> concentration in 2025 compared to 2024:

SA01NO Irlam Locks (2025 = 13.2 µg/m<sup>3</sup>, 2024 = 12.5 µg/m<sup>3</sup>)

SA69NO Agecroft Road/ Pendlecroft Avenue (2025 = 32.2 µg/m<sup>3</sup>, 2024 = 31.7 µg/m<sup>3</sup>)

SA83NO Bury New Road (2025 = 20.3 µg/m<sup>3</sup>, 2024 = 19.9 µg/m<sup>3</sup>)

SA90NO Trafford Road (2025 = 21.4 µg/m<sup>3</sup>, 2024 = 20.8 µg/m<sup>3</sup>)

This change is likely to be mainly due to variations in meteorological conditions between the two years, rather than an increase in local emissions.

Decreases in annual mean concentrations at other monitoring sites from 2024 to 2025 ranged between 0.15% and 18%.

The annual mean for 1 diffusion tube site in Salford was estimated using the annualisation function of the Defra Diffusion Tube Data Processing Tool. SA90NO (Trafford Road) data capture for 2025 at this site was 50% due to street furniture where the tube was located being removed from June 2025. There were no suitable alternative sites in the immediate vicinity that would give directly comparable results. This monitoring site was replaced with SA94NO Trafford Road at a nearby location from January 2026. Annual monitoring results for the SA94NO Trafford Road site will be reported in the next Annual Status Report.

The highest diffusion tube annual mean NO<sub>2</sub> concentration measured in Salford during 2025 was 33.4 µg/m<sup>3</sup> after bias correction at the SA86NO Bury Old Road site. This is adjacent to the AQMA and approximately 0.5 m away from the kerb edge along the busy A665 Bury Old Road.

The lowest diffusion tube annual mean NO<sub>2</sub> concentrations measured in Salford during 2025 were 12.5 µg/m<sup>3</sup> at the SA2NO Irlam (Princes Park) site (urban background) and 9.6 µg/m<sup>3</sup> at the Glazebury colocation (SA56-58NO, rural background), both outside the

AQMA. These monitoring sites have historically measured relatively low annual mean NO<sub>2</sub> concentrations.

Where longer term trends are available for roadside monitoring sites within the AQMA, there is an overall general downward trend in concentrations over time. This trend is also apparent for urban background monitoring sites.

### 3.2.1.7 Stockport Metropolitan Borough Council

#### Automatic Monitoring

Stockport Council operate two automatic monitoring stations at:

- A34 Cheadle, a roadside monitoring site at the junction with the A560 (SK7)
- A6 Hazel Grove, a roadside monitoring site (STK5).

NO<sub>2</sub> concentrations measured at both automatic sites are well below the NO<sub>2</sub> annual mean objective and long-term concentrations of NO<sub>2</sub> have decreased.

The Cheadle monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 3.6 µg/m<sup>3</sup> compared to 2024 (2024 = 24.9 µg/m<sup>3</sup>, 2025 = 21.3 µg/m<sup>3</sup>), data capture = 97.0%.

The Hazel Grove monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 0.6 µg/m<sup>3</sup> compared to 2024 (2024 = 16.0 µg/m<sup>3</sup>, 2025 = 15.4 µg/m<sup>3</sup>), data capture = 98.6%.

There were no hourly mean concentrations above 200 µg/m<sup>3</sup> for either of the sites and no exceedances of the NO<sub>2</sub> air quality objectives in 2025.

#### Diffusion Tubes

In 2025, there were 29 diffusion tubes (25 unique locations with duplicate/triplicate tubes). 17 locations are within the AQMA, with 8 locations outside it. The network includes six co-located diffusion tubes at the automatic monitoring sites.

No issues were reported during the data collection period, which was completed in line with the diffusion tube monitoring calendar. There were some missing tubes noted at collection time and some anomalous values during the analysis. Results from these tubes were removed from the dataset and, where appropriate, two locations have been annualised (ST11NO and ST27NO). This process resulted in ST31NO having insufficient data capture for annualisation, as such it was removed from the reporting and analysis. Further details are provided in Appendix C.

In 2025, no diffusion tube sites measured annual mean NO<sub>2</sub> concentrations that exceeded the air quality objective of 40 µg/m<sup>3</sup>.

No sites recorded annual concentrations greater than 35 µg/m<sup>3</sup>, after distance correction Stockport has recorded **three year's compliance**.

Overall, there has been a long-term reduction in NO<sub>2</sub> concentrations over the past five years.

ST36NO (A6, Stockport town centre) recorded the highest measured concentration with a concentration of 28.6 µg/m<sup>3</sup>, in 2024 the measured concentration was 32.6 µg/m<sup>3</sup>. This location also recorded the highest concentration in 2024.

Where results are available for 2025 and 2024, there was a reduction in concentrations at almost all sites, with two increases (range of increase 0.3 –1.1 µg/m<sup>3</sup>). ST9NO (Hazel Grove) saw the greatest increase at 1.1 µg/m<sup>3</sup>, though this is still one of the lowest sites in Stockport at 10.4 µg/m<sup>3</sup>. The largest decrease was observed at Kennilworth Road (ST20NO), which recorded a concentration of 24.1 µg/m<sup>3</sup> (2024 = 29.2 µg/m<sup>3</sup>).

### 3.2.1.8 Tameside Metropolitan Borough Council

#### Automatic Monitoring

Tameside Council operate two automatic monitoring stations at:

- A57 Mottram Moor, Hollingworth, a roadside location (TAM1)
- A635, Manchester Road, Ashton-under-Lyne, a roadside location (TS001).

NO<sub>2</sub> concentrations measured at both automatic sites are well below the NO<sub>2</sub> annual mean objective and long-term concentrations of NO<sub>2</sub> have decreased.

The Mottram Moor monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 2.0 µg/m<sup>3</sup> compared to 2024 (2024 = 29.7 µg/m<sup>3</sup>, 2025 = 27.7 µg/m<sup>3</sup>), data capture = 57.8%. This site experienced issues with the power supply which resulted in a lower data capture rate. As this is lower than 75%, the data have been annualised in line with LAQM.TG22 (Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC).

The Manchester Road monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 2.7 µg/m<sup>3</sup> compared to 2024 (2024 = 29.1 µg/m<sup>3</sup>, 2025 = 26.4 µg/m<sup>3</sup>), data capture = 93.6%.

There were no hourly mean concentrations above 200  $\mu\text{g}/\text{m}^3$  for either of the sites and no exceedances of the  $\text{NO}_2$  air quality objectives in 2025.

### Diffusion Tubes

In 2025, there were 53 diffusion tubes (51 unique locations with duplicate/triplicate tubes). 29 locations are within the AQMA, with 22 locations outside it. The network includes three co-located diffusion tubes at the Mottram Moor automatic monitoring site.

No issues were reported during the data collection period, which was completed in line with the diffusion tube monitoring calendar, there were some anomalous values during the analysis which. No diffusion tubes required annualisation. Further details are provided in Appendix C.

In 2025, no diffusion tube sites measured annual mean  $\text{NO}_2$  concentrations that exceeded the air quality objective of 40  $\mu\text{g}/\text{m}^3$ .

One site recorded an annual concentration greater than 35  $\mu\text{g}/\text{m}^3$ , after distance correction Tameside has recorded **two year's compliance**.

Overall, there has been a long-term reduction in  $\text{NO}_2$  concentrations over the past five years.

TA11NO (Market Street, Hollingworth) recorded the highest measured concentration with a concentration of 36.4  $\mu\text{g}/\text{m}^3$ , in 2024 the measured concentration was 38.4  $\mu\text{g}/\text{m}^3$ . This location also recorded the highest concentration in 2024.

Where results are available for 2025 and 2024, there was a reduction in concentrations at most sites, with increases at 4 locations (range of increase 0.3 – 1.3  $\mu\text{g}/\text{m}^3$ ). TA25NO increased from 17.6  $\mu\text{g}/\text{m}^3$  (2024) to 18.9  $\mu\text{g}/\text{m}^3$  (2025), though the long-term trend is still a reduction in  $\text{NO}_2$  concentration. The largest decrease was observed at the Mottram Moor colocation site (TA45NO, TA46NO, TA47NO), which recorded a concentration of 27.7  $\mu\text{g}/\text{m}^3$  (2024 = 35.6  $\mu\text{g}/\text{m}^3$ ).

#### 3.2.1.9 Trafford Metropolitan Borough Council

##### Automatic Monitoring

Trafford Council operate three automatic monitoring stations at:

- Stretford A56, adjacent to Stretford House, M32 9AZ, a roadside location (TRF2)
- Wellacre Academy, Urmston, M41 6AP, an urban background location (TRF3)

- Moss Park Junior School, Stretford, M32 9HR, an urban background location (TRAF)

NO<sub>2</sub> concentrations measured at the automatic sites are well below the NO<sub>2</sub> annual mean objective and long-term concentrations of NO<sub>2</sub> have decreased.

The A56 monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 1.7 µg/m<sup>3</sup> compared to 2024 (2024 = 20.2 µg/m<sup>3</sup>, 2025 = 18.5 µg/m<sup>3</sup>), data capture = 98.4%.

The Wellacre monitoring site 2025 annual mean NO<sub>2</sub> concentration remained constant compared to 2024 (2024 = 10.6 µg/m<sup>3</sup>, 2025 = 10.6 µg/m<sup>3</sup>), data capture = 94.4%.

The Moss Park monitoring site 2025 annual mean NO<sub>2</sub> concentration decreased by 0.9 µg/m<sup>3</sup> compared to 2024 (2024 = 12.4 µg/m<sup>3</sup>, 2025 = 11.5 µg/m<sup>3</sup>), data capture = 55.0%. This site experienced issues with the enclosure which resulted in a lower data capture rate. As this is lower than 75%, the data have been annualised in line with LAQM.TG22 (Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC).

There were no hourly mean concentrations above 200 µg/m<sup>3</sup> for any of the sites and no exceedances of the NO<sub>2</sub> air quality objectives in 2025.

### Diffusion Tubes

In 2025, there were 21 diffusion tubes (14 unique locations with duplicate/triplicate tubes). 6 locations are within the AQMA, with 8 locations outside it. The network includes nine co-located diffusion tubes at automatic monitoring sites.

No issues were reported during the data collection period, which was completed in line with the diffusion tube monitoring calendar. No diffusion tubes required annualisation. Further details are provided in Appendix C.

In 2025, no diffusion tube sites measured annual mean NO<sub>2</sub> concentrations that exceeded the air quality objective of 40 µg/m<sup>3</sup>.

No sites recorded an annual concentration greater than 35 µg/m<sup>3</sup>, after distance correction Trafford has recorded **three year's compliance**.

Overall, there has been a long-term reduction in NO<sub>2</sub> concentrations over the past five years.

TR31NO (Carrington Spur, Sale) recorded the highest measured concentration with a concentration of  $25.5 \mu\text{g}/\text{m}^3$ , consistent with 2024. This location also recorded the highest concentration in 2024.

Where results are available for 2025 and 2024, there was a reduction in concentrations at all sites ( $0 - 4.4 \mu\text{g}/\text{m}^3$ ). The largest decrease was observed at Warburton Lane, Partington (TR27NO), which recorded a concentration of  $11.0 \mu\text{g}/\text{m}^3$  (2024 =  $15.4 \mu\text{g}/\text{m}^3$ ).

### **3.2.1.10 Wigan Metropolitan Borough Council**

#### **Automatic Monitoring**

Wigan Council operate two automatic monitoring stations at:

- Wigan Centre (WIG5) automatic monitoring site, an urban background site located at Deanery High School, Frog Lane close to Wigan town centre.
- Wigan Leigh 3 (WIG07) monitoring station, a roadside site located on Market Street, Leigh.

$\text{NO}_2$  concentrations measured at the automatic sites are well below the  $\text{NO}_2$  annual mean objective and long-term concentrations of  $\text{NO}_2$  have decreased.

The Wigan Centre monitoring site 2025 annual mean  $\text{NO}_2$  concentration increased by  $1.1 \mu\text{g}/\text{m}^3$  compared to 2024 (2024 =  $12.7 \mu\text{g}/\text{m}^3$ , 2025 =  $13.8 \mu\text{g}/\text{m}^3$ ), data capture = 98.9%.

The Leigh monitoring site 2025 annual mean  $\text{NO}_2$  concentration decreased by  $0.7 \mu\text{g}/\text{m}^3$  compared to 2024 (2024 =  $19.1 \mu\text{g}/\text{m}^3$ , 2025 =  $18.4 \mu\text{g}/\text{m}^3$ ), data capture = 99.5%.

There were no hourly mean concentrations above  $200 \mu\text{g}/\text{m}^3$  for any of the sites and no exceedances of the nitrogen dioxide air quality objectives in 2025.

#### **Diffusion Tubes**

In 2025, there were 50 diffusion tubes (48 unique locations with duplicate/triplicate tubes). 8 locations are within the AQMA, with 40 locations outside it. The network includes three co-located diffusion tubes at the Leigh automatic monitoring site.

No issues were reported during the data collection period, which was completed in line with the diffusion tube monitoring calendar. There were some missing tubes noted at collection time and some anomalous values during the analysis. Results from these tubes were removed from the dataset and, where appropriate, three locations have been

annualised (WI217NO, WI246NO and WI247NO). Further details are provided in Appendix C.

In 2025, no diffusion tube sites measured annual mean NO<sub>2</sub> concentrations that exceeded the air quality objective of 40 µg/m<sup>3</sup>.

No sites recorded annual concentrations greater than 35 µg/m<sup>3</sup>, after distance correction Wigan has recorded **one year's compliance**.

Overall, there has been a long-term reduction in NO<sub>2</sub> concentrations over the past five years.

WI180NO (Winwick Lane) and WI245NO (Wallgate, Wigan) recorded the highest measured concentrations with 32.9 µg/m<sup>3</sup> and 32.1 µg/m<sup>3</sup> respectively, in 2024 the measured concentrations were 39.1 µg/m<sup>3</sup> and 40.7 µg/m<sup>3</sup>.

Since the introduction air quality improvement measures at WI180NO (Winwick Lane), measured concentrations have reduced from 42.4 µg/m<sup>3</sup> in 2023 and 39.1 µg/m<sup>3</sup> in 2024.

WI245NO (Wallgate, Wigan) recorded the largest year on year decrease of 8.6 µg/m<sup>3</sup>, from measuring the highest concentration in 2024. Over the three years this site has been operational, measured NO<sub>2</sub> concentrations at this location have reduced from 43.8 µg/m<sup>3</sup> in 2023. The nearest relevant receptor is 8 m away from this measuring site and the exposure concentrations are likely to be much reduced.

Where results are available for 2025 and 2024, there was a reduction in concentrations at most sites, with nine increases (range of increase 0.1 – 2.3 µg/m<sup>3</sup>). WI221NO (Tanners Lane, Golbourne) saw the greatest increase at 2.3 µg/m<sup>3</sup>, though this is still in line with the long-term average of 20.0 µg/m<sup>3</sup>.

### 3.2.1.11 Diurnal Analysis of NO<sub>2</sub> in Greater Manchester

Diurnal analysis of the automatic sites has been undertaken to identify daily trends in nitrogen dioxide across the year. This has been included in previous GM Annual Status Reports and allows comparisons with previous years.

The graph, shown in

Figure 3-1, displays the average daily variation in NO<sub>2</sub> concentrations at six Greater Manchester roadside and background sites for 2025. These are:

- Bolton: A579 Derby Street (Urban Traffic)

- Rochdale: Queensway (Urban Traffic)
- Salford: M60 (Urban Traffic)
- Manchester: Piccadilly (Urban Background)
- Salford: Eccles (Urban Background)
- Wigan: Wigan Centre (Urban Background)

Most monitoring sites show a similar trend, a peak in NO<sub>2</sub> concentrations occurs in the morning between 07:00 and 10:00. Another smaller and more spread out evening peak occurs from approximately 17:00 to 20:00. These peaks correspond to commuting traffic peak times and a shallow atmospheric boundary layer (which occurs early in the morning and later in the evening, trapping pollutants near ground level).

These trends are similar to 2024 and occur for both selected urban traffic and background monitoring sites. However, peaks for some sites occur at slightly lower concentration levels than in 2024, e.g. diurnal analysis of 2024 automatic monitoring site data showed that the Salford M60 site experienced a morning NO<sub>2</sub> concentration peak of approximately 39 µg/m<sup>3</sup>. In 2025, the morning peak had reduced to around 38 µg/m<sup>3</sup>.

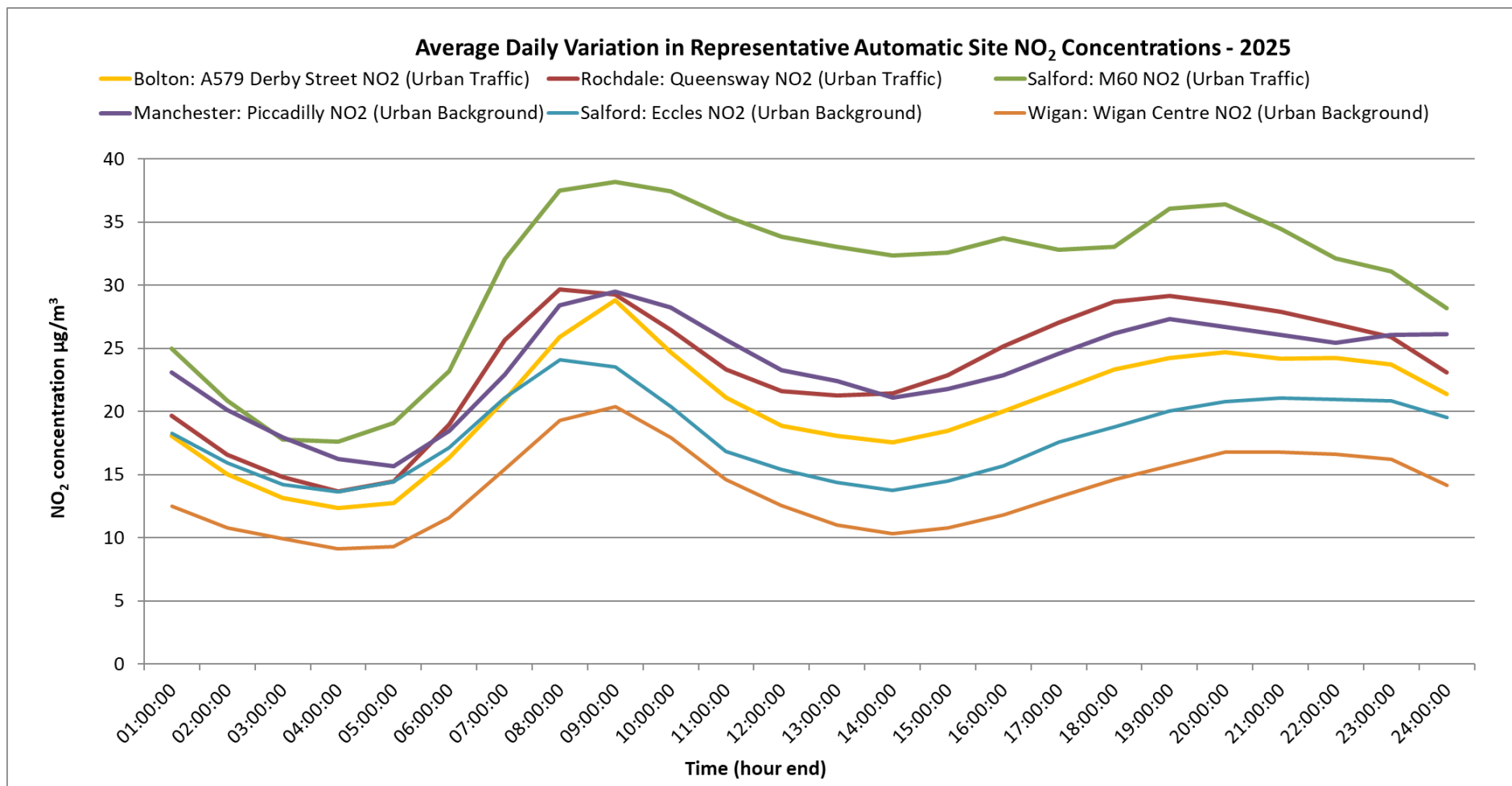


Figure 3-1 – Graph Showing Diurnal Trends in NO<sub>2</sub> Concentration in Selected Automatic Sites for 2025

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

Table A.6 in Appendix A compares the ratified and adjusted monitored PM<sub>10</sub> annual mean concentrations for the past five years with the air quality objective of 40 µg/m<sup>3</sup>.

Table A.7 in Appendix A compares the ratified continuous monitored PM<sub>10</sub> daily mean concentrations for the past five years with the air quality objective of 50 µg/m<sup>3</sup>, not to be exceeded more than 35 times per year.

The last five years of available monitoring data have shown that annual mean PM<sub>10</sub> concentrations, at the 20 GM air quality monitoring sites, have remained relatively stable. However, there were slight increases in annual mean PM<sub>10</sub> concentrations in 2025 compared to 2024.

A confirmatory check of the Defra 2021-based background maps for 2025 indicates no likely exceedances of the objective levels for PM<sub>10</sub>.

#### 3.2.2.1 Bolton Metropolitan Borough Council

Bolton Council operate one automatic monitoring station at A579, Derby Street near the University of Bolton (BOL03), a roadside location.

PM<sub>10</sub> concentrations measured at the automatic sites are well below the annual mean objective and have remained so for the past five years.

The Derby Street monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 0.9 µg/m<sup>3</sup> compared to 2024 (2024 = 16.4 µg/m<sup>3</sup>, 2025 = 17.3 µg/m<sup>3</sup>), data capture = 98.6%. Two days recorded a daily mean above 50 µg/m<sup>3</sup>.

There were no exceedances of the PM<sub>10</sub> annual mean or 24-hour national air quality objectives at this monitoring site.

#### 3.2.2.2 Bury Metropolitan Borough Council

Bury Council operate three automatic monitoring stations at roadside locations:

- Whitefield (BURW - A56, Bury New Road)
- Radcliffe (BUR1 - A665 Water Street)
- Prestwich (BUR2 - A56 Bury New Road).

PM<sub>10</sub> concentrations measured at the automatic sites are well below the annual mean objective and have remained so for the past five years.

The Whitefield monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 0.9 µg/m<sup>3</sup> compared to 2024 (2024 = 13.1 µg/m<sup>3</sup>, 2025 = 14.0 µg/m<sup>3</sup>), data capture = 95.9%. No days recorded a daily mean above 50 µg/m<sup>3</sup>.

The Radcliffe monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 3.9 µg/m<sup>3</sup> compared to 2024 (2024 = 14.9 µg/m<sup>3</sup>, 2025 = 18.8 µg/m<sup>3</sup>), data capture = 97.0%. Four days recorded a daily mean above 50 µg/m<sup>3</sup>.

The Prestwich monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 2.7 µg/m<sup>3</sup> compared to 2024 (2024 = 16.3 µg/m<sup>3</sup>, 2025 = 19.0 µg/m<sup>3</sup>), data capture = 99.5%. Two days recorded a daily mean above 50 µg/m<sup>3</sup>.

There were no exceedances of the PM<sub>10</sub> annual mean or 24-hour national air quality objectives at these monitoring sites.

### 3.2.2.3 Manchester City Council

Manchester City Council operate three automatic monitoring stations at:

- Piccadilly Gardens (MAN3, Urban Centre)
- Oxford Road (MAN1, Kerbside)
- Manchester Sharston (MAHG, Suburban Industrial)

PM<sub>10</sub> concentrations measured at the automatic sites are well below the annual mean objective and have remained so for the past five years.

The Piccadilly monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 0.9 µg/m<sup>3</sup> compared to 2024 (2024 = 14.8 µg/m<sup>3</sup>, 2025 = 15.7 µg/m<sup>3</sup>), data capture = 98.1%. One day recorded a daily mean above 50 µg/m<sup>3</sup>.

The Oxford Road monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 2.1 µg/m<sup>3</sup> compared to 2024 (2024 = 20.5 µg/m<sup>3</sup>, 2025 = 22.6 µg/m<sup>3</sup>), data capture = 99.2%. Six days recorded a daily mean above 50 µg/m<sup>3</sup>.

The Sharston monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 2.2 µg/m<sup>3</sup> compared to 2024 (2024 = 10.7 µg/m<sup>3</sup>, 2025 = 12.2 µg/m<sup>3</sup>), data capture = 99.3%. No days recorded a daily mean above 50 µg/m<sup>3</sup>.

There were no exceedances of the PM<sub>10</sub> annual mean or 24-hour national air quality objectives at these monitoring sites.

### 3.2.2.4 Oldham Metropolitan Borough Council

Oldham Council operate one automatic monitoring station at Crompton Way, Shaw (CW), at a roadside location.

PM<sub>10</sub> concentrations measured at the automatic sites are well below the annual mean objective and have remained so for the past five years.

The Crompton Way monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 2.5 µg/m<sup>3</sup> compared to 2024 (2024 = 14.4 µg/m<sup>3</sup>, 2025 = 16.9 µg/m<sup>3</sup>), data capture = 95.8%. Two days recorded a daily mean above 50 µg/m<sup>3</sup>.

There were no exceedances of the PM<sub>10</sub> annual mean or 24-hour national air quality objectives at this monitoring site.

### 3.2.2.5 Rochdale Metropolitan Borough Council

Rochdale BC has one automatic monitoring station at Queensway, A664 (RDL001), a roadside location.

PM<sub>10</sub> concentrations measured at the automatic sites are well below the annual mean objective and have remained so for the past five years.

The Queensway monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 2.2 µg/m<sup>3</sup> compared to 2024 (2024 = 14.5 µg/m<sup>3</sup>, 2025 = 16.7 µg/m<sup>3</sup>), data capture = 93.7%. One day recorded a daily mean above 50 µg/m<sup>3</sup>.

There were no exceedances of the PM<sub>10</sub> annual mean or 24-hour national air quality objectives at this monitoring site.

### 3.2.2.6 Salford City Council

Salford City Council operate three automatic monitoring stations at:

- Eccles – an urban background site located close to Eccles town centre, operational since 1997 (ECCL).
- M60 – a roadside monitoring site located close to the M60 in Worsley, operational since 1999 (M60).
- Glazebury – a rural background site, operational since May 2022 (GLAZ).

At the Eccles monitoring site, the 2025 annual mean PM<sub>10</sub> concentration increased by 1.4 µg/m<sup>3</sup> (9%) compared to 2024 (2024 = 15.6 µg/m<sup>3</sup>, 2025 = 17.0 µg/m<sup>3</sup>, data capture = 93.7%). Five days recorded a daily mean above 50 µg/m<sup>3</sup>.

At the M60 monitoring site, the 2025 annual mean PM<sub>10</sub> concentration increased by 1.8 µg/m<sup>3</sup> (11%) compared to 2024 (2024 = 16.8 µg/m<sup>3</sup>, 2025 = 18.6 µg/m<sup>3</sup>, data capture = 93.7%). Four days recorded a daily mean above 50 µg/m<sup>3</sup>.

At the Glazebury monitoring site, the 2025 annual mean PM<sub>10</sub> concentration increased by 1.9 µg/m<sup>3</sup> (18%) compared to 2024 (2024 = 10.3 µg/m<sup>3</sup>, 2025 = 12.2 µg/m<sup>3</sup>), data capture = 99.8%. No days recorded a daily mean above 50 µg/m<sup>3</sup>.

The last few years of available monitoring data have shown that annual mean PM<sub>10</sub> concentrations at Salford air quality monitoring sites have remained relatively stable. However, there were slight increases in annual mean PM<sub>10</sub> concentrations in 2025 compared to 2024. Since 2021, concentrations have fluctuated between 15 to 17 µg/m<sup>3</sup> at the Eccles monitoring site, 17 to 20 µg/m<sup>3</sup> at the M60 monitoring site and 10 to 13 µg/m<sup>3</sup> at the Glazebury monitoring site.

There were no exceedances of either the annual mean or 24-hour national air quality objectives at these monitoring sites.

All Salford automatic monitoring sites had very high rates of PM<sub>10</sub> data capture during 2025 (all achieved 98% or above) and there were no prolonged significant technical issues.

### **3.2.2.7 Stockport Metropolitan Borough Council**

Stockport Council operate two automatic monitoring stations at:

- A34 Cheadle, a roadside monitoring site at the junction with the A560 (STK7)
- A6 Hazel Grove, a roadside monitoring site (STK5).

PM<sub>10</sub> concentrations measured at the automatic sites are well below the annual mean objective and have remained so for the past five years.

The Cheadle monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 2.3 µg/m<sup>3</sup> compared to 2024 (2024 = 12.3 µg/m<sup>3</sup>, 2025 = 14.5 µg/m<sup>3</sup>), data capture = 96.6%. No days recorded a daily mean above 50 µg/m<sup>3</sup>.

The Hazel Grove monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 2.6 µg/m<sup>3</sup> compared to 2024 (2024 = 15.9 µg/m<sup>3</sup>, 2025 = 18.5 µg/m<sup>3</sup>), data capture = 97.0%. Three days recorded a daily mean above 50 µg/m<sup>3</sup>.

There were no exceedances of the PM<sub>10</sub> annual mean or 24-hour national air quality objectives at these monitoring sites.

### 3.2.2.8 Tameside Metropolitan Borough Council

Tameside Council operate two automatic monitoring stations at:

- A57 Mottram Moor, Hollingworth, a roadside location (TAM1)
- A635, Manchester Road, Ashton-under-Lyne, a roadside location (TS001).

PM<sub>10</sub> concentrations measured at the automatic sites are well below the annual mean objective and have remained so for the past five years.

The Mottram Moor monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 1.5 µg/m<sup>3</sup> compared to 2024 (2024 = 13.5 µg/m<sup>3</sup>, 2025 = 15.0 µg/m<sup>3</sup>), data capture = 54.5%. No days recorded a daily mean above 50 µg/m<sup>3</sup>. This site experienced issues with the power supply which resulted in a lower data capture rate. As this is lower than 75%, the data have been annualised in line with LAQM.TG22 (Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC).

The Manchester Road monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 2.1 µg/m<sup>3</sup> compared to 2024 (2024 = 16.2 µg/m<sup>3</sup>, 2025 = 18.3 µg/m<sup>3</sup>), data capture = 94.2%. No days recorded a daily mean above 50 µg/m<sup>3</sup>.

There were no exceedances of the PM<sub>10</sub> annual mean or 24-hour national air quality objectives at these monitoring sites.

### 3.2.2.9 Trafford Metropolitan Borough Council

Trafford Council operate two automatic monitoring stations at:

- Stretford A56, adjacent to Stretford House, M32 9AZ, a roadside location (TRF2)
- Moss Park Junior School, Stretford, M32 9HR, an urban background location (TRAF)

PM<sub>10</sub> concentrations measured at the automatic sites are well below the annual mean objective and have remained so for the past five years.

The A56 monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 2.1 µg/m<sup>3</sup> compared to 2024 (2024 = 12.8 µg/m<sup>3</sup>, 2025 = 14.9 µg/m<sup>3</sup>), data capture = 95.4%. No days recorded a daily mean above 50 µg/m<sup>3</sup>.

The Moss Park monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 2.2 µg/m<sup>3</sup> compared to 2024 (2024 = 11.2 µg/m<sup>3</sup>, 2025 = 13.4 µg/m<sup>3</sup>), data capture = 48.0%. No days recorded a daily mean above 50 µg/m<sup>3</sup>. This site experienced issues with the enclosure which resulted in a lower data capture rate. As this is lower than 75%, the data have been annualised in line with LAQM.TG22 (Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC).

There were no exceedances of the PM<sub>10</sub> annual mean or 24-hour national air quality objectives at these monitoring sites.

### **3.2.2.10 Wigan Metropolitan Borough Council**

Wigan Council operate two automatic monitoring stations at:

- Wigan Centre (WIG5) automatic monitoring site, an urban background site located at Deanery High School, Frog Lane close to Wigan town centre.
- Wigan Leigh 3 (WIG07) monitoring station, a roadside site located on Market Street, Leigh.

PM<sub>10</sub> concentrations measured at the automatic sites are well below the annual mean objective and have remained so for the past five years.

The Wigan Centre monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 2.5 µg/m<sup>3</sup> compared to 2024 (2024 = 12.0 µg/m<sup>3</sup>, 2025 = 14.5 µg/m<sup>3</sup>), data capture = 98.1%. No days recorded a daily mean above 50 µg/m<sup>3</sup>.

The Leigh monitoring site 2025 annual mean PM<sub>10</sub> concentration increased by 2.0 µg/m<sup>3</sup> compared to 2024 (2024 = 15.5 µg/m<sup>3</sup>, 2025 = 17.5 µg/m<sup>3</sup>), data capture = 98.4%. No days recorded a daily mean above 50 µg/m<sup>3</sup>.

There were no exceedances of the PM<sub>10</sub> annual mean or 24-hour national air quality objectives at these monitoring sites.

### 3.2.2.12 Diurnal Analysis of PM<sub>10</sub> in Greater Manchester

Diurnal analysis of the automatic sites has been undertaken to identify daily trends in PM<sub>10</sub> across the year.

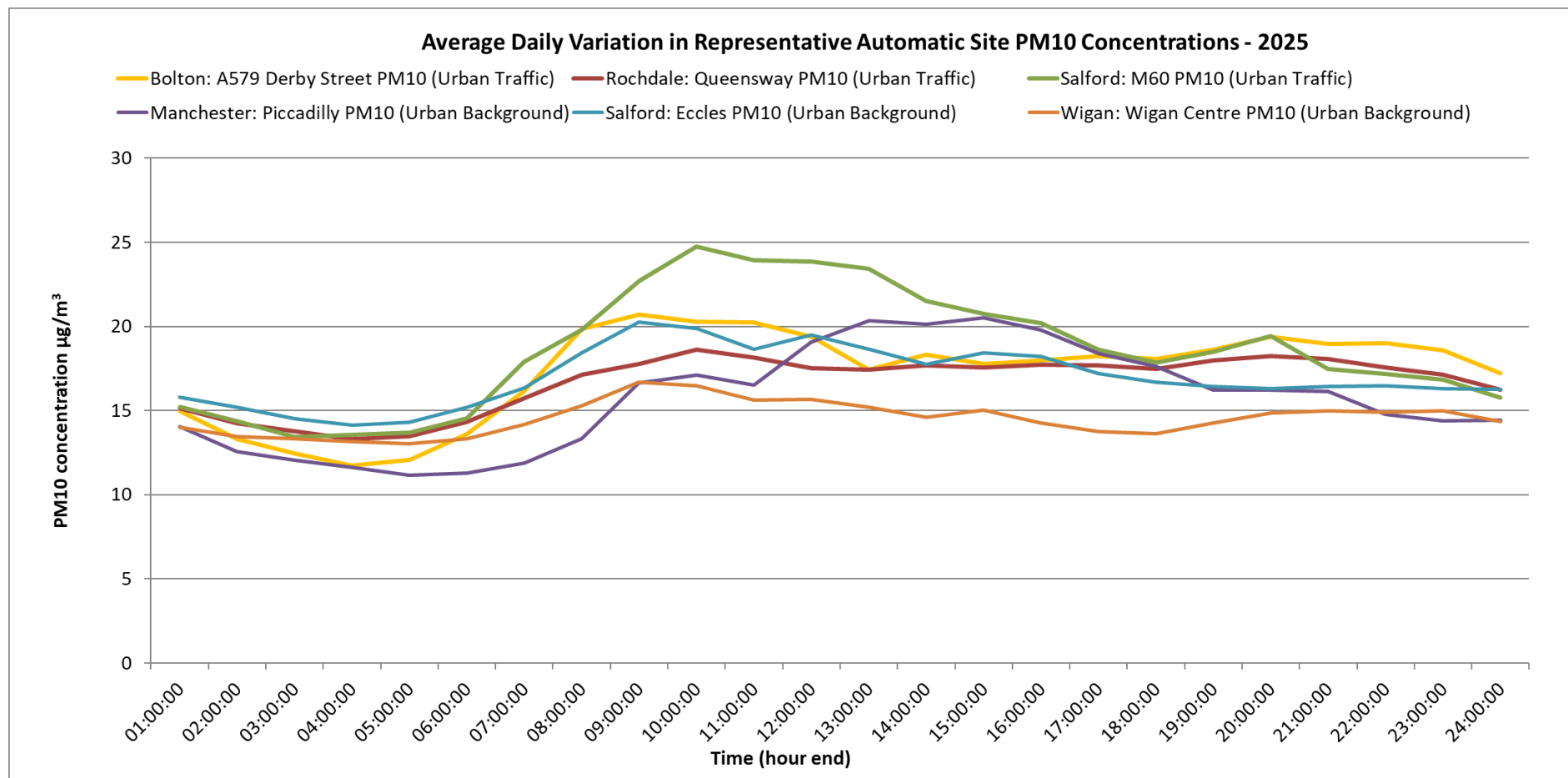
The graph, shown in Figure 3-2, displays the average daily variation in PM<sub>10</sub> concentrations at six Greater Manchester roadside and background sites for 2025. These are:

- Bolton: A579 Derby Street (Urban Traffic)
- Rochdale: Queensway (Urban Traffic)
- Salford: M60 (Urban Traffic)
- Manchester: Piccadilly (Urban Background)
- Salford: Eccles (Urban Background)
- Wigan: Wigan Centre (Urban Background)

Most monitoring sites show a similar trend in the morning, a peak in PM<sub>10</sub> concentrations occurs between approximately 08:00 and 10:00. At the Salford M60 site, the peak concentrations occur between approximately 10:00 and 12:00. At the Manchester Picadilly site, these occur between approximately 13:00 and 16:00, possibly reflecting the influence of mixed urban background conditions and formation of secondary pollutants, rather than immediate roadside conditions.

The Salford M60 and Salford Eccles sites show a similar trend, which may be reflecting activity on the Strategic Road Network. A smaller peak in concentrations occurs at most sites between approximately 19:00 and 21:00.

Trends in concentrations are similar to 2024. Peaks in concentrations at most sites are typically associated with increased traffic emissions and a shallow atmospheric boundary layer, which occurs early in the morning and later in the evening, trapping pollutants near ground level.



**Figure 3-2 - Graph Showing Diurnal Trends in PM<sub>10</sub> Concentration in Selected Automatic Sites for 2025**

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

Table A.8 in Appendix A presents the ratified and adjusted monitored PM<sub>2.5</sub> annual mean concentrations for the past five years.

All monitoring sites in GM maintain annual mean PM<sub>2.5</sub> concentrations below both the 20 µg/m<sup>3</sup> annual objective concentration and the 10 µg/m<sup>3</sup> 2030 long term target value. A confirmatory check of the Defra 2021-based background maps for 2025 indicates no likely exceedances of the objective levels for PM<sub>2.5</sub>.

The last five years of available monitoring data have shown that annual mean PM<sub>2.5</sub> concentrations, at GM air quality monitoring sites, have remained relatively stable. However, there were slight increases in annual mean PM<sub>2.5</sub> concentrations in 2025 compared to 2024.

#### 3.2.3.1 Bolton Metropolitan Borough Council

Bolton Council operate one automatic monitoring station at A579, Derby Street near the University of Bolton (BOL03), a roadside location.

PM<sub>2.5</sub> concentrations measured at the automatic site are below the annual mean targets. Concentrations increased slightly in 2025 after two years of reductions in 2023 and 2024.

The Derby Street monitoring site 2025 annual mean PM<sub>2.5</sub> concentration increased by 2.3 µg/m<sup>3</sup> compared to 2024 (2024 = 7.3 µg/m<sup>3</sup>, 2025 = 9.6 µg/m<sup>3</sup>), data capture = 96.1%.

There was no exceedance of the PM<sub>2.5</sub> annual mean UK 2030 interim or 2040 long-term target of 10 µg/m<sup>3</sup> in 2025.

#### 3.2.3.2 Manchester City Council

Manchester City Council measure at two automatic monitoring stations at:

- Piccadilly Gardens (MAN3, Urban Centre)
- Manchester Sharston (MAHG, Suburban Industrial)

PM<sub>2.5</sub> concentrations measured at the automatic sites are below the annual mean targets. Concentrations increased slightly in 2025 after stabilising in 2023 and 2024.

The Piccadilly monitoring site 2025 annual mean PM<sub>2.5</sub> concentration increased by 1.1 µg/m<sup>3</sup> compared to 2024 (2024 = 8.5 µg/m<sup>3</sup>, 2025 = 9.6 µg/m<sup>3</sup>), data capture = 98.1%.

The Sharston monitoring site 2025 annual mean PM<sub>2.5</sub> concentration increased by 1.3 µg/m<sup>3</sup> compared to 2024 (2024 = 6.5 µg/m<sup>3</sup>, 2025 = 7.8 µg/m<sup>3</sup>), data capture = 99.3%.

There were no exceedances of the PM<sub>2.5</sub> annual mean UK 2030 interim or 2040 long-term target of 10 µg/m<sup>3</sup> in 2025.

### 3.2.3.3 Rochdale Metropolitan Borough Council

Rochdale Council operate one automatic monitoring station at Queensway, A664 (RDL001), a roadside location.

PM<sub>2.5</sub> concentrations measured at the automatic site are below the annual mean targets. Concentrations increased slightly in 2025 after two years of reductions in 2023 and 2024.

The Queensway monitoring site 2025 annual mean PM<sub>2.5</sub> concentration increased by 2.4 µg/m<sup>3</sup> compared to 2024 (2024 = 8.3 µg/m<sup>3</sup>, 2025 = 9.7 µg/m<sup>3</sup>), data capture = 98.7%.

There was no exceedance of the PM<sub>2.5</sub> annual mean UK 2030 interim or 2040 long-term target of 10 µg/m<sup>3</sup> in 2025.

### 3.2.3.4 Salford City Council

Salford City Council operate three automatic monitoring stations at:

- Eccles – an urban background site located close to Eccles town centre, operational since 2008 (ECCL).
- M60 – a roadside monitoring site located close to the M60 in Worsley, operational since 2017 (M60).
- Glazebury – a rural background site, operational since May 2022 (GLAZ).

At the Eccles monitoring site, the 2025 annual mean PM<sub>2.5</sub> was 9.8 µg/m<sup>3</sup> similar to 2024 (9.1 µg/m<sup>3</sup>), data capture = 99.9%.

At the M60 monitoring site, the 2025 annual mean PM<sub>2.5</sub> concentration increased by 2.3 µg/m<sup>3</sup> (23%) compared to 2024 (2024 = 7.6 µg/m<sup>3</sup>, 2025 = 9.9 µg/m<sup>3</sup>), data capture = 98.2%.

At the Glazebury monitoring site, the 2025 annual mean PM<sub>2.5</sub> increased by 1.3 µg/m<sup>3</sup> (20%) compared to 2024 (2024 = 6.4 µg/m<sup>3</sup>, 2025 = 7.7 µg/m<sup>3</sup>), data capture = 99.8%.

The last few years of available monitoring data have shown that annual mean PM<sub>2.5</sub> concentrations at Salford air quality monitoring sites have remained relatively stable.

However, there were slight increases in annual mean PM<sub>2.5</sub> concentrations in 2025 compared to 2024. Since 2021, concentrations have fluctuated between 9 to 10 µg/m<sup>3</sup> at the Eccles monitoring site, 8 to 11 µg/m<sup>3</sup> at the M60 monitoring site and 6 to 8 µg/m<sup>3</sup> at the Glazebury monitoring site.

There was no exceedance of the PM<sub>2.5</sub> annual mean UK 2030 interim or 2040 long-term target of 10 µg/m<sup>3</sup> in 2025.

All Salford automatic monitoring sites had very high rates of PM<sub>2.5</sub> data capture during 2025 (all achieved 98% or above) and there were no prolonged significant technical issues.

### **3.2.3.5 Tameside Metropolitan Borough Council**

Tameside Council operate one automatic monitoring station at A635, Manchester Road, Ashton-under-Lyne, a roadside location (TS001).

PM<sub>2.5</sub> concentrations measured at the automatic site are below the annual mean targets. Concentrations increased slightly in 2025 after stabilising in 2023 and 2024.

The Manchester Road monitoring site 2025 annual mean PM<sub>2.5</sub> concentration increased by 1.3 µg/m<sup>3</sup> compared to 2024 (2024 = 7.8 µg/m<sup>3</sup>, 2025 = 9.1 µg/m<sup>3</sup>), data capture = 83.9%.

There was no exceedance of the PM<sub>2.5</sub> annual mean UK 2030 interim or 2040 long-term target of 10 µg/m<sup>3</sup> in 2025.

### **3.2.3.6 Wigan Metropolitan Borough Council**

Wigan Council operate two automatic monitoring stations at:

- Wigan Centre (WIG5) automatic monitoring site, an urban background site located at Deanery High School, Frog Lane close to Wigan town centre.
- Wigan Leigh 3 (WIG07) monitoring station, a roadside site located on Market Street, Leigh.

PM<sub>2.5</sub> concentrations measured at the automatic sites are below the annual mean targets. Concentrations increased slightly in 2025 after stabilising in 2023 and 2024.

The Wigan Centre monitoring site 2025 annual mean PM<sub>2.5</sub> concentration increased by 1.2 µg/m<sup>3</sup> compared to 2024 (2024 = 7.5 µg/m<sup>3</sup>, 2025 = 8.7 µg/m<sup>3</sup>), data capture = 98.1%.

The Leigh monitoring site 2025 annual mean PM<sub>2.5</sub> concentration increased by 0.7 µg/m<sup>3</sup> compared to 2024 (2024 = 8.6 µg/m<sup>3</sup>, 2025 = 9.3 µg/m<sup>3</sup>), data capture = 99.3%.

There were no exceedances of the PM<sub>2.5</sub> annual mean UK 2030 interim or 2040 long-term target of 10 µg/m<sup>3</sup> in 2025.

### 3.2.3.7 Diurnal Analysis of PM<sub>2.5</sub> in Greater Manchester

Diurnal analysis of the automatic sites has been undertaken to identify daily trends in PM<sub>2.5</sub> across the year.

The graph, shown in Figure 3-3, displays the average daily variation in PM<sub>2.5</sub> concentrations at six Greater Manchester roadside and background sites for 2025. These are:

- Bolton: A579 Derby Street (Urban Traffic)
- Rochdale: Queensway (Urban Traffic)
- Salford: M60 (Urban Traffic)
- Manchester: Piccadilly (Urban Background)
- Salford: Eccles (Urban Background)
- Wigan: Wigan Centre (Urban Background)

Most monitoring sites show a similar trend in concentrations, a peak in PM<sub>2.5</sub> concentrations occurs from approximately 07:00 to 10:00, and then another evening peak occurs from approximately 20:00 to 24:00.

This trend occurs for both selected urban traffic and background monitoring sites and is associated with traffic emissions (especially the morning peak), domestic heating (which may have more of an influence on the evening peak, especially in winter) and a shallow atmospheric boundary layer (which occurs early in the morning and late in the evening, trapping pollutants near ground level).

At the Manchester Picadilly site the earlier peak in concentrations occurs between approximately 12:00 to 15:00. As with PM<sub>10</sub> concentrations, this may be reflecting the influence of mixed urban background conditions and formation of secondary pollutants.

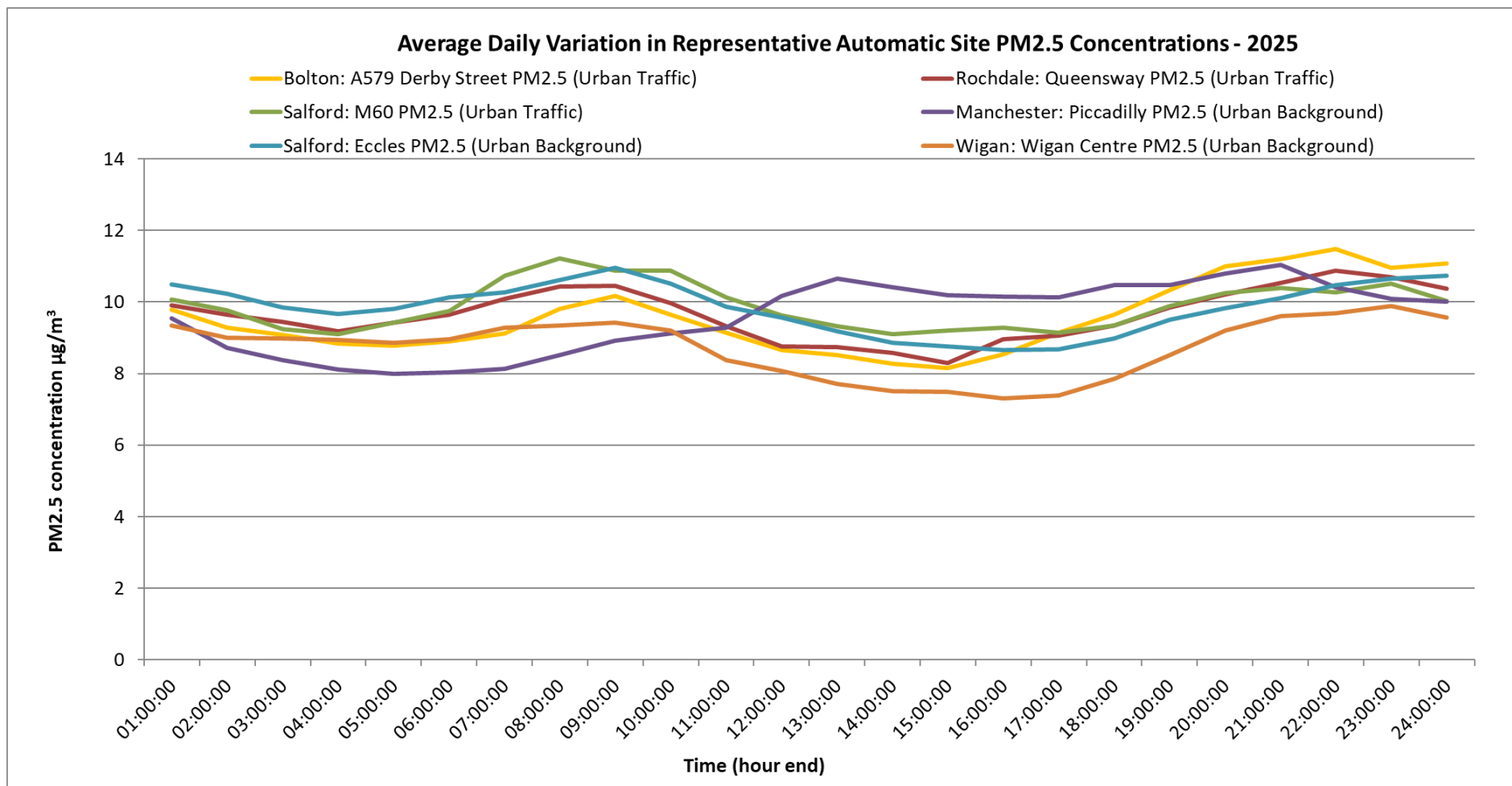


Figure 3-3 - Graph Showing Diurnal Trends in PM<sub>2.5</sub> Concentration in Selected Automatic Sites for 2025

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

Table A.9 in Appendix A compares the ratified continuous monitored SO<sub>2</sub> concentrations for 2025 with the air quality objectives for SO<sub>2</sub>.

During 2025, SO<sub>2</sub> concentrations were recorded at two automatic monitoring stations in the district of Manchester:

- Manchester Piccadilly Gardens (Urban Centre), MAN3.
- Manchester Sharston (Suburban Industrial), MANHG.

There were no notable events in 2025 which resulted in elevated levels of SO<sub>2</sub> concentrations. The maximum hourly and daily mean concentrations recorded for 2025 are shown in Table 3-2. Neither site exceeded the legal limit for this pollutant. A confirmatory check of the Defra background maps indicates that there are no likely exceedances of the objective levels for this pollutant.

**Table 3-2 - Annual Mean SO<sub>2</sub> Monitoring Results 2025**

Monitoring Site	Max. hourly mean concentration (µg/m <sup>3</sup> )	Max. daily mean concentration (µg/m <sup>3</sup> )
Manchester Piccadilly	10	4
Manchester Sharston	9	5

## 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? <sup>(1)</sup>	Monitoring Technique	Distance to Relevant Exposure (m) <sup>(2)</sup>	Distance to kerb of nearest road (m) <sup>(1)</sup>	Inlet Height (m)
BOL03	Bolton A579 Derby Street	Roadside	371296	408600	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub>	Yes	2016 AQMA	Chemiluminescent & BAM	30	2.5	2
BUR03	Bury Bridge (CAP)	Roadside	379840	410944	NO <sub>2</sub>	Yes	2016 AQMA	Chemiluminescent	N/A	4	1.5
BUR2	Bury Prestwich	Roadside	381650	403222	NO <sub>2</sub> , PM <sub>10</sub>	Yes	2016 AQMA	Chemiluminescent & BAM	15	2.5	1.5
BUR1	Bury Radcliffe	Roadside	378190	407480	NO <sub>2</sub> , PM <sub>10</sub>	Yes	2016 AQMA	Chemiluminescent & BAM	10	2.5	1.5
BURW	Bury Whitefield	Roadside	380636	406973	NO <sub>2</sub> , PM <sub>10</sub>	Yes	2016 AQMA	Chemiluminescent & FDMS	24	7	3
MAN09	Manchester Bridge Street (CAP)	Roadside	383556	398292	NO <sub>2</sub>	Yes	2016 AQMA	Chemiluminescent	N/A	0.8	1.4
MAN1	Manchester Oxford Road	Kerbside	384239	397276	NO <sub>2</sub> , PM <sub>10</sub>	Yes	2016 AQMA	Chemiluminescent & BAM	5	3	2
MAN3	Manchester Piccadilly	Urban Centre	384310	398337	NO <sub>2</sub> , PM <sub>10</sub> ,	Yes	2016 AQMA	Chemiluminescent, Palas Fidas, UV	2	30	4

					PM <sub>2.5</sub> , O <sub>3</sub> , SO <sub>2</sub>			absorption & UV Fluorescent			
MAHG	Manchester Sharston	Suburban	384202	386121	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> , O <sub>3</sub> , SO <sub>2</sub>	No	2016 AQMA	Chemiluminescent, Palas Fidas, UV absorption & UV Fluorescent	35	6	2.7
CW	Oldham Crompton Way	Roadside	393884	409183	NO <sub>2</sub> , PM <sub>10</sub>	Yes	2016 AQMA	Chemiluminescent & BAM	10	1	1.5
RDL001	Rochdale Queensway	Roadside	389336	411419	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub>	Yes	2016 AQMA	Chemiluminescent & BAM	17	4	3
ECCL	Salford Eccles	Urban Background	377926	398727	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> , O <sub>3</sub>	No	2016 AQMA	Chemiluminescent, Palas Fidas & UV absorption	7	6	3.5
GLAZ	Salford Glazebury	Rural	368759	396027	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> , O <sub>3</sub>	No	2016 AQMA	Chemiluminescent, Palas Fidas & UV absorption	130	1372	3
M60	Salford M60	Roadside	374811	400857	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> , O <sub>3</sub>	Yes	2016 AQMA	Chemiluminescent, BAM & UV absorption	85	22	3
SAL001	Salford Regent Road (CAP)	Roadside	382580	397717	NO <sub>2</sub>	Yes	2016 AQMA	Chemiluminescent	N/A	3	1.6
STK7	Stockport Cheadle A34	Roadside	385047	388339	NO <sub>2</sub> , PM <sub>10</sub>	Yes	2016 AQMA	Chemiluminescent & BAM	18	2	2
STK5	Stockport Hazel Grove	Roadside	391481	387637	NO <sub>2</sub> , PM <sub>10</sub>	Yes	2016 AQMA	Chemiluminescent & BAM	33	4	2

TS001	Tameside A635 Manchester Road	Roadside	392538	398419	NO <sub>2</sub> ; PM <sub>10</sub> ; PM <sub>2.5</sub>	Yes	2016 AQMA	Chemiluminescent, BAM	10	1	2
TAM1	Tameside Mottram Moor	Roadside	399719	395804	NO <sub>2</sub> , PM <sub>10</sub>	Yes	2016 AQMA	Chemiluminescent & BAM	4	5	4
TRF2	Trafford A56	Roadside	379411	394014	NO <sub>2</sub> , PM <sub>10</sub>	Yes	2016 AQMA	Chemiluminescent & BAM	40	2	2.5
TRAF	Trafford Moss Park	Urban Background	378783	394728	NO <sub>2</sub> , PM <sub>10</sub>	No	2016 AQMA	Chemiluminescent & BAM	60	98	2.5
TRF3	Trafford Wellacre Academy	Urban Background	373755	394477	NO <sub>2</sub>	No	2016 AQMA	Chemiluminescent	79	160	2.5
WIG5	Wigan Centre	Urban Background	357816	406024	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> , O <sub>3</sub>	No	2016 AQMA	Chemiluminescent, Palas Fidas & UV absorption	0	175	2.5
WIG07	Wigan Leigh 3	Roadside	365686	400243	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub>	No	2016 AQMA	Chemiluminescent, BAM	23	3.6	2.6

**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).

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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co-located with a Continuous Analyser?	Tube Height (m)
<b>Bolton Metropolitan Borough Council</b>										
BO3NO	Quintins 3	Kerbside	370763	407929	NO <sub>2</sub>	2016 AQMA	2.0	0.5	No	2.4
BO4NO	Manley Terrace 4	Urban Background	371394	411718	NO <sub>2</sub>	2016 AQMA	0.0	2.5	No	2.4
BO8NO	Le Mans Crescent 8	Kerbside	371352	409094	NO <sub>2</sub>	No	5.0	0.5	No	2.4
BO11NO	Horwich Allotments 11	Urban Background	363712	412396	NO <sub>2</sub>	No	40.0	138.0	No	1.0
BO14NO	Farnworth Town Hall 14	Roadside	373839	406130	NO <sub>2</sub>	No	3.0	2.5	No	2.4
BO15NO	Astley Bridge t/lights 15	Kerbside	371435	411690	NO <sub>2</sub>	2016 AQMA	15.0	0.5	No	2.4
BO16NO	Drummond St 16	Urban Background	371304	411748	NO <sub>2</sub>	No	6.0	2.0	No	2.4
BO41NO	Bolton Road 41	Urban Background	366286	406561	NO <sub>2</sub>	No	5.0	1.5	No	2.4
BO43NO	Bee Hive Pub kerb 43	Kerbside	365501	409887	NO <sub>2</sub>	2016 AQMA	20.0	1.0	No	2.4

BO44NO, BO45NO	1007 Chorley new 45	Urban Background	365599	409845	NO <sub>2</sub>	2016 AQMA	0.0	19.0	No	2.0
BO48NO	Ainsworth Rd L/L 48	Urban Background	375397	407457	NO <sub>2</sub>	2016 AQMA	3.0	1.5	No	2.2
BO53NO	3 Turton Road yard 53	Urban Background	373236	411968	NO <sub>2</sub>	2016 AQMA	0.0	4.0	No	2.2
BO54NO	20 Laburnum Park 54	Urban Background	372908	412120	NO <sub>2</sub>	No	0.0	4.0	No	2.2
BO60NO	134 Buckley Lane 60	Roadside	373287	405061	NO <sub>2</sub>	2016 AQMA	3.0	1.5	No	2.4
BO61NO	Primrose Street 61	Kerbside	374450	405207	NO <sub>2</sub>	2016 AQMA	22.0	0.5	No	1.0
BO62NO	13 Higher Market Street 62	Urban Background	374194	405460	NO <sub>2</sub>	2016 AQMA	0.0	1.5	No	2.4
BO63NO	Fern Street 63	Urban Background	374282	406257	NO <sub>2</sub>	2016 AQMA	5.0	1.5	No	2.4
BO64NO	Bolton Gate Retail 64	Roadside	371965	409907	NO <sub>2</sub>	2016 AQMA	30.0	2.0	No	2.4
BO65NO	Pheonix Street 65	Urban Background	372059	409877	NO <sub>2</sub>	2016 AQMA	7.0	1.5	No	2.4
BO66NO	Blackburn Road 66	Roadside	371442	411599	NO <sub>2</sub>	2016 AQMA	20.0	3.0	No	2.4
BO67NO	The Welland 67	Urban Background	365163	405640	NO <sub>2</sub>	No	8.0	1.5	No	2.4
BO68NO	26 Winslow Road 68	Urban Background	367672	406910	NO <sub>2</sub>	2016 AQMA	13.0	1.5	No	2.4

BO69NO	Red Lion Salford Road 69 Lamp Post No2	Roadside	369030	405809	NO <sub>2</sub>	2016 AQMA	30.0	1.5	No	2.4
BO70NO	Cornwall Avenue Lamp Post No. 4 70	Roadside	368757	405701	NO <sub>2</sub>	2016 AQMA	8.0	1.5	No	2.4
BO71NO	J4 traffic Lights - northbound exit 71	Roadside	370362	405400	NO <sub>2</sub>	2016 AQMA	300.0	1.5	No	2.4
BO72NO	Watergate Drive 72	Roadside	370115	405372	NO <sub>2</sub>	2016 AQMA	75.0	9.5	No	2.4
BO73NO	Turton Street 73	Roadside	371805	409820	NO <sub>2</sub>	2016 AQMA	3.0	2.0	No	2.4
BO74NO	Kay Street 74	Roadside	371805	409832	NO <sub>2</sub>	2016 AQMA	100.0	2.0	No	2.4
BO75NO	Oxford St. (post near costa coffee) 75	Roadside	371623	409235	NO <sub>2</sub>	2016 AQMA	50.0	3.0	No	2.4
BO76NO, BO77NO, BO78NO	Westland Avenue 78	Roadside	373491	404836	NO <sub>2</sub>	No	1.0	3.0	No	2.0
BO79NO, BO80NO, BO81NO	Derby St (monitoring station)	Roadside	371296	408600	NO <sub>2</sub>	2016 AQMA	26.0	3.0	Yes	2.0
BOA101	Ivy Grove - Outside 26	Roadside	374561	405364	NO <sub>2</sub>	2016 AQMA	0.5	0.5	No	2.4
BOA102	Grosvenor Street - Outside 44	Roadside	374584	405525	NO <sub>2</sub>	2016 AQMA	0.5	0.5	No	2.4

BOA103	Bridge Street - Opposite 22	Roadside	374526	405906	NO <sub>2</sub>	NO	7.0	1.0	No	2.4
BOA104	All Saints - Outside 1 Devon Street	Roadside	373795	406600	NO <sub>2</sub>	NO	3.0	0.5	No	2.4
BOA105	Starcliffe Street - Outside 37	Roadside	373604	406882	NO <sub>2</sub>	2016 AQMA	1.0	0.5	No	2.4
BOA107	Bradford Street	Roadside	372372	408912	NO <sub>2</sub>	2016 AQMA	3.0	1.0	No	2.4
BOA106	Sharman Street - Opposite Number 4	Roadside	372643	408070	NO <sub>2</sub>	NO	3.0	1.0	No	2.4
BOA109	Corner of Bury Rd/Oakenbottom Rd	Roadside	373818	409401	NO <sub>2</sub>	2016 AQMA	7.0	1.5	No	2.4
BOA110	Topp Way Next to Entrance to Davenport Street	Roadside	371501	409694	NO <sub>2</sub>	2016 AQMA	10.0	0.5	No	2.4
BOA111	Corner Ruth Street/ST. Georges Road	Roadside	371102	409575	NO <sub>2</sub>	2016 AQMA	0.5	0.5	No	2.4
BOA112	Derby Street Adjacent to Sweet Green Tavern/Crook Street	Roadside	371715	408681	NO <sub>2</sub>	2016 AQMA	5.0	0.5	No	2.4
BOA113	Grosvenor Street – outside 16	Roadside	374510	405522	NO <sub>2</sub>	2016 AQMA	0.5	0.5	No	2.4

BOA114	Church Bank, near parish church	Roadside	372122	409347	NO <sub>2</sub>	2016 AQMA	100.0	0.5	No	2.4
BOA115	93 Bradshawgate	Roadside	371903	409026	NO <sub>2</sub>	2016 AQMA	3.0	0.5	No	2.4
BOA116	Great Moor St, outside St Patrick's presbytery	Roadside	371803	408976	NO <sub>2</sub>	2016 AQMA	5.0	0.5	No	2.4
BOA118	St Georges Street, The Renaissance Flats	Roadside	371832	409625	NO <sub>2</sub>	2016 AQMA	0.5	1.0	No	2.4
BOA119	Marsden Road, outside Marsden House	Roadside	371328	409251	NO <sub>2</sub>	2016 AQMA	0.5	0.5	No	2.4
BOA120	Bradford Street	Roadside	373946	405207	NO <sub>2</sub>	No	0.5	0.5	No	2.4
<b>Bury Metropolitan Borough Council</b>										
BU1NO	BU1 Baguley Crescent	Roadside	384372	404917	NO <sub>2</sub>	2016 AQMA	7.0	1.2	No	2.6
BU2NO	Ramsbottom Lane	Roadside	379101	417145	NO <sub>2</sub>	No	6.0	2.0	No	2.6
BU3ANO, BU3BNO, BU3CNO	BU3 Bury Roadside Whitefield (AURN)	Roadside	380636	406973	NO <sub>2</sub>	2016 AQMA	23.0	7.0	Yes	3.0
BU4NO	Hardmans Rd Whitefield	Roadside	380964	404831	NO <sub>2</sub>	2016 AQMA	8.2	22.0	No	2.3

BU5NO	BU5 Radcliffe New Rd. Whitefield	Roadside	380497	405420	NO <sub>2</sub>	No	4.1	3.5	No	2.5
BU6NO	BU6 5 Bolton Rd, Bury	Roadside	379658	410888	NO <sub>2</sub>	2016 AQMA	0.0	5.0	No	2.0
BU7NO	Ferngrove	Roadside	381984	411866	NO <sub>2</sub>	2016 AQMA	8.6	9.5	No	2.7
BU8NO	Walmersely Road	Roadside	380754	412619	NO <sub>2</sub>	No	6.0	0.3	No	2.6
BU9NO	Crostones Road	Roadside	379630	411031	NO <sub>2</sub>	2016 AQMA	NA	3.5	No	2.5
BU10NO	Bury Bridge	Roadside	379854	410978	NO <sub>2</sub>	2016 AQMA	NA	4.4	No	2.5
BU11NO	Moorgate	Roadside	380980	411193	NO <sub>2</sub>	2016 AQMA	NA	1.5	No	2.5
BU12NO	Rochdale Road	Kerbside	381344	410744	NO <sub>2</sub>	2016 AQMA	1.9	0.5	No	2.2
BU13NO	Rochdale Road	Kerbside	381728	410677	NO <sub>2</sub>	2016 AQMA	11.0	0.5	No	2.5
BU14NO	Angouleme Way	Roadside	380398	410455	NO <sub>2</sub>	2016 AQMA	NA	3.0	No	2.2
BU15NO	Bury New Road/Bury Old Road	Kerbside	380852	405209	NO <sub>2</sub>	2016 AQMA	NA	0.5	No	2.3
BU16NO	Bury New Road	Roadside	380914	404898	NO <sub>2</sub>	2016 AQMA	5.0	2.2	No	2.6

BU17NO	Prestwich Centre	Roadside	381105	404279	NO <sub>2</sub>	2016 AQMA	13.0	3.0	No	2.3
BU18NO	Rochdale Old Road	Roadside	382071	411362	NO <sub>2</sub>	2016 AQMA	3.0	2.0	No	2.3
BU19NO	Balmoral Avenue	Roadside	381321	405115	NO <sub>2</sub>	2016 AQMA	7.0	12.0	No	2.5
BU20NO	Droughts Lane	Urban Background	382974	405930	NO <sub>2</sub>	2016 AQMA	6.0	25.0	No	2.5
<b>Manchester City Council</b>										
MA9ANO	Newton Street	Kerbside	384601	398303	NO <sub>2</sub>	2016 AQMA	43.0	0.5	No	3.0
MA24NO	Princess Street	Kerbside	383968	398070	NO <sub>2</sub>	2016 AQMA	150.0	0.5	No	3.0
MA26ANO	Chetham's School	Urban Background	383973	398874	NO <sub>2</sub>	2016 AQMA	5.0	59.0	No	3.0
MA29ANO	Oxford Street	Roadside	384119	397503	NO <sub>2</sub>	2016 AQMA	2.0	2.5	No	3.0
MA37NO	Princess Road	Roadside	382829	391493	NO <sub>2</sub>	2016 AQMA	10.0	4.0	No	3.0
MA59NO, MA60NO, MA61NO	Piccadilly Gardens	Urban Background	384310	398337	NO <sub>2</sub>	2016 AQMA	45.0	56.0	Yes	4.0
MA71NO	Great Ancoats Street	Roadside	385161	398290	NO <sub>2</sub>	2016 AQMA	10.0	3.0	No	3.0
MA72NO	Lockton Close	Urban Background	384761	397384	NO <sub>2</sub>	2016 AQMA	7.0	46.0	No	3.0

MA73NO	Hyde Road	Roadside	388604	396042	NO <sub>2</sub>	2016 AQMA	12.0	3.0	No	3.0
MA75NO	Stockport Road	Kerbside	387363	394617	NO <sub>2</sub>	2016 AQMA	3.0	0.5	No	3.0
MA77NO	Hewitt Street	Urban Background	383576	397489	NO <sub>2</sub>	2016 AQMA	2.0	8.0	No	3.0
MA81NO	Peaceville Road	Urban Background	386589	394083	NO <sub>2</sub>	No	10.0	18.0	No	3.0
MA82NO, MA83NO, MA84NO	Manchester Oxford Road	Roadside	384239	397276	NO <sub>2</sub>	2016 AQMA	5.0	3.0	Yes	2.0
MA88NO	Angel St	Kerbside	384469	398981	NO <sub>2</sub>	2016 AQMA	5.0	1.0	No	3.0
MA88ANO	Hyde Rd/Clowes St	Roadside	386536	396699	NO <sub>2</sub>	2016 AQMA	25.0	3.0	No	3.0
MA90BNO, MA91BNO, MA92BNO	Manchester Sharston	Suburban	384202	386121	NO <sub>2</sub>	No	35.0	44.0	Yes	3.0
MA93BNO	Palatine Road	Roadside	382419	390010	NO <sub>2</sub>	2016 AQMA	22.0	3.0	No	3.0
MA95BNO	Ashton Old Road	Roadside	386668	397566	NO <sub>2</sub>	2016 AQMA	9.0	2.5	No	3.0
MA96BNO	Ardwick Green	Roadside	385189	397167	NO <sub>2</sub>	2016 AQMA	2.0	3.0	No	3.0
MA99BNO	Oldham Road (rear of 6 Airton Close)	Roadside	385400	399245	NO <sub>2</sub>	2016 AQMA	8.0	3.0	No	3.0

MA100BNO	Middleton Road	Roadside	383605	402293	NO <sub>2</sub>	2016 AQMA	11.0	2.0	No	3.0
MA101BNO	Rochdale Rd, Harpurhey	Roadside	385999	402026	NO <sub>2</sub>	2016 AQMA	3.0	2.0	No	3.0
MA102BNO	1133 Rochdale Rd, Charlestown	Roadside	385792	402952	NO <sub>2</sub>	2016 AQMA	3.0	2.0	No	3.0
MA103BNO	Queens Rd, Harpurhey	Roadside	385431	400653	NO <sub>2</sub>	2016 AQMA	2.0	2.0	No	3.0
MA104BNO	Cheetwood Primary School, Waterloo Road	Roadside	383511	399906	NO <sub>2</sub>	2016 AQMA	0.5	2.0	No	3.0
MA112BNO	112 Epping Street	Roadside	383987	396734	NO <sub>2</sub>	2016 AQMA	2.0	2.0	No	3.0
MA113BNO	113 Brunswick Street	Roadside	385087	396891	NO <sub>2</sub>	2016 AQMA	2.3	2.0	No	3.0

### Oldham Metropolitan Borough Council

OLMRNO	Middleton Road (Chadd Precinct)	Roadside	390746	405397	NO <sub>2</sub>	No	3.5	2.0	No	2.0
OLSHSNO	St Herberts School, Broadway	Roadside	390394	405454	NO <sub>2</sub>	2016 AQMA	11.0	2.3	No	2.0
OL259BNO	Lamppost 94, outside 259 Broadway, Chadderton	Roadside	390089	404456	NO <sub>2</sub>	2016 AQMA	10.5	3.0	No	2.0
OL1RANO	Lamppost 1, Moston Rd, side	Roadside	388698	404903	NO <sub>2</sub>	No	5.0	2.0	No	2.0

	of Radclyffe Arms Pub									
OL484BNO	Lamppost 1 outside 484 Broadway	Urban Background	389367	403280	NO <sub>2</sub>	2016 AQMA	4.5	9.9	No	2.0
OLOBNO	Outside 409 Broadway	Roadside	389789	403685	NO <sub>2</sub>	2016 AQMA	29.0	14.0	No	2.0
OLPSNO	Lamppost 1, Poplar St, Failsworth (end of Victoria St)	Urban Background	388747	400973	NO <sub>2</sub>	2016 AQMA	11.1	13.4	No	2.0
OLWARNO	Lamppost 35, Oldham Rd, Failsworth	Roadside	389237	401310	NO <sub>2</sub>	2016 AQMA	17.7	4.1	No	2.0
OLHRNO	Hollins Road jn. Cardigan Rd	Roadside	390756	402571	NO <sub>2</sub>	2016 AQMA	5.0	3.0	No	2.0
OLIRSNO	Lamppost 2, outside 13 Irving St, Failsworth	Urban Background	390675	402736	NO <sub>2</sub>	2016 AQMA	5.8	23.7	No	2.0
OL368MRNO	Outside 368 Manchester Rd, Chadderton	Roadside	390976	403252	NO <sub>2</sub>	2016 AQMA	2.0	4.4	No	2.0
OLESNO	Lamppost 4, outside 1 Edward St	Roadside	391367	404318	NO <sub>2</sub>	2016 AQMA	6.6	1.2	No	2.0
OLARNO	Ashton Road cnr Bellfield Rd	Roadside	392771	402951	NO <sub>2</sub>	No	3.0	3.0	No	2.0

OLWOODNO	First lamppost close to 1 Woodstock St	Urban Background	393056	404638	NO <sub>2</sub>	No	1.8	15.1	No	2.0
OLWSMSNO	Lamppost jn., Woodstock St/Mowbray St	Roadside	392947	404854	NO <sub>2</sub>	No	32.0	4.6	No	2.0
OL17SRNO	Bus Stop outside DP Kitchens 12-14 Shaw Rd, Derker	Kerbside	393643	405343	NO <sub>2</sub>	2016 AQMA	1.5	0.0	No	2.0
OLHS2NO	Lamppost 2 Honduras St, by Europcar	Roadside	393501	405186	NO <sub>2</sub>	No	15.5	12.0	No	2.0
OLRRNO	45 Ripponden Road	Roadside	394210	405752	NO <sub>2</sub>	No	1.0	1.5	No	2.0
OLHURNO	617 Huddersfield Road	Roadside	395561	405751	NO <sub>2</sub>	No	4.0	2.0	No	2.0
OLCVNO	65 Chew Valley Road	Roadside	399533	404454	NO <sub>2</sub>	No	2.5	2.0	No	2.0
OLHSNO	18 High St Uppermill	Roadside	399589	405511	NO <sub>2</sub>	No	2.0	2.0	No	2.0
OLCW1NO, OLCW2NO, OLCW3NO	Crompton Way 3	Roadside	393884	409183	NO <sub>2</sub>	No	2.0	2.0	Yes	1.5
OL21SRNO	Lamppost 6, outside 21 Shaw Rd, Royton	Roadside	392217	407255	NO <sub>2</sub>	2016 AQMA	0.5	2.0	No	2.0

OLJSNO	Lamppost 1, Jones St, Royton	Urban Background	393097	406897	NO <sub>2</sub>	No	5.1	7.2	No	2.0
OLRDNO	Rochdale Road jn. Sheepfoot Lane	Roadside	392111	406432	NO <sub>2</sub>	2016 AQMA	3.0	3.0	No	2.0
OL12ORNO	Outside Tokies, 12 Oldham Rd, Royton	Roadside	392045	407608	NO <sub>2</sub>	2016 AQMA	0.0	1.5	No	2.0
OLFANO	Lamppost outside 6 Fernlea Ave, Chadderton	Urban Background	391100	406218	NO <sub>2</sub>	No	6.8	1.9	No	2.0
OLSMWNO	Lamp post between St Mary's Way and Poppy Road	Urban Background	392748	405294	NO <sub>2</sub>	2016 AQMA	8.0	21.0	No	3.0
OLLSNO	Lamp post at side of 44 Lord Street close to St Mary's Way	Roadside	392646	405286	NO <sub>2</sub>	2016 AQMA	7.7	5.7	No	4.0
OLSWNO	Lamp post 142 Sedgemoor Way, Oldham	Roadside	392622	405289	NO <sub>2</sub>	2016 AQMA	0.0	17.0	No	5.0
<b>Rochdale Metropolitan Borough Council</b>										
RO2ANO	Trows Lane Castleton	Urban Background	388537	409942	NO <sub>2</sub>	2016 AQMA	0.0	20.0	No	2.0
RO3ANO	52 Cherrington Drive Castleton	Urban Background	388581	409797	NO <sub>2</sub>	2016 AQMA	100.0	15.0	No	2.0

RO4ANO	Middleton Library	Urban Background	387080	406278	NO <sub>2</sub>	2016 AQMA	0.0	5.0	No	2.0
RO5ANO	Mossway Middleton	Roadside	386870	404044	NO <sub>2</sub>	2016 AQMA	100.0	10.0	No	2.0
RO6ANO	Heywood Old Rd Birch	Kerbside	385413	408320	NO <sub>2</sub>	2016 AQMA	15.0	1.0	No	2.0
RO7ANO	Edinburgh Way Rochdale	Urban Background	388603	411925	NO <sub>2</sub>	2016 AQMA	0.0	6.0	No	2.0
RO8ANO	Manchester Old Rd Rochdale	Roadside	388932	412091	NO <sub>2</sub>	2016 AQMA	0.0	4.0	No	2.0
RO9ANO	Manchester Rd Rochdale	Kerbside	389057	412217	NO <sub>2</sub>	2016 AQMA	0.0	1.0	No	2.0
RO10ANO	Holmes Street Rochdale	Urban Background	388800	413603	NO <sub>2</sub>	2016 AQMA	0.0	4.0	No	2.0
RO12ANO	Halifax Road Wardle	Roadside	392072	415687	NO <sub>2</sub>	2016 AQMA	20.0	2.0	No	2.0
RO13ANO	725 Halifax Road Wardle	Urban Background	392042	415707	NO <sub>2</sub>	No	30.0	15.0	No	2.0
RO14ANO	Hey Bottom, Calderbrook	Rural	393665	417816	NO <sub>2</sub>	No	100.0	50.0	No	2.0
RO15ANO	M62 Depot Milnrow	Roadside	392976	411906	NO <sub>2</sub>	2016 AQMA	30.0	10.0	No	2.0
RO16ANO	Ashfield Road Milnrow	Urban Background	392542	411709	NO <sub>2</sub>	2016 AQMA	40.0	2.0	No	2.0
RO17ANO	Kingsway Rochdale	Urban Background	391214	412609	NO <sub>2</sub>	2016 AQMA	50.0	12.0	No	2.0

RO18ANO	Penn Street	Urban Background	389877	413590	NO <sub>2</sub>	No	150.0	1.0	No	2.0
RO20ANO	Manchester Road / Bader Drive	Roadside	385773	408972	NO <sub>2</sub>	2016 AQMA	50.0	1.0	No	2.0
RO21ANO	York Street, Heywood	Roadside	385820	410776	NO <sub>2</sub>	No	50.0	2.0	No	2.0
RO22ANO	19 Kingsway Rochdale	Roadside	390464	411976	NO <sub>2</sub>	2016 AQMA	20.0	2.0	No	2.0
RO23ANO	174 Oldham Road	Roadside	390377	412030	NO <sub>2</sub>	No	5.0	2.0	No	2.5
RO24ANO	Ogden Street, Castleton	Urban Background	388089	410822	NO <sub>2</sub>	No	13.0	3.0	No	2.5
RO25ANO	Oldham Road, Middleton	Roadside	387792	406013	NO <sub>2</sub>	No	1.0	1.5	No	3.0
RO26ANO	Whitworth Road	Roadside	389782	414241	NO <sub>2</sub>	2016 AQMA	20.0	1.5	No	3.0
RO27ANO	156 Halifax Road Rochdale	Roadside	390710	414563	NO <sub>2</sub>	2016 AQMA	1.0	1.5	No	2.5
RO28ANO	Smithy Bridge Road	Urban Background	392871	415127	NO <sub>2</sub>	No	1.0	2.0	No	3.0
RO29ANO, RO30ANO, RO31ANO	Queensway, Rochdale	Roadside	389336	411419	NO <sub>2</sub>	2016 AQMA	17.0	5.0	Yes	2.0
RO32ANO	Heywood Old Rd, Middleton	Roadside	385145	407701	NO <sub>2</sub>	No	2.0	2.5	No	2.0

Salford City Council

SA1NO	Irlam Locks	Urban Background	372767	394103	NO <sub>2</sub>	NO	-30.0	45.0	No	1.7
SA2NO	Irlam (Princes Park)	Urban Background	372140	394210	NO <sub>2</sub>	NO	-57.0	67.0	No	3.0
SA4NO	Crompton	Urban Background	377453	401830	NO <sub>2</sub>	NO	-5.0	21.5	No	2.5
SA9NO	St Marks School	Urban Background	374741	400937	NO <sub>2</sub>	NO	-10.0	125.0	No	2.0
SA13NO	Buckland Road	Urban Background	379613	399784	NO <sub>2</sub>	NO	12.0	2.5	No	3.0
SA16NO	Wharton School	Urban Background	371187	404453	NO <sub>2</sub>	NO	7.0	2.0	No	2.5
SA20NO, SA21NO, SA22NO	M60 automatic site co-location	Roadside	374811	400857	NO <sub>2</sub>	2016 AQMA	83.0	20.0	Yes	3.0
SA23NO, SA24NO, SA29NO	Eccles AURN co-location	Urban Background	377926	398727	NO <sub>2</sub>	NO	7.0	6.0	Yes	3.5
SA25NO	Wythop Gardens	Urban Background	381304	398014	NO <sub>2</sub>	2016 AQMA	-8.5	22.5	No	3.0
SA26NO	Halton Bank sub station	Roadside	380718	399597	NO <sub>2</sub>	2016 AQMA	8.0	6.0	No	2.0
SA27NO	Trinity Way	Roadside	383078	398741	NO <sub>2</sub>	2016 AQMA	2.0	1.5	No	3.0
SA31NO	Walkden Road	Roadside	374025	401905	NO <sub>2</sub>	2016 AQMA	8.0	3.5	No	3.0

SA34NO	Liverpool Road	Roadside	375367	397800	NO <sub>2</sub>	2016 AQMA	0.5	8.5	No	1.7
SA39NO	Trinity Way /Chapel Street	Roadside	383040	398563	NO <sub>2</sub>	2016 AQMA	0.0	8.5	No	3.0
SA38NO	Clifton Primary School	Roadside	377796	403065	NO <sub>2</sub>	NO	7.0	1.7	No	2.5
SA51NO	Liverpool Road / Claybank	Roadside	375213	397661	NO <sub>2</sub>	2016 AQMA	1.5	2.5	No	2.0
SA55NO	Leigh Road / Ellenbrook Road	Roadside	372871	400734	NO <sub>2</sub>	2016 AQMA	7.0	3.0	No	2.5
SA56NO, SA57NO, SA58NO	Glazebury AURN co-location	Rural	368759	396027	NO <sub>2</sub>	NO	130.0	N/A	Yes	3.0
SA59NO	West Crown Avenue	Roadside	381822	397895	NO <sub>2</sub>	2016 AQMA	11.0	2.0	No	3.0
SA60NO	Regent Road	Roadside	382445	397724	NO <sub>2</sub>	2016 AQMA	2.5	4.5	No	2.0
SA61NO	Campbell Road	Roadside	377269	400943	NO <sub>2</sub>	2016 AQMA	5.0	3.5	No	2.5
SA63NO	Greenacre Lane	Roadside	374673	399912	NO <sub>2</sub>	2016 AQMA	-11.5	21.5	No	3.0
SA64NO	Lancaster Road	Roadside	378805	399848	NO <sub>2</sub>	2016 AQMA	10.0	5.0	No	2.0
SA65NO	Eccles Old Road	Roadside	378584	399220	NO <sub>2</sub>	2016 AQMA	10.0	3.0	No	3.0

SA66NO	Stannard Road	Roadside	375118	398502	NO <sub>2</sub>	2016 AQMA	5.0	12.5	No	3.0
SA68NO	Walkden High Street	Roadside	373570	403096	NO <sub>2</sub>	2016 AQMA	3.5	2.5	No	3.0
SA69NO	Agecroft Road/ Pendlecroft Ave	Roadside	379397	401370	NO <sub>2</sub>	2016 AQMA	8.5	1.5	No	3.0
SA70NO	Belvedere Road	Roadside	381677	398832	NO <sub>2</sub>	2016 AQMA	4.0	12.8	No	3.0
SA72NO	Station Road, Swinton	Roadside	377536	401804	NO <sub>2</sub>	2016 AQMA	2.0	0.5	No	3.0
SA73NO	Worsley Brow	Roadside	374576	400611	NO <sub>2</sub>	2016 AQMA	N/A	2.0	No	3.0
SA74NO	Canal Bank	Roadside	376315	399249	NO <sub>2</sub>	2016 AQMA	-3.5	24.0	No	3.0
SA75NO	Weaste Road	Roadside	379608	398539	NO <sub>2</sub>	2016 AQMA	7.5	0.5	No	3.0
SA76NO	Langworthy Road	Roadside	380540	398422	NO <sub>2</sub>	2016 AQMA	5.0	2.9	No	3.0
SA77NO	Albion Way (Trenam Place)	Roadside	381686	398504	NO <sub>2</sub>	2016 AQMA	3.0	13.5	No	3.0
SA78NO	Broughton Road	Roadside	381220	399530	NO <sub>2</sub>	2016 AQMA	2.5	1.5	No	3.0
SA79NO	Chapel Street	Roadside	382602	398519	NO <sub>2</sub>	2016 AQMA	2.0	10.0	No	3.0
SA80NO	Hawthorne Drive	Roadside	375428	401417	NO <sub>2</sub>	2016 AQMA	-9.0	30.5	No	3.0

SA82NO	Rooke Street	Roadside	375394	397816	NO <sub>2</sub>	2016 AQMA	10.0	2.2	No	3.0
SA83NO	Bury New Road	Roadside	382945	400732	NO <sub>2</sub>	2016 AQMA	7.7	3.0	No	2.5
SA84NO	Langley Road	Roadside	380776	400834	NO <sub>2</sub>	NO	2.0	2.0	No	2.5
SA85NO	Bray Avenue	Roadside	375991	399237	NO <sub>2</sub>	2016 AQMA	-3.5	9.0	No	2.5
SA86NO	Bury Old Road	Kerbside	383819	401771	NO <sub>2</sub>	NO	5.0	0.5	No	2.5
SA87NO	Merlin Road	Roadside	372225	395616	NO <sub>2</sub>	NO	9.0	2.4	No	2.5
SA89NO	Velveteen Crescent	Roadside	373892	404569	NO <sub>2</sub>	2016 AQMA	7.0	30.0	No	2.5
SA90NO	Trafford Road	Roadside	381349	397162	NO <sub>2</sub>	2016 AQMA	2.5	4.5	No	2.0
SA91NO, SA92NO, SA93NO	Regent Road automatic site co-location	Roadside	382580	397717	NO <sub>2</sub>	2016 AQMA	N/A	3.0	Yes	1.5
<b>Stockport Metropolitan Borough Council</b>										
ST3NO	Denby Lane	Urban Background	388547	391845	NO <sub>2</sub>	2016 AQMA	8.0	2.0	No	2.5
ST4NO	Compstall Library	Rural	396469	390800	NO <sub>2</sub>	No	15.0	20.0	No	2.5
ST5NO	Lyme Farm	Rural	396869	382699	NO <sub>2</sub>	No	8.0	100.0	No	1.5
ST6NO	Cheadle Library	Urban Background	385960	388552	NO <sub>2</sub>	No	24.0	20.0	No	1.5

ST7NO	Civic Centre Hazel Grove	Kerbside	392063	386972	NO <sub>2</sub>	2016 AQMA	3.0	1.0	No	2.0
ST8NO	Marshalls Yard Hazel Grove	Urban Background	392016	387042	NO <sub>2</sub>	2016 AQMA	14.0	15.0	No	1.5
ST9NO	Alderley Close Hazel Grove	Urban Background	392742	385680	NO <sub>2</sub>	No	0.0	25.0	No	1.5
ST10NO	Deneside Cres. Hazel Grove	Urban Background	392781	387271	NO <sub>2</sub>	No	0.0	6.0	No	1.5
ST11NO	Norwood Road	Roadside	391083	387938	NO <sub>2</sub>	2016 AQMA	3.0	3.0	No	2.0
ST13NO	Prospect Vale	Urban Background	384675	386295	NO <sub>2</sub>	No	4.0	2.0	No	2.0
ST2NO, ST12NO, ST14NO	A34 Kingsway	Roadside	385047	388339	NO <sub>2</sub>	2016 AQMA	8.0	1.0	Yes	2.0
ST15NO	Bramhall Lane	Roadside	389886	388961	NO <sub>2</sub>	2016 AQMA	4.0	2.0	No	2.0
ST16NO	Stockport Rd. Bredbury	Roadside	391568	391225	NO <sub>2</sub>	2016 AQMA	20.0	3.0	No	2.5
ST17NO	Yew Street	Urban Background	388442	390077	NO <sub>2</sub>	2016 AQMA	82.0	2.0	No	2.0
ST18NO	Debenhams	Urban Background	389272	390440	NO <sub>2</sub>	2016 AQMA	20.0	3.0	No	2.0
ST19NO	Gorton Road	Roadside	389479	393463	NO <sub>2</sub>	2016 AQMA	0.0	2.2	No	2.5
ST20NO	Kennilworth Road	Urban Background	386921	389528	NO <sub>2</sub>	2016 AQMA	3.0	15.0	No	2.0

ST21NO	Carmichael Street	Urban Background	388598	389415	NO <sub>2</sub>	No	0.0	1.0	No	2.5
ST22NO, ST23NO, ST24NO	A6 Hazel Grove	Roadside	391483	387637	NO <sub>2</sub>	2016 AQMA	5.0	5.0	Yes	2.0
ST25NO	Central Marple	Roadside	395770	388655	NO <sub>2</sub>	No	5.0	3.0	No	2.5
ST26NO	Midland Road	Urban Background	389396	387357	NO <sub>2</sub>	No	0.0	10.0	No	1.5
ST27NO	Pinewood Close	Urban Background	387091	391384	NO <sub>2</sub>	No	0.0	6.0	No	1.5
ST28NO	Finney Lane	Roadside	385700	386219	NO <sub>2</sub>	2016 AQMA	2.0	3.0	No	2.5
ST29NO	Russell Street	Urban Background	390087	388545	NO <sub>2</sub>	No	0.0	2.0	No	1.5
ST31NO	Stockport Rd, West Bredbury	Roadside	392442	391752	NO <sub>2</sub>	2016 AQMA	10.0	2.0	No	2.5
ST32NO	Lancashire Hill	Roadside	389480	390957	NO <sub>2</sub>	2016 AQMA	30.0	2.0	No	2.5
ST33NO	Hall Street	Roadside	390416	390087	NO <sub>2</sub>	2016 AQMA	10.0	2.0	No	2.5
ST34NO	Didsbury Road	Roadside	388304	390351	NO <sub>2</sub>	2016 AQMA	6.0	2.0	No	2.5
ST35NO	A6, High Lane	Roadside	395020	385360	NO <sub>2</sub>	2016 AQMA	2.0	2.0	No	2.5
ST36NO	A6 Post Office Site	Roadside	389386	390142	NO <sub>2</sub>	2016 AQMA	5.0	1.0	No	2.4

Tameside Metropolitan Borough Council										
TA1NO	King Street Dukinfield	Roadside	394051	397180	NO <sub>2</sub>	No	1.0	2.0	No	3.0
TA2NO	Hyde Town Hall Hyde	Roadside	394788	394933	NO <sub>2</sub>	No	2.0	2.0	No	3.0
TA3NO	Thompson Road Denton	Urban Background	390961	395417	NO <sub>2</sub>	2016 AQMA	3.0	2.0	No	3.0
TASPNO	Penny Meadow Ashton	Roadside	394194	399267	NO <sub>2</sub>	2016 AQMA	3.0	4.0	No	3.0
TA5NO	Green Lane Hollingworth	Urban Background	400488	396539	NO <sub>2</sub>	No	6.0	2.0	No	3.0
TA11NO	Market Street Hollingworth	Roadside	400390	396025	NO <sub>2</sub>	2016 AQMA	1.0	2.0	No	3.0
TA13NO	Manchester Road Ashton	Roadside	392586	398431	NO <sub>2</sub>	2016 AQMA	10.0	3.0	No	3.0
TA14NO	Park Parade Ashton	Roadside	393696	398794	NO <sub>2</sub>	2016 AQMA	30.0	10.0	No	3.0
TA16NO	Manchester Road Audenshaw	Roadside	391413	397974	NO <sub>2</sub>	2016 AQMA	8.0	2.0	No	3.0
TA17NO	Manchester Road Droylsden	Roadside	389106	398242	NO <sub>2</sub>	2016 AQMA	4.0	4.0	No	3.0
TA18NO	Manchester Road Denton	Roadside	391970	395521	NO <sub>2</sub>	2016 AQMA	35.0	2.0	No	3.0
TA19NO	Manchester Road Crown Point	Roadside	392477	395505	NO <sub>2</sub>	2016 AQMA	1.0	1.0	No	3.0

TA20NO	B&Q Hyde	Roadside	394610	395102	NO <sub>2</sub>	2016 AQMA	3.0	1.0	No	3.0
TA21NO	Woolley Lane Hollingworth	Roadside	400423	395965	NO <sub>2</sub>	2016 AQMA	1.0	1.0	No	3.0
TA23NO	Cavendish Mill Ashton	Urban Background	393630	398598	NO <sub>2</sub>	No	1.0	9.0	No	3.0
TA24NO	Manchester Road Denton (Golf Course)	Roadside	390475	395621	NO <sub>2</sub>	2016 AQMA	5.0	2.0	No	3.0
TA25NO	Oldham Road Ashton	Roadside	396950	402329	NO <sub>2</sub>	2016 AQMA	5.0	2.0	No	3.0
TA27NO	Acres Lane Stalybridge	Roadside	396177	398218	NO <sub>2</sub>	2016 AQMA	17.0	2.0	No	3.0
TA28NO	George Lawton Hall, Mossley	Roadside	393050	401038	NO <sub>2</sub>	No	5.0	2.0	No	3.0
TA29NO	Keane Street Ashton	Suburban	393370	399494	NO <sub>2</sub>	No	3.0	75.0	No	3.0
TA30NO	Oldham Road Ashton	Roadside	393419	399691	NO <sub>2</sub>	2016 AQMA	2.0	2.0	No	3.0
TA31NO	Waterton Lane Mossley	Suburban	396899	402449	NO <sub>2</sub>	No	5.0	2.0	No	3.0
TA32NO	Arundel Street Mossley	Suburban	396982	402437	NO <sub>2</sub>	No	2.0	2.0	No	3.0
TA33NO	Lees Road Mossley	Roadside	397011	402591	NO <sub>2</sub>	No	2.0	2.0	No	3.0
TA34NO	Stockport Road Mossley	Roadside	397060	402581	NO <sub>2</sub>	No	16.0	2.0	No	3.0

TA35NO	Stamford Road Mossley	Roadside	397080	402540	NO <sub>2</sub>	No	8.0	2.0	No	3.0
TA36NO	Argyle Street Mossley	Suburban	397060	402387	NO <sub>2</sub>	No	2.0	1.0	No	3.0
TA37NO	Stamford Street Mossley	Roadside	396728	402073	NO <sub>2</sub>	No	7.0	2.0	No	3.0
TA38NO	Albermarle Terrace Ashton	Urban Background	394006	399392	NO <sub>2</sub>	No	11.0	22.0	No	3.0
TA39NO	Cowhill Lane Ashton	Urban Background	394114	399366	NO <sub>2</sub>	No	11.0	1.0	No	3.0
TA40NO	Cowhill Lane Railway Bridge Ashton	Urban Background	394066	399314	NO <sub>2</sub>	No	45.0	1.0	No	3.0
TA41NO	Newton Street Ashton	Urban Background	394118	399259	NO <sub>2</sub>	2016 AQMA	1.0	2.0	No	3.0
TA42NO	Stamford Street East Ashton	Urban Background	394494	399010	NO <sub>2</sub>	No	6.0	2.0	No	3.0
TA43NO	Scotland Street Ashton	Roadside	394204	398933	NO <sub>2</sub>	2016 AQMA	30.0	13.0	No	3.0
TA44NO	Hattersley Road West Hattersley	Urban Background	397418	394398	NO <sub>2</sub>	No	22.0	12.0	No	3.0
TA45NO, TA46NO, TA47NO	Mottram Moor Hollingworth	Roadside	399719	395805	NO <sub>2</sub>	2016 AQMA	24.0	5.0	Yes	4.0
TA49NO	Park Parade AuL adjacent to Asda car park lamp post 56	Roadside	393731	398770	NO <sub>2</sub>	2016 AQMA	46.0	3.0	No	3.0

TA50NO	Park Parade/ Bentinck St AuL lamp post no.	Roadside	393498	398704	NO <sub>2</sub>	2016 AQMA	140.0	4.0	No	3.0
TA51NO	Park Parade AuL adjacent to Bentinck St car park lamp post no 113	Kerbside	393314	398624	NO <sub>2</sub>	2016 AQMA	82.0	1.0	No	3.0
TA52NO	Park Parade AuL adjacent to Bentinck St car park	Roadside	393509	398737	NO <sub>2</sub>	2016 AQMA	103.0	5.0	No	3.0
TA53NO	Stockport Rd AuL lamp post no.2	Roadside	393133	398536	NO <sub>2</sub>	2016 AQMA	31.0	3.0	No	3.0
TA54NO	Quality Vans William St AuL lamp post no.16	Roadside	392958	398474	NO <sub>2</sub>	2016 AQMA	24.0	3.0	No	3.0
TA55NO	39/41 Manchester Rd AuL lamp post no.17	Roadside	392741	398469	NO <sub>2</sub>	2016 AQMA	6.0	3.0	No	3.0
TA56NO	Manchester Rd AuL Slip Rd S/W lamp post no.28	Roadside	392490	398368	NO <sub>2</sub>	2016 AQMA	11.0	5.0	No	3.0
TA57NO	Manchester Rd AuL bus stop opposite BP station lamp post	Roadside	392838	398533	NO <sub>2</sub>	2016 AQMA	28.0	3.0	No	3.0

TA58NO	Manchester Rd AuL St Peter's Church lamp post no.3	Roadside	393080	398620	NO <sub>2</sub>	2016 AQMA	40.0	4.0	No	3.0
TA59NO	Astley Rd Stalybridge lamp post no.15	Roadside	395652	399140	NO <sub>2</sub>	No	23.0	2.0	No	3.0
TA60NO	33 Darnton Rd Stalybridge lamp post no.30	Roadside	395747	399112	NO <sub>2</sub>	No	9.0	1.0	No	3.0
TA61NO	42 Darnton Rd Stalybridge lamp post no.27	Roadside	395682	399171	NO <sub>2</sub>	No	6.0	1.0	No	3.0
TA62NO	Darnton Rd Stalybridge adjacent to boating lake lamp post no.23	Roadside	395589	399227	NO <sub>2</sub>	No	25.0	4.0	No	3.0
TA63NO	Lees Road Ashton, lamp post 15	Kerbside	394917	400922	NO <sub>2</sub>	No	13.0	0.0	No	3.0
TA64NO	Stamford Street Stalybridge	kerbside	395787	398769	NO <sub>2</sub>	2016 AQMA	1.0	0.0	No	3.0
TA65NO	Guide Lane Audenshaw	Kerbside	392532	396768	NO <sub>2</sub>	2016 AQMA	30.0	0.0	No	3.0
<b>Trafford Metropolitan Borough Council</b>										
TR5NO	5 Sale Leisure Centre	Urban Background	379052	392043	NO <sub>2</sub>	No	10.0	5.0	No	4.0

TR9NO	9 Trafford, Town Hall 12	Urban Background	380933	395889	NO <sub>2</sub>	2016 AQMA	20.0	100.0	No	3.0
TR19NO, TR19ANO, TR19BNO	19w Moss Park School (AQMA)	Urban Background	378783	394728	NO <sub>2</sub>	No	3.0	100.0	Yes	2.0
TR20NO, TR20ANO, TR20BNO	20w A56 Chester Road AQMA	Roadside	379411	394014	NO <sub>2</sub>	2016 AQMA	42.0	5.0	Yes	3.0
TR22NO	22w A56 corner of De Quincey Road	Kerbside	377089	390130	NO <sub>2</sub>	2016 AQMA	50.0	1.0	No	4.0
TR15NO	Bradley Lane, Stretford	Roadside	379089	393282	NO <sub>2</sub>	2016 AQMA	350.0	5.0	No	4.0
TR16NO, TR16ANO	Kingsway Park School, Urmston	Roadside	377418	395689	NO <sub>2</sub>	2016 AQMA	30.0	2.0	No	3.0
TR23NO	Stroma Gardens	Roadside	376432	396355	NO <sub>2</sub>	2016 AQMA	8.0	40.0	No	3.0
TR24NO	Tithebarn Road	Urban Background	379263	385812	NO <sub>2</sub>	No	16.0	3.0	No	2.0
TR25NO, TR25ANO, TR25BNO	Wellacre Academy	Kerbside	373755	394477	NO <sub>2</sub>	No	10.0	160.0	Yes	2.0
TR27NO	Warburton Lane Partington	Kerbside	371419	390760	NO <sub>2</sub>	No	20.0	1.0	No	2.0
TR28NO	Stamford New Road, Altrincham	Roadside	376804	387740	NO <sub>2</sub>	No	0.0	2.0	No	2.0

TR29NO	29	Kerbside	373906	392820	NO <sub>2</sub>	No	10.0	3.0	No	2.0
TR31NO	Carrington Spur	Roadside	376205	392690	NO <sub>2</sub>	No	120.0	0.5	No	2.0
<b>Wigan Metropolitan Borough Council</b>										
WI24NO	Wigan Town Hall	Roadside	358341	405539	NO <sub>2</sub>	2016 AQMA	20.0	4.0	No	2.0
WI33NO	Rose Court, Ince	Roadside	359723	405537	NO <sub>2</sub>	2016 AQMA	30.0	1.0	No	2.0
WI52NO	Church Lane, Lowton (A580)	Roadside	362137	396948	NO <sub>2</sub>	2016 AQMA	35.0	3.0	No	2.0
WI81NO	Preston Road Standish	Roadside	355979	410362	NO <sub>2</sub>	2016 AQMA	0.0	4.0	No	2.0
WI114NO	Atherleigh Way, Leigh	Roadside	365115	400259	NO <sub>2</sub>	No	0.0	3.0	No	2.0
WI148NO	120 Wigan Road	Kerbside	361247	404576	NO <sub>2</sub>	No	5.0	1.0	No	2.0
WI156NO	244 Leigh Road	Kerbside	366320	402136	NO <sub>2</sub>	No	8.0	1.0	No	2.0
WI161NO	80 Manchester Road	Roadside	369635	402019	NO <sub>2</sub>	No	0.0	2.0	No	2.0
WI167NO	60 Newton Road	Roadside	363544	397933	NO <sub>2</sub>	No	15.0	2.0	No	2.0
WI168NO	239a Newton Road	Kerbside	362463	397005	NO <sub>2</sub>	2016 AQMA	15.0	2.0	No	2.0
WI169NO	East Lancashire Road	Roadside	362557	396906	NO <sub>2</sub>	No	28.0	2.0	No	2.0

WI170NO	269 Newton Road	Roadside	362236	396675	NO <sub>2</sub>	No	11.0	1.0	No	2.0
WI172NO	537 Wigan Road	Kerbside	356881	401314	NO <sub>2</sub>	No	3.0	1.0	No	2.0
WI177NO	18 Cross Street	Kerbside	356230	410105	NO <sub>2</sub>	No	1.0	3.0	No	2.0
WI178NO	22 School Lane	Kerbside	356021	410128	NO <sub>2</sub>	No	6.0	0.5	No	2.0
WI180NO	4 Winwick Lane	Kerbside	362105	396491	NO <sub>2</sub>	No	0.0	2.0	No	2.0
WI181NO	Walthew House Lane	Kerbside	354819	406235	NO <sub>2</sub>	No	5.0	1.0	No	2.0
WI186NO	King Street West C	Kerbside	358070	405587	NO <sub>2</sub>	2016 AQMA	88.0	2.0	No	2.0
WI188NO	Winwick Lane B	Roadside	362111	396526	NO <sub>2</sub>	No	18.0	2.0	No	2.0
WI205NO	Lime Grove, Lane Head	Kerbside	362151	396604	NO <sub>2</sub>	No	6.5	1.0	No	2.0
WI208NO, WI209NO, WI210NO	Wigan Leigh 3	Roadside	365686	400243	NO <sub>2</sub>	No	23.0	2.0	Yes	2.0
WI213NO	Newton Road B	Roadside	362019	396512	NO <sub>2</sub>	No	19.0	1.0	No	2.0
WI216NO	Darlington Street B	Kerbside	358464	405342	NO <sub>2</sub>	2016 AQMA	2.0	1.0	No	2.0
WI217NO	Miry Lane	Kerbside	357780	405306	NO <sub>2</sub>	No	20.0	0.5	No	2.0
WI219NO	Wilcock Street, Wigan	Roadside	357484	405407	NO <sub>2</sub>	No	59.0	2.0	No	2.0

WI220NO	Pottery Road, Wigan	Roadside	357420	405407	NO <sub>2</sub>	No	146.0	2.0	No	2.0
WI221NO	Tanners Lane, Golborne (A)	Roadside	360499	397867	NO <sub>2</sub>	No	3.0	2.0	No	2.0
WI222NO	Tanners Lane, Golborne (B)	Roadside	360491	397842	NO <sub>2</sub>	No	12.0	2.0	No	2.0
WI223NO	High Street, Golborne (A)	Roadside	360430	397779	NO <sub>2</sub>	No	15.0	2.0	No	2.0
WI224NO	High Street, Golborne (B)	Roadside	360418	397775	NO <sub>2</sub>	No	10.0	2.0	No	2.0
WI225NO	Charles Street, Golborne (B)	Roadside	360459	397995	NO <sub>2</sub>	No	11.0	2.0	No	2.0
WI226NO	Charles St, Golborne (C)	Roadside	360462	398006	NO <sub>2</sub>	No	2.0	2.0	No	2.0
WI227NO	High Street, Golborne (C)	Roadside	360576	398144	NO <sub>2</sub>	No	21.0	2.0	No	2.0
WI228NO	High Street, Golborne (D)	Roadside	360578	398126	NO <sub>2</sub>	No	4.0	2.0	No	2.0
WI230NO	Heath Street, Golborne (B)	Roadside	360380	397912	NO <sub>2</sub>	No	0.0	2.0	No	2.0
WI231NO	St Oswalds Road / A58, Ashton	Roadside	357473	398990	NO <sub>2</sub>	No	25.0	2.0	No	2.0
WI232NO	Queens Road / A49, Ashton	Roadside	357635	399502	NO <sub>2</sub>	No	15.0	3.0	No	2.0

WI233NO	Gidlow Lane / Gidlow Ave, Wigan	Kerbside	357445	406461	NO <sub>2</sub>	No	9.0	1.0	No	2.0
WI234NO	Atherton Road / Oak Avenue, Hindley Green	Roadside	363136	403467	NO <sub>2</sub>	No	10.0	3.0	No	2.0
WI235NO	Chestnut Avenue, Leigh	Roadside	365419	399116	NO <sub>2</sub>	No	21.0	0.5	No	2.0
WI236NO	Eyet Street, Leigh	Kerbside	365386	400353	NO <sub>2</sub>	No	5.0	0.5	No	2.0
WI237NO	Fletcher St, Atherton	Kerbside	367352	403200	NO <sub>2</sub>	No	12.0	0.5	No	2.0
WI238NO	Oak Street, Atherton	Roadside	369056	402146	NO <sub>2</sub>	No	10.0	2.0	No	2.0
WI239NO	Worsley Mesnes Ave, Wigan	Roadside	357092	404213	NO <sub>2</sub>	No	20.0	3.0	No	2.0
WI240NO	Wigan Road, New Springs	Kerbside	360220	407146	NO <sub>2</sub>	No	14.0	2.0	No	2.0
WI241NO	Kenyon Road, Wigan	Kerbside	358025	406658	NO <sub>2</sub>	No	8.0	0.5	No	2.0
WI244NO	244	Kerbside	357610	406859	NO <sub>2</sub>	No	14.0	1.0	No	2.0
WI245NO	245	Kerbside	358133	405492	NO <sub>2</sub>	2016 AQMA	8.0	0.5	No	2.0

**Notes:**

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

(2) N/A if not applicable.

**Table A.3 – Annual Mean NO<sub>2</sub> Monitoring Results: Automatic Monitoring (µg/m<sup>3</sup>)**

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2025 (%) <sup>(2)</sup>	2021 <sup>(3)</sup>	2022 <sup>(3)</sup>	2023	2024	2025
Bolton A579 Derby Street	371296	408600	Roadside	96.9	96.9	23	23	21.4	19.9	20.4
Bury Bridge (CAP)	379840	410944	Roadside	95.8	95.8	-	22.6	22.3	20.7	19.6
Bury Prestwich	381650	403222	Roadside	99.5	99.5	33.3	30	28.1	26.7	22.5
Bury Radcliffe	378190	407480	Roadside	83.2	83.2	21.7	20	18.9	17.8	16.9
Bury Whitefield	380636	406973	Roadside	99.2	99.2	20	21	19.6	18.6	16.0
Manchester Bridge Street (CAP) <sup>(3)</sup>	383556	398292	Roadside	96.6	96.6	-	-	<b>53.5</b>	<b>51.9</b>	<b>42.4<sup>(4)</sup></b>
Manchester Oxford Rd	384239	397276	Kerbside	98.9	95.0	<b>44(40.4)</b>	<b>43(38.4)</b>	<b>40.9(35.6)</b>	<b>44.2(37.3)</b>	34.6
Manchester Piccadilly	384310	398337	Urban Centre	98.3	98.3	30	29	26.8	27.0	23.6
Manchester Sharston	384202	386121	Suburban	92.2	92.2	16	15	14.7	14.2	13.8
Oldham Crompton Way	393884	409183	Roadside	99.4	99.4	25	24	21	20.2	18.0
Rochdale Queensway	389325	411411	Roadside	97.5	97.5	28.5	27	25.7	23.2	23.4
Salford Eccles	377926	398727	Urban Background	95.6	95.6	23	22	19.6	18.0	18.0

Salford Glazebury	368759	396027	Rural	97.7	97.7	12	11	12.1	11.2	9.9
Salford M60	374811	400857	Roadside	99.4	99.4	34	34	33.4	31.5	30.6
Salford Regent Road (CAP)	382580	397717	Roadside	99.4	99.4	-	-	32	32.0	29.6
Stockport Cheadle A34	385047	388339	Roadside	97.0	97.0	28	29	25.6	24.9	21.3
Stockport Hazel Grove	391481	387637	Roadside	98.6	98.6	19	18	16.7	16.0	15.4
Tameside A635 Manchester Road	392538	398419	Roadside	93.6	93.6	34	32	30.1	29.1	26.4
Tameside Mottram Moor	399719	395804	Roadside	97.6	57.8	36	34	32.9	29.7	27.7
Trafford A56	379411	394014	Roadside	98.4	98.4	23	24	20.7	20.2	18.5
Trafford Moss Park	378783	394728	Urban Background	98.6	55.0	15	15	14.4	12.4	11.5
Trafford Wellacre Academy	373755	394477	Urban Background	95.8	94.4	13	11	10.6	10.6	10.6
Wigan Centre	357816	406024	Urban Background	98.9	98.9	17	17	14.8	12.7	13.8
Wigan Leigh 3	365686	400243	Roadside	99.5	99.5	25	22	21.4	19.1	18.4

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 NO<sub>2</sub> annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2025.**

**Notes:**

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

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

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

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

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

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

(3) Due the way in which historic reports were generated, these years are not reported to 1 decimal place.

(4) **There is no relevant exposure near to this location. The fall-off with distance concentration cannot be calculated.**

**Table A.4 – Annual Mean NO<sub>2</sub> Monitoring Results: Non-Automatic Monitoring (µg/m<sup>3</sup>)**

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2025 (%) <sup>(2)</sup>	2021	2022	2023	2024	2025
<b>Bolton Metropolitan Borough Council</b>										
BO3NO	370763	407929	Kerbside	100.0	100.0	37.1	36.6	37.4	31.1	30.7
BO4NO	371394	411718	Urban Background	100.0	100.0	20.0	21.4	18.7	15.9	16.8
BO8NO	371352	409094	Kerbside	92.3	92.3	19.5	23.8	18.4	16.8	16.2
BO11NO	363712	412396	Urban Background	100.0	100.0	10.9	10.7	8.9	9.1	7.5
BO14NO	373839	406130	Roadside	100.0	100.0	18.2	19.1	18.4	15.8	15.2
BO15NO	371435	411690	Kerbside	92.3	92.3	28.1	30.7	27.4	20.2	22.4
BO16NO	371304	411748	Urban Background	100.0	100.0	16.6	17.0	15.4	13.3	13.6
BO41NO	366286	406561	Urban Background	100.0	100.0	29.4	27.6	26.8	23.2	21.9
BO43NO	365501	409887	Kerbside	100.0	100.0	26.2	27.4	27.0	22.3	21.8
BO44NO, BO45NO	365599	409845	Urban Background	100.0	100.0	18.0	18.3	16.6	15.3	13.7
BO48NO	375397	407457	Urban Background	90.4	90.4	23.1	21.4	20.9	17.7	17.4

BO53NO	373236	411968	Urban Background	82.7	82.7	14.2	25.4	30.7	25.1	26.0
BO54NO	372908	412120	Urban Background	90.4	90.4	12.4	11.0	11.7	10.2	9.8
BO60NO	373287	405061	Roadside	75.0	75.0	25.6	26.6	23.1	19.0	18.8
BO61NO	374450	405207	Kerbside	80.8	80.8	31.7	30.4	29.2	26.0	26.7
BO62NO	374194	405460	Urban Background	90.4	90.4	29.9	30.7	29.1	24.9	26.4
BO63NO	374282	406257	Urban Background	75.0	75.0	18.5	17.3	17.7	15.8	16.6
BO64NO	371965	409907	Roadside	100.0	100.0	21.1	23.9	22.3	18.8	19.7
BO65NO	372059	409877	Urban Background	100.0	100.0	21.8	23.0	19.4	18.9	17.1
BO66NO	371442	411599	Roadside	100.0	100.0	32.5	31.2	28.2	20.4	26.0
BO67NO	365163	405640	Urban Background	100.0	100.0	17.1	16.6	15.1	12.9	12.6
BO68NO	367672	406910	Urban Background	100.0	100.0	23.7	24.1	22.3	22.6	19.6
BO69NO	369030	405809	Roadside	100.0	100.0	38.1	39.2	35.9	30.6	30.0
BO70NO	368757	405701	Roadside	100.0	100.0	18.2	18.9	17.0	13.4	14.0
BO71NO	370362	405400	Roadside	100.0	100.0	<b>41.5</b>	39.7	<b>40.4</b>	31.6	29.3
BO72NO	370115	405372	Roadside	100.0	100.0	25.8	37.0	22.0	20.1	20.4
BO73NO	371805	409820	Roadside	75.0	75.0	37.4	38.3	35.7	27.2	29.5

BO74NO	371805	409832	Roadside	90.4	90.4	33.8	34.5	33.2	28.6	28.7
BO75NO	371623	409235	Roadside	59.6	59.6	19.1	20.5	16.8	-	20.3
BO76NO, BO77NO, BO78NO	373491	404836	Roadside	100.0	100.0	24.7	26.0	24.4	21.5	19.6
BO79NO, BO80NO, BO81NO	371296	408600	Roadside	100.0	100.0	18.7	25.2	23.0	20.5	19.6
BOA101	374561	405364	Roadside	100.0	100.0	25.3	25.8	22.5	22.7	19.7
BOA102	374584	405525	Roadside	84.6	84.6	24.9	26.9	24.7	20.9	21.1
BOA103	374526	405906	Roadside	92.3	92.3	22.5	21.3	21.2	18.0	16.9
BOA104	373795	406600	Roadside	48.1	48.1	34.1	35.6	33.0	18.3	19.5
BOA105	373604	406882	Roadside	92.3	92.3	26.1	27.0	25.1	21.4	21.6
BOA107	372372	408912	Roadside	100.0	100.0	20.3	21.0	19.4	18.0	17.0
BOA106	372643	408070	Roadside	100.0	100.0	31.3	26.5	27.0	23.8	21.5
BOA109	373818	409401	Roadside	90.4	90.4	18.6	19.0	18.3	15.9	14.0
BOA110	371501	409694	Roadside	100.0	100.0	33.4	32.3	29.9	24.5	25.0
BOA111	371102	409575	Roadside	100.0	100.0	28.8	28.7	25.2	24.5	22.0

BOA112	371715	408681	Roadside	100.0	100.0	29.8	28.8	25.3	25.8	24.8
BOA113	374510	405522	Roadside	84.6	84.6	25.9	26.9	25.2	21.0	19.1
BOA114	372122	409347	Roadside	100.0	100.0	26.1	26.2	24.7	20.5	22.1
BOA115	371903	409026	Roadside	84.6	84.6	32.3	32.3	35.1	27.6	27.4
BOA116	371803	408976	Roadside	100.0	100.0	31.0	28.7	30.9	24.3	24.7
BOA118	371832	409625	Roadside	100.0	100.0	24.5	24.8	23.7	20.2	19.2
BOA119	371328	409251	Roadside	100.0	100.0	27.1	31.4	31.7	29.0	25.6
BOA120	373946	405207	Roadside	75.0	75.0	-	-	-	18.2	16.4
<b>Bury Metropolitan Borough Council</b>										
BU1NO	384372	404917	Roadside	65.4	65.4	25.3	26.6	24.6	21.9	19.9
BU2NO	379101	417145	Roadside	65.4	65.4	27.4	28.7	26.8	27.3	21.1
BU3ANO, BU3BNO, BU3CNO	380636	406973	Roadside	65.4	65.4	19.1	20.9	18.8	16.7	14.1
BU4NO	380964	404831	Roadside	65.4	65.4	28.4	31.8	29.1	27.4	23.3
BU5NO	380497	405420	Roadside	65.4	65.4	20.9	21.0	19.6	17.6	15.8
BU6NO	379658	410888	Roadside	65.4	65.4	30.4	30.7	27.3	23.6	23.5

BU7NO	381984	411866	Roadside	65.4	65.4	24.8	25.9	24.1	21.5	20.6
BU8NO	380754	412619	Roadside	7.7	7.7	25.6	25.9	23.2	23.2	-
BU9NO	379630	411031	Roadside	57.7	57.7	26.9	30.2	25.0	22.8	21.5
BU10NO	379854	410978	Roadside	57.7	57.7	27.9	30.7	26.9	27.6	28.0
BU11NO	380980	411193	Roadside	65.4	65.4	33.5	34.7	31.4	27.7	26.0
BU12NO	381344	410744	Kerbside	65.4	65.4	<b>40.9</b>	38.7	38.7	36.4	33.1
BU13NO	381728	410677	Kerbside	55.8	55.8	39.8	36.9	35.0	34.0	29.1
BU14NO	380398	410455	Roadside	50.0	50.0	26.8	30.7	29.6	25.8	22.3
BU15NO	380852	405209	Kerbside	65.4	65.4	37.4	<b>40.5</b>	36.8	33.4	27.0
BU16NO	380914	404898	Roadside	65.4	65.4	36.1	39.0	34.8	31.7	26.5
BU17NO	381105	404279	Roadside	65.4	65.4	28.2	28.6	26.8	24.3	20.1
BU18NO	382071	411362	Roadside	57.7	57.7	30.3	30.3	30.2	25.7	24.8
BU19NO	381321	405115	Roadside	65.4	65.4	33.1	37.7	33.5	29.1	27.4
BU20NO	382974	405930	Urban Background	65.4	65.4	28.4	28.8	27.6	24.1	20.7
<b>Manchester City Council</b>										
MA9ANO	384601	398303	Kerbside	100.0	100.0	35.7	37.5	36.2	33.8	28.7

MA24NO	383968	398070	Kerbside	100.0	100.0	31.8	32.4	29.8	27.2	24.3
MA26ANO	383973	398874	Urban Background	100.0	100.0	25.9	27.5	24.5	24.6	20.5
MA29ANO	384119	397503	Roadside	100.0	100.0	<b>44.8</b>	<b>49.8</b>	<b>49.6</b>	<b>51.3</b>	38.6
MA37NO	382829	391493	Roadside	100.0	100.0	29.5	32.1	28.5	28.6	23.5
MA59NO, MA60NO, MA61NO	384310	398337	Urban Background	100.0	100.0	24.6	25.3	24.4	24.4	20.3
MA71NO	385161	398290	Roadside	100.0	100.0	34.2	34.4	30.7	29.0	26.2
MA72NO	384761	397384	Urban Background	100.0	100.0	27.5	26.3	24.3	24.0	21.2
MA73NO	388604	396042	Roadside	100.0	100.0	31.6	31.5	29.5	28.0	26.3
MA75NO	387363	394617	Kerbside	100.0	100.0	39.0	38.8	39.6	37.2	33.1
MA77NO	383576	397489	Urban Background	100.0	100.0	30.8	33.1	31.6	28.4	26.9
MA81NO	386589	394083	Urban Background	84.6	84.6	18.1	18.8	17.0	16.3	15.4
MA82NO, MA83NO, MA84NO	384239	397276	Roadside	100.0	100.0	<b>40.7</b>	<b>42.6</b>	<b>41.4</b>	<b>41.7</b>	31.4
MA88NO	384469	398981	Kerbside	100.0	100.0	36.8	35.7	32.7	30.3	28.0
MA88ANO	386536	396699	Roadside	90.4	90.4	35.3	39.2	36.1	31.9	29.4

MA90BNO, MA91BNO, MA92BNO	384202	386121	Suburban	100.0	100.0	14.1	15.2	14.2	13.9	12.7
MA93BNO	382419	390010	Roadside	82.7	82.7	33.8	34.0	31.0	30.4	26.2
MA95BNO	386668	397566	Roadside	75.0	75.0	34.1	33.7	31.5	27.3	26.7
MA96BNO	385189	397167	Roadside	82.7	82.7	<b>41.0</b>	<b>43.5</b>	39.7	36.4	30.8
MA99BNO	385400	399245	Roadside	84.6	84.6	32.9	32.7	31.3	27.5	23.9
MA100BNO	383605	402293	Roadside	92.3	92.3	33.6	33.0	30.6	27.2	24.1
MA101BNO	385999	402026	Roadside	100.0	100.0	35.9	35.6	34.9	32.1	30.6
MA102BNO	385792	402952	Roadside	92.3	92.3	31.0	32.8	32.2	27.6	24.2
MA103BNO	385431	400653	Roadside	100.0	100.0	39.6	<b>40.1</b>	37.9	35.4	32.1
MA104BNO	383511	399906	Roadside	92.3	92.3	36.4	37.9	34.5	31.1	28.2
MA112BNO	383987	396734	Roadside	100.0	100.0	21.4	22.7	19.8	19.3	17.5
MA113BNO	385087	396891	Roadside	100.0	100.0	28.1	29.2	28.2	27.6	24.4
<b>Oldham Metropolitan Borough Council</b>										
OLMRNO	390746	405397	Roadside	67.3	67.3	28.6	35.0	28.4	22.1	27.4
OLSHSNO	390394	405454	Roadside	100.0	100.0	29.8	29.6	29.1	25.9	25.1

OL259BNO	390089	404456	Roadside	100.0	100.0	34.5	34.9	32.3	31.2	26.1
OL1RANO	388698	404903	Roadside	100.0	100.0	24.1	26.0	24.0	21.9	21.7
OL484BNO	389367	403280	Urban Background	84.6	84.6	-	-	27.1	25.2	22.8
OLOBNO	389789	403685	Roadside	75.0	75.0	27.8	28.2	32.5	22.3	23.5
OLPSNO	388747	400973	Urban Background	90.4	90.4	32.5	30.7	30.4	26.1	22.3
OLWARNO	389237	401310	Roadside	100.0	100.0	32.4	33.4	33.7	27.9	26.0
OLHRNO	390756	402571	Roadside	100.0	100.0	32.6	33.9	32.3	28.1	27.0
OLIRSNO	390675	402736	Urban Background	92.3	92.3	25.7	27.9	29.0	23.4	22.1
OL368MRNO	390976	403252	Roadside	100.0	100.0	38.2	38.9	37.1	33.0	29.7
OLESNO	391367	404318	Roadside	92.3	92.3	27.9	29.1	27.0	25.3	23.7
OLARNO	392771	402951	Roadside	100.0	100.0	25.5	26.4	25.6	22.8	19.6
OLWOODNO	393056	404638	Urban Background	100.0	100.0	31.1	31.4	28.3	25.7	23.0
OLWSMSNO	392947	404854	Roadside	100.0	100.0	38.2	37.1	26.7	24.8	25.7
OL17SRNO	393643	405343	Kerbside	50.0	50.0	39.9	<b>40.4</b>	38.3	35.0	26.1
OLHS2NO	393501	405186	Roadside	80.8	80.8	25.6	26.1	26.1	23.2	20.4
OLRRNO	394210	405752	Roadside	100.0	100.0	32.4	30.2	28.4	24.6	21.9

OLHURNO	395561	405751	Roadside	100.0	100.0	30.9	28.5	28.7	24.4	22.6
OLCVNO	399533	404454	Roadside	100.0	100.0	15.3	15.4	15.8	13.3	12.1
OLHSNO	399589	405511	Roadside	100.0	100.0	25.2	25.8	25.4	21.0	18.8
OLCW1NO, OLCW2NO, OLCW3NO	393884	409183	Roadside	92.3	92.3	28.9	26.6	25.5	22.5	19.2
OL21SRNO	392217	407255	Roadside	100.0	100.0	<b>46.3</b>	<b>43.8</b>	<b>45.0</b>	<b>41.3</b>	36.5
OLJSNO	393097	406897	Urban Background	100.0	100.0	24.2	23.4	23.0	19.5	20.8
OLRDNO	392111	406432	Roadside	92.3	92.3	27.4	29.8	30.1	24.7	22.9
OL12ORNO	392045	407608	Roadside	100.0	100.0	<b>43.2</b>	<b>47.0</b>	<b>43.6</b>	37.4	32.1
OLFANO	391100	406218	Urban Background	90.4	90.4	18.4	20.7	17.8	16.4	15.0
OLSMWNO	392748	405294	Urban Background	57.7	57.7	-	-	-	19.8	19.0
OLLSNO	392646	405286	Roadside	100.0	100.0	-	-	-	22.8	19.9
OLSWNO	392622	405289	Roadside	100.0	100.0	-	-	-	23.6	19.3
<b>Rochdale Metropolitan Borough Council</b>										
RO2ANO	388537	409942	Urban Background	80.8	80.8	-	-	31.0	24.5	24.1
RO3ANO	388581	409797	Urban Background	67.3	67.3	16.4	17.0	16.4	14.4	13.1

RO4ANO	387080	406278	Urban Background	92.3	92.3	22.8	22.7	23.0	20.3	16.5
RO5ANO	386870	404044	Roadside	90.4	90.4	16.4	16.4	14.2	15.1	13.6
RO6ANO	385413	408320	Kerbside	90.4	90.4	32.3	34.7	28.9	24.3	27.7
RO7ANO	388603	411925	Urban Background	100.0	100.0	27.7	26.4	26.1	22.6	22.9
RO8ANO	388932	412091	Roadside	48.1	48.1	36.6	36.3	32.1	-	26.9
RO9ANO	389057	412217	Kerbside	90.4	90.4	34.9	36.4	26.6	-	27.1
RO10ANO	388800	413603	Urban Background	100.0	100.0	14.9	15.0	13.4	12.3	12.4
RO12ANO	392072	415687	Roadside	90.4	90.4	30.3	31.0	29.3	27.2	25.5
RO13ANO	392042	415707	Urban Background	48.1	48.1	15.1	19.9	-	-	22.6
RO14ANO	393665	417816	Rural	100.0	100.0	10.2	12.9	11.6	9.4	9.1
RO15ANO	392976	411906	Roadside	90.4	90.4	23.0	19.7	20.1	-	15.8
RO16ANO	392542	411709	Urban Background	82.7	82.7	18.3	19.5	16.8	15.1	15.0
RO17ANO	391214	412609	Urban Background	100.0	100.0	17.6	24.5	17.3	14.5	14.1
RO18ANO	389877	413590	Urban Background	100.0	100.0	18.7	22.7	18.1	15.3	13.6
RO20ANO	385773	408972	Roadside	90.4	25.0	24.9	24.3	29.6	30.2	26.0
RO21ANO	385820	410776	Roadside	100.0	90.4	28.2	27.7	26.1	26.3	23.6

RO22ANO	390464	411976	Roadside	82.7	100.0	32.7	32.2	30.2	26.5	24.6
RO23ANO	390377	412030	Roadside	82.7	82.7	31.4	31.7	29.8	26.1	25.1
RO24ANO	388089	410822	Urban Background	90.4	82.7	23.1	24.0	25.2	20.2	19.9
RO25ANO	387792	406013	Roadside	92.3	90.4	30.9	33.0	31.1	-	22.7
RO26ANO	389782	414241	Roadside	92.3	92.3	32.5	34.2	27.6	-	27.1
RO27ANO	390710	414563	Roadside	90.4	92.3	28.8	31.3	32.6	28.4	27.1
RO28ANO	392871	415127	Urban Background	100.0	90.4	22.8	23.3	22.6	21.2	19.0
RO29ANO, RO30ANO, RO31ANO	389336	411419	Roadside	100.0	100.0	31.1	30.6	23.1	26.5	25.0
RO32ANO	385145	407701	Roadside	40.4	100.0	26.6	30.3	27.9	-	19.0
<b>Salford City Council</b>										
SA1NO	372767	394103	Urban Background	100.0	100.0	15.5	15.8	13.8	12.5	13.2
SA2NO	372140	394210	Urban Background	100.0	100.0	15.5	15.4	14.0	12.9	12.5
SA4NO	377453	401830	Urban Background	100.0	100.0	20.2	20.2	18.9	16.9	16.2
SA9NO	374741	400937	Urban Background	100.0	100.0	18.5	19.3	18.1	16.7	16.1
SA13NO	379613	399784	Urban Background	84.6	84.6	16.7	17.6	15.5	15.4	14.2

SA16NO	371187	404453	Urban Background	100.0	100.0	17.6	18.4	17.7	17.1	15.8
SA20NO, SA21NO, SA22NO	374811	400857	Roadside	100.0	100.0	33.0	34.8	33.1	30.2	30.5
SA23NO, SA24NO, SA29NO	377926	398727	Urban Background	100.0	100.0	20.5	20.2	18.8	16.5	16.0
SA25NO	381304	398014	Urban Background	100.0	100.0	24.7	22.7	21.9	19.7	19.2
SA26NO	380718	399597	Roadside	100.0	100.0	25.8	25.4	24.5	22.2	20.5
SA27NO	383078	398741	Roadside	100.0	100.0	28.8	27.2	24.6	24.0	22.3
SA31NO	374025	401905	Roadside	100.0	100.0	23.5	22.9	21.8	19.3	18.4
SA34NO	375367	397800	Roadside	100.0	100.0	34.1	33.8	31.2	28.5	26.3
SA39NO	383040	398563	Roadside	92.3	92.3	33.0	35.1	27.8	-	31.1
SA38NO	377796	403065	Roadside	100.0	100.0	21.6	21.7	18.9	18.0	16.7
SA51NO	375213	397661	Roadside	100.0	100.0	26.5	26.0	24.8	22.3	20.6
SA55NO	372871	400734	Roadside	100.0	100.0	24.6	24.4	21.8	19.6	18.6
SA56NO, SA57NO, SA58NO	368759	396027	Rural	100.0	100.0	11.5	11.9	10.8	9.7	9.6

SA59NO	381822	397895	Roadside	80.8	80.8	27.5	26.2	24.5	22.8	21.2
SA60NO	382445	397724	Roadside	92.3	92.3	32.6	32.1	30.4	27.5	25.5
SA61NO	377269	400943	Roadside	100.0	100.0	34.0	33.3	31.3	30.9	26.2
SA63NO	374673	399912	Roadside	100.0	100.0	35.3	38.0	33.1	31.2	28.5
SA64NO	378805	399848	Roadside	100.0	100.0	21.5	23.4	20.2	18.4	17.3
SA65NO	378584	399220	Roadside	100.0	100.0	37.9	37.7	36.1	30.5	27.7
SA66NO	375118	398502	Roadside	92.3	92.3	25.7	25.3	24.5	22.2	21.5
SA68NO	373570	403096	Roadside	100.0	100.0	<b>44.3</b>	38.7	39.1	33.7	31.7
SA69NO	379397	401370	Roadside	100.0	100.0	36.8	39.9	37.3	31.7	32.2
SA70NO	381677	398832	Roadside	100.0	100.0	23.4	22.8	21.2	19.8	18.8
SA72NO	377536	401804	Roadside	100.0	100.0	38.8	37.4	36.7	32.5	30.0
SA73NO	374576	400611	Roadside	92.3	92.3	38.5	39.7	29.4	31.1	29.2
SA74NO	376315	399249	Roadside	100.0	100.0	30.5	31.9	31.9	26.9	25.2
SA75NO	379608	398539	Roadside	100.0	100.0	25.2	27.2	25.6	22.0	22.0
SA76NO	380540	398422	Roadside	100.0	100.0	31.3	29.0	27.2	25.3	23.7
SA77NO	381686	398504	Roadside	100.0	100.0	25.8	26.5	25.1	22.9	22.6

SA78NO	381220	399530	Roadside	100.0	100.0	39.6	<b>40.5</b>	38.8	32.7	32.0
SA79NO	382602	398519	Roadside	100.0	100.0	30.0	30.8	29.5	28.5	24.4
SA80NO	375428	401417	Roadside	92.3	92.3	25.5	25.6	23.8	22.1	19.2
SA82NO	375394	397816	Roadside	92.3	92.3	39.6	<b>40.1</b>	37.8	33.8	30.0
SA83NO	382945	400732	Roadside	92.3	92.3	25.2	25.5	23.2	19.9	20.3
SA84NO	380776	400834	Roadside	100.0	100.0	25.1	24.6	23.9	21.3	20.6
SA85NO	375991	399237	Roadside	100.0	100.0	22.3	21.6	20.7	18.7	17.6
SA86NO	383819	401771	Kerbside	100.0	100.0	<b>44.0</b>	<b>45.2</b>	<b>43.2</b>	38.9	33.4
SA87NO	372225	395616	Roadside	100.0	100.0	23.7	23.0	21.8	20.4	18.0
SA89NO	373892	404569	Roadside	100.0	100.0	-	27.7	25.4	22.3	21.9
SA90NO	381349	397162	Roadside	48.1	48.1	-	-	-	20.8	21.4
SA91NO, SA92NO, SA93NO	382580	397717	Roadside	100.0	100.0	-	-	-	37.8	34.4
<b>Stockport Metropolitan Borough Council</b>										
ST3NO	388547	391845	Urban Background	100.0	100.0	19.5	19.4	19.6	17.3	15.8
ST4NO	396469	390800	Rural	-	-	10.9	11.1	11.2	10.0	-

ST5NO	396869	382699	Rural	-	-	9.7	6.8	5.7	5.9	-
ST6NO	385960	388552	Urban Background	92.3	92.3	9.7	12.9	12.0	12.4	11.7
ST7NO	392063	386972	Kerbside	92.3	92.3	25.9	26.4	25.0	24.2	22.0
ST8NO	392016	387042	Urban Background	-	-	17.2	16.1	15.7	13.7	-
ST9NO	392742	385680	Urban Background	92.3	92.3	10.9	10.5	9.3	9.3	10.4
ST10NO	392781	387271	Urban Background	-	-	11.6	11.3	11.2	-	-
ST11NO	391083	387938	Roadside	65.4	65.4	24.4	23.9	23.4	21.8	17.6
ST13NO	384675	386295	Urban Background	92.3	92.3	13.6	13.3	12.5	12.2	12.5
ST2NO, ST12NO, ST14NO	385047	388339	Roadside	100.0	100.0	28.4	29.6	27.1	24.7	22.3
ST15NO	389886	388961	Roadside	100.0	100.0	23.7	22.0	21.4	19.7	19.3
ST16NO	391568	391225	Roadside	100.0	100.0	19.6	20.1	20.2	19.5	16.3
ST17NO	388442	390077	Urban Background	90.4	90.4	20.2	19.0	19.4	18.2	16.9
ST18NO	389272	390440	Urban Background	90.4	90.4	29.3	26.7	28.5	24.3	20.5
ST19NO	389479	393463	Roadside	100.0	100.0	32.2	31.6	30.7	27.0	24.8
ST20NO	386921	389528	Urban Background	100.0	100.0	32.2	30.2	30.7	29.2	24.1

ST21NO	388598	389415	Urban Background	92.3	92.3	18.4	16.7	16.8	15.3	15.3
ST22NO, ST23NO, ST24NO	391481	387637	Roadside	100.0	100.0	18.5	17.7	17.0	16.5	15.4
ST25NO	395770	388655	Roadside	100.0	100.0	21.5	24.8	20.0	18.2	15.4
ST26NO	389396	387357	Urban Background	100.0	100.0	12.1	11.5	10.8	10.6	10.1
ST27NO	387091	391384	Urban Background	48.1	48.1	13.1	13.1	12.2	11.8	11.6
ST28NO	385700	386219	Roadside	100.0	100.0	30.3	30.3	27.6	25.9	24.2
ST29NO	390087	388545	Urban Background	100.0	100.0	14.3	13.3	12.5	12.4	11.0
ST31NO	392442	391752	Roadside	15.4	15.4	31.0	30.9	23.5	-	-
ST32NO	389480	390957	Roadside	100.0	100.0	24.6	27.7	25.5	22.7	21.7
ST33NO	390416	390087	Roadside	100.0	100.0	29.8	28.8	26.2	25.6	23.1
ST34NO	388304	390351	Roadside	90.4	90.4	35.8	36.0	32.9	30.5	27.2
ST35NO	395020	385360	Roadside	84.6	84.6	23.5	20.6	19.1	18.1	16.0
ST36NO	389386	390142	Roadside	100.0	100.0	34.7	35.8	34.3	32.6	28.6
<b>Tameside Metropolitan Borough Council</b>										
TA1NO	394051	397180	Roadside	100.0	100.0	21.1	22.4	21.4	19.0	16.6

TA2NO	394788	394933	Roadside	-	-	21.2	20.7	19.2	20.0	-
TA3NO	390961	395417	Urban Background	92.3	92.3	21.9	21.8	21.2	18.5	19.1
TASPNO	394194	399267	Roadside	92.3	92.3	-	-	27.5	24.0	23.1
TA5NO	400488	396539	Urban Background	100.0	100.0	9.8	9.8	9.6	8.5	7.7
TA11NO	400390	396025	Roadside	100.0	100.0	<b>41.1</b>	<b>43.9</b>	<b>43.2</b>	38.4	36.4
TA13NO	392586	398431	Roadside	100.0	100.0	33.6	33.9	32.3	29.9	27.5
TA14NO	393696	398794	Roadside	84.6	84.6	31.3	32.1	28.9	28.4	24.4
TA16NO	391413	397974	Roadside	75.0	75.0	33.2	34.5	33.8	29.4	25.7
TA17NO	389106	398242	Roadside	100.0	100.0	28.7	29.0	27.5	24.3	21.6
TA18NO	391970	395521	Roadside	100.0	100.0	36.5	38.3	34.7	29.0	26.3
TA19NO	392477	395505	Roadside	100.0	100.0	29.5	26.9	27.6	25.7	23.0
TA20NO	394610	395102	Roadside	0.0	0.0	29.9	30.2	29.6	25.7	-
TA21NO	400423	395965	Roadside	90.4	90.4	37.9	39.0	36.4	36.0	31.2
TA23NO	393630	398598	Urban Background	100.0	100.0	18.7	19.3	17.3	15.7	14.5
TA24NO	390475	395621	Roadside	100.0	100.0	31.6	26.6	31.0	24.8	25.3
TA25NO	396950	402329	Roadside	75.0	75.0	19.8	21.1	20.7	17.6	18.9

TA27NO	396177	398218	Roadside	100.0	100.0	22.5	22.1	21.0	19.0	17.4
TA28NO	393050	401038	Roadside	100.0	100.0	31.4	31.4	31.1	23.8	21.3
TA29NO	393370	399494	Suburban	100.0	100.0	19.0	20.6	19.8	16.4	16.7
TA30NO	393419	399691	Roadside	100.0	100.0	31.1	31.4	31.4	28.4	22.9
TA31NO	396899	402449	Suburban	100.0	100.0	16.1	16.7	15.9	15.3	14.7
TA32NO	396982	402437	Suburban	100.0	100.0	20.1	19.9	19.6	16.7	15.6
TA33NO	397011	402591	Roadside	100.0	100.0	19.2	19.9	18.8	18.2	16.2
TA34NO	397060	402581	Roadside	100.0	100.0	17.9	19.5	19.5	16.4	14.8
TA35NO	397080	402540	Roadside	100.0	100.0	29.1	30.4	31.3	27.3	22.8
TA36NO	397060	402387	Suburban	90.4	90.4	17.0	16.5	15.9	14.2	12.8
TA37NO	396728	402073	Roadside	100.0	100.0	27.7	28.1	26.8	22.8	20.9
TA38NO	394006	399392	Urban Background	100.0	100.0	23.4	23.0	23.3	21.4	18.5
TA39NO	394114	399366	Urban Background	100.0	100.0	25.9	25.8	25.0	25.7	20.9
TA40NO	394066	399314	Urban Background	100.0	100.0	23.5	24.3	22.9	21.0	17.7
TA41NO	394118	399259	Urban Background	100.0	100.0	25.9	28.1	25.2	24.0	21.6
TA42NO	394494	399010	Urban Background	100.0	100.0	24.5	23.5	23.0	24.3	18.9

TA43NO	394204	398933	Roadside	100.0	100.0	33.2	35.3	33.0	25.9	26.5
TA44NO	397418	394398	Urban Background	75.0	75.0	12.2	12.1	11.4	10.3	9.2
TA45NO, TA46NO, TA47NO	399719	395805	Roadside	100.0	100.0	39.7	39.1	<b>40.9</b>	35.6	27.7
TA49NO	393731	398770	Roadside	92.3	92.3	30.8	28.8	27.1	24.8	22.0
TA50NO	393498	398704	Roadside	100.0	100.0	35.4	32.0	33.3	30.7	27.0
TA51NO	393314	398624	Kerbside	100.0	100.0	33.1	32.2	31.0	27.8	23.1
TA52NO	393509	398737	Roadside	90.4	90.4	35.3	36.9	35.3	32.4	30.0
TA53NO	393133	398536	Roadside	100.0	100.0	31.8	30.2	30.3	27.1	23.7
TA54NO	392958	398474	Roadside	100.0	100.0	39.9	<b>41.5</b>	36.9	35.0	31.2
TA55NO	392741	398469	Roadside	92.3	92.3	<b>42.5</b>	<b>45.9</b>	<b>45.2</b>	37.3	34.2
TA56NO	392490	398368	Roadside	100.0	100.0	35.6	35.5	34.8	30.8	27.3
TA57NO	392838	398533	Roadside	100.0	100.0	35.2	32.9	30.0	30.8	27.4
TA58NO	393080	398620	Roadside	100.0	100.0	29.7	29.6	28.6	25.3	21.6
TA59NO	395652	399140	Roadside	100.0	100.0	15.9	15.1	14.1	13.7	12.0
TA60NO	395747	399112	Roadside	100.0	100.0	21.5	20.2	19.3	18.4	15.9

TA61NO	395682	399171	Roadside	100.0	100.0	20.3	19.0	18.4	16.6	16.1
TA62NO	395589	399227	Roadside	100.0	100.0	17.2	18.4	17.7	15.9	13.7
TA63NO	394917	400922	Kerbside	84.6	84.6	23.8	24.4	24.1	21.4	18.5
TA64NO	395787	398769	kerbside	100.0	100.0	37.4	36.7	36.7	32.0	29.0
TA65NO	392532	396768	Kerbside	90.4	90.4	-	28.0	27.1	23.7	21.7
<b>Trafford Metropolitan Borough Council</b>										
TR5NO	379052	392043	Urban Background	90.4	90.4	21.5	22.2	21.3	19.3	17.4
TR9NO	380933	395889	Urban Background	100.0	100.0	20.1	18.4	19.8	18.6	15.5
TR19NO, TR19ANO, TR19BNO	378783	394728	Urban Background	100.0	100.0	15.0	15.6	13.2	12.5	11.3
TR20NO, TR20ANO, TR20BNO	379411	394014	Roadside	100.0	100.0	23.9	23.4	22.4	21.1	18.5
TR22NO	377089	390130	Kerbside	92.3	92.3	22.9	31.7	29.8	24.8	20.9
TR15NO	379089	393282	Roadside	100.0	100.0	22.9	22.3	22.2	19.7	18.8
TR16NO, TR16ANO	377418	395689	Roadside	100.0	100.0	22.5	20.9	20.5	18.7	18.0
TR23NO	376432	396355	Roadside	100.0	100.0	26.0	24.8	24.3	22.1	20.1

TR24NO	379263	385812	Urban Background	100.0	100.0	19.8	19.1	18.5	17.5	16.0
TR25NO, TR25ANO, TR25BNO	373755	394477	Kerbside	100.0	100.0	11.5	11.3	11.3	9.5	9.5
TR27NO	371419	390760	Kerbside	92.3	92.3	16.1	15.4	17.5	15.4	11.0
TR28NO	376804	387740	Roadside	100.0	100.0	26.4	23.5	23.4	23.6	21.3
TR29NO	373906	392820	Kerbside	100.0	100.0	18.2	17.6	17.9	15.8	14.6
TR31NO	376205	392690	Roadside	100.0	100.0	31.3	29.0	27.7	25.4	25.5
<b>Wigan Metropolitan Borough Council</b>										
WI24NO	358341	405539	Roadside	90.4	90.4	-	-	22.2	19.6	21.0
WI33NO	359723	405537	Roadside	100.0	100.0	30.4	31.0	30.8	27.5	24.5
WI52NO	362137	396948	Roadside	90.4	90.4	30.5	29.7	26.8	25.0	24.8
WI81NO	355979	410362	Roadside	100.0	100.0	20.0	19.8	17.6	16.1	14.8
WI114NO	365115	400259	Roadside	100.0	100.0	32.1	32.8	29.4	29.1	24.9
WI148NO	361247	404576	Kerbside	100.0	100.0	24.2	22.8	22.7	21.9	20.4
WI156NO	366320	402136	Kerbside	82.7	82.7	20.1	19.8	18.9	17.3	18.2
WI161NO	369635	402019	Roadside	92.3	92.3	22.5	22.9	21.9	19.3	17.0

WI167NO	363544	397933	Roadside	92.3	92.3	20.6	19.2	19.2	17.0	13.2
WI168NO	362463	397005	Kerbside	82.7	82.7	25.4	25.0	24.3	21.5	21.9
WI169NO	362557	396906	Roadside	100.0	100.0	26.1	24.1	22.8	21.4	19.0
WI170NO	362236	396675	Roadside	100.0	100.0	22.7	21.4	19.3	18.7	17.1
WI172NO	356881	401314	Kerbside	100.0	100.0	25.1	23.9	21.9	19.9	19.8
WI177NO	356230	410105	Kerbside	100.0	100.0	23.5	22.1	20.5	18.9	17.4
WI178NO	356021	410128	Kerbside	92.3	92.3	35.2	33.3	32.5	28.6	25.2
WI180NO	362105	396491	Kerbside	100.0	100.0	<b>44.6</b>	<b>45.3</b>	<b>42.4</b>	39.1	32.9
WI181NO	354819	406235	Kerbside	100.0	100.0	28.2	28.6	25.8	23.5	21.0
WI186NO	358070	405587	Kerbside	82.7	82.7	33.2	33.1	-	33.1	30.0
WI188NO	362111	396526	Roadside	100.0	100.0	30.6	30.7	28.5	24.7	24.0
WI205NO	362151	396604	Kerbside	100.0	100.0	23.0	22.9	21.1	19.0	18.3
WI208NO, WI209NO, WI210NO	365686	400243	Roadside	100.0	100.0	24.0	23.7	22.3	22.0	19.7
WI213NO	362019	396512	Roadside	100.0	100.0	17.1	16.0	14.9	13.4	13.2
WI216NO	358464	405342	Kerbside	90.4	90.4	31.0	31.7	31.9	33.5	31.3

WI217NO	357780	405306	Kerbside	63.5	63.5	24.3	22.0	22.2	20.1	19.6
WI219NO	357484	405407	Roadside	100.0	100.0	19.3	17.9	18.9	18.0	16.6
WI220NO	357420	405407	Roadside	100.0	100.0	18.5	18.3	17.4	16.1	14.6
WI221NO	360499	397867	Roadside	100.0	100.0	20.9	21.8	19.6	17.7	20.0
WI222NO	360491	397842	Roadside	100.0	100.0	22.1	24.9	23.0	21.8	17.4
WI223NO	360430	397779	Roadside	100.0	100.0	20.7	22.4	20.9	18.9	17.4
WI224NO	360418	397775	Roadside	100.0	100.0	29.6	30.3	27.3	29.1	25.3
WI225NO	360459	397995	Roadside	82.7	82.7	19.9	20.5	19.7	17.7	19.9
WI226NO	360462	398006	Roadside	100.0	100.0	20.8	20.3	19.0	17.4	17.5
WI227NO	360576	398144	Roadside	100.0	100.0	25.1	23.9	21.4	21.0	20.1
WI228NO	360578	398126	Roadside	90.4	90.4	21.6	22.4	20.8	20.4	18.9
WI230NO	360380	397912	Roadside	100.0	100.0	27.1	29.1	27.0	23.9	22.6
WI231NO	357473	398990	Roadside	100.0	100.0	27.9	26.2	26.8	23.9	20.8
WI232NO	357635	399502	Roadside	90.4	90.4	19.0	19.3	16.9	15.8	16.0
WI233NO	357445	406461	Kerbside	100.0	100.0	19.7	22.1	18.7	17.0	16.8
WI234NO	363136	403467	Roadside	100.0	100.0	26.8	26.6	24.0	23.8	21.4

WI235NO	365419	399116	Roadside	100.0	100.0	21.3	19.7	17.8	17.0	15.1
WI236NO	365386	400353	Kerbside	80.8	80.8	16.4	16.4	14.4	14.8	15.5
WI237NO	367352	403200	Kerbside	100.0	100.0	20.4	21.0	20.2	19.1	18.4
WI238NO	369056	402146	Roadside	82.7	82.7	20.7	22.1	20.9	18.6	20.1
WI239NO	357092	404213	Roadside	100.0	100.0	-	15.3	13.9	14.5	14.5
WI240NO	360220	407146	Kerbside	100.0	100.0	20.4	19.2	19.0	15.8	15.7
WI241NO	358025	406658	Kerbside	100.0	100.0	24.3	23.3	23.1	19.3	18.4
WI244NO	357610	406859	Kerbside	92.3	92.3	-	18.5	19.3	17.4	18.3
WI245NO	358133	405492	Kerbside	100.0	100.0	-	-	<b>43.8</b>	<b>40.7</b>	32.1

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

Diffusion tube data have 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  $\text{NO}_2$  annual mean objective of  $40\mu\text{g}/\text{m}^3$  are shown in **bold**.

$\text{NO}_2$  annual means exceeding  $60\mu\text{g}/\text{m}^3$ , indicating a potential exceedance of the  $\text{NO}_2$  1-hour mean objective are shown in **bold and underlined**.

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

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

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

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

Figure A.1 – Trends in Annual Mean NO<sub>2</sub> Concentrations – Greater Manchester Automatic Sites

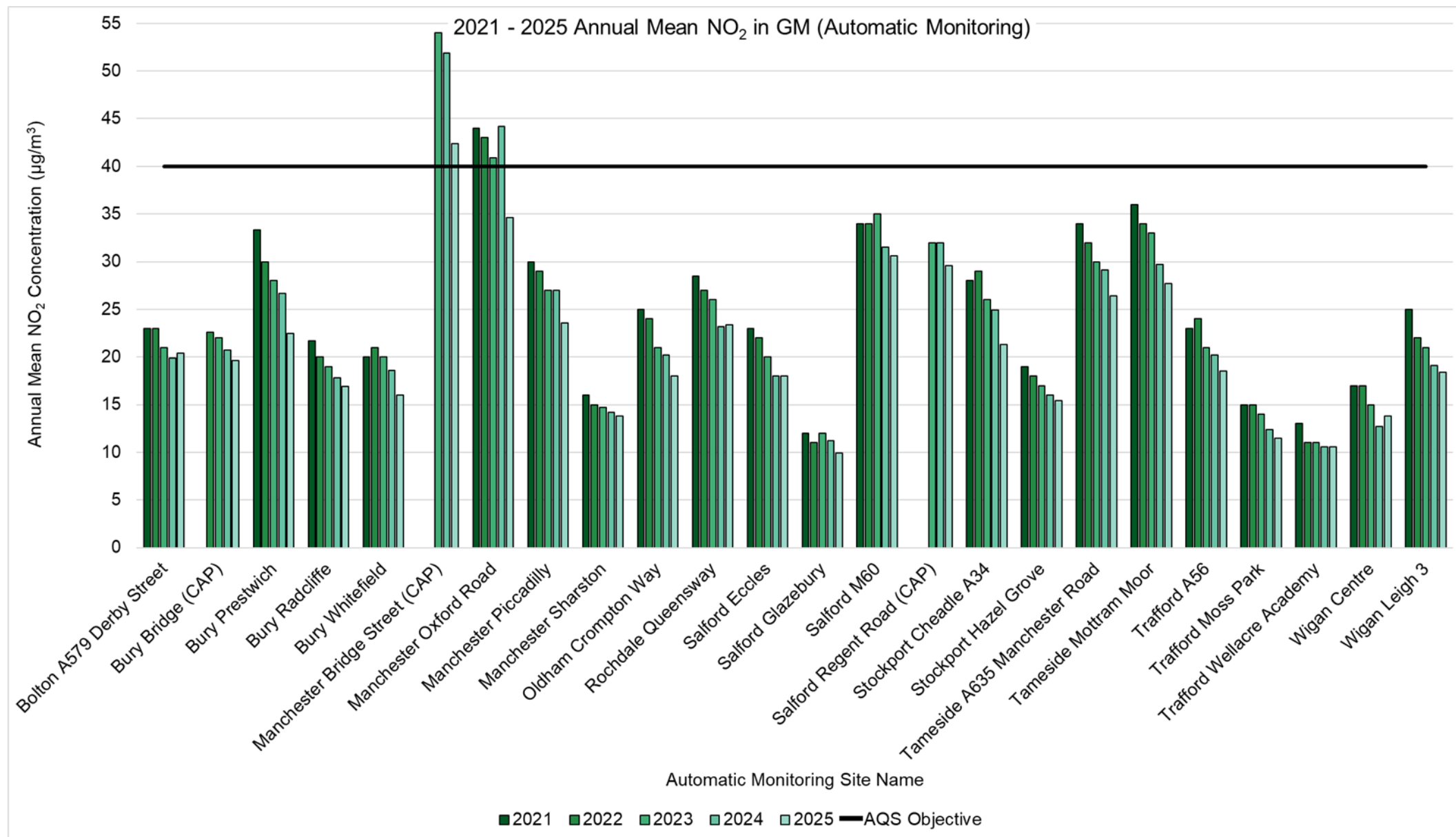


Figure A.2 – Trends in Annual Mean NO<sub>2</sub> Concentrations – Bolton Non-Automatic Sites

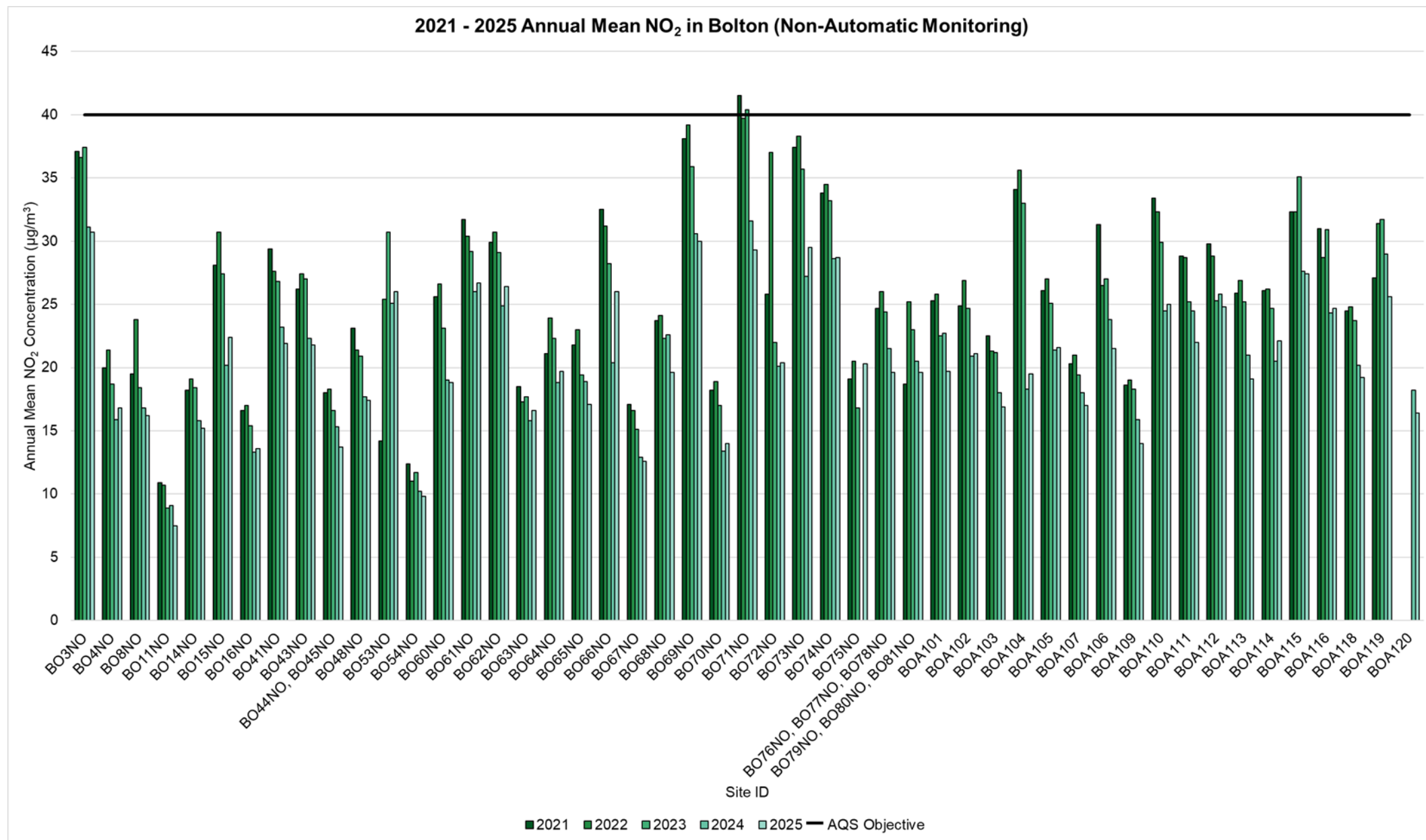


Figure A.3 – Trends in Annual Mean NO<sub>2</sub> Concentrations – Bury Non-Automatic Sites

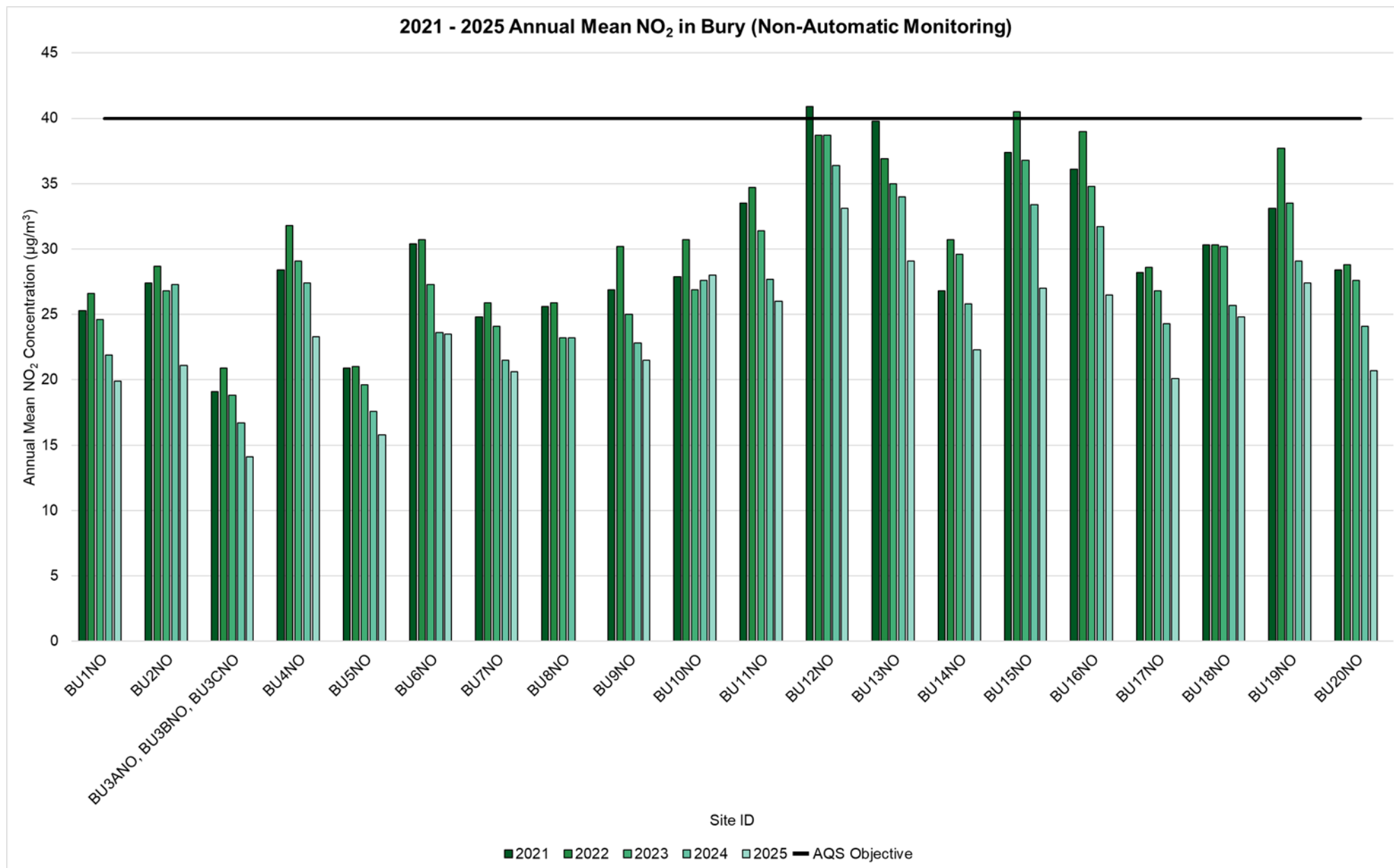


Figure A.4 – Trends in Annual Mean NO<sub>2</sub> Concentrations – Manchester Non-Automatic Sites

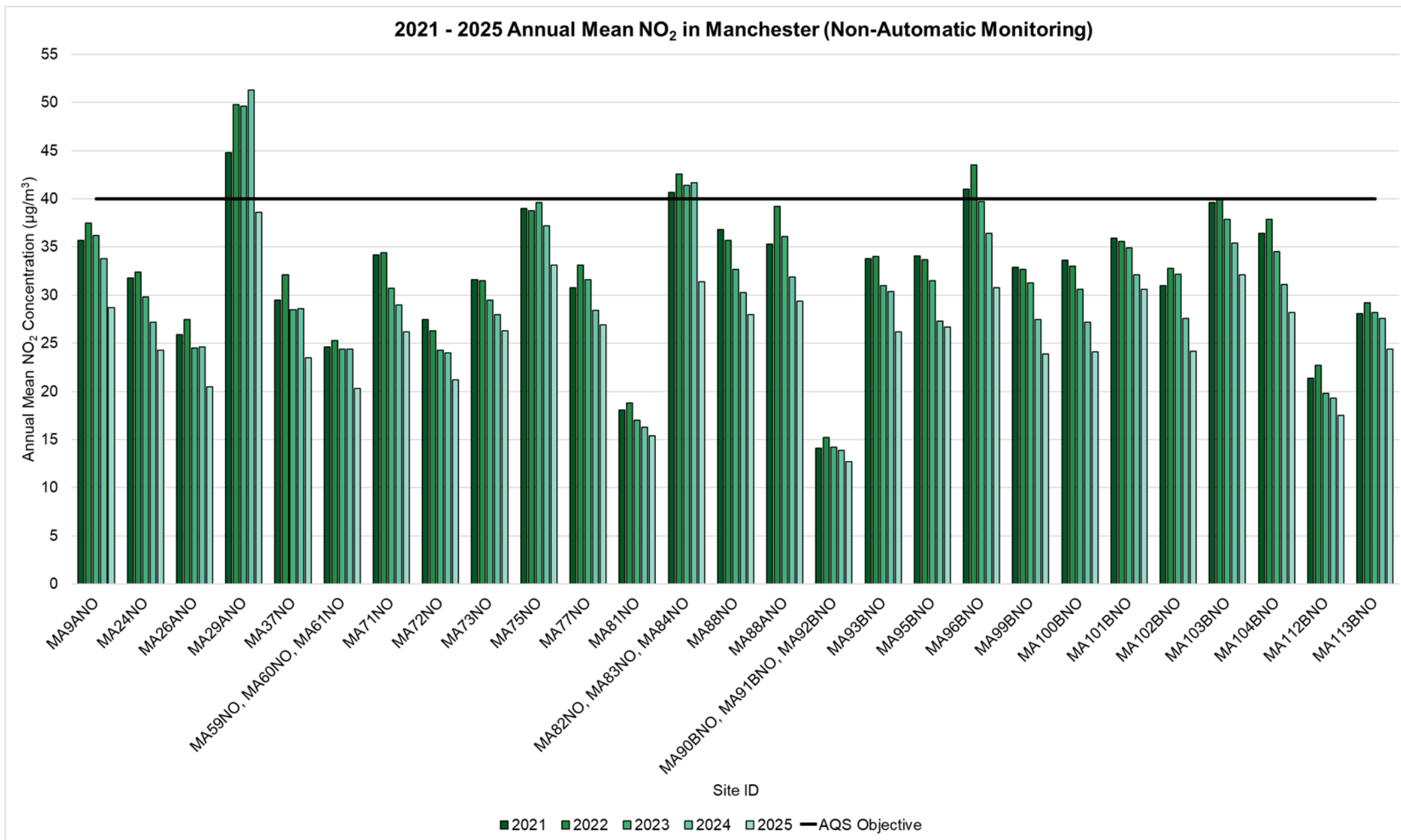


Figure A.5 – Trends in Annual Mean NO<sub>2</sub> Concentrations – Oldham Non-Automatic Sites

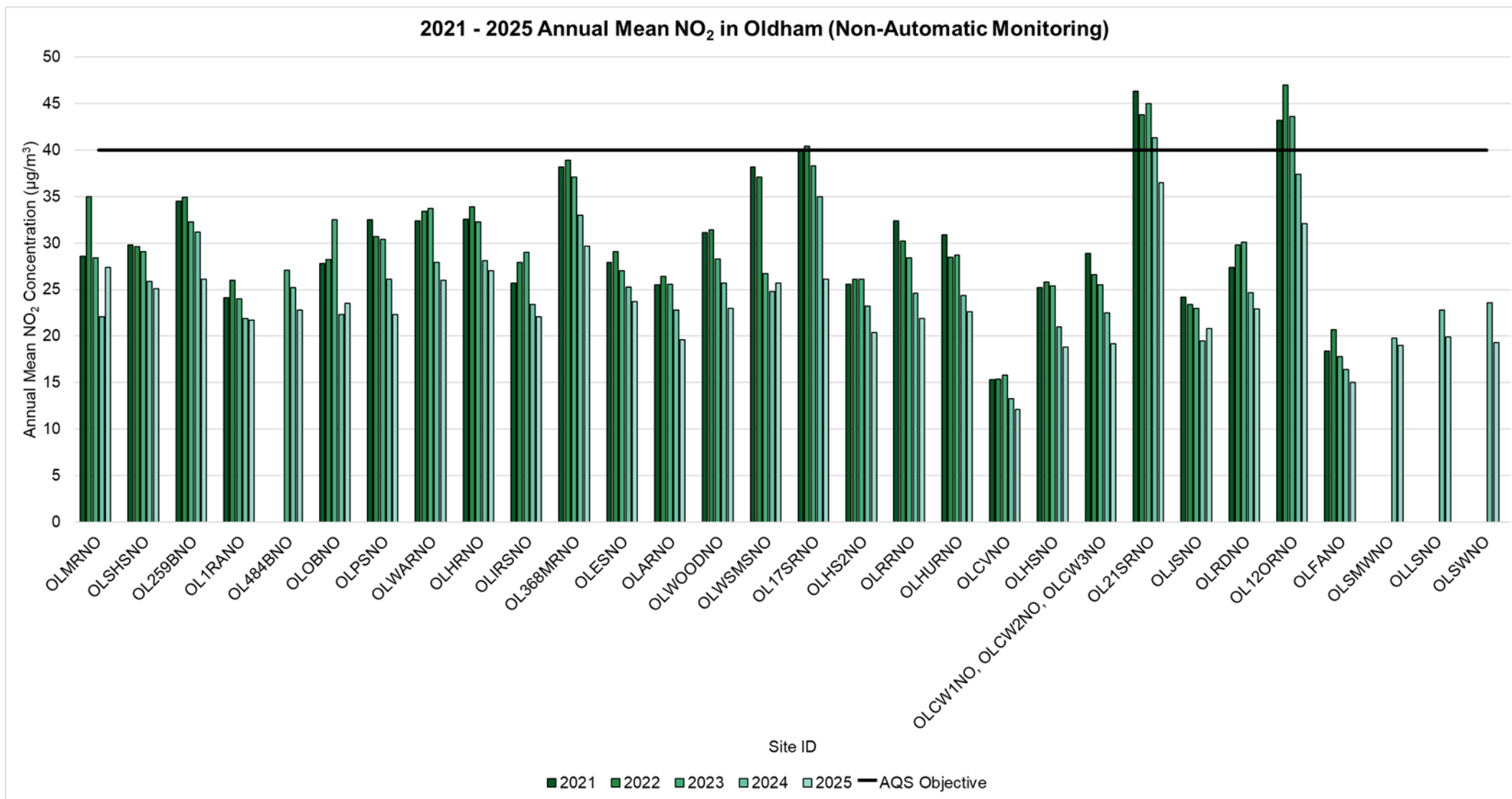


Figure A.6 – Trends in Annual Mean NO<sub>2</sub> Concentrations – Rochdale Non-Automatic Sites

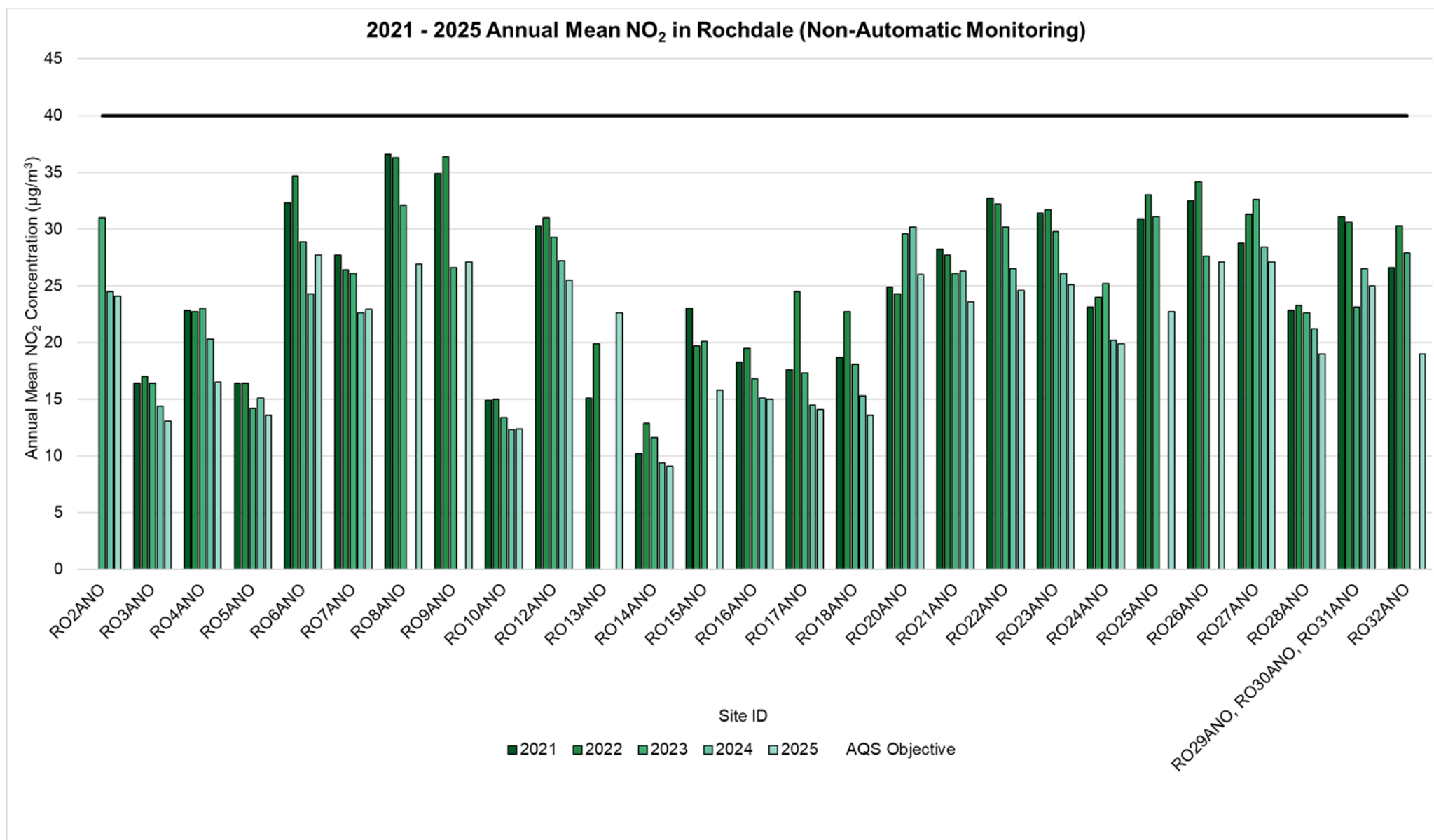


Figure A.7 – Trends in Annual Mean NO<sub>2</sub> Concentrations – Salford Non-Automatic Sites

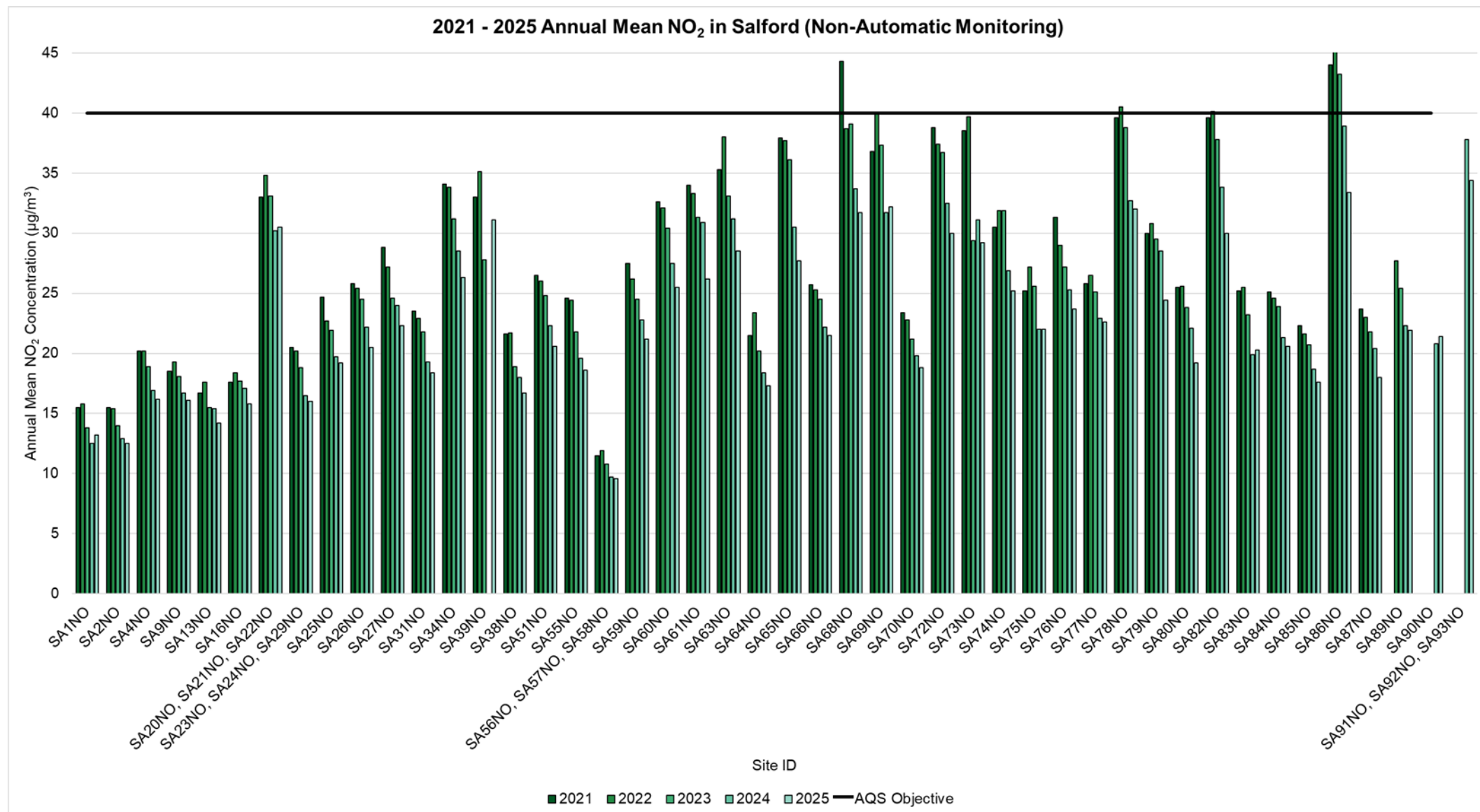


Figure A.8 – Trends in Annual Mean NO<sub>2</sub> Concentrations – Stockport Non-Automatic

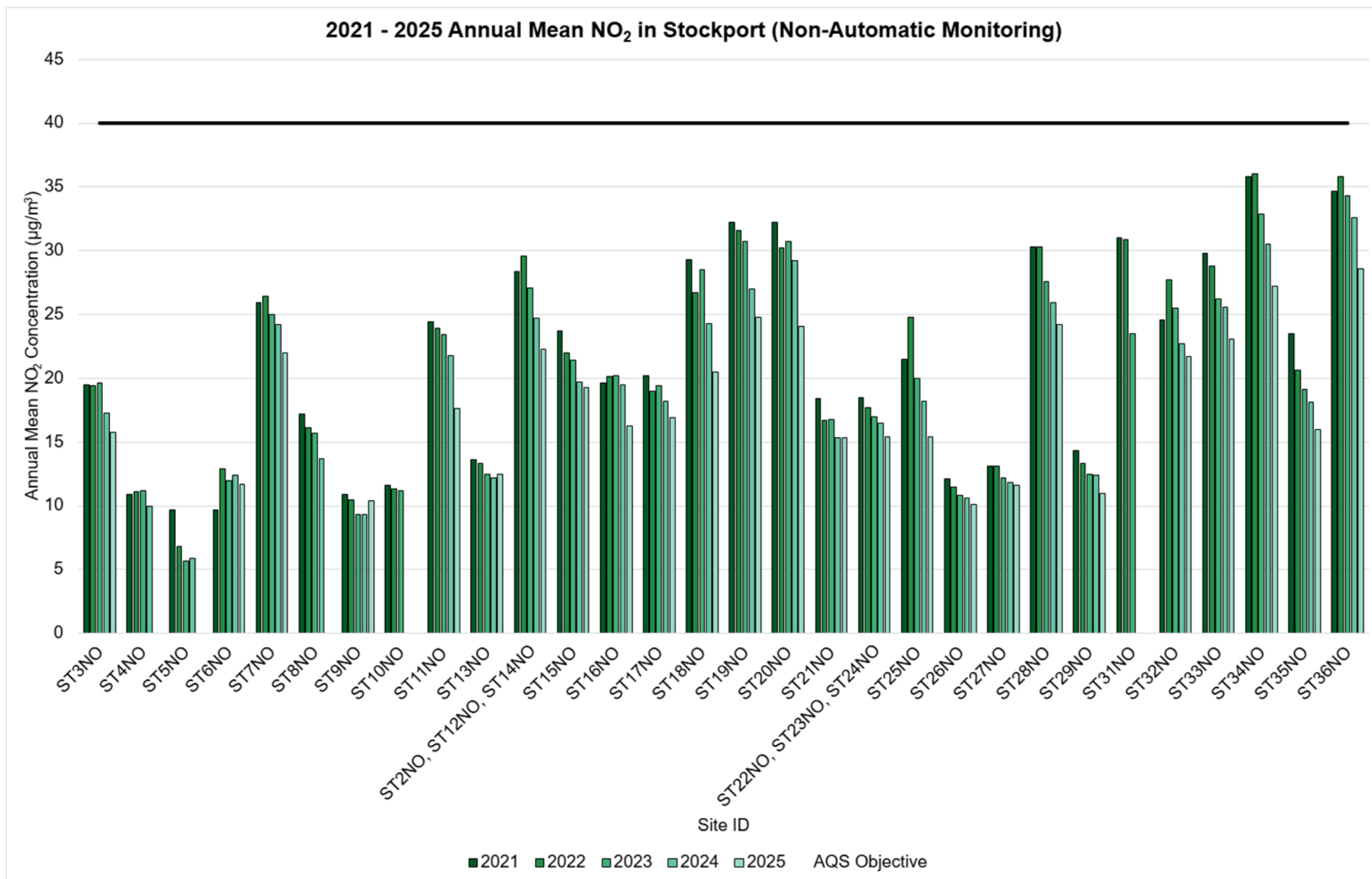


Figure A.9 – Trends in Annual Mean NO<sub>2</sub> Concentrations – Tameside Non-Automatic Sites

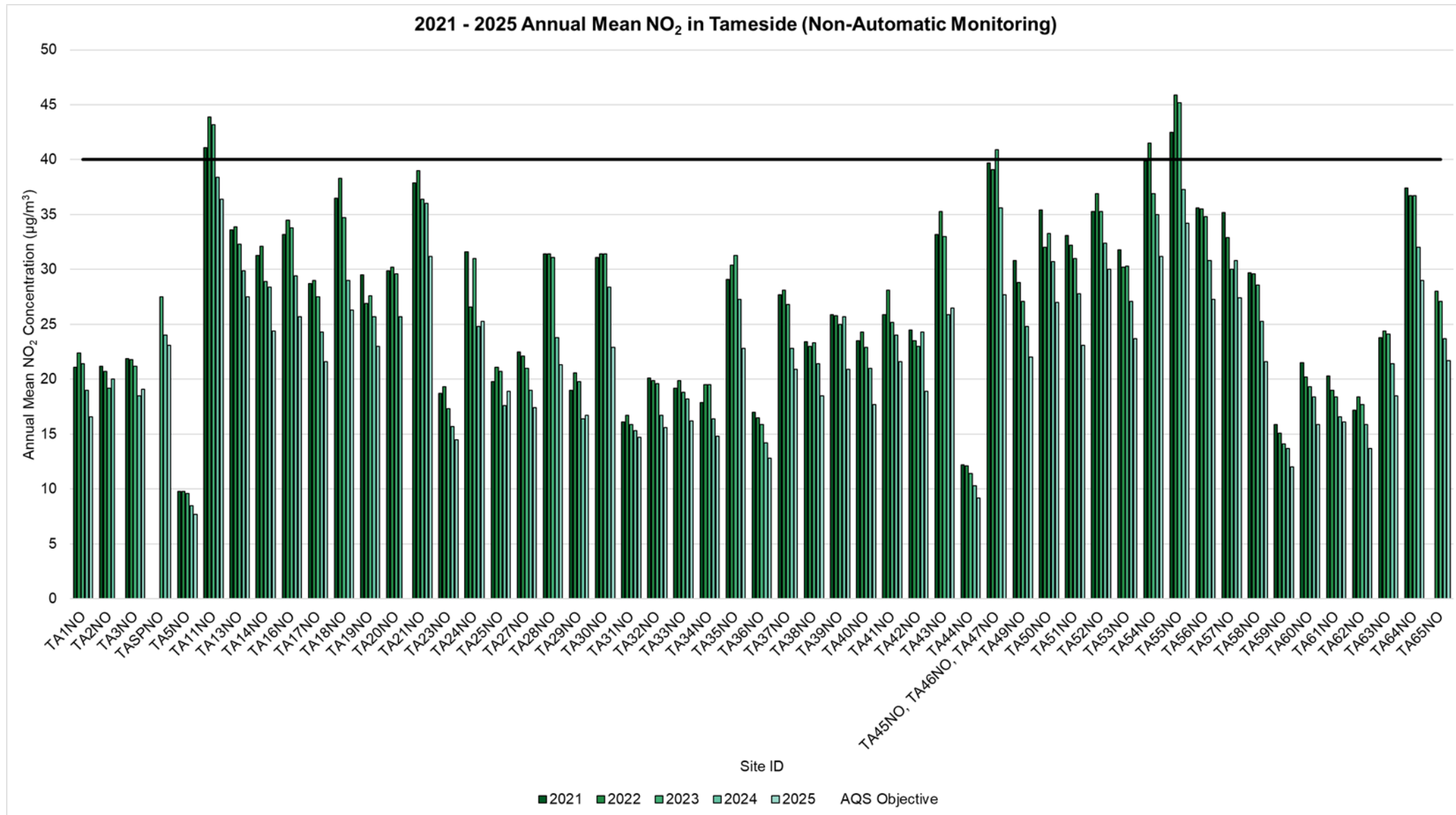


Figure A.10 – Trends in Annual Mean NO<sub>2</sub> Concentrations – Trafford Non-Automatic Sites

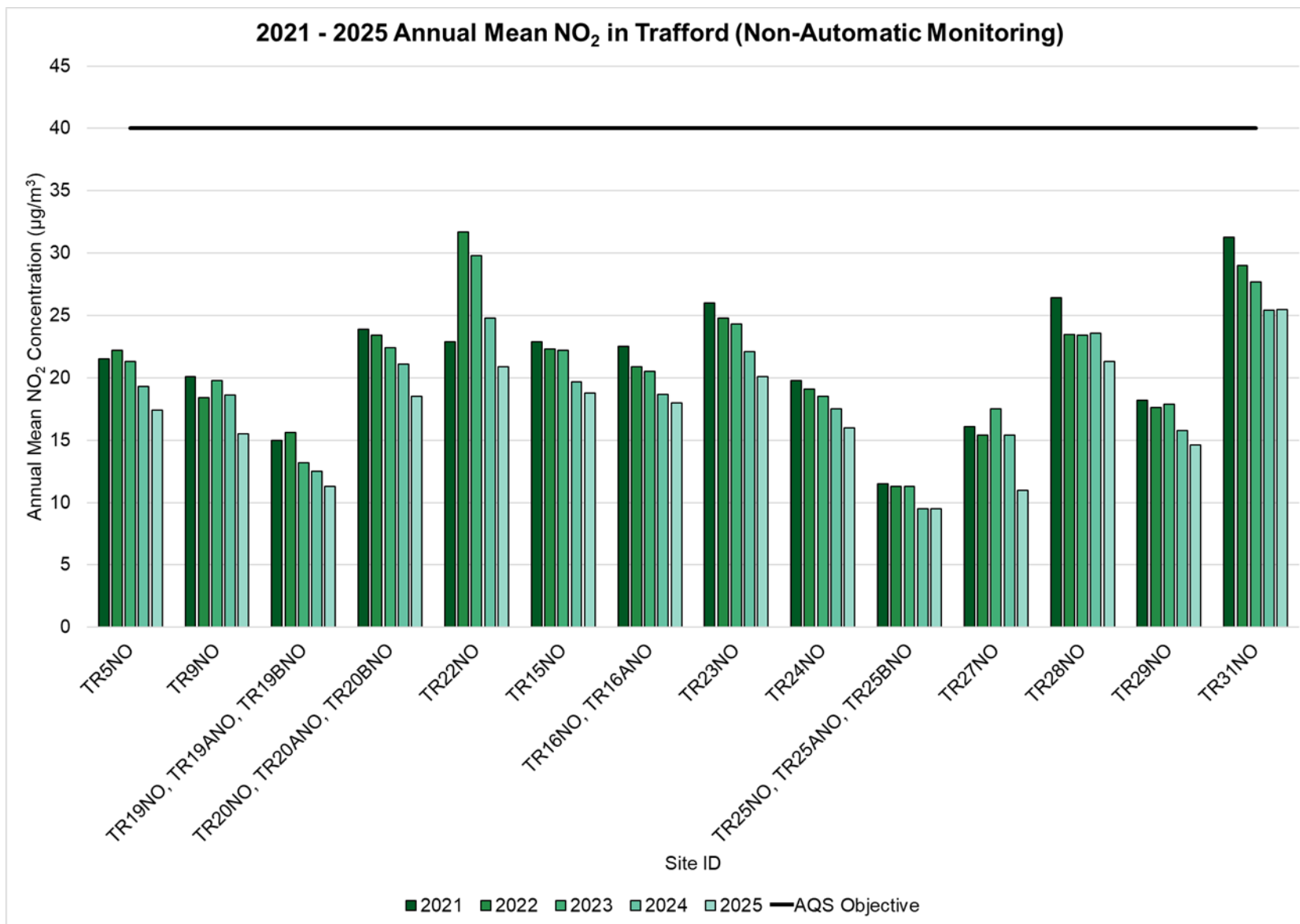
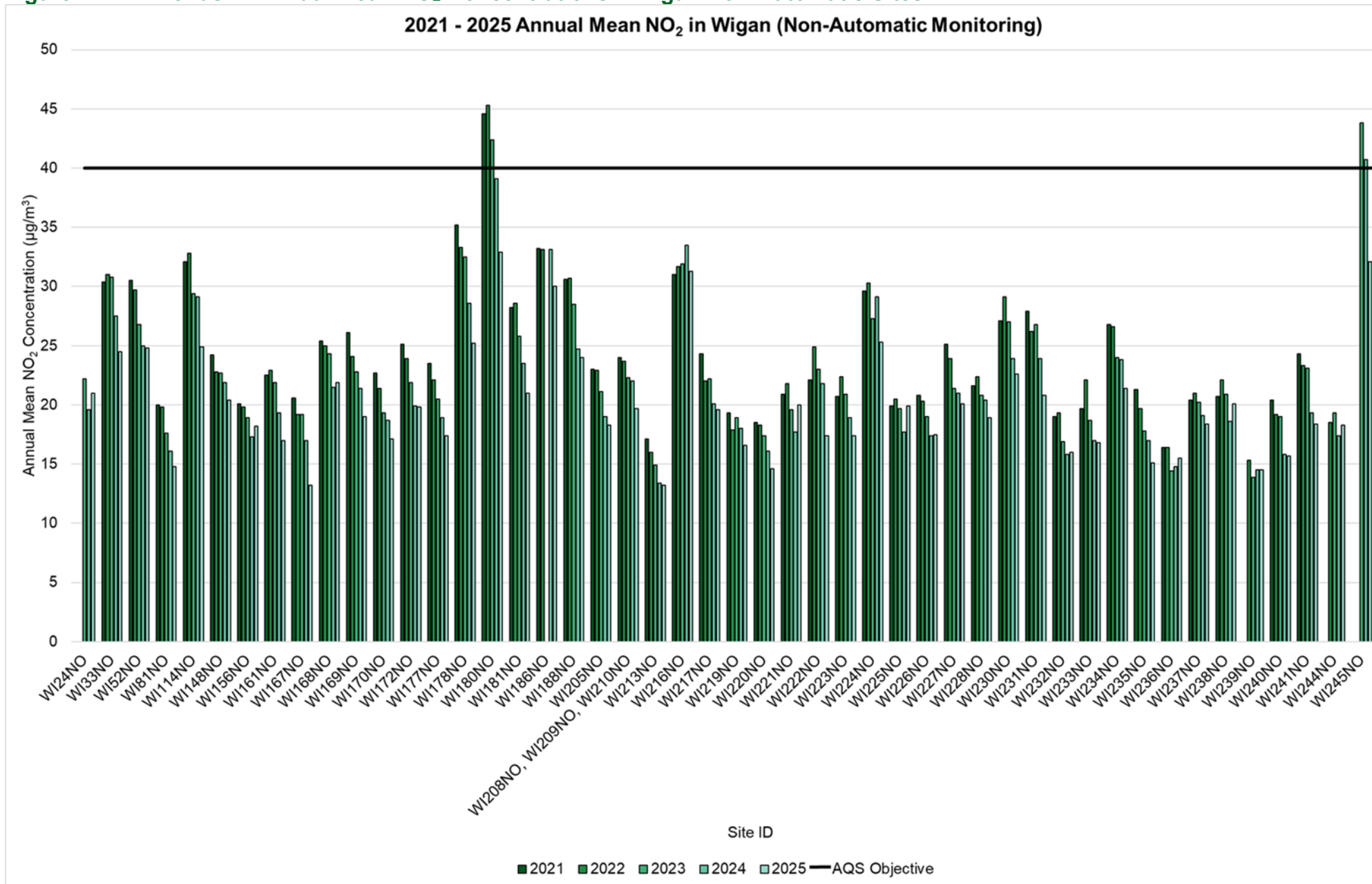


Figure A.11 – Trends in Annual Mean NO<sub>2</sub> Concentrations – Wigan Non-Automatic Sites



**Table A.5 – 1-Hour Mean NO<sub>2</sub> Monitoring Results, Number of 1-Hour Means > 200µg/m<sup>3</sup>**

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2025 (%) <sup>(2)</sup>	2020	2021	2022	2023	2024
Bolton A579 Derby Street	371296	408600	Roadside	96.9	96.9	0	0	0	0	0
Bury Bridge (CAP)	379840	410944	Roadside	95.8	95.8	-	0(82)	0	0	0
Bury Radcliffe	378190	407480	Roadside	83.2	83.2	0(79)	0	0	0	0 (77)
Bury Prestwich	381650	403222	Roadside	99.5	99.5	0(96)	0	0	0	0
Bury Whitefield	380636	406973	Roadside	99.2	99.2	0	0	0	0	0
Manchester Bridge Street (CAP)	383556	398292	Roadside	96.6	96.6	-	-	10	3	3
Manchester Oxford Rd	384239	397276	Kerbside	98.9	95.0	0	3	0	0 (142)	0
Manchester Piccadilly	384310	398337	Urban Centre	98.3	98.3	0	0	0	0	0
Manchester Sharston	384202	386121	Suburban	92.2	92.2	0	0	0	0	0
Oldham Crompton Way	393884	409183	Roadside	99.4	99.4	0	0	0	0	0
Rochdale Queensway	389325	411411	Roadside	97.5	97.5	0	0	0	0	0
Salford Eccles	377926	398727	Urban Background	95.6	95.6	0	0	0	0	0
Salford Glazebury	368759	396027	Rural	97.7	97.7	0	0	0	0	0

Salford M60	374811	400857	Roadside	99.4	99.4	0	0	0	0	0
Salford Regent Road (CAP)	382580	397717	Roadside	99.4	99.4	-	-	0	0	0
Stockport Cheadle A34	385047	388339	Roadside	97.0	97.0	0	0	0	0	0
Stockport Hazel Grove	391481	387637	Roadside	98.6	98.6	0	0	0	1	0
Tameside A635 Manchester Road	392538	398419	Roadside	93.6	93.6	0	0	0	0	0
Tameside Mottram Moor	399719	395804	Roadside	97.6	57.8	0	0	0	0	0 (101)
Trafford A56	379411	394014	Roadside	98.4	98.4	0	0	0	0	0
Trafford Moss Park	378783	394728	Urban Background	98.6	55.0	0	0(98)	0	0 (70)	0 (50)
Trafford Wellacre Academy	373755	394477	Urban Background	95.8	94.4	0	0	0	0	0
Wigan Centre	357816	406024	Urban Background	98.9	98.9	0	0	0	0	0
Wigan Leigh 3	365686	400243	Roadside	99.5	99.5	0	0	0	0 (82)	0

**Notes:**

Results are presented as the number of 1-hour periods where concentrations greater than 200µg/m<sup>3</sup> have been recorded.

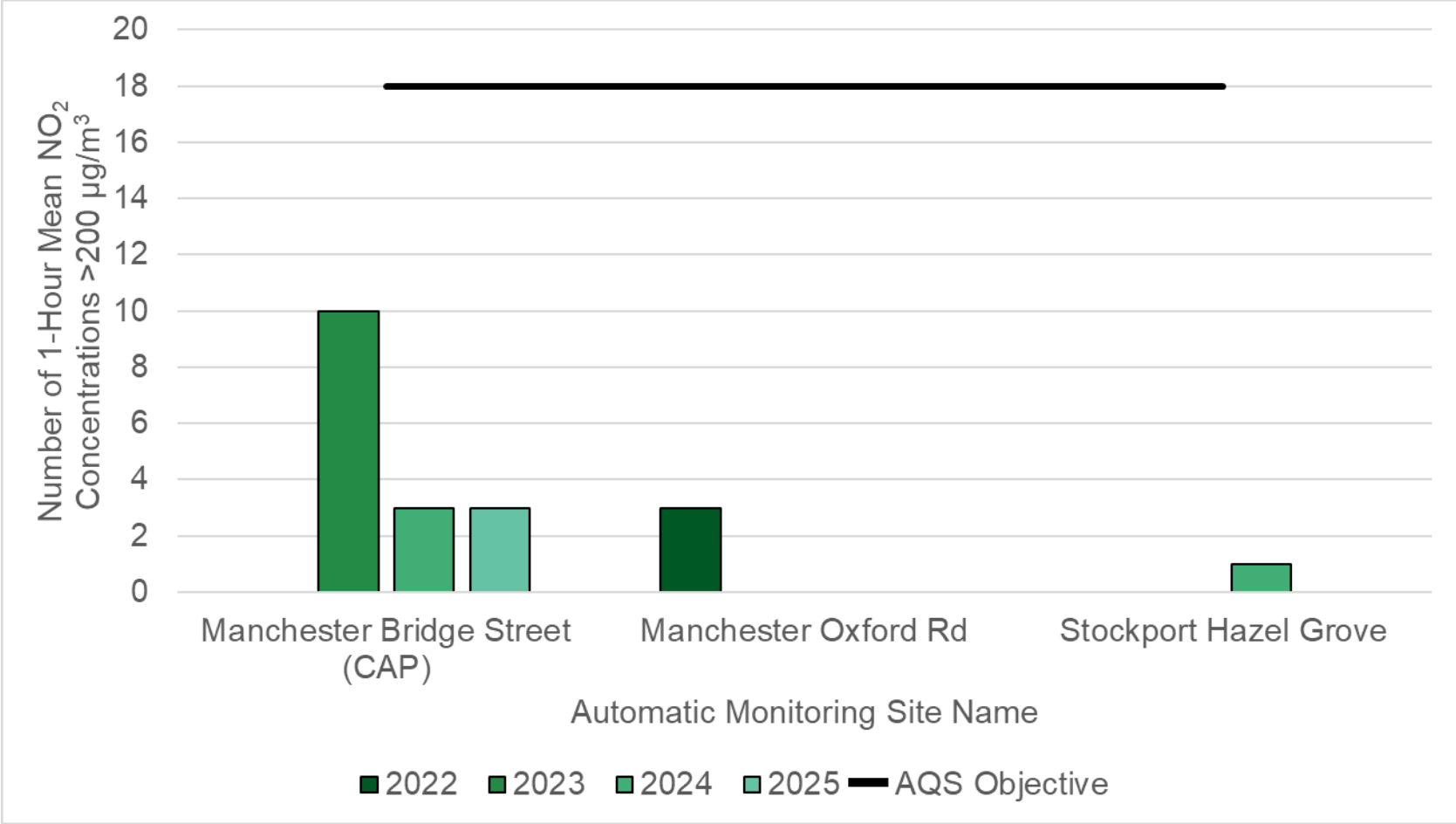
Exceedances of the NO<sub>2</sub> 1-hour mean objective (200µg/m<sup>3</sup> not to be exceeded more than 18 times/year) are shown in **bold**.

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.12 – Trends in Number of NO<sub>2</sub> 1-Hour Means > 200 µg/m<sup>3</sup>



**Table A.6 – Annual Mean PM<sub>10</sub> Monitoring Results (µg/m<sup>3</sup>)**

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2025 (%) <sup>(2)</sup>	2021 <sup>(3)</sup>	2022 <sup>(3)</sup>	2023	2024	2025
Bolton A579 Derby Street	371296	408600	Roadside	98.6	98.6	17	19	16.1	16.4	17.3
Bury Prestwich	381650	403222	Roadside	99.5	99.5	17.5	19	17.3	16.3	19.0
Bury Radcliffe	378190	407480	Roadside	97.0	97.0	17	18	15.6	14.9	18.8
Bury Whitefield	380636	406973	Roadside	95.9	95.9	15	16	14.0	13.1	14.0
Manchester Oxford Road	384239	397276	Kerbside	99.2	99.2	18	18	17.5	20.5	22.6
Manchester Piccadilly	384310	398337	Urban Centre	98.1	98.1	15	17	15.1	14.8	15.7
Manchester Sharston	384202	386121	Suburban	99.3	99.3	12	13	10.8	10.7	12.9
Oldham Crompton Way	393884	409183	Roadside	95.8	95.8	17	18	14.9	14.4	16.9
Rochdale Queensway	389325	411411	Roadside	93.7	93.7	15.5	18	16.1	14.5	16.7
Salford Eccles	377926	398727	Urban Background	99.9	99.9	15	17	15.1	15.6	17.0
Salford Glazebury	368759	396027	Rural	99.8	99.8	-	12.7	10.7	10.3	12.2
Salford M60	374811	400857	Roadside	97.9	97.9	20	20	18.5	16.8	18.6
Stockport Cheadle A34	385047	388339	Roadside	98.7	96.6	16	16	13.5	12.3	14.5

Stockport Hazel Grove	391481	387637	Roadside	99.5	99.5	18	20	17.1	15.9	18.5
Tameside A635 Manchester Road	392538	398419	Roadside	94.2	94.2	20	20	16.7	16.2	18.3
Tameside Mottram Moor	399719	395804	Roadside	95.9	54.5	15	15	11.3	13.5	15.0
Trafford A56	379411	394014	Roadside	95.4	95.4	14	16	12.9	12.8	14.9
Trafford Moss Park	378783	394728	Urban Background	88.1	48.0	13	17	11.1	11.2	13.4
Wigan Centre	357816	406024	Urban Background	98.1	98.1	13	15	12.5	12.0	14.5
Wigan Leigh 3	365686	400243	Roadside	98.4	98.4	18	19	15.5	15.5	17.5

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

#### Notes:

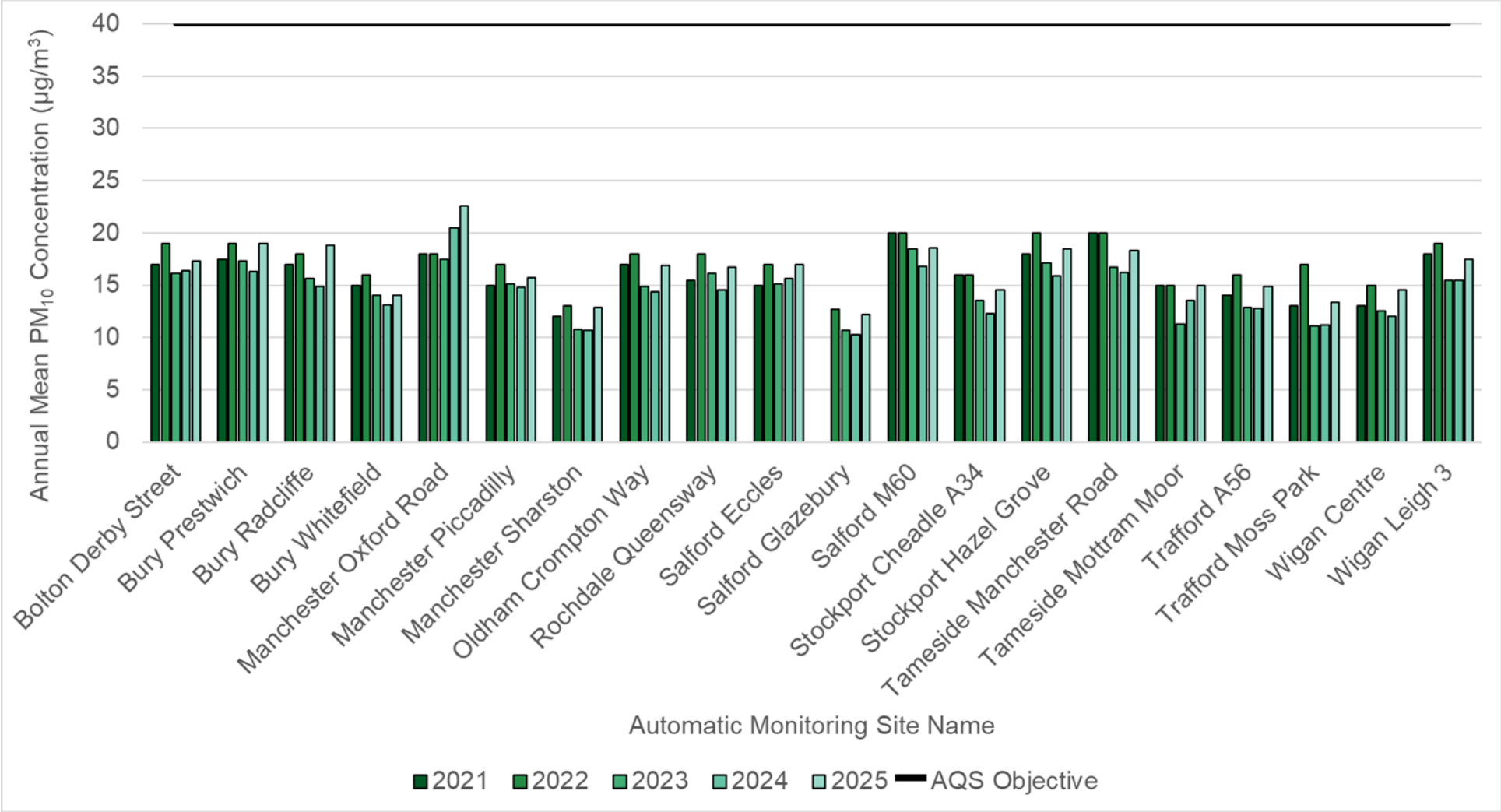
The annual mean concentrations are presented as  $\mu\text{g}/\text{m}^3$ .

Exceedances of the  $\text{PM}_{10}$  annual mean objective of  $40\mu\text{g}/\text{m}^3$  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%).
- (3) Due the way in which historic reports were generated, these years are not reported to 1 decimal place.

Figure A.13 – Trends in Annual Mean PM<sub>10</sub> Concentrations



**Table A.7 – 24-Hour Mean PM<sub>10</sub> Monitoring Results, Number of PM<sub>10</sub> 24-Hour Means > 50µg/m<sup>3</sup>**

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2025 (%) <sup>(2)</sup>	2021	2022	2023	2024	2025
Bolton A579 Derby Street	371296	408600	Roadside	98.6	98.6	2	7	1	0 (32)	2
Bury Prestwich	381650	403222	Roadside	99.5	99.5	1(27)	6	2	1	2
Bury Radcliffe	378190	407480	Roadside	97.0	97.0	1(23)	7	1	0	4
Bury Whitefield	380636	406973	Roadside	95.9	95.9	0	5	1	0	0
Manchester Oxford Road	384239	397276	Kerbside	99.2	99.2	2	8	4	1 (36)	6
Manchester Piccadilly	384310	398337	Urban Centre	98.1	98.1	2	4	1	0 (26)	1
Manchester Sharston	384202	386121	Suburban	99.3	99.3	-	1	0	0	0
Oldham Crompton Way	393884	409183	Roadside	95.8	95.8	0	1	1	0	2
Rochdale Queensway	389325	411411	Roadside	93.7	93.7	0	6	1	1	1
Salford Eccles	377926	398727	Urban Background	99.9	99.9	1	7	2	3	5
Salford Glazebury	368759	396027	Rural	99.8	99.8	-	0(18)	0	0	0
Salford M60	374811	400857	Roadside	97.9	97.9	2	8	5	0	4
Stockport Cheadle A34	385047	388339	Roadside	98.7	96.6	1	1	0	0	0

Stockport Hazel Grove	391481	387637	Roadside	99.5	99.5	1	7	2	0	3
Tameside A635 Manchester Road	392538	398419	Roadside	94.2	94.2	2	7	2	0	2
Tameside Mottram Moor	399719	395804	Roadside	95.9	54.5	1	1	0	0	0 (33)
Trafford A56	379411	394014	Roadside	95.4	95.4	0	4	0	0	0
Trafford Moss Park	378783	394728	Urban Background	88.1	48.0	0	4	0	0 (21)	0 (19)
Wigan Centre	357816	406024	Urban Background	98.1	98.1	1	6	0	0	0
Wigan Leigh 3	365686	400243	Roadside	98.4	98.4	1	7	0	0	0

**Notes:**

Results are presented as the number of 24-hour periods where daily mean concentrations greater than  $50\mu\text{g}/\text{m}^3$  have been recorded.

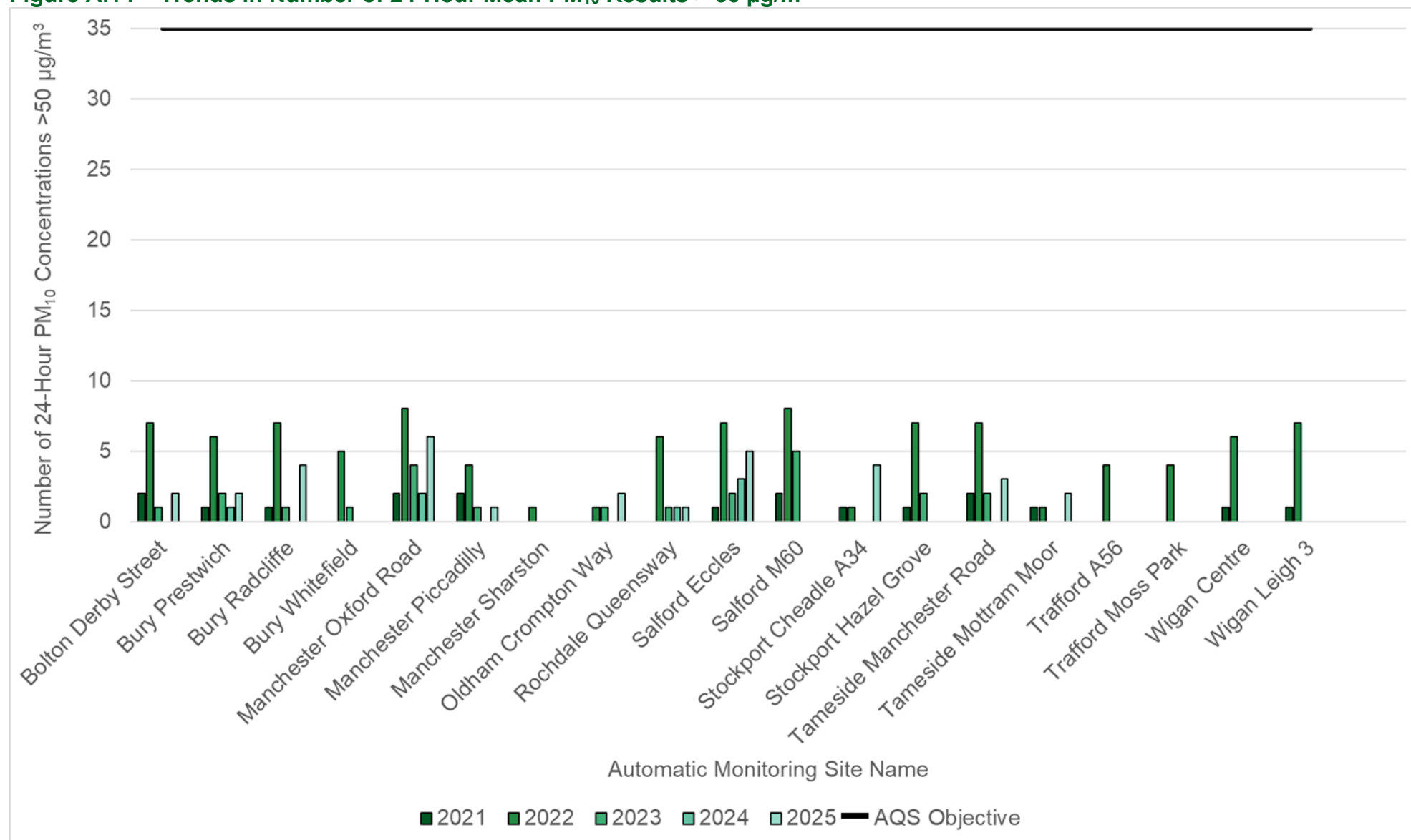
Exceedances of the  $\text{PM}_{10}$  24-hour mean objective ( $50\mu\text{g}/\text{m}^3$  not to be exceeded more than 35 times/year) are shown in **bold**.

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%).

**Figure A.14 – Trends in Number of 24-Hour Mean PM<sub>10</sub> Results > 50 µg/m<sup>3</sup>**



Only sites which recorded a 24-hour concentration above 50 µg/m<sup>3</sup> between 2021 and 2025 have been included in this chart. None were recorded for Salford Glazebury between 2021 and 2025.

**Table A.8 – Annual Mean PM<sub>2.5</sub> Monitoring Results (µg/m<sup>3</sup>)**

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2025 (%) <sup>(2)</sup>	2021 <sup>(3)</sup>	2022 <sup>(3)</sup>	2023	2024	2025
Bolton A579 Derby Street	371296	408600	Roadside	96.1	96.1	10	11	8.4	7.3	9.6
Manchester Piccadilly	384310	398337	Urban Centre	98.1	98.1	9	10	8.5	8.5	9.6
Manchester Sharston	384202	386121	Suburban	99.3	99.3	6.3	7	6.4	6.5	7.8
Rochdale Queensway	389325	411411	Roadside	98.7	98.7	9.2	10	8.9	8.3	9.7
Salford Eccles	377926	398727	Urban Background	99.9	99.9	9	10	8.6	9.1	9.8
Salford Glazebury	368759	396027	Rural	99.8	99.8	-	7.6	6.5	6.4	7.7
Salford M60	374811	400857	Roadside	98.2	98.2	10	11	8.8	7.6	9.9
Tameside A635 Manchester Road	392538	398419	Roadside	84.5	83.9	11	11	7.6	7.8	9.1
Wigan Centre	357816	406024	Urban Background	98.1	98.1	8	9	7.5	7.5	8.7
Wigan Leigh 3	365686	400243	Roadside	97.8	97.8	9	11	8.2	8.6	9.3

**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/m<sup>3</sup>.

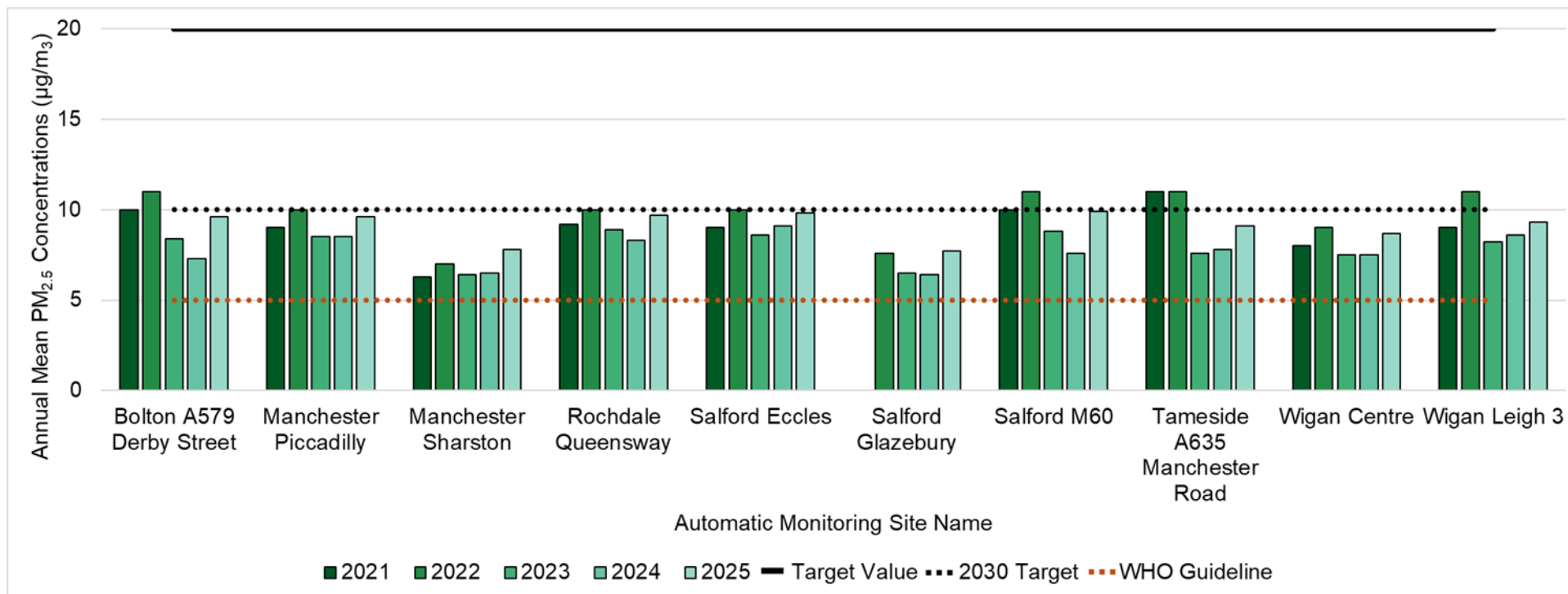
All means have been “annualised” as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C.

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

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

(3) Due the way in which historic reports were generated, these years are not reported to 1 decimal place.

Figure A.15 – Trends in Annual Mean PM<sub>2.5</sub> Concentrations



**Table A.9 – SO<sub>2</sub> 2025 Monitoring Results, Number of Relevant Instances**

Site ID	X OS Grid Ref (Eastin g)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2025 (%) <sup>(2)</sup>	Number of 15-minute Means > 266µg/m <sup>3</sup>	Number of 1-hour Means > 350µg/m <sup>3</sup>	Number of 24-hour Means > 125µg/m <sup>3</sup>
Manchester Piccadilly	384310	398337	Urban Centre	86.0	86.0	0	0	0
Manchester Sharston	384202	386121	Suburban	98.5	98.5	0	0	0

**Notes:**

Results are presented as the number of instances where monitored concentrations are greater than the objective concentration. Exceedances of the SO<sub>2</sub> objectives are shown in **bold** (15-min mean = 35 allowed a year, 1-hour mean = 24 allowed a year, 24-hour mean = 3 allowed a year).

If the period of valid data is less than 85%, the relevant percentiles are 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%).

## Appendix B: Full Monthly Diffusion Tube Results for 2025

Table B.1 – NO<sub>2</sub> 2025 Diffusion Tube Results (µg/m<sup>3</sup>)

Diffusion Tube 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
Bolton Metropolitan Borough Council																		
BO3NO	370763	407929	56.9	40.3	28.8	37.5	25.9	35.3	29.8	35.5	36.3	41.0	52.2	35.2	37.9	30.7		
BO4NO	371394	411718	31.3	27.2	17.2	18.8	11.2	15.5	11.2	17.7	22.0	21.9	30.2	25.1	20.8	16.8		
BO8NO	371352	409094	32.9	25.5	16.3	18.3	9.1	11.7	10.9	17.6	19.6	18.1	(a)	39.5	20.0	16.2		
BO11NO	363712	412396	15.4	12.2	7.0	9.7	4.4	6.3	5.7	7.4	9.2	9.5	13.2	11.0	9.3	7.5		
BO14NO	373839	406130	31.6	23.4	17.0	17.2	9.0	12.0	12.9	16.1	19.1	18.9	24.9	23.2	18.8	15.2		
BO15NO	371435	411690	41.6	35.2	(a)	30.5	16.9	21.5	15.6	24.4	27.2	26.8	34.2	30.9	27.7	22.4		
BO16NO	371304	411748	32.5	22.4	14.8	15.7	7.2	11.0	8.7	12.3	15.5	16.7	25.0	19.1	16.7	13.6		
BO41NO	366286	406561	35.7	33.6	27.6	27.1	17.7	21.5	26.3	21.2	25.0	28.5	30.0	30.9	27.1	21.9		
BO43NO	365501	409887	40.6	33.9	21.8	25.0	17.6	26.8	21.6	23.0	26.8	27.7	29.5	28.8	26.9	21.8		
BO44NO	365599	409845	26.2	19.8	15.2	13.1	10.5	15.8	12.7	12.4	16.4	19.1	22.1	19.9	-	-		Duplicate Site with BO44NO and BO45NO - Annual data provided for BO45NO only
BO45NO	365599	409845	26.7	20.4	14.2	14.2	9.8	14.6	11.3	14.0	16.4	18.4	22.7	19.8	16.9	13.7		Duplicate Site with BO44NO and BO45NO - Annual data provided for BO45NO only
BO48NO	375397	407457	30.0	26.0	18.6	19.5	(b)	24.7	14.6	16.1	18.3	19.1	25.6	24.4	21.5	17.4		
BO53NO	373236	411968	41.3	33.1	28.3	31.3	(a)	(b)	28.1	29.8	31.0	30.8	36.0	31.8	32.2	26.0		
BO54NO	372908	412120	22.8	16.6	10.8	11.4	5.9	8.6	7.1	10.8	12.2	11.2	16.1	(a)	12.1	9.8		
BO60NO	373287	405061	37.5	(a)	(a)	20.7	(a)	17.5	15.3	15.8	20.4	23.5	31.0	27.6	23.3	18.8		
BO61NO	374450	405207	37.1	37.0	30.7	35.2	(a)	46.3	22.4	25.3	29.1	29.0	37.6	(a)	33.0	26.7		
BO62NO	374194	405460	44.6	35.0	27.6	29.1	(a)	45.8	20.5	26.8	31.3	31.2	35.2	31.7	32.6	26.4		
BO63NO	374282	406257	27.0	24.6	17.5	18.8	(a)	(a)	12.7	(a)	18.9	17.9	24.2	23.2	20.5	16.6		

BO64NO	371965	409907	35.5	26.0	20.3	20.4	11.5	18.4	14.4	20.6	20.9	25.6	49.4	29.1	24.3	19.7		
BO65NO	372059	409877	33.6	25.9	18.6	16.3	11.1	18.0	15.3	16.3	20.1	21.2	29.9	26.6	21.1	17.1		
BO66NO	371442	411599	45.9	37.9	31.5	32.6	20.3	29.9	24.7	28.6	30.1	31.4	37.9	34.9	32.1	26.0		
BO67NO	365163	405640	22.1	23.5	17.0	16.3	8.5	10.3	9.4	11.0	15.5	13.9	19.9	18.6	15.5	12.6		
BO68NO	367672	406910	32.3	29.3	20.3	22.3	13.0	25.2	17.3	24.2	25.1	26.1	29.0	26.3	24.2	19.6		
BO69NO	369030	405809	45.0	42.1	36.1	38.2	27.4	34.7	37.6	34.5	36.9	36.9	38.3	37.0	37.1	30.0		
BO70NO	368757	405701	23.1	24.5	18.7	20.6	10.2	10.3	10.6	14.5	16.6	15.4	22.3	20.2	17.3	14.0		
BO71NO	370362	405400	38.8	42.7	39.5	40.1	33.2	30.0	32.5	36.2	31.6	29.1	41.9	38.1	36.1	29.3		
BO72NO	370115	405372	36.5	33.8	24.5	25.6	14.6	17.0	17.0	23.0	25.0	24.3	31.4	29.8	25.2	20.4		
BO73NO	371805	409820	50.2	40.4	32.3	34.5	25.2	39.3	29.9	(a)	(a)	36.9	(a)	38.9	36.4	29.5		
BO74NO	371805	409832	49.7	41.5	33.5	38.1	(b)	26.1	21.9	31.8	32.5	33.2	41.7	40.2	35.5	28.7		
BO75NO	371623	409235	(a)	(a)	18.1	52.2	9.1	(a)	13.0	16.3	20.3	(a)	(a)	24.9	22.0	20.3		
BO76NO	373491	404836	40.8	34.1	21.8	24.9	10.8	17.7	16.6	17.7	24.8	27.2	32.4	29.5	-	-		Triplicate Site with BO76NO, BO77NO and BO78NO - Annual data provided for BO78NO only
BO77NO	373491	404836	37.5	31.0	22.3	23.3	12.0	19.0	15.3	19.0	25.7	26.1	24.2	28.1	-	-		Triplicate Site with BO76NO, BO77NO and BO78NO - Annual data provided for BO78NO only
BO78NO	373491	404836	39.8	33.6	23.0	23.5	12.5	20.5	15.1	14.3	23.9	24.1	30.8	30.4	24.3	19.6		Triplicate Site with BO76NO, BO77NO and BO78NO - Annual data provided for BO78NO only
BO79NO	371296	408600	36.5	33.3	24.9	25.6	12.9	16.7	14.0	21.8	27.3	24.9	31.8	28.0	-	-		Triplicate Site with BO79NO, BO80NO and BO81NO - Annual data provided for BO81NO only
BO80NO	371296	408600	33.9	30.0	21.5	26.5	12.1	16.3	14.4	20.7	24.4	23.5	30.1	30.5	-	-		Triplicate Site with BO79NO, BO80NO and BO81NO - Annual data provided for BO81NO only
BO81NO	371296	408600	37.1	32.0	22.9	26.1	12.5	16.3	14.4	21.7	24.7	22.6	30.4	29.4	24.2	19.6		Triplicate Site with BO79NO, BO80NO and BO81NO - Annual data provided for BO81NO only
BOA101	374561	405364	32.8	29.2	21.7	23.2	16.9	19.8	19.1	22.5	24.3	25.6	30.2	25.9	24.3	19.7		
BOA102	374584	405525	39.1	(a)	(a)	23.8	15.0	24.0	21.9	24.6	27.2	29.2	27.0	29.1	26.1	21.1		
BOA103	374526	405906	34.9	(a)	20.7	21.2	12.7	14.3	13.6	17.8	20.6	20.4	28.7	25.2	20.9	16.9		

BOA104	373795	406600	(a)	49.4	20.0	(a)	(a)	(a)	(a)	13.9	20.1	20.8	27.4	(a)	25.3	19.5		
BOA105	373604	406882	39.6	31.3	22.3	(a)	15.2	29.2	20.4	24.6	28.0	28.2	25.7	29.0	26.7	21.6		
BOA107	372372	408912	30.0	27.9	21.6	21.6	12.6	14.8	13.4	17.5	19.7	22.2	26.7	24.3	21.0	17.0		
BOA106	372643	408070	38.5	32.4	21.5	24.0	19.2	23.4	23.5	24.0	26.1	29.9	31.4	24.8	26.6	21.5		
BOA109	373818	409401	27.4	19.0	16.3	18.9	11.6	13.8	12.3	14.4	16.4	17.1	22.9	(a)	17.3	14.0		
BOA110	371501	409694	43.6	42.0	27.9	34.3	21.2	24.8	18.8	27.8	31.6	29.4	36.1	33.6	30.9	25.0		
BOA111	371102	409575	38.3	30.7	23.5	26.9	15.8	23.3	23.3	23.5	27.7	28.3	35.5	29.8	27.2	22.0		
BOA112	371715	408681	43.6	35.3	31.5	32.3	20.7	23.5	24.3	28.0	27.6	28.4	38.0	34.4	30.6	24.8		
BOA113	374510	405522	35.8	(a)	(a)	24.3	12.2	19.6	15.4	18.8	24.6	23.9	32.7	28.4	23.6	19.1		
BOA114	372122	409347	43.0	34.5	22.9	28.1	17.0	21.9	15.7	25.3	29.7	24.8	31.4	32.9	27.3	22.1		
BOA115	371903	409026	(a)	43.3	31.1	37.2	24.9	26.5	23.7	31.6	34.6	30.9	(a)	54.6	33.8	27.4		
BOA116	371803	408976	42.0	34.3	23.3	28.9	18.8	26.2	20.6	30.0	33.1	32.1	41.9	35.1	30.5	24.7		
BOA118	371832	409625	35.4	30.0	22.4	22.1	14.2	19.4	17.3	20.8	22.8	23.4	29.7	26.6	23.7	19.2		
BOA119	371328	409251	41.1	33.7	27.5	32.5	20.5	18.4	17.5	26.4	28.9	29.5	59.7	44.0	31.6	25.6		
BOA120	373946	405207	30.8	24.5	17.2	(a)	(a)	(a)	11.4	14.6	17.6	17.9	23.9	24.7	20.3	16.4		
<b>Bury Metropolitan Borough Council</b>																		
BU1NO	384372	404917	34.8	28.6	20.1	22.5	(c)	(c)	21.8	22.4	25.5	30.3	(c)	(c)	25.8	19.9		
BU2NO	379101	417145	37.3	29.5	21.1	25.6	(c)	(c)	21.6	26.5	22.6	34.4	(c)	(c)	27.3	21.1		
BU3ANO	380636	406973	29.8	20.2	15.7	15.5	(c)	(c)	14.6	15.0	18.6	17.7	(c)	(c)	-	-		Triplicate Site with BU3ANO, BU3BNO and BU3CNO - Annual data provided for BU3CNO only
BU3BNO	380636	406973	28.8	21.7	14.4	15.5	(c)	(c)	13.3	15.3	18.1	18.1	(c)	(c)	-	-		Triplicate Site with BU3ANO, BU3BNO and BU3CNO - Annual data provided for BU3CNO only
BU3CNO	380636	406973	27.8	22.1	16.4	15.3	(c)	(c)	14.1	14.5	18.2	17.8	(c)	(c)	18.3	14.1		Triplicate Site with BU3ANO, BU3BNO and BU3CNO - Annual data provided for BU3CNO only
BU4NO	380964	404831	39.5	34.5	24.5	27.8	(c)	(c)	20.9	28.5	31.0	34.6	(c)	(c)	30.2	23.3		

BU5NO	380497	405420	29.5	25.1	18.2	16.9	(c)	(c)	14.6	16.6	20.5	22.5	(c)	(c)	20.5	15.8		
BU6NO	379658	410888	39.8	31.6	28.0	32.1	(c)	(c)	24.3	25.7	29.2	32.8	(c)	(c)	30.4	23.5		
BU7NO	381984	411866	50.6	25.6	20.3	20.0	(c)	(c)	21.9	23.7	26.2	24.8	(c)	(c)	26.6	20.6		
BU8NO	380754	412619	43.7	-	-	-	-	-	-	-	-	-	-	-	-	-		Discontinued monitoring
BU9NO	379630	411031	34.9	29.7	19.6	(a)	(c)	(c)	32.2	24.4	26.3	29.0	(c)	(c)	28.0	21.5		
BU10NO	379854	410978	49.0	37.6	32.1	(a)	(c)	(c)	19.8	34.3	41.2	41.0	(c)	(c)	36.4	28.0		
BU11NO	380980	411193	39.8	36.5	33.9	33.3	(c)	(c)	25.3	32.3	30.8	37.5	(c)	(c)	33.7	26.0		
BU12NO	381344	410744	48.6	47.6	36.4	44.4	(c)	(c)	43.9	39.1	39.2	43.9	(c)	(c)	42.9	33.1		
BU13NO	381728	410677	44.6	43.8	35.6	42.1	(c)	(c)	(a)	35.2	38.4	42.9	(c)	(c)	40.4	29.1		
BU14NO	380398	410455	38.8	38.7	27.6	(a)	(c)	(c)	22.8	23.0	(a)	28.6	(c)	(c)	29.9	22.3		
BU15NO	380852	405209	51.6	37.8	26.4	31.3	(c)	(c)	29.8	30.9	36.0	36.3	(c)	(c)	35.0	27.0		
BU16NO	380914	404898	45.2	36.9	30.3	30.5	(c)	(c)	26.5	31.7	36.2	36.9	(c)	(c)	34.3	26.5		
BU17NO	381105	404279	38.2	29.2	21.2	23.0	(c)	(c)	23.4	19.9	25.7	27.4	(c)	(c)	26.0	20.1		
BU18NO	382071	411362	39.6	36.5	(a)	32.9	(c)	(c)	20.9	27.0	29.0	33.2	(c)	(c)	31.3	24.8		
BU19NO	381321	405115	40.4	42.3	38.4	36.6	(c)	(c)	21.6	34.3	31.0	39.1	(c)	(c)	35.5	27.4		
BU20NO	382974	405930	32.6	27.2	24.3	22.5	(c)	(c)	30.0	23.6	28.5	25.5	(c)	(c)	26.8	20.7		
<b>Manchester City Council</b>																		
MA9ANO	384601	398303	55.4	45.1	32.3	33.1	22.4	31.4	28.2	32.3	35.7	30.9	40.5	38.2	35.5	28.7		
MA24NO	383968	398070	43.9	34.8	31.1	29.6	20.6	25.0	27.0	23.9	28.7	29.6	32.7	33.5	30.0	24.3		
MA26ANO	383973	398874	41.3	29.2	22.5	23.8	18.2	19.1	20.1	20.7	23.3	22.3	33.1	30.2	25.3	20.5		
MA29ANO	384119	397503	60.4	55.6	47.1	47.2	34.5	46.6	42.0	44.3	46.5	42.9	53.5	51.3	47.7	38.6	35.8	
MA37NO	382829	391493	44.8	34.8	29.1	23.5	21.5	26.7	26.4	26.7	26.8	29.5	29.5	28.2	29.0	23.5		
MA59NO	384310	398337	39.2	31.3	25.8	24.1	16.3	19.6	17.6	20.2	23.6	20.9	32.1	32.6	-	-		Triplicate Site with MA59NO, MA60NO and MA61NO - Annual data provided for MA61NO only

MA60NO	384310	398337	38.5	31.5	26.2	23.6	17.8	19.3	17.3	20.3	24.5	22.4	30.9	29.3	-	-		Triplicate Site with MA59NO, MA60NO and MA61NO - Annual data provided for MA61NO only
MA61NO	384310	398337	39.4	31.3	22.9	25.0	17.0	19.1	17.6	20.4	22.6	22.4	31.7	29.0	25.1	20.3		Triplicate Site with MA59NO, MA60NO and MA61NO - Annual data provided for MA61NO only
MA71NO	385161	398290	49.4	36.3	27.6	28.8	19.3	30.7	29.9	28.8	33.0	34.3	38.0	32.5	32.4	26.2		
MA72NO	384761	397384	40.5	31.2	26.3	26.3	15.7	20.2	21.5	21.7	23.8	24.5	32.1	29.7	26.1	21.2		
MA73NO	388604	396042	47.1	37.3	38.7	34.2	26.0	23.7	27.8	30.1	27.3	29.2	34.4	34.0	32.5	26.3		
MA75NO	387363	394617	61.7	48.2	35.4	43.5	32.7	33.1	32.7	38.6	39.0	34.4	46.2	45.4	40.9	33.1		
MA77NO	383576	397489	42.6	40.0	36.2	31.8	18.2	30.8	31.2	31.8	32.8	31.5	37.1	35.1	33.3	26.9		
MA81NO	386589	394083	29.8	23.0	20.0	14.6	11.6	(d)	14.6	16.3	(a)	18.6	21.5	20.5	19.1	15.4		
MA82NO	384239	397276	51.3	46.8	31.7	34.9	24.4	34.9	36.3	34.1	36.7	38.4	49.8	43.8	-	-		Triplicate Site with MA82NO, MA83NO and MA84NO - Annual data provided for MA84NO only
MA83NO	384239	397276	51.2	45.8	34.2	36.2	26.7	32.4	35.5	36.9	36.7	36.7	49.4	41.1	-	-		Triplicate Site with MA82NO, MA83NO and MA84NO - Annual data provided for MA84NO only
MA84NO	384239	397276	55.9	45.2	36.6	36.1	25.6	33.7	32.9	34.5	37.5	36.8	49.2	44.4	38.7	31.4		Triplicate Site with MA82NO, MA83NO and MA84NO - Annual data provided for MA84NO only
MA88NO	384469	398981	45.8	41.2	38.1	37.8	29.2	26.9	31.0	31.9	31.6	29.2	35.7	35.7	34.5	28.0		
MA88ANO	386536	396699	57.3	43.1	26.9	33.4	(a)	30.8	29.5	30.5	33.8	33.3	40.8	39.7	36.3	29.4		
MA90BNO	384202	386121	26.1	(a)	15.1	13.6	12.2	12.6	12.8	12.9	14.5	15.9	15.3	16.8	-	-		Triplicate Site with MA90BNO, MA91BNO and MA92BNO - Annual data provided for MA92BNO only
MA91BNO	384202	386121	(a)	19.0	15.5	13.3	11.8	12.8	12.8	13.1	13.2	16.0	17.3	18.1	-	-		Triplicate Site with MA90BNO, MA91BNO and MA92BNO - Annual data provided for MA92BNO only
MA92BNO	384202	386121	26.8	18.0	15.7	13.4	11.6	12.5	13.4	13.4	14.2	14.5	17.7	16.2	15.6	12.7		Triplicate Site with MA90BNO, MA91BNO and MA92BNO - Annual data provided for MA92BNO only
MA93BNO	382419	390010	42.0	36.4	35.3	28.8	24.6	(d)	30.1	30.0	29.8	(a)	35.4	31.0	32.3	26.2		
MA95BNO	386668	397566	47.2	37.4	24.6	30.6	(a)	(a)	(a)	25.2	30.0	33.7	37.0	30.5	32.9	26.7		
MA96BNO	385189	397167	(a)	49.2	39.9	42.9	(a)	28.8	31.0	34.4	38.4	34.8	41.9	38.4	38.0	30.8		

MA99BNO	385400	399245	50.3	32.1	27.0	28.4	19.9	(a)	21.8	24.7	(a)	27.8	32.1	31.1	29.5	23.9		
MA100BNO	383605	402293	44.8	(a)	32.3	30.8	23.5	25.8	23.1	27.7	28.2	27.7	33.4	30.3	29.8	24.1		
MA101BNO	385999	402026	58.6	38.5	39.3	39.9	24.8	32.3	28.0	34.5	35.9	33.1	49.9	39.0	37.8	30.6		
MA102BNO	385792	402952	45.3	30.9	29.3	28.1	24.0	29.9	26.8	27.5	28.5	29.3	(a)	28.7	29.8	24.2		
MA103BNO	385431	400653	54.3	41.1	33.8	40.7	31.1	39.9	36.3	42.6	39.1	36.9	40.7	38.5	39.6	32.1		
MA104BNO	383511	399906	53.1	(a)	32.8	36.5	22.2	30.8	25.8	30.6	35.2	33.0	42.7	40.1	34.8	28.2		
MA112BNO	383987	396734	35.2	24.7	20.9	17.9	13.2	27.5	16.5	16.5	18.8	20.8	24.1	23.3	21.6	17.5		
MA113BNO	385087	396891	45.8	36.2	32.2	29.7	18.8	21.4	22.3	23.9	28.5	33.8	35.6	33.1	30.1	24.4		
<b>Oldham Metropolitan Borough Council</b>																		
OLMRNO	390746	405397	43.2	31.9	28.3	(b)	18.2	30.7	54.9	21.4	(b)	34.0	(b)	(b)	32.8	27.4		
OLSHSNO	390394	405454	47.9	36.5	38.6	32.4	20.0	22.8	17.4	30.9	28.9	26.6	38.2	31.7	31.0	25.1		
OL259BNO	390089	404456	45.9	40.8	33.1	32.7	24.8	26.6	25.7	29.5	32.6	31.7	29.9	33.8	32.3	26.1		
OL1RANO	388698	404903	39.0	31.7	28.5	25.3	17.2	19.8	19.6	22.2	22.7	23.2	44.6	28.4	26.9	21.7		
OL484BNO	389367	403280	39.3	37.6	31.3	28.9	17.5	(d)	21.3	24.5	27.1	25.3	(a)	28.5	28.1	22.8		
OLOBNO	389789	403685	35.8	26.6	25.0	(a)	(a)	(a)	31.3	22.6	24.3	26.0	33.8	35.9	29.0	23.5		
OLPSNO	388747	400973	40.2	30.4	29.0	23.9	20.4	23.9	24.5	23.9	26.8	27.2	33.0	(a)	27.6	22.3		
OLWARNO	389237	401310	49.0	36.4	36.8	33.1	19.0	26.3	18.9	28.9	32.6	30.0	40.1	34.6	32.1	26.0		
OLHRNO	390756	402571	51.2	34.7	29.4	27.9	24.2	30.1	27.5	30.4	32.8	36.9	39.5	35.2	33.3	27.0		
OLIRSNO	390675	402736	40.2	30.0	25.7	21.4	15.8	25.4	23.0	(a)	26.4	24.2	39.5	29.2	27.3	22.1		
OL368MRNO	390976	403252	55.8	41.2	41.7	37.6	23.8	27.3	25.8	33.0	36.0	33.7	44.4	39.8	36.7	29.7		
OLESNO	391367	404318	42.3	36.3	30.2	32.8	17.2	24.3	22.0	27.1	29.8	29.9	(a)	29.9	29.3	23.7		
OLARNO	392771	402951	33.0	28.5	23.4	22.0	14.2	18.7	20.1	21.4	24.3	26.5	31.7	26.7	24.2	19.6		
OLWOODNO	393056	404638	39.4	29.6	27.0	26.4	20.8	25.1	24.7	25.6	21.7	27.6	39.2	34.1	28.4	23.0		

OLWSMSNO	392947	404854	45.9	36.4	31.5	31.1	20.1	26.5	23.9	30.6	33.8	30.6	38.0	32.2	31.7	25.7		
OL17SRNO	393643	405343	59.3	50.4	41.7	34.9	(b)	(b)	(b)	(b)	(b)	23.4	(b)	27.2	39.5	26.1		
OLHS2NO	393501	405186	38.0	31.6	27.5	23.0	17.3	20.7	19.1	22.3	21.7	(b)	30.7	(b)	25.2	20.4		
OLRRNO	394210	405752	38.8	30.2	22.0	25.0	20.7	26.9	24.2	26.3	27.1	25.4	31.4	25.9	27.0	21.9		
OLHURNO	395561	405751	35.1	33.2	31.2	28.9	20.7	24.3	23.9	24.2	26.2	28.3	33.2	25.1	27.9	22.6		
OLCVNO	399533	404454	22.4	18.2	17.8	14.0	10.5	12.5	12.4	12.8	14.0	14.0	15.6	15.7	15.0	12.1		
OLHSNO	399589	405511	25.9	27.8	22.4	23.5	16.3	23.6	18.2	23.5	21.0	22.4	28.5	25.4	23.2	18.8		
OLCW1NO	393884	409183	36.3	27.3	23.1	20.2	18.1	22.5	21.4	20.6	24.9	24.3	(a)	26.2	-	-		Triplicate Site with OLCW1NO, OLCW2NO and OLCW3NO - Annual data provided for OLCW3NO only
OLCW2NO	393884	409183	32.9	26.4	17.8	21.3	17.1	22.4	19.6	20.9	23.0	25.1	(a)	24.3	-	-		Triplicate Site with OLCW1NO, OLCW2NO and OLCW3NO - Annual data provided for OLCW3NO only
OLCW3NO	393884	409183	36.5	26.4	23.7	21.4	19.3	22.5	20.1	21.0	24.2	25.9	(a)	27.2	23.8	19.2		Triplicate Site with OLCW1NO, OLCW2NO and OLCW3NO - Annual data provided for OLCW3NO only
OL21SRNO	392217	407255	55.7	44.7	44.4	43.8	35.2	46.7	37.5	46.9	44.4	45.0	52.5	43.2	45.0	36.5	35.3	
OLJSNO	393097	406897	36.0	26.0	22.5	36.1	12.3	15.9	38.6	18.6	21.0	22.7	31.0	27.8	25.7	20.8		
OLRDNO	392111	406432	38.9	(a)	28.9	26.8	17.0	19.3	20.0	23.7	28.7	25.2	41.4	41.2	28.3	22.9		
OL12ORNO	392045	407608	54.3	41.1	32.2	22.3	28.0	44.3	(b)	39.9	40.8	42.3	49.3	41.5	37.5	30.4		
OLFANO	391100	406218	32.1	23.5	17.4	16.5	(b)	12.4	12.2	13.8	17.6	18.2	18.3	21.3	18.5	15.0		
OLSMWNO	392748	405294	(a)	(a)	19.4	17.7	(b)	19.4	16.7	17.2	25.8	23.3	(d)	(a)	19.9	19.0		
OLLSNO	392646	405286	37.6	25.6	19.6	23.0	16.0	25.1	19.2	23.0	26.9	25.2	28.7	24.5	24.5	19.9		
OLSWNO	392622	405289	17.6	31.1	24.3	25.7	18.0	24.7	19.7	23.7	20.3	21.5	31.2	28.0	23.8	19.3		
<b>Rochdale Metropolitan Borough Council</b>																		
RO2ANO	388537	409942	40.3	27.5	23.8	28.5	21.6	29.5	(b)	30.8	32.9	29.5	33.1	(a)	29.8	24.1		
RO3ANO	388581	409797	(a)	(a)	18.4	(a)	13.0	11.5	12.9	12.6	10.4	12.8	19.3	(d)	13.9	13.1		

RO4ANO	387080	406278	(d)	24.7	21.9	20.1	12.7	16.7	14.5	15.8	22.2	22.4	27.3	26.0	20.4	16.5		
RO5ANO	386870	404044	23.8	20.0	16.0	16.7	(d)	12.3	10.8	13.7	15.1	17.0	20.7	18.9	16.8	13.6		
RO6ANO	385413	408320	43.6	32.8	24.2	26.4	13.3	16.5	27.9	35.8	34.2	70.8	50.4	(d)	34.2	27.7		
RO7ANO	388603	411925	44.1	36.9	30.3	30.9	15.7	19.7	15.7	23.6	28.7	25.9	35.1	32.2	28.2	22.9		
RO8ANO	388932	412091	51.7	45.5	34.8	33.1	24.6	28.7	(b)	(b)	(b)	(b)	(b)	(a)	36.4	26.9		
RO9ANO	389057	412217	47.3	36.7	30.6	29.7	25.7	30.7	(a)	30.7	36.2	33.7	37.6	29.3	33.5	27.1		
RO10ANO	388800	413603	28.6	19.9	12.9	14.4	9.0	9.5	9.4	11.8	15.4	13.6	21.1	18.1	15.3	12.4		
RO12ANO	392072	415687	50.0	36.3	28.4	33.0	27.0	34.8	21.6	26.2	29.3	25.1	34.8	(d)	31.5	25.5		
RO13ANO	392042	415707	43.8	33.1	28.3	31.7	22.5	24.1	(a)	(a)	(a)	(a)	(a)	(a)	30.6	22.6		
RO14ANO	393665	417816	24.2	11.5	10.0	9.9	5.2	7.1	6.9	7.7	11.3	10.9	15.5	14.8	11.3	9.1		
RO15ANO	392976	411906	31.2	24.7	20.3	21.2	12.4	16.0	14.0	10.9	19.5	20.0	24.8	(d)	19.5	15.8		
RO16ANO	392542	411709	33.1	25.2	20.0	18.7	11.3	13.4	11.4	16.9	16.5	19.0	(a)	(a)	18.6	15.0		
RO17ANO	391214	412609	27.2	21.2	16.3	14.8	9.9	14.4	13.9	15.5	17.8	19.2	19.6	19.5	17.4	14.1		
RO18ANO	389877	413590	27.5	20.6	14.6	16.2	10.4	11.2	11.6	12.9	17.0	17.5	23.0	19.7	16.9	13.6		
RO20ANO	385773	408972	36.3	41.6	34.4	37.3	30.5	35.4	17.8	23.7	29.5	30.4	35.9	(d)	32.1	26.0		
RO21ANO	385820	410776	41.4	36.5	25.8	25.6	18.4	23.5	21.8	25.0	28.7	30.6	36.5	35.5	29.1	23.6		
RO22ANO	390464	411976	44.6	34.8	33.4	31.9	25.5	24.0	26.0	25.3	26.3	(a)	(a)	32.2	30.4	24.6		
RO23ANO	390377	412030	47.3	34.0	26.6	31.8	22.6	20.5	(a)	19.8	(d)	30.1	41.0	36.3	31.0	25.1		
RO24ANO	388089	410822	41.9	28.7	24.0	23.0	14.5	17.9	(a)	17.5	24.1	23.0	29.0	26.9	24.6	19.9		
RO25ANO	387792	406013	44.0	36.6	29.0	28.5	17.6	20.0	19.1	20.9	(d)	29.4	32.0	30.9	28.0	22.7		
RO26ANO	389782	414241	48.1	36.4	30.1	32.6	24.0	31.2	27.9	(a)	34.3	34.9	37.8	30.7	33.5	27.1		
RO27ANO	390710	414563	53.0	42.9	30.9	38.5	22.9	24.6	23.2	29.4	32.1	32.1	38.4	(d)	33.5	27.1		
RO28ANO	392871	415127	36.7	26.4	20.5	22.8	16.2	17.6	20.9	19.9	22.5	23.5	27.9	26.3	23.4	19.0		

RO29ANO	389336	411419	46.1	33.6	28.5	28.1	21.5	26.9	27.6	30.0	32.1	30.5	37.2	33.4	-	-		Triplicate Site with RO29ANO, RO30ANO and RO31ANO - Annual data provided for RO31ANO only
RO30ANO	389336	411419	39.6	32.3	29.5	28.0	22.1	26.7	28.2	27.6	31.6	31.5	37.3	33.8	-	-		Triplicate Site with RO29ANO, RO30ANO and RO31ANO - Annual data provided for RO31ANO only
RO31ANO	389336	411419	44.5	31.7	29.1	29.9	22.0	27.9	27.1	27.5	28.8	30.6	36.8	33.4	30.9	25.0		Triplicate Site with RO29ANO, RO30ANO and RO31ANO - Annual data provided for RO31ANO only
RO32ANO	385145	407701	37.2	28.6	27.3	25.2	21.8	(a)	(a)	(a)	(a)	(a)	(a)	(a)	28.0	19.0		
<b>Salford City Council</b>																		
SA1NO	372767	394103	28.9	19.6	17.6	15.1	10.8	11.1	11.1	13.4	15.3	16.3	18.8	18.1	16.3	13.2		
SA2NO	372140	394210	21.3	18.7	17.3	15.3	10.1	10.9	10.6	12.7	14.9	16.3	18.4	18.5	15.4	12.5		
SA4NO	377453	401830	34.1	26.8	21.0	19.2	11.1	11.9	13.3	15.5	18.1	18.4	25.5	25.5	20.0	16.2		
SA9NO	374741	400937	34.1	24.8	20.4	18.9	13.1	12.6	11.9	16.8	18.7	19.5	24.6	22.6	19.8	16.1		
SA13NO	379613	399784	31.1	22.2	16.8	14.8	10.4	10.3	10.7	(a)	(a)	17.1	21.4	20.5	17.5	14.2		
SA16NO	371187	404453	31.9	24.7	20.7	16.3	12.4	15.5	12.8	14.9	19.6	19.0	23.0	23.4	19.5	15.8		
SA20NO	374811	400857	48.6	46.7	36.1	40.0	32.3	32.9	21.7	36.8	37.5	31.4	44.4	42.7	-	-		Triplicate Site with SA20NO, SA21NO and SA22NO - Annual data provided for SA22NO only
SA21NO	374811	400857	50.4	45.9	36.4	40.0	32.3	33.4	21.6	35.2	37.9	31.7	42.9	42.2	-	-		Triplicate Site with SA20NO, SA21NO and SA22NO - Annual data provided for SA22NO only
SA22NO	374811	400857	41.7	46.0	38.6	44.8	34.0	34.7	22.5	35.8	40.0	32.0	43.9	41.7	37.7	30.5		Triplicate Site with SA20NO, SA21NO and SA22NO - Annual data provided for SA22NO only
SA23NO	377926	398727	30.7	25.2	22.8	20.3	15.1	12.1	13.6	15.6	18.5	19.4	22.6	19.6	-	-		Triplicate Site with SA23NO, SA24NO and SA29NO - Annual data provided for SA29NO only
SA24NO	377926	398727	31.7	24.4	22.5	19.9	14.4	12.5	13.5	15.9	18.6	19.8	23.5	21.7	-	-		Triplicate Site with SA23NO, SA24NO and SA29NO - Annual data provided for SA29NO only
SA29NO	377926	398727	33.6	25.7	20.6	18.9	14.7	(b)	14.0	15.8	18.4	18.6	23.6	22.2	19.8	16.0		Triplicate Site with SA23NO, SA24NO and SA29NO - Annual data provided for SA29NO only
SA25NO	381304	398014	36.8	29.8	28.2	24.3	18.3	13.8	15.6	18.5	20.2	22.3	29.2	27.4	23.7	19.2		
SA26NO	380718	399597	37.3	30.5	27.9	25.6	18.3	17.6	20.5	21.3	22.6	23.8	29.1	29.6	25.3	20.5		

SA27NO	383078	398741	38.4	33.0	30.2	24.6	20.2	22.9	17.3	24.5	27.9	28.4	31.8	30.8	27.5	22.3		
SA31NO	374025	401905	38.4	28.0	25.0	21.3	14.6	14.8	14.9	19.1	20.2	20.8	30.2	25.8	22.8	18.4		
SA34NO	375367	397800	45.2	34.8	36.3	26.5	23.4	28.9	28.9	29.1	28.1	27.9	46.5	34.0	32.5	26.3		
SA39NO	383040	398563	(a)	45.9	42.7	44.1	34.1	28.3	25.8	34.1	34.9	35.1	43.3	53.5	38.3	31.1		
SA38NO	377796	403065	34.8	24.4	23.0	18.9	15.4	12.7	15.2	16.7	18.8	19.3	24.4	23.8	20.6	16.7		
SA51NO	375213	397661	37.1	32.6	28.9	26.6	20.4	19.9	17.6	21.8	21.9	24.6	27.7	25.9	25.4	20.6		
SA55NO	372871	400734	38.3	31.9	22.5	20.2	14.8	17.4	15.1	16.9	20.9	23.1	28.2	26.2	23.0	18.6		
SA56NO	368759	396027	22.1	15.3	12.9	11.7	7.9	7.4	7.2	8.5	10.0	10.2	12.6	11.4	-	-		Triplicate Site with SA56NO, SA57NO and SA58NO - Annual data provided for SA58NO only
SA57NO	368759	396027	22.7	15.2	13.6	12.5	8.3	7.6	7.2	9.2	10.7	10.3	13.7	12.5	-	-		Triplicate Site with SA56NO, SA57NO and SA58NO - Annual data provided for SA58NO only
SA58NO	368759	396027	23.5	16.0	13.1	11.8	8.4	8.2	7.4	8.8	10.3	11.5	15.0	13.1	11.9	9.6		Triplicate Site with SA56NO, SA57NO and SA58NO - Annual data provided for SA58NO only
SA59NO	381822	397895	36.6	32.7	29.5	26.7	20.1	15.6	(a)	20.7	22.4	(a)	29.7	28.2	26.2	21.2		
SA60NO	382445	397724	(a)	34.7	35.3	32.8	29.9	25.7	34.9	31.5	27.0	30.0	32.3	31.8	31.4	25.5		
SA61NO	377269	400943	43.8	37.3	35.6	30.9	25.5	25.6	31.7	28.3	28.7	31.0	34.0	35.4	32.3	26.2		
SA63NO	374673	399912	46.8	37.4	35.6	30.0	29.1	38.5	38.3	36.5	34.5	40.0	20.6	35.1	35.2	28.5		
SA64NO	378805	399848	36.3	27.1	21.4	17.4	13.4	14.8	14.8	16.3	20.0	21.6	27.1	26.8	21.4	17.3		
SA65NO	378584	399220	48.9	39.5	32.3	27.5	23.1	32.6	26.8	26.0	32.9	34.7	49.0	36.9	34.2	27.7		
SA66NO	375118	398502	43.0	32.7	(a)	30.2	22.2	16.5	17.5	22.5	24.6	21.5	30.6	30.0	26.5	21.5		
SA68NO	373570	403096	56.0	47.3	38.5	40.3	24.1	32.8	26.7	33.6	39.1	40.0	43.0	47.8	39.1	31.7		
SA69NO	379397	401370	54.8	44.0	38.5	39.0	28.5	41.6	30.5	37.6	40.3	40.1	40.1	41.5	39.7	32.2		
SA70NO	381677	398832	37.8	26.0	23.7	21.6	17.4	17.2	17.1	18.6	21.1	23.7	28.3	26.2	23.2	18.8		
SA72NO	377536	401804	49.4	40.6	40.4	33.8	28.3	34.6	35.9	31.4	34.4	37.4	39.1	38.8	37.0	30.0		
SA73NO	374576	400611	52.0	43.1	37.3	34.2	30.2	29.8	28.2	30.4	33.3	32.4	(a)	45.5	36.0	29.2		

SA74NO	376315	399249	47.5	37.4	31.4	27.4	21.1	25.6	21.3	24.6	29.7	35.0	37.5	35.3	31.2	25.2		
SA75NO	379608	398539	40.2	33.7	29.4	26.4	19.9	17.7	19.1	22.0	24.0	27.4	33.3	32.2	27.1	22.0		
SA76NO	380540	398422	44.4	35.0	31.1	25.4	18.1	20.6	23.3	25.7	28.4	28.4	36.3	34.1	29.2	23.7		
SA77NO	381686	398504	45.7	32.5	30.4	27.0	19.8	21.0	17.1	24.2	27.2	26.2	33.2	30.9	27.9	22.6		
SA78NO	381220	399530	50.2	43.1	38.7	37.5	28.0	34.4	31.8	37.2	41.4	41.6	49.0	41.0	39.5	32.0		
SA79NO	382602	398519	48.0	35.1	32.3	24.4	18.6	25.8	23.3	23.7	31.0	32.1	35.5	31.9	30.1	24.4		
SA80NO	375428	401417	33.7	27.1	24.5	19.3	19.5	23.2	26.5	21.2	(b)	22.0	25.2	19.0	23.7	19.2		
SA82NO	375394	397816	42.0	39.9	39.2	35.0	30.8	34.7	34.6	35.2	(a)	38.0	39.1	38.6	37.0	30.0		
SA83NO	382945	400732	41.3	28.2	(a)	21.2	15.5	19.1	18.2	19.7	28.9	25.5	31.8	25.9	25.0	20.3		
SA84NO	380776	400834	41.6	31.0	25.4	22.4	18.7	18.5	18.8	19.7	22.7	23.3	32.9	30.0	25.4	20.6		
SA85NO	375991	399237	33.2	27.1	25.7	20.9	15.3	13.5	17.6	17.3	19.1	19.0	26.0	25.7	21.7	17.6		
SA86NO	383819	401771	56.3	41.3	40.2	39.5	32.1	37.0	38.5	36.3	39.8	39.4	47.7	46.6	41.2	33.4		
SA87NO	372225	395616	31.0	24.5	23.6	19.6	18.4	20.8	22.3	19.9	20.5	21.7	23.1	20.8	22.2	18.0		
SA89NO	373892	404569	41.5	35.9	29.6	28.1	20.1	17.4	20.3	22.3	23.8	24.9	29.6	31.4	27.1	21.9		
SA90NO	381349	397162	42.5	33.3	31.3	32.0	17.7	16.9	(a)	(a)	(a)	(a)	(a)	(a)	29.0	21.4		Discontinued from June
SA91NO	382580	397717	57.5	44.6	37.4	39.7	32.1	42.1	43.0	42.3	37.8	46.9	(a)	40.8	-	-		Triplicate Site with SA91NO, SA92NO and SA93NO - Annual data provided for SA93NO only
SA92NO	382580	397717	57.3	45.0	42.4	37.4	31.7	41.2	42.3	40.8	39.8	48.5	(a)	40.5	-	-		Triplicate Site with SA91NO, SA92NO and SA93NO - Annual data provided for SA93NO only
SA93NO	382580	397717	53.8	45.8	43.4	39.0	32.7	42.4	43.0	42.5	38.6	44.6	44.1	38.3	42.4	34.4		Triplicate Site with SA91NO, SA92NO and SA93NO - Annual data provided for SA93NO only
<b>Stockport Metropolitan Borough Council</b>																		
ST2NO	385047	388339	36.6	27.5	32.6	19.0	18.2	25.0	25.1	25.3	23.9	25.4	29.8	27.5	-	-		Triplicate Site with ST2NO, ST12NO and ST14NO - Annual data provided for ST14NO only
ST3NO	388551	391846	32.1	23.5	20.7	14.8	12.2	15.4	13.4	15.6	18.7	21.8	24.5	20.7	19.5	15.8		
ST6NO	385960	388552	20.1	14.6	15.9	11.0	8.5	9.1	9.9	(b)	19.7	15.8	16.8	17.3	14.4	11.7		

ST7NO	392063	386972	38.3	32.4	30.8	26.5	16.9	22.7	18.9	26.1	(d)	27.6	34.0	24.5	27.2	22.0		
ST9NO	392743	385681	21.1	13.3	15.0	11.3	7.6	(a)	9.9	8.8	9.9	13.6	15.3	15.6	12.9	10.4		
ST11NO	391083	387938	37.3	27.8	27.7	22.9	(a)	17.0	(a)	(a)	(a)	20.2	23.2	25.5	25.2	17.6		
ST12NO	385047	388339	36.3	31.2	30.2	24.4	20.0	26.8	25.2	24.2	24.8	25.6	28.9	27.0	-	-		Triplicate Site with ST2NO, ST12NO and ST14NO - Annual data provided for ST14NO only
ST13NO	384675	386295	23.5	15.2	15.8	11.7	8.1	11.6	11.7	12.1	11.2	15.7	(d)	33.4	15.5	12.5		
ST14NO	385047	388339	34.3	30.7	31.0	23.3	22.2	24.7	24.4	25.0	21.9	38.0	48.3	28.3	27.6	22.3		Triplicate Site with ST2NO, ST12NO and ST14NO - Annual data provided for ST14NO only
ST15NO	389886	388961	31.0	24.5	23.7	21.2	15.9	19.0	18.7	20.8	23.9	25.8	31.5	29.2	23.8	19.3		
ST16NO	391569	391226	29.3	21.5	27.8	15.9	13.2	15.4	17.8	15.6	17.8	23.4	22.9	21.1	20.1	16.3		
ST17NO	388442	390077	29.9	28.1	28.6	18.3	(a)	8.9	15.7	16.9	17.3	20.1	22.9	22.3	20.8	16.9		
ST18NO	389272	390441	36.7	27.3	25.1	19.4	(a)	21.5	20.6	20.4	23.4	27.3	31.6	25.4	25.3	20.5		
ST19NO	389479	393464	44.9	32.9	31.7	28.4	22.1	29.1	23.7	27.7	28.4	32.2	36.9	29.4	30.6	24.8		
ST20NO	386921	389529	33.7	33.1	46.3	32.8	27.9	27.1	29.2	25.9	20.9	26.1	26.0	28.3	29.8	24.1		
ST21NO	388599	389416	27.1	21.3	20.6	(b)	24.2	12.1	13.0	12.6	15.1	18.4	21.4	21.6	18.9	15.3		
ST22NO	391483	387636	25.2	24.2	26.4	20.9	12.9	14.2	12.6	16.3	16.2	19.6	21.7	22.3	-	-		Triplicate Site with ST22NO, ST23NO and ST24NO - Annual data provided for ST24NO only
ST23NO	391483	387636	22.7	22.4	23.7	19.6	14.3	13.0	13.0	14.9	17.0	18.4	19.7	22.0	-	-		Triplicate Site with ST22NO, ST23NO and ST24NO - Annual data provided for ST24NO only
ST24NO	391483	387636	29.2	23.0	26.5	19.6	14.1	13.2	12.9	14.7	16.3	18.5	22.9	21.4	19.0	15.4		Triplicate Site with ST22NO, ST23NO and ST24NO - Annual data provided for ST24NO only
ST25NO	395770	388655	28.3	21.5	23.5	17.2	12.6	18.8	14.8	14.8	17.8	17.9	21.5	19.1	19.0	15.4		
ST26NO	389396	387357	19.6	14.8	15.7	9.5	7.2	7.9	8.8	9.6	10.7	12.1	14.8	18.5	12.4	10.1		
ST27NO	387091	391384	24.0	17.1	16.0	12.2	16.8	8.4	(a)	(a)	(a)	(a)	(a)	(a)	15.8	11.6		
ST28NO	385700	386220	39.3	31.5	39.0	31.4	24.7	25.2	22.8	26.9	26.8	28.0	32.1	30.2	29.8	24.2		
ST29NO	390088	388545	22.2	15.7	15.2	10.4	8.7	9.5	10.6	10.1	12.1	14.3	18.8	16.1	13.6	11.0		
ST31NO	392442	391752	47.3	(a)	32.6	(a)	(a)	(b)	(a)	(a)	(a)	(a)	(a)	(a)	-	-		Insufficient data capture for annualisation

ST32NO	389480	390957	40.8	30.8	27.7	26.1	17.5	21.3	16.9	25.6	26.9	25.6	31.9	29.9	26.8	21.7		
ST33NO	390416	390087	45.2	28.0	29.3	35.2	21.4	24.6	23.6	22.6	24.2	29.8	31.3	26.4	28.5	23.1		
ST34NO	388304	390351	45.3	41.4	43.2	20.9	(b)	28.2	24.7	29.8	31.4	34.4	36.3	33.8	33.6	27.2		
ST35NO	395020	385360	22.9	20.8	26.7	(d)	16.5	(a)	20.0	18.3	16.2	20.6	16.5	18.5	19.7	16.0		
ST36NO	389386	390142	44.6	40.6	34.0	25.1	26.0	36.3	27.3	35.2	37.3	39.0	43.5	35.1	35.3	28.6		
<b>Tameside Metropolitan Borough Council</b>																		
TA1NO	394051	397180	28.7	24.1	20.4	19.3	13.8	15.5	13.0	16.1	18.9	21.0	28.5	26.1	20.5	16.6		
TA2NO	394788	394933	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	-	-		Insufficient data capture for annualisation
TA3NO	390961	395417	30.7	28.7	27.6	21.3	14.9	13.2	16.2	(b)	32.5	22.3	25.1	26.9	23.6	19.1		
TASPNO	394194	399267	37.8	34.6	29.2	27.2	18.6	20.3	22.0	(b)	38.5	25.1	30.8	29.0	28.5	23.1		
TA5NO	400488	396539	11.6	12.7	10.1	9.4	6.0	8.3	7.1	8.6	8.3	9.1	10.0	12.9	9.5	7.7		
TA11NO	400390	396025	49.0	51.7	38.8	50.0	37.5	42.8	36.2	47.9	44.2	45.7	49.2	45.7	44.9	36.4	33.7	
TA13NO	392586	398431	43.9	38.2	29.3	33.4	21.4	31.2	40.3	29.9	33.0	37.2	34.9	34.5	33.9	27.5		
TA14NO	393696	398794	41.9	37.9	25.2	32.7	22.7	27.6	24.9	29.9	(a)	31.1	(a)	27.7	30.2	24.4		
TA16NO	391413	397974	46.2	39.8	29.2	32.5	24.1	27.8	23.6	29.7	32.7	(a)	(a)	(a)	31.7	25.7		
TA17NO	389106	398242	37.4	32.1	26.3	23.0	15.5	20.8	20.4	22.2	23.8	26.9	31.5	39.7	26.6	21.6		
TA18NO	391970	395521	40.7	40.1	35.9	30.8	24.8	30.6	27.3	31.7	33.9	22.0	39.1	33.3	32.5	26.3		
TA19NO	392477	395505	35.9	30.3	35.0	30.5	23.2	21.5	22.0	26.5	26.9	28.6	29.8	30.1	28.4	23.0		
TA20NO	394610	395102	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	-	-		Insufficient data capture for annualisation
TA21NO	400423	395965	42.1	47.5	34.2	39.3	31.8	38.9	(a)	38.6	35.2	39.7	40.7	35.7	38.5	31.2		
TA23NO	393630	398598	24.9	23.0	20.9	18.5	11.8	11.3	13.7	14.4	16.8	17.6	22.1	19.7	17.9	14.5		
TA24NO	390475	395621	37.9	31.7	28.6	29.4	19.8	18.4	22.8	23.4	42.6	26.3	38.0	56.2	31.3	25.3		
TA25NO	396950	402329	28.6	20.3	19.0	(a)	(d)	15.9	(a)	20.7	19.2	22.1	46.1	18.4	23.4	18.9		

TA27NO	396177	398218	32.2	28.1	22.5	21.4	14.5	16.5	18.3	18.7	20.3	22.1	26.0	17.4	21.5	17.4		
TA28NO	393050	401038	33.1	28.5	22.7	24.7	19.3	23.4	23.8	23.8	24.4	28.9	36.2	26.7	26.3	21.3		
TA29NO	393370	399494	31.0	28.3	20.0	18.0	10.9	14.5	12.2	16.0	18.5	26.8	28.2	23.6	20.7	16.7		
TA30NO	393419	399691	44.2	35.2	24.8	27.2	20.2	21.8	18.4	24.6	27.3	29.9	36.6	29.3	28.3	22.9		
TA31NO	396899	402449	30.1	24.6	19.6	19.7	10.9	12.1	16.9	14.9	15.4	14.8	20.8	17.9	18.1	14.7		
TA32NO	396982	402437	24.1	19.7	16.6	16.1	14.5	15.7	11.6	26.9	18.2	21.3	24.3	22.5	19.3	15.6		
TA33NO	397011	402591	28.1	20.7	17.0	18.5	13.0	18.0	13.5	15.3	30.5	20.7	24.4	20.4	20.0	16.2		
TA34NO	397060	402581	25.3	21.7	17.4	17.2	11.6	15.0	15.8	16.0	19.0	20.3	19.3	20.1	18.2	14.8		
TA35NO	397080	402540	41.3	40.3	32.7	31.0	23.2	15.5	22.9	30.2	17.7	21.7	33.9	27.7	28.2	22.8		
TA36NO	397060	402387	22.4	20.4	14.3	13.3	9.6	14.8	14.9	12.6	15.4	(d)	19.4	16.1	15.7	12.8		
TA37NO	396728	402073	36.2	29.6	24.5	24.9	19.8	26.7	22.4	17.9	26.5	29.8	25.6	25.8	25.8	20.9		
TA38NO	394006	399392	33.9	27.9	21.4	19.6	14.4	20.1	18.1	18.2	20.6	23.9	30.3	25.9	22.9	18.5		
TA39NO	394114	399366	38.2	35.4	22.3	22.3	20.3	22.2	17.4	21.1	21.7	29.0	29.3	31.1	25.9	20.9		
TA40NO	394066	399314	32.7	28.0	23.7	19.9	13.8	16.0	16.6	17.8	20.5	21.9	25.5	25.1	21.8	17.7		
TA41NO	394118	399259	36.1	34.0	24.5	24.9	17.5	24.0	23.3	23.1	25.8	27.7	31.1	27.9	26.7	21.6		
TA42NO	394494	399010	45.3	28.8	24.9	19.2	14.9	17.3	18.9	16.5	20.5	25.0	22.5	25.5	23.3	18.9		
TA43NO	394204	398933	34.7	40.1	31.0	31.6	24.0	30.3	28.0	31.6	33.4	34.9	38.6	33.9	32.7	26.5		
TA44NO	397418	394398	18.7	14.9	10.9	12.1	7.2	9.0	9.7	9.7	9.6	(a)	(a)	(a)	11.3	9.2		
TA45NO	399719	395805	42.5	47.3	41.4	45.4	28.8	(d)	(b)	29.6	28.1	30.2	29.6	21.7	-	-		Triplicate Site with TA45NO, TA46NO and TA47NO - Annual data provided for TA47NO only
TA46NO	399719	395805	46.1	46.8	40.5	31.0	33.2	32.5	31.5	30.4	27.0	30.0	24.9	26.7	-	-		Triplicate Site with TA45NO, TA46NO and TA47NO - Annual data provided for TA47NO only
TA47NO	399719	395805	45.4	46.5	45.0	44.3	30.6	33.2	32.2	31.6	27.1	27.7	31.1	26.4	34.2	27.7		Triplicate Site with TA45NO, TA46NO and TA47NO - Annual data provided for TA47NO only
TA49NO	393731	398770	39.8	34.9	26.0	24.7	18.9	25.3	24.6	24.5	26.2	29.5	(a)	23.7	27.1	22.0		

TA50NO	393498	398704	44.7	36.0	33.9	32.4	26.1	30.0	31.1	32.2	32.3	33.1	33.7	34.4	33.3	27.0		
TA51NO	393314	398624	39.6	34.5	30.8	25.6	22.9	27.1	28.3	24.1	25.4	20.9	33.1	30.0	28.5	23.1		
TA52NO	393509	398737	53.6	44.8	34.7	37.9	27.6	32.6	25.3	33.8	38.0	38.3	40.5	(a)	37.0	30.0		
TA53NO	393133	398536	38.9	33.1	28.9	30.8	22.3	21.7	22.4	28.5	27.7	28.8	37.7	30.7	29.3	23.7		
TA54NO	392958	398474	47.8	45.5	34.4	37.6	32.9	32.2	20.5	40.2	37.7	37.3	42.0	53.4	38.5	31.2		
TA55NO	392741	398469	52.8	51.0	37.5	43.5	32.5	42.8	31.1	41.1	(a)	44.9	43.8	43.9	42.3	34.2		
TA56NO	392490	398368	44.1	39.0	36.9	35.3	25.7	33.9	26.2	29.2	31.0	35.8	37.2	30.5	33.7	27.3		
TA57NO	392838	398533	48.1	43.6	32.5	38.9	27.3	26.8	21.3	33.4	32.1	33.1	34.4	34.8	33.9	27.4		
TA58NO	393080	398620	38.2	33.6	26.1	26.6	19.0	24.8	23.0	24.2	25.4	29.7	31.6	18.4	26.7	21.6		
TA59NO	395652	399140	23.0	21.0	14.8	12.4	8.4	11.0	10.6	10.3	12.6	15.1	20.8	17.8	14.8	12.0		
TA60NO	395747	399112	29.2	26.6	18.1	16.4	12.8	16.6	17.0	16.4	18.3	21.8	25.1	17.5	19.7	15.9		
TA61NO	395682	399171	30.9	25.0	16.7	16.8	11.9	16.2	14.5	15.6	19.2	21.5	29.0	20.5	19.8	16.1		
TA62NO	395589	399227	23.6	21.9	14.0	14.8	10.5	15.3	13.4	14.4	17.0	19.5	22.2	16.9	17.0	13.7		
TA63NO	394917	400922	36.3	28.8	21.8	21.1	13.8	16.8	15.5	(d)	(b)	21.8	27.2	25.3	22.8	18.5		
TA64NO	395787	398769	43.7	43.3	36.9	37.1	25.0	33.3	27.8	38.7	34.2	33.8	41.4	34.2	35.8	29.0		
TA65NO	392532	396768	37.6	34.6	22.6	22.8	18.8	24.7	(b)	20.8	24.9	29.5	31.6	26.5	26.8	21.7		
<b>Trafford Metropolitan Borough Council</b>																		
TR5NO	379052	392043	33.4	26.9	23.7	20.7	16.5	13.8	(d)	16.3	19.6	19.5	24.5	21.2	21.5	17.4		
TR9NO	380933	395889	35.8	25.4	12.9	15.9	11.8	15.1	14.9	15.8	17.4	21.6	24.8	18.9	19.2	15.5		
TR19NO	378783	394728	27.5	18.2	14.0	13.5	7.2	8.7	6.5	9.8	12.2	12.3	18.5	15.2	-	-		Triplicate Site with TR19NO, TR19ANO and TR19BNO - Annual data provided for TR19BNO only
TR19ANO	378783	394728	27.8	19.2	14.8	13.6	7.6	8.3	8.5	10.4	12.5	12.4	18.7	17.3	-	-		Triplicate Site with TR19NO, TR19ANO and TR19BNO - Annual data provided for TR19BNO only
TR19BNO	378783	394728	27.6	19.0	14.1	13.2	6.5	8.6	8.3	9.8	13.9	12.7	17.3	14.7	13.9	11.3		Triplicate Site with TR19NO, TR19ANO and TR19BNO -

																		Annual data provided for TR19BNO only
TR20NO	379411	394014	38.1	28.2	24.4	22.0	12.5	16.3	18.2	18.2	20.6	20.2	28.7	26.7	-	-		Triplicate Site with TR20NO, TR20ANO and TR20ANO - Annual data provided for TR20ANO only
TR20ANO	379411	394014	38.3	30.7	24.4	24.7	12.6	17.2	15.1	18.6	21.5	20.6	29.0	19.4	-	-		Triplicate Site with TR20NO, TR20ANO and TR20ANO - Annual data provided for TR20ANO only
TR20BNO	379411	394014	38.3	30.7	24.4	24.7	12.6	17.2	15.1	18.6	21.5	20.6	29.0	19.4	22.8	18.5		Triplicate Site with TR20NO, TR20ANO and TR20ANO - Annual data provided for TR20ANO only
TR22NO	377089	390130	39.6	33.5	23.7	27.3	17.5	22.0	20.0	23.1	25.4	25.5	(a)	25.8	25.8	20.9		
TR15NO	379089	393282	34.8	24.5	32.9	27.4	19.9	13.2	12.8	19.8	20.7	18.8	28.1	26.2	23.3	18.8		
TR16NO	377418	395689	35.3	27.4	24.2	22.5	17.5	13.3	13.5	17.8	20.7	23.0	34.5	28.1	-	-		Duplicate Site with TR16NO and TR16ANO - Annual data provided for TR16ANO only
TR16ANO	377418	395689	32.7	27.6	19.1	18.9	15.2	13.8	12.9	17.2	20.9	19.7	27.3	31.5	22.3	18.0		Duplicate Site with TR16NO and TR16ANO - Annual data provided for TR16ANO only
TR23NO	376432	396355	33.7	30.6	24.2	23.1	18.0	18.3	20.6	21.2	21.8	23.8	28.2	33.8	24.8	20.1		
TR24NO	379263	385812	31.2	22.4	16.4	21.6	12.1	13.4	16.6	16.3	18.0	18.7	21.3	29.7	19.8	16.0		
TR25NO	373755	394477	23.1	15.5	13.9	12.1	8.0	7.6	6.8	9.0	11.2	10.4	13.5	10.6	-	-		Triplicate Site with TR25NO, TR25ANO and TR25BNO - Annual data provided for TR25BNO only
TR25ANO	373755	394477	21.8	15.7	11.5	12.7	7.7	7.5	7.1	9.3	11.2	10.6	11.6	13.1	-	-		Triplicate Site with TR25NO, TR25ANO and TR25BNO - Annual data provided for TR25BNO only
TR25BNO	373755	394477	21.7	15.3	14.1	11.9	7.8	7.3	6.7	8.7	10.7	10.9	14.2	11.5	11.7	9.5		Triplicate Site with TR25NO, TR25ANO and TR25BNO - Annual data provided for TR25BNO only
TR27NO	371419	390760	(a)	13.4	13.8	13.3	9.6	11.0	10.7	12.3	13.6	16.0	18.4	16.8	13.5	11.0		
TR28NO	376804	387740	39.9	32.5	26.4	23.6	21.6	21.0	20.8	23.6	25.2	24.5	30.1	26.4	26.3	21.3		
TR29NO	373906	392820	26.6	23.9	17.6	18.8	13.6	13.0	13.2	15.8	16.3	17.6	22.6	17.7	18.1	14.6		
TR31NO	376205	392690	40.6	35.1	35.5	35.0	24.6	26.1	26.0	32.6	30.2	31.5	33.9	27.3	31.5	25.5		

WI24NO	358341	405539	34.7	23.1	24.8	23.8	(d)	34.6	14.8	18.8	23.6	34.5	28.2	24.8	26.0	21.0		
WI33NO	359723	405537	44.1	33.8	33.0	40.0	21.0	26.5	19.2	30.1	32.7	15.6	39.6	26.9	30.2	24.5		
WI52NO	362137	396948	40.1	32.7	32.3	33.2	(a)	12.6	21.5	31.3	35.2	30.8	33.9	33.2	30.6	24.8		
WI81NO	355979	410362	27.8	22.6	20.8	17.4	11.4	13.9	14.2	14.5	18.3	18.1	23.3	17.5	18.3	14.8		
WI114NO	365115	400259	40.6	35.9	32.1	32.5	24.8	10.5	27.3	30.5	32.6	32.2	35.9	33.4	30.7	24.9		
WI148NO	361247	404576	37.0	29.8	26.4	25.2	19.0	20.4	18.8	19.4	25.3	24.8	28.9	27.7	25.2	20.4		
WI156NO	366320	402136	31.1	24.7	22.3	23.5	13.2	(a)	(b)	17.3	21.3	20.6	26.3	24.0	22.4	18.2		
WI161NO	369635	402019	35.0	26.0	21.4	19.8	14.5	13.3	14.1	(a)	18.7	20.2	23.4	24.4	21.0	17.0		
WI167NO	363544	397933	31.3	(a)	(b)	16.7	10.7	11.9	11.5	13.8	14.7	15.3	17.7	18.9	15.0	12.1		
WI168NO	362463	397005	38.5	31.0	26.1	25.0	17.9	23.0	(a)	(a)	26.0	26.1	30.2	27.1	27.1	21.9		
WI169NO	362557	396906	32.7	29.0	21.1	24.4	21.2	19.7	19.3	22.2	21.4	23.0	22.7	24.9	23.5	19.0		
WI170NO	362236	396675	29.1	24.3	23.0	21.1	18.4	17.2	17.0	19.4	19.0	20.2	22.0	22.1	21.1	17.1		
WI172NO	356881	401314	39.5	26.0	24.2	26.1	13.4	18.8	17.2	20.8	25.9	22.4	31.7	27.8	24.5	19.8		
WI177NO	356230	410105	33.6	24.5	24.5	22.2	12.9	14.2	15.6	18.3	21.3	19.7	26.6	24.6	21.5	17.4		
WI178NO	356021	410128	43.2	(a)	33.3	30.5	26.4	29.2	26.6	27.8	29.2	27.1	37.1	32.4	31.2	25.2		
WI180NO	362105	396491	49.3	41.5	41.3	37.8	37.8	44.1	41.1	35.4	41.6	39.4	38.9	39.5	40.6	32.9		
WI181NO	354819	406235	35.0	31.8	28.0	26.3	22.0	19.2	19.4	24.0	26.0	26.0	24.3	28.6	25.9	21.0		
WI186NO	358070	405587	(a)	39.4	40.2	48.1	(a)	15.0	30.2	40.5	40.9	33.9	41.7	41.0	37.1	30.0		
WI188NO	362111	396526	38.0	33.3	27.9	26.8	25.2	29.3	27.2	29.9	30.9	28.0	30.5	28.9	29.7	24.0		
WI205NO	362151	396604	32.7	26.8	23.5	25.8	16.1	17.8	11.3	21.3	23.2	22.5	26.0	24.1	22.6	18.3		
WI208NO	365686	400243	33.9	24.6	24.1	20.7	15.2	18.0	19.5	20.7	24.1	27.3	35.7	27.0	-	-		Triplicate Site with WI208NO, WI209NO and WI210NO - Annual data provided for WI210NO only
WI209NO	365686	400243	34.5	27.4	21.6	21.6	13.2	19.6	18.7	20.6	24.2	25.7	34.3	30.4	-	-		Triplicate Site with WI208NO, WI209NO and WI210NO - Annual data provided for WI210NO only

WI210NO	365686	400243	37.4	25.3	23.2	22.2	14.4	20.1	17.8	20.7	23.3	27.5	34.3	28.8	24.4	19.7		Triplicate Site with WI208NO, WI209NO and WI210NO - Annual data provided for WI210NO only
WI213NO	362019	396512	26.4	22.1	17.9	18.0	9.4	10.0	9.2	14.6	16.4	15.9	20.1	15.2	16.3	13.2		
WI216NO	358464	405342	56.9	39.7	45.6	40.8	34.4	38.1	(a)	24.5	33.5	34.6	40.9	36.4	38.7	31.3		
WI217NO	357780	405306	39.7	31.9	25.0	28.8	(a)	13.2	(a)	20.9	23.4	22.4	(a)	(a)	25.7	19.6		
WI219NO	357484	405407	36.6	27.2	20.1	20.9	11.1	13.7	11.0	17.2	20.3	18.1	26.3	22.7	20.4	16.6		
WI220NO	357420	405407	30.9	23.9	19.6	18.0	10.0	12.2	11.7	14.2	18.5	17.1	23.0	17.7	18.1	14.6		
WI221NO	360499	397867	36.0	30.2	27.6	24.2	16.4	22.2	18.6	22.7	27.2	23.7	29.2	18.8	24.7	20.0		
WI222NO	360491	397842	33.7	24.0	22.3	21.4	14.5	16.9	16.3	16.1	21.1	21.1	26.0	24.0	21.5	17.4		
WI223NO	360430	397779	32.9	24.4	22.4	21.4	14.4	15.6	14.5	18.9	22.6	20.6	25.5	24.8	21.5	17.4		
WI224NO	360418	397775	45.4	37.8	30.7	32.9	20.8	28.9	22.7	30.8	32.1	28.4	31.8	32.1	31.2	25.3		
WI225NO	360459	397995	34.6	27.1	20.4	(d)	30.8	15.3	(a)	17.4	20.7	19.8	25.1	34.9	24.6	19.9		
WI226NO	360462	398006	34.8	27.4	23.8	22.5	13.2	13.5	13.5	18.6	21.3	20.4	25.4	25.3	21.6	17.5		
WI227NO	360576	398144	36.4	30.4	24.9	25.3	15.7	19.5	17.5	22.5	25.0	22.6	30.2	27.5	24.8	20.1		
WI228NO	360578	398126	33.2	27.2	22.7	25.0	18.1	17.7	(a)	20.6	22.8	21.0	25.4	23.6	23.4	18.9		
WI230NO	360380	397912	39.9	30.3	26.7	29.8	17.7	26.1	23.0	26.6	27.8	28.4	29.4	29.7	28.0	22.6		
WI231NO	357473	398990	34.2	28.1	26.8	26.6	21.6	21.1	19.6	24.2	26.2	24.5	27.6	27.2	25.6	20.8		
WI232NO	357635	399502	32.7	25.2	21.0	20.5	11.6	12.3	10.8	14.1	19.5	(a)	26.5	23.4	19.8	16.0		
WI233NO	357445	406461	36.4	26.1	21.1	19.9	10.7	13.3	11.8	17.3	20.7	19.1	27.9	24.6	20.7	16.8		
WI234NO	363136	403467	42.7	32.4	28.1	26.1	15.5	19.6	18.3	22.0	23.9	24.5	32.4	30.9	26.4	21.4		
WI235NO	365419	399116	30.0	22.5	17.8	16.3	12.0	14.4	12.6	16.0	18.2	18.0	21.9	23.5	18.6	15.1		
WI236NO	365386	400353	29.9	22.0	18.0	14.5	(b)	28.9	9.9	12.0	14.9	(a)	20.6	20.6	19.1	15.5		
WI237NO	367352	403200	36.1	29.1	24.4	23.0	13.5	13.7	13.9	19.2	21.9	21.3	29.6	27.6	22.8	18.4		
WI238NO	369056	402146	36.5	26.5	(d)	40.9	14.5	16.3	13.6	18.8	22.6	(a)	27.9	30.3	24.8	20.1		

WI239NO	357092	404213	30.7	22.0	19.3	16.7	9.9	11.5	11.2	14.4	19.1	17.9	22.7	19.2	17.9	14.5		
WI240NO	360220	407146	29.4	21.5	19.8	17.6	13.3	13.1	13.1	16.0	16.6	31.0	20.5	21.3	19.4	15.7		
WI241NO	358025	406658	42.8	27.7	22.8	22.2	13.4	16.3	13.2	18.5	20.1	20.6	29.8	25.2	22.7	18.4		
WI244NO	357610	406859	38.1	26.5	21.8	22.1	11.6	12.4	11.0	(a)	23.5	24.2	31.7	25.1	22.5	18.3		
WI245NO	358133	405492	53.6	36.1	44.7	34.8	33.2	36.6	39.6	36.7	38.1	41.5	43.5	37.7	39.7	32.1		

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

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

Local bias adjustment factor used.

National bias adjustment factor used.

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

Greater Manchester confirm that all 2025 diffusion tube data have been uploaded to the Diffusion Tube Data Entry System.

#### Notes:

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

NO<sub>2</sub> annual means exceeding 60 µg/m<sup>3</sup>, indicating a potential exceedance of the NO<sub>2</sub> 1-hour mean objective are shown in **bold and underlined**.

See Appendix C: QA/QC of Diffusion Tube Monitoring for details on bias adjustment, monthly outliers/anomalous results and annualisation.

**(a)** – Missing tube

**(b)** – Monthly outliers/Anomalous results

**(c)** – Double exposed diffusion tubes

**(d)** – No result reported (E.g. Returned blank, or compromised due to dirt, water, missing labels etc.)

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

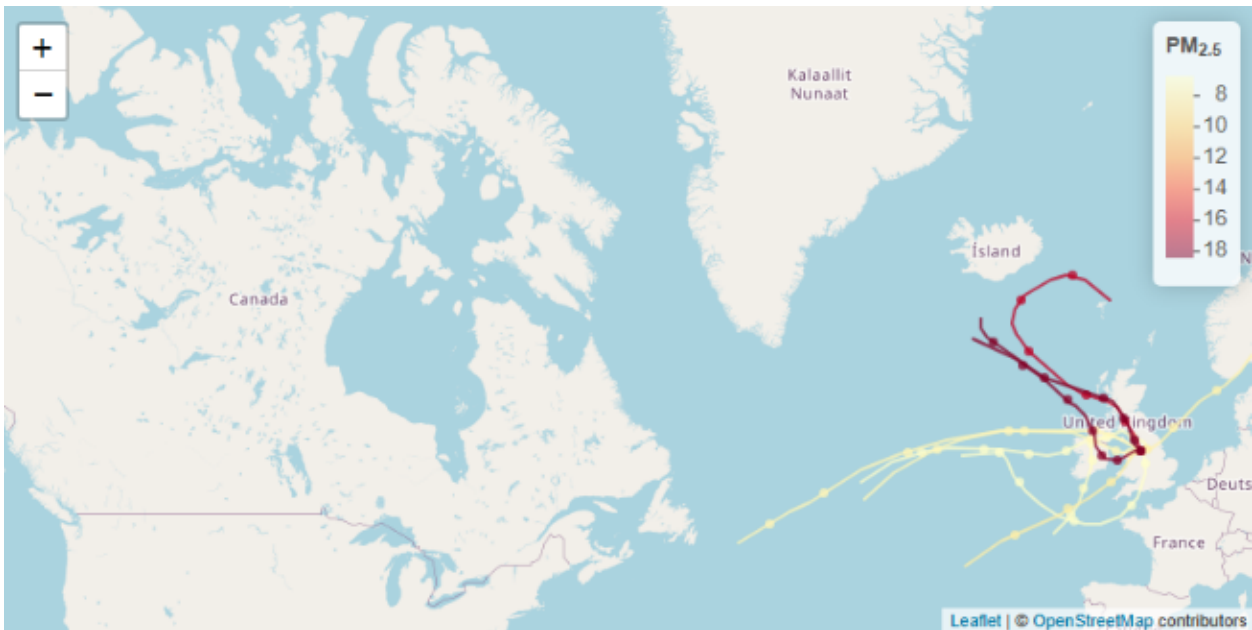
### New or Changed Sources Identified Within Greater Manchester During 2025

#### Greater Manchester Regional Sources

Air Quality episode notifications were received from the Met Office and Bureau Veritas during 2025 relating to predicted high pollution episodes. These were noted and the GM automatic monitor network monitored for any events. Local events, such as large fires, were also monitored to ascertain if there are any effects on regional air quality (such as moorland fires in Oldham and Bolton, and large building fires in Wigan and Manchester).

Levels of both PM<sub>10</sub> and PM<sub>2.5</sub> increased during 2025; work has been on-going to put this into context and identify possible sources. This has been supplemented by readings taken for the Burn Better project using the GM low-cost sensor network. A summary of notable events is provided below, with further explanation taken from CAMS (Copernicus Atmosphere Monitoring Service) reports ([Link to Quarterly and Episode Reports](#)):

- PM<sub>2.5</sub> increases linked to stagnant weather conditions and absence of precipitation associated with anticyclones. This facilitated the accumulation of emissions of PM and gaseous precursors from agriculture and residential heating across Europe with a transboundary contribution to the UK. From 10 March particulate matter started to decline, as precipitation began to remove pollutants.
- June-July 2025 – Spike events could relate to the transboundary contribution of Canadian wildfires and Saharan dust over Europe ([Link to CAMS video showing intense dust and smoke activity over Europe](#)). Increases towards the end of this period may be due to wildfires in Northern Scotland, these fires increased the year-to-date total estimated emissions for the UK to the highest level recorded in 23 years of CAMS data ([CAMS tracks extreme July wildfire activity on both sides of Atlantic | Copernicus](#)). Figure C.1 is a map showing transatlantic air pollution trajectories from North America to Europe, with colour-coded lines representing PM<sub>2.5</sub> concentration levels ranging from 8-18 µg/m<sup>3</sup>. Key routes originate near Canada and the United States, extending across the Atlantic Ocean to the United Kingdom, highlighting pollution transport patterns.



**Figure C.1 – Example back trajectory plot for top ten highest daily PM<sub>2.5</sub> concentration, July 2025**

- 10-13 August, with smaller spikes 17th and 24th – Further analysis suggests these could result from a combination of wildfires in Canada, Spain and Portugal along with Saharan dust reaching the UK ([Highest wildfire emissions in at least 23 years for Europe after a hectic summer | Copernicus](#)). Figure C.2 is a map showing PM<sub>2.5</sub> pollution levels originating from parts of Europe and the Atlantic Ocean, with coloured lines indicating pollution trajectories heading towards the United Kingdom.



**Figure C.2 - Example back trajectory plot for top ten highest daily PM<sub>2.5</sub> concentration, August 2025**

**Bolton Metropolitan Borough Council**

Air quality assessments have been received and considered for the following planning applications. The air quality impact was determined as negligible/not significant for all the developments, although some required mitigation measures during the construction phase of the development in the form of a construction environmental management plan (CEMP). Notable applications included:

**19281/24**| PART A; OUTLINE APPLICATION FOR THE ERECTION OF A HOTEL, MIXED COMMERCIAL/RETAIL AND RESIDENTIAL USES PART B; FULL PLANNING APPLICATION FOR THE DEMOLITION, SITE CLEARANCE AND REMEDIATION OF EXISTING SITE, COMPRISING OF LANDSCAPING AND HIGHWAYS WORKS TOGETHER WITH THE ERECTION OF UP TO 398 DWELLINGS AND 5 COMMERCIAL/RETAIL UNITS (650SQM). Land at Church Wharf.

**19713/25**| DISCHARGE OF CONDITIONS 3 (AIR QUALITY) AND 12 (NOISE) ON APPLICATION 18454/24 BL5 1BZ.

**19724/25**| OUTLINE APPLICATION FOR THE ERECTION OF MIXED USE COMMERCIAL, INDUSTRIAL AND STORAGE UNITS (CLASS B2/B8) WITH ASSOCIATED INFRASTRUCTURE Moss Lane Bolton.

**19813/25**| PART DISCHARGE OF CONDITION 10 (CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN), 12 (CONSTRUCTION DUST MANAGEMENT PLAN) BL5 1BH.

**19948/25**| CHANGE OF USE FROM INDUSTRIAL/STORAGE INTO A PET FUNERAL SERVICE (SUI GENERIS BL3 6EH).

**20136/25**| DISCHARGE OF CONDITION 6 (SUSTAINABILITY AND AIR QUALITY MEASURES - PRIOR TO CONSTRUCTION (BLOCKS 1 & 2) COMPLIANCE (BLOCKS 3 & 4 AND TOWNHOUSES) ON APPLICATION 17137/23|Former Moor Lane Bus Station.

**20524/25**|RETROSPECTIVE APPLICATION FOR USE OF LAND AS A WASTE TRANSFER STATION. Land North of Toughsheet Site, Off Manchester Road, Bolton.

**20526/25**| DISCHARGE OF CONDITION 4 (DETAILS OF EXTERNAL FLUE) ON APPLICATION 19948/25 BL3 6EH.

**20536/25**| ERECTION OF 6 NO. INDUSTRIAL UNITS TOGETHER WITH ASSOCIATED ACCESS ROAD, SERVICES AREAS, CAR PARKING BL2 2HH.

**20734/25**| ERECTION OF 60 NO. DWELLINGS TOGETHER WITH CONSTRUCTION OF VEHICLE ACCESS POINTS, INTERNAL ACCESS ROADS AND INFRASTRUCTURE WORKS BL5 1DQ.

**21509/25**| PART DISCHARGE OF CONDITION 2 (AIR EMISSIONS) OF PLANNING APPLICATION 15775/23|Land South West of Moss Lane Blackrod Bolton.

In addition to these, 22 CEMPs were submitted to address emissions associated with the construction phase of developments (a decrease from 27 received in 2024). Planning applications are available to view through the following link: [Bolton Council Planning Portal Search](#).

There were no new Part A or Part B industrial installations permitted under The Environmental Permitting (England and Wales) Regulations 2016 in Bolton in 2025

### **Manchester City Council**

No major developments receiving planning approval in Manchester during 2025 with an associated air quality assessment were deemed to be likely to have a significant adverse impact on local air quality during their operational phase. Demolition and/or construction phase dust control mitigation measures were agreed for the majority of developments in accordance with IAQM Guidance, as was EV charging provision in accordance with MCC Air Quality & Planning Guidance and IAQM Guidance.

No new Environmental Permitting Regulations (EPR) sites began operation in Manchester during 2025 which were likely to have a significant adverse impact on local air quality.

One EPR site closed during 2025:

Thomas Storey Fabrications Ltd, Stainburn Road, Manchester, M11 2EB. Part B Process: Coating of metal and plastic.

### **Salford City Council**

A planning application search, using the [Salford City Council Planning Public Register](#), was conducted for all types of major development that were approved during 2025 with an associated air quality assessment. 18 results were generated; none were deemed to have a significant adverse impact on air quality during their operational phase. Dust control mitigation measures were proposed during the construction/demolition phase for the majority of developments. Recommended mitigation measures included the installation of EV charging points at developments in accordance with Salford City Council Local Plan

policies, EPUK/ IAQM 'Land-Use Planning & Development Control: Planning for Air Quality' guidance and Building regulations requirements.

There have been no planning applications related to large biomass installations, combined heat and power (CHP) or district heating schemes in Salford during 2025.

#### Regulated industrial processes

##### *Part A industrial processes regulated by the Environment Agency:*

The [Environment Agency public register](#) for new part A industrial installations in Salford during 2025 showed 2 Part A industrial process permits were granted:

- EPR/PP3624LU - M & I Materials Limited (Non-Ferrous Metals): Standard rules SR2009 No2 environmental permit for low impact Part A installation.
- EPR/QP3925LN - Utilities Services (MediaCity UK) Limited: Medium combustion plant boiler fuelled by natural gas.

The air quality impact of these permit variations is not considered to be significant assuming the use of best available techniques to minimise and prevent pollution.

##### *Part A2/B industrial processes regulated by the local authority:*

During 2025, 2 new part B industrial installations were permitted by Salford City Council under The Environmental Permitting (England and Wales) Regulations 2016 as follows:

- 184777/020725 - Exact Concrete Ltd: Unloading cement
- 184758/130825 - HB Accident Repair Ltd: Vehicle respraying

The air quality impact of these permit variations is not considered to be significant assuming the use of best available techniques to minimise and prevent pollution.

#### **Stockport Metropolitan Borough Council**

Stockport Council has not identified any new sources relating to significant air quality impacts within the reporting year of 2025.

In 2025 the Environmental Regulation team reviewed a significant number of planning applications for new developments within Stockport. Over 90 applications were reviewed in relation to potential air quality impacts from new developments including the construction and demolition phases.

Planning applications are reviewed to assess potential impacts of new developments on local air quality including the Stockport AQMA and locations that are included within the GM CAP. Planning applications are reviewed for impacts of bringing sensitive receptors to locations where levels of nitrogen dioxide exceed or are close to exceeding legal limit values.

## **Tameside Metropolitan Borough Council**

### **A57 Mottram Bypass (A57 Link Roads Scheme)**

The A57 Mottram Bypass forms part of the A57 Link Roads scheme delivered by National Highways and represents a major strategic highway intervention. The scheme comprises a new dual carriageway linking M67 Junction 4 to Mottram Moor and a new single carriageway connecting Mottram Moor to Woolley Bridge, bypassing Mottram-in-Longdendale. The scheme is intended to address long-standing congestion on the A57/A628 corridor between Manchester and Sheffield.

#### **Scheme Status**

Construction of the A57 Link Roads scheme commenced in late 2024 / early 2025, with phased works taking place at Mottram Moor, Woolley Bridge and the M67 terminus. The scheme is expected to become operational from 2028, with full completion anticipated during Road Investment Strategy Period 3 (2026–2031).

#### **Relevance to Local Air Quality**

The existing A57 through Mottram-in-Longdendale experiences high traffic volumes, with approximately 25,000 vehicles per day including a significant proportion of HGVs (approximately 2000 vehicles per day), resulting in congestion and stop-start traffic conditions. These conditions have historically contributed to elevated roadside pollutant concentrations and increased exposure of nearby residential receptors. The scheme is therefore considered relevant to local air quality management.

#### **Construction Phase Air Quality Impacts**

During the construction phase, there is potential for short-term and localised impacts on air quality associated with construction traffic, temporary traffic management measures, and activities such as earthworks and piling. These impacts are expected to be temporary in nature and managed through standard construction environmental controls implemented by National Highways.

#### **Anticipated Operational Air Quality Impacts**

Once operational, the bypass is expected to remove a significant proportion of through-traffic, including HGVs, from Mottram-in-Longdendale. This is anticipated to reduce congestion and improve traffic flow within residential areas, leading to a beneficial effect on local air quality, subject to the redistribution of traffic onto the new link roads.

## Additional Air Quality Works Undertaken by Greater Manchester During 2025

### Salford City Council

Salford City Council has continued to expand renewable energy generation across its estate. A £300k grant from the Mayoral Renewables Fund has enabled the installation of additional solar PV systems at seven further council sites. This programme now delivers:

- More than 5 MW of installed renewable energy capacity across solar carports, roof-mounted, and ground-mounted arrays
- An expected annual generation of over 4.7 GWh
- Estimated annual carbon savings of over 1,600 tonnes of CO<sub>2</sub>

Work is ongoing to improve the energy performance of council buildings and reduce emissions from heat:

- A £101,000 grant was secured to undertake feasibility studies and detailed designs for low-carbon heat and energy efficiency upgrades across seven council sites.
- Further grant applications have been submitted to the Public Building Retrofit Fund and the Public Building Retrofit Enabling Fund.
- LED lighting upgrades have been completed in an additional five council buildings.

These actions reduce reliance on grid electricity and contribute to lower emissions from power generation, supporting both climate and air quality objectives.

### Fleet Decarbonisation

The Council continues to transition its operational fleet to low-carbon alternatives. Recent progress includes the installation of 25 new EV chargers across four council sites and the procurement of five additional electric vehicles, including:

- An electric refuse collection vehicle
- An electric pick-up truck

The shift to electric fleet vehicles reduces exhaust emissions of NO<sub>x</sub> and particulate matter, delivering direct air quality benefits alongside carbon reductions.

### Greener Salford Campaign

The Greener Salford campaign continues to support behaviour change among residents by providing practical advice, best-practice guidance, and accessible information on climate action:

- The 2025 campaign focused on repair, donate, sell, recycle, encouraging residents to reduce waste and extend product lifecycles. Messaging was delivered through the Council website and citywide digital advertising channels.

This engagement work helps build community participation in climate action and supports wider environmental improvements across the city.

## QA/QC of Diffusion Tube Monitoring

Diffusion tubes used by Greater Manchester are supplied by Staffordshire County Council Highways Laboratory as 20% TEA in Water solution. The Air Quality Review and Assessment website gives a bias adjustment figure of 0.81 for the 2025 data set.

The diffusion tube monitoring program was completed generally in line with the 2025 Diffusion Tube Monitoring Calendar. However, in some districts, collection of diffusion tubes and returning to the analysis laboratory was affected by local issues (see Section 3.2.1 for further information). These tubes have been noted and the affected monthly results removed from the analysis calculations.

The AIR NO<sub>2</sub> Proficiency Testing (PT) scheme uses laboratory spiked Palmes-type diffusion tubes to assess each participating laboratory's analytical performance on a quarterly basis.

Staffordshire County Council Highways Laboratory have provided a 100% satisfactory response to tested samples up to March 2026 (latest data provided by the laboratory). Round 68 (February 2025) recorded 87.5% satisfactory results, however all other rounds continued a 100% satisfactory response to tested samples achieved since the 2022 AIR PT exercise.

Table C.1 lists those UK laboratories undertaking LAQM activities that have participated in recent AIR NO<sub>2</sub> PT rounds and the percentage of results submitted which were subsequently determined to be satisfactory. As noted in the LAQM QA-QC Framework, [link to 'AIR-PT-Rounds 62 to 74 \(February 2024 – February 2026\)'](#).

Diffusion tube precision can be described as the ability of a measurement to be consistently reproduced, i.e., how similar the results of duplicate or triplicate tubes are to each other. For the purposes of Local Air Quality Management, tube precision is separated into two categories, "good" or "poor." The results of the AIR PT and a field inter-

comparison exercise precision survey indicated a good overall level of precision with collocated studies for the Staffordshire County Council Highways Laboratory diffusion tubes over the past three years. A summary of the results of collocated diffusion tube analysis by various laboratories is presented in Table C.2, as noted at the following LAQM [link to Precision and Accuracy](#).

### Monthly Outliers/Anomalous Results

Diffusion tube data will occasionally report monthly concentrations that do not correlate with expected values at this site. Table C.3 outlines outlying monthly values, including the annual mean at the site before and after the outlier has been removed.

These monthly concentrations have been regarded by the Authority as erroneous given the type of location, and comparison with other measured concentrations from the same location. Consequently, these have been removed from the annual results. Similarly, for months where diffusion tubes were otherwise compromised, in a manner potentially affecting the readings, as noted by the analysis laboratory, they have been disregarded.

Where this has resulted in datasets with less than 75% data capture, they have proceeded to be annualised in accordance with LAQM.TG22.

### Diffusion Tube Annualisation

Annualisation is required for any site with data capture less than 75% but greater than 25%. Annualisation was required for 36 locations which had less than a 75% capture rate, due to the factors noted above or tubes missing at collection time. The sites requiring annualisation are shown in Table C.4.

The Automatic Urban and Rural Network urban background sites at Manchester Piccadilly (UKA00248, Easting/Northing: 384311, 398337), Bury Whitefield (UKA00598, Easting/Northing: 380637, 406974), Manchester Sharston (UKA00617, Easting/Northing: 384201, 386122) and Wigan Centre (UKA00482, Easting/Northing: 357816, 406024) have been used to provide an annualisation correction factor which was applied to the sites. Details of the calculation method undertaken are provided in Table C.4.

The remaining diffusion tube monitoring locations within Greater Manchester recorded data capture of greater than 75%, annualisation is not required for these monitoring data.

**Table C.1 - Laboratory summary performance for AIR Nitrogen Dioxide PT rounds, 2023-2025**

AIR PT Round	AR062	AR063	AR065	AR066	AR068	AR069	AR071	AR072	AR074
Round conducted in period	Jan – Feb 2024	April – June 2024	July – Aug 2024	Sep – Oct 2024	Jan – Feb 2025	April – June 2025	July – Sep 2025	Oct – Dec 2025	Jan – Feb 2026
Aberdeen Scientific Services	100%	100%	100%	100%	100%	100%	100%	100%	100%
Edinburgh Scientific Services	100%	100%	100%	100%	100%	100%	100%	100%	0%
SOCOTEC	100% [1]	100% [1]	100% [1]	100% [1]	87.5% [1]	100% [1]	100% [1]	87.5% [1]	100% [1]
Glasgow Scientific Services	75%	100%	100%	100%	100%	75%	100%	100%	100%
Gradko International	100%	100%	100%	100%	50%	75%	100%	100%	50%
Lambeth Scientific Services	50%	50%	50%	50%	100%	100%	75%	50%	100%
Milton Keynes Council	100%	NR [2]	50%	100%	100%	75%	75%	50%	75%
Somerset Scientific Services	100%	100%	100%	100%	100%	100%	100%	100%	NR [2]
South Yorkshire AQ Samplers	NR [2]	NR [2]	NR [2]	NR [2]	NR [2]	NR [2]	NR [2]	NR [2]	NR [2]
<b>Staffordshire County Council</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>87.5%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Tayside Scientific Services	NR [2]	NR [2]	100%	NR [2]	NR [2]	NR [2]	NR [2]	100%	NR [2]

[1] Participant subscribed to two sets of test results (2 x 4 test samples) in each AIR PT round.

[2] NR, no results reported.

**Table C.2 - Summary of Precision Results for Nitrogen Dioxide Diffusion Tube Collocation Studies by Laboratory, 2023-2025**

Diffusion Tube Preparation Method	2023 Good	2023 Bad	2024 Good	2024 Bad	2025 Good	2025 Bad
Gradko, 50% TEA in Acetone	16	0	11	0	18	0
Gradko, 20% TEA in Water	25	0	30	0	28	0
ESG Didcot/SOCOTEC, 50% TEA in Acetone	33	2	33	4	17	0
ESG Didcot/SOCOTEC, 20% TEA in Water	8	0	1	1	4	0
<b>Staffordshire Scientific Services</b>	<b>12</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>14</b>	<b>0</b>
Glasgow Scientific Services	1	0	1	0	1	0
Edinburgh Scientific Services	4	2	5	2	1	0
Milton Keynes Council	1	0	1	0	1	0
Tayside Scientific Services	1	0	1	0	1	0
Lambeth Scientific Services	10	1	7	1	2	0
Aberdeen Scientific Services	7	0	6	0	6	0
ESG Glasgow, 50% TEA in Acetone	1	0	1	0	0	0
ESG Glasgow, 20% TEA in Water	1	0	1	0	0	0
Somerset County Council	12	0	4	0	4	0

**Table C.3 - Summary of Monthly Outliers/Anomalous Results**

District	Diffusion Tube	Month	Concentration Observed ( $\mu\text{g}/\text{m}^3$ )	Observation	Annual Mean including Outlier ( $\mu\text{g}/\text{m}^3$ )	Annual Mean excluding Outlier ( $\mu\text{g}/\text{m}^3$ )
Bolton	BO48NO	May	153.0	High	26.3	17.4
Bolton	BO53NO	June	57.6	High	27.9	26.0
Bolton	BO74NO	May	1.2	Low	26.4	28.7
Oldham	OLMRNO	April	637.2	High	75.7	27.4
Oldham	OLMRNO	September	70.0	High	75.7	27.4
Oldham	OLMRNO	November	90.5	High	75.7	27.4
Oldham	OLMRNO	December	61.4	High	75.7	27.4
Oldham	OL17SRNO	May	2.5	Low	17.2	26.1
Oldham	OL17SRNO	June	2.5	Low	17.2	26.1
Oldham	OL17SRNO	July	2.8	Low	17.2	26.1
Oldham	OL17SRNO	August	3.5	Low	17.2	26.1
Oldham	OL17SRNO	September	1.6	Low	17.2	26.1
Oldham	OL17SRNO	November	4.8	Low	17.2	26.1
Oldham	OLHS2NO	October	3.9	Low	17.3	20.4
Oldham	OLHS2NO	December	0.9	Low	17.3	20.4
Oldham	OL12ORNO	July	13.9	Low	30.4	32.1
Oldham	OLFANO	May	9.0	Low	14.3	15.0
Oldham	OLSMWNO	May	10.3	Low	18.4	19.0
Rochdale	RO2ANO	July	652.9	High	70.0	24.2
Rochdale	RO8ANO	July	1.7	Low	17.4	26.9

Rochdale	RO8ANO	August	3.7	Low	17.4	26.9
Rochdale	RO8ANO	September	2.5	Low	17.4	26.9
Rochdale	RO8ANO	October	5.2	Low	17.4	26.9
Rochdale	RO8ANO	November	5.2	Low	17.4	26.9
Salford	SA29NO (1)	June	6.2	Low	15.9	16.0
Salford	SA80NO	September	2.6	Low	17.8	19.2
Stockport	ST6NO	August	1.0	Low	10.8	11.7
Stockport	ST21NO	April	1.0	Low	14.1	15.3
Stockport	ST31NO	June	7.0	Low	18.8	N/A (2)
Stockport	ST34NO	May	12.6	Low	25.8	27.2
Tameside	TA3NO	August	0.8	Low	17.6	19.1
Tameside	TASPNO	August	1.1	Low	21.1	23.1
Tameside	TA25NO	May	1.2	Low	17.1	18.9
Tameside	TA45NO (1)	July	58.9	High	28.3	27.7
Tameside	TA63NO	September	37.3	High	19.6	18.5
Tameside	TA65NO	July	6.3	Low	20.3	21.7
Wigan	WI156NO	July	7.0	Low	17.0	18.2
Wigan	WI167NO	March	2.1	Low	12.1	13.2
Wigan	WI236NO	May	7.7	Low	14.7	15.5

**Note:**

(1) Part of a triplicate site, annual mean reported as averaged result.

(2) Data capture fell below 25%, therefore unsuitable for annualisation and removed from reporting and analysis.

Table C.4 – Annualisation Summary (concentrations presented in  $\mu\text{g}/\text{m}^3$ )

Site ID	Annualisation Factor Manchester Piccadilly AURN (UKA00248)	Annualisation Factor Bury Whitefield AURN (UKA00598)	Annualisation Factor Manchester Sharston AURN (UKA00617)	Annualisation Factor Wigan Centre AURN (UKA00482)	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean	Comments
BO75NO	1.1225	1.1619	1.0923	1.1917	1.1421	22.0	25.1	
BOA104	0.9486	0.9662	0.9680	0.9367	0.9549	25.3	24.1	
BU1NO	0.9585	0.9568	0.9508	0.9491	0.9538	25.8	24.6	
BU2NO	0.9585	0.9568	0.9508	0.9491	0.9538	27.3	26.1	
BU3ANO	0.9585	0.9568	0.9508	0.9491	0.9538	-	-	<i>Triplicate Site with BU3ANO, BU3BNO and BU3CNO - Annual data provided for BU3CNO only</i>
BU3BNO	0.9585	0.9568	0.9508	0.9491	0.9538	-	-	<i>Triplicate Site with BU3ANO, BU3BNO and BU3CNO - Annual data provided for BU3CNO only</i>
BU3CNO	0.9585	0.9568	0.9508	0.9491	0.9538	18.3	17.4	<i>Triplicate Site with BU3ANO, BU3BNO and BU3CNO - Annual data provided for BU3CNO only</i>
BU4NO	0.9585	0.9568	0.9508	0.9491	0.9538	30.2	28.8	
BU5NO	0.9585	0.9568	0.9508	0.9491	0.9538	20.5	19.5	
BU6NO	0.9585	0.9568	0.9508	0.9491	0.9538	30.4	29.0	
BU7NO	0.9585	0.9568	0.9508	0.9491	0.9538	26.6	25.4	
BU9NO	0.9528	0.9459	0.9515	0.9433	0.9484	28.0	26.6	
BU10NO	0.9528	0.9459	0.9515	0.9433	0.9484	36.4	34.5	
BU11NO	0.9585	0.9568	0.9508	0.9491	0.9538	33.7	32.1	
BU12NO	0.9585	0.9568	0.9508	0.9491	0.9538	42.9	40.9	
BU13NO	0.8965	0.8964	0.8996	0.8621	0.8887	40.4	35.9	

Site ID	Annualisation Factor Manchester Piccadilly AURN (UKA00248)	Annualisation Factor Bury Whitefield AURN (UKA00598)	Annualisation Factor Manchester Sharston AURN (UKA00617)	Annualisation Factor Wigan Centre AURN (UKA00482)	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean	Comments
BU14NO	0.9276	0.9232	0.9179	0.9197	0.9221	29.9	27.6	
BU15NO	0.9585	0.9568	0.9508	0.9491	0.9538	35.0	33.4	
BU16NO	0.9585	0.9568	0.9508	0.9491	0.9538	34.3	32.7	
BU17NO	0.9585	0.9568	0.9508	0.9491	0.9538	26.0	24.8	
BU18NO	0.9928	0.9737	0.9835	0.9683	0.9796	31.3	30.7	
BU19NO	0.9585	0.9568	0.9508	0.9491	0.9538	35.5	33.8	
BU20NO	0.9585	0.9568	0.9508	0.9491	0.9538	26.8	25.5	
OLMRNO	1.0211	1.0281	1.0030	1.0645	1.0292	32.8	33.8	
OL17SRNO	0.8240	0.8255	0.8368	0.7758	0.8155	39.5	32.2	
OLSMWNO	1.1647	1.1807	1.1025	1.2573	1.1763	19.9	23.4	
RO3ANO	1.1515	1.1632	1.1049	1.2437	1.1658	13.9	16.2	
RO8ANO	0.8994	0.9207	0.9076	0.9159	0.9109	36.4	33.2	
RO13ANO	0.8994	0.9207	0.9076	0.9159	0.9109	30.6	27.9	
RO32ANO	0.8340	0.8553	0.8403	0.8266	0.8390	28.0	23.5	
SA90NO	0.8994	0.9207	0.9076	0.9159	0.9109	29.0	26.4	
ST11NO	0.8707	0.8661	0.8890	0.8325	0.8646	25.2	21.8	
ST27NO	0.8994	0.9207	0.9076	0.9159	0.9109	15.8	14.3	
WI217NO	0.9445	0.9442	0.9476	0.9296	0.9415	25.7	24.2	

## 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<sub>x</sub>/NO<sub>2</sub> continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

GM has applied a national bias adjustment factor of 0.81 to the 2025 monitoring data. This is the overall factor calculated from 14 studies of Staffordshire County Highways Laboratory 20% TEA in Water diffusion tubes. Figure C.3 shows the March 2026 update to the National Diffusion Tube Bias Adjustment Factor Spreadsheet. A summary of bias adjustment factors used by GM over the past five years is shown in Table C.5.

GM has calculated a local bias adjustment factor for 2025 using seven co-location sites (maximum number permitted by the Diffusion Tube Data Processing Tool). The sites are representative of the city-region and majority of diffusion tube sampling locations, utilising both AURN and Local Authority continuous analysers, maintained to the same standard. The following co-location sites were used to determine the local bias adjustment factor Bolton Derby Street (BOL03), Manchester Sharston AURN (UKA00617), Oldham Shaw (UKA00579) Rochdale Queensway (RDL001), Salford Eccles AURN (UKA00339), Stockport Hazel Grove (STK5) and Wigan Leigh (WIG07).

Local bias adjustment factors in the range 0.74 to 0.92 were determined using the Diffusion Tube Data Processing Tool v6.0 and are presented in Table C.6. Combining, according to LAQM.TG22, provides a local factor of 0.81. For clarity and completeness, calculation of local bias adjustments was verified using the Diffusion Tube Precision Accuracy Bias Spreadsheet, example results for BOL03 are shown in Figure C.4.

Due to the similarity in local and national bias factor, and following LAQM.TG22 guidance, the national bias factor has been used to aid comparison with previous ASRs. The nationally derived factor includes local factors based on co-location data sent to NPL, for which GM authorities contributed 10 of the 14 studies used. As such, the national factor is likely to be the more reliable.

Figure C.3 – Screenshot of National Diffusion Tube Bias Adjustment Factor Spreadsheet (Version Number: 03/26)

National Diffusion Tube Bias Adjustment Factor Spreadsheet							Spreadsheet Version Number: 03/26				
Follow the steps below <u>in the correct order</u> to show the results of <u>relevant</u> co-location studies										This spreadsheet will be updated at the end of June 2026 <a href="#">LAQM Helpdesk Website</a>	
Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods											
Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet This spreadsheet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.											
The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.							Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.				
Step 1:	Step 2:	Step 3:	Step 4:								
Select the Laboratory that Analyses Your Tubes from the Drop-Down List	Select a Preparation Method from the Drop-Down List	Select a Year from the Drop-Down List	Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor <sup>3</sup> shown in blue at the foot of the final column.								
If a laboratory is not shown, we have no data for this laboratory.	If a preparation method is not shown, we have no data for this method at this laboratory.	If a year is not shown, we have no data <sup>2</sup>	If you have your own co-location study then see footnote <sup>4</sup> . If uncertain what to do then contact the Local Air Quality Management Helpdesk at <a href="mailto:LAQMHelpdesk@bureauveritas.com">LAQMHelpdesk@bureauveritas.com</a> or 0800 0327953								
Analysed By <sup>1</sup>	Method <small>To undo your selection, choose (All) from the pop-up list</small>	Year <sup>5</sup> <small>To undo your selection, choose (All)</small>	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m <sup>3</sup> )	Automatic Monitor Mean Conc. (Cm) (µg/m <sup>3</sup> )	Bias (B)	Tube Precision <sup>6</sup>	Bias Adjustment Factor (A) (Cm/Dm)	
Staffordshire County Council	20% TEA in water	2025	KS	Marylebone Road Intercomparison	12	45	31	42.1%	G	<b>0.70</b>	
Staffordshire County Council	20% TEA in water	2025	UB	Salford City Council	11	20	18	10.1%	G	<b>0.91</b>	
Staffordshire County Council	20% TEA in water	2025	B	Salford City Council	12	12	10	20.7%	G	<b>0.83</b>	
Staffordshire County Council	20% TEA in water	2025	R	Salford City Council	12	38	31	22.3%	G	<b>0.82</b>	
Staffordshire County Council	20% TEA in water	2025	R	Salford City Council	12	42	29	43.9%	G	<b>0.69</b>	
Staffordshire County Council	20% TEA in water	2025	R	Stoke-on-trent City Council	12	44	31	44.8%	G	<b>0.69</b>	
Staffordshire County Council	20% TEA in water	2025	R	Stoke-on-trent City Council	12	47	36	29.2%	G	<b>0.77</b>	
Staffordshire County Council	20% TEA in water	2025	UB	Stoke-on-trent City Council	10	19	15	23.1%	G	<b>0.81</b>	
Staffordshire County Council	20% TEA in water	2025	R	Bolton Council	11	24	19	24.3%	G	<b>0.80</b>	
Staffordshire County Council	20% TEA in water	2025	KS	Manchester City Council	11	37	34	10.4%	G	<b>0.91</b>	
Staffordshire County Council	20% TEA in water	2025	UC	Manchester City Council	12	25	24	5.6%	G	<b>0.95</b>	
Staffordshire County Council	20% TEA in water	2025	SI	Manchester City Council	10	14	13	12.1%	G	<b>0.89</b>	
Staffordshire County Council	20% TEA in water	2025	R	Stockport Mbc	12	28	21	29.2%	G	<b>0.77</b>	
Staffordshire County Council	20% TEA in water	2025	R	Stockport Mbc	12	19	15	23.8%	G	<b>0.81</b>	
Staffordshire County Council	20% TEA in water	2025		<b>Overall Factor<sup>3</sup> (14 studies)</b>					<b>Use</b>	<b>0.81</b>	

**Table C.5 – Bias Adjustment Factor**

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2025	National	03/26	0.81
2024	National	04/25	0.82
2023	National	03/24	0.86
2022	National	03/22	0.87
2021	National	03/21	0.86

**Table C.6 – Local Bias Adjustment Calculation**

	Local Bias Adjustment Input 1 Oldham Shaw	Local Bias Adjustment Input 2 Sharston	Local Bias Adjustment Input 3 Rochdale	Local Bias Adjustment Input 4 Eccles	Local Bias Adjustment Input 5 Hazel Grove	Local Bias Adjustment Input 6 Leigh	Local Bias Adjustment Input 7 Bolton
Periods used to calculate bias	11	12	11	12	12	12	11
Bias Factor A	0.74 (0.68 - 0.8)	0.9 (0.83 - 0.99)	0.76 (0.69 - 0.85)	0.92 (0.83 - 1.03)	0.81 (0.75 - 0.88)	0.76 (0.69 - 0.84)	0.85 (0.74 - 1)
Bias Factor B	35% (25% - 46%)	11% (1% - 21%)	31% (18% - 44%)	9% (-3% - 21%)	24% (13% - 34%)	32% (19% - 45%)	17% (0% - 34%)
Diffusion Tube Mean ( $\mu\text{g}/\text{m}^3$ )	23.8	15.5	31.1	19.8	19.0	24.4	23.8
Mean CV (Precision)	4.6%	3.2%	2.8%	3.0%	5.0%	4.3%	3.8%
Automatic Mean ( $\mu\text{g}/\text{m}^3$ )	17.5	14.0	23.8	18.2	15.4	18.4	20.2
Data Capture	98%	98%	98%	100%	97%	98%	100%
Adjusted Tube Mean ( $\mu\text{g}/\text{m}^3$ )	18 (16 - 19)	14 (13 - 15)	24 (21 - 26)	18 (16 - 20)	15 (14 - 17)	14 (13 - 16)	16 (14 - 19)

**Notes:**

The combined local bias adjustment factor was determined as 0.81. This has been provided for comparison with the national bias adjustment factor and has not been used to bias adjust the 2025 diffusion tube results. Please refer to explanation in text above.

### Figure C.4 – Example screenshot of Local Diffusion Tube Precision Accuracy Bias Spreadsheet, Bolton Derby Street (BOL03)

#### Checking Precision and Accuracy of Triplicate Tubes



Diffusion Tubes Measurements										Automatic Method		Data Quality Check	
Period	Start Date dd/mm/yyyy	End Date dd/mm/yyyy	Tube 1 µgm <sup>-3</sup>	Tube 2 µgm <sup>-3</sup>	Tube 3 µgm <sup>-3</sup>	Triplicate Mean	Standard Deviation	Coefficient of Variation (CV)	95% CI of mean	Period Mean	Data Capture (% DC)	Tubes Precision Check	Automatic Monitor Data
1	01/08/2025	02/05/2025	36.5	33.9	37.1	36	1.7	5	4.2	39	99.3	Good	Good
2	02/05/2025	03/05/2025	33.3	30	32	32	1.7	5	4.1	26.6	99.9	Good	Good
3	03/05/2025	04/02/2025	24.9	21.5	22.9	23	1.7	7	4.2	25.5	100	Good	Good
4	04/02/2025	4/30/2025	25.6	26.5	26.1	26	0.5	2	1.1	21.3	100	Good	Good
5	4/30/2025	06/04/2025	12.9	12.1	12.5	13	0.4	3	1.0	14	99.8	Good	Good
6	06/04/2025	07/02/2025	16.7	16.3	16.3	16	0.2	1	0.6	11	97.5	Good	Good
7	07/02/2025	08/06/2025	14	14.4	14.4	14	0.2	2	0.6	9	99.9	Good	Good
8	08/06/2025	09/03/2025	21.8	20.7	21.7	21	0.6	3	1.5	14	99.7	Good	Good
9	09/03/2025	10/01/2025	27.3	24.4	24.7	25	1.6	6	4.0	19	99.9	Good	Good
10	10/01/2025	11/05/2025	24.9	23.5	22.6	24	1.2	5	2.9	18	100	Good	Good
11	11/05/2025	12/03/2025	31.8	30.1	30.4	31	0.9	3	2.3	25.7	99.6	Good	Good
12	12/03/2025	01/07/2026	28	30.5	29.4	29	1.3	4	3.1	27	52.7	Good	Poor Data Capture
13													

It is necessary to have results for at least two tubes in order to calculate the precision of the measurements

Overall survey -->

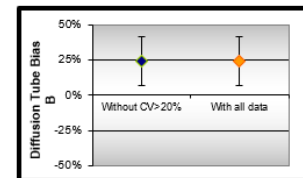
Good precision Good Overall DC  
(Check average CV & DC from Accuracy calculations)

Site Name/ ID: Bolton Derby Street (BOL03)

Precision 12 out of 12 periods have a CV smaller than 20%

<b>Accuracy (with 95% confidence interval)</b>	
without periods with CV larger than 20%	
Bias calculated using 11 periods of data	
Bias factor A	0.85 (0.74 - 1)
Bias B	17% (0% - 34%)
Diffusion Tubes Mean:	24 µgm <sup>-3</sup>
Mean CV (Precision):	4
Automatic Mean:	20 µgm <sup>-3</sup>
Data Capture for periods used:	100%
Adjusted Tubes Mean:	20 (18 - 24) µgm <sup>-3</sup>

<b>Accuracy (with 95% confidence interval)</b>	
WITH ALL DATA	
Bias calculated using 11 periods of data	
Bias factor A	0.85 (0.74 - 1)
Bias B	17% (0% - 34%)
Diffusion Tubes Mean:	24 µgm <sup>-3</sup>
Mean CV (Precision):	4
Automatic Mean:	20 µgm <sup>-3</sup>
Data Capture for periods used:	100%
Adjusted Tubes Mean:	20 (18 - 24) µgm <sup>-3</sup>



Jaume Targa, for AEA  
Version 04 - February 2011

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

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO<sub>2</sub> concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO<sub>2</sub> fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO<sub>2</sub> concentrations corrected for distance are presented in Table B.1.

For 2025, distance correction was required at 3 monitoring locations where the annual mean concentration was greater than 36 µg/m<sup>3</sup> and the monitoring site was not located at a point of relevant exposure (taking the limitations of the calculator into account). Defra 2021-based background maps for 2025 were used to obtain background NO<sub>2</sub> concentrations. The data are presented in Table C.7.

Table C.7 only shows distance corrections for tubes that meet the parameters used in the distance correction tool. Where it has not been possible to distance correct results, due to receptor to kerb or monitor to kerb distances being outside the limitations of the tool, these results have been omitted from the table.

**Table C.7 – Non-Automatic NO<sub>2</sub> Fall off With Distance Calculations (concentrations presented in µg/m<sup>3</sup>)**

Site ID	Distance (m): Monitoring Site to Kerb	Distance (m): Receptor to Kerb	Monitored Concentration (Annualised and Bias Adjusted)	Background Concentration	Concentration Predicted at Receptor	Comments
<b>Manchester City Council</b>						
MA29ANO	2.5	4.5	38.6	19.4	35.8	
<b>Oldham Metropolitan Borough Council</b>						
OL21SRNO	2.0	2.5	36.5	13.5	35.3	
<b>Tameside Metropolitan Borough Council</b>						
TA11NO	2.0	3.0	36.4	8.7	33.7	

## QA/QC of Automatic Monitoring

### Greater Manchester Air Quality Network (GMAQN)

Automatic air quality analysers in the GMAQN are subject to a high level of quality assurance/quality control. All analysers are either operated as part of the national Automatic Urban and Rural Network (AURN) or to equivalent standards.

### Data management and ratification

Analysers that are not part of or affiliated to the AURN are part of the 'Calibration Club' scheme run by Ricardo-AEA (an independent organisation accredited to perform QA/QC checks on reference automatic monitoring equipment to the ISO17025:2017 standard for testing and calibration laboratories). Data management and ratification procedures are equivalent to the AURN, the key features being:

- Data screened daily for errors including manual and automatic checks.
- Data scaled in accordance with AURN and Defra Technical Guidance (LAQM.TG22) procedures.
- Data errors or faults reported to Local Site Operators on same or next working day.
- Independent site audits twice per year to check and evaluate a range of analyser key functions and check on-site calibration gases against traceable standards.
- Final data set scaled and ratified to same standard as the AURN.

Automatic data used in the report are fully ratified.

## **Analyser service and maintenance**

Automatic analysers that are not part of or affiliated to the AURN have a dedicated Equipment Support Unit (ESU), which is currently Cura Terrae Air Ltd. The ESU service contract specification includes:

- Analyser routine servicing and maintenance twice per year to manufacturers specifications and AURN procedures.
- 48 hour callout to analyser non-routine maintenance and breakdown repair events.
- Air conditioning system routine service and maintenance in accordance with the manufacturers recommendations and 48 hour callout to attend maintenance and breakdown repair events.
- Periodic Electrical Inspection Condition Report and portable appliance electrical testing.

## **Local Site Operators (LSOs)**

Local authority officers perform LSO duties, which includes:

- Management of automatic sites within their local authority area.
- Routine instrument calibrations using calibration gases traceable to primary standards – every two weeks for Roadside sites, every four weeks for Urban Background/Urban Industrial sites.
- Emergency call-out visits, including simple or temporary repairs as directed by the AURN management unit, Ricardo or the ESU.

Current and historic data are available through [the Air Quality England website](#) and [the Clean Air GM data hub](#).

## **PM<sub>10</sub> and PM<sub>2.5</sub> Monitoring Adjustment**

The reference method for measuring both PM<sub>10</sub> and PM<sub>2.5</sub> is based upon using a gravimetric sampler. This samples ambient air through a size selective sampling head through a filter over a 24-hour period. The particulate concentration is measured by the mass difference of the filter before and after exposure and accounts for the volume of air sampled. However, this is labour intensive and cannot provide hourly measurements.

All automatic PM<sub>10</sub> and PM<sub>2.5</sub> monitoring conducted for LAQM purposes in Greater Manchester uses either Met One Beta Attenuation Monitors (BAMs) or Palas Fidas 200 particulate analysers. These are all suitable for ambient air quality reporting purposes in

the UK. For some instruments, a correction factor needs to be applied to raw data to be equivalent to the reference method:

- Met One Smart Heated BAM 1020 PM<sub>10</sub> data: Divide by 1.035
- Met One Unheated BAM 1020 PM<sub>10</sub> data: Multiply by 0.833
- Palas Fidas 200 PM<sub>2.5</sub> data: Data are processed by an inbuilt algorithm (known as Method 11), and then divided by 1.06

Where this is necessary, the correction factor is automatically applied to the raw data by Ricardo-AEA. Further information about UK approval of particulate matter monitoring instruments can be found on the [UK AIR website \(link in text\)](#).

### Automatic Monitoring Annualisation

Annualisation is required for any site with data capture less than 75% but greater than 25%. Annualisation was required for two locations which had less than a 75% capture rate: Tameside Mottram Moor (TAM1) and Trafford Moss Park (TRAF) both for NO<sub>2</sub> and PM<sub>10</sub>. The annualised data are shown in Table C.8 and Table C.9 below.

The Automatic Urban and Rural Network urban background sites at Manchester Piccadilly (UKA00248, Easting/Northing: 384311, 398337), Salford Eccles (UKA00339, Easting/Northing: 377925, 398729) and background rural site at Glazebury (UKA00170, Easting/Northing: 368755, 396030) have been used to provide an annualisation correction factor which was applied to the sites.

The remaining automatic monitoring locations recorded data capture of greater than 75%. Therefore, it was not required to annualise these monitoring data.

**Table C.8 – Automatic NO<sub>2</sub> Annualisation Summary (concentrations presented in µg/m<sup>3</sup>)**

Background Site	Annual Data Capture (%)	Annual Mean (A <sub>m</sub> )	TAM1		TRAF	
			Period Mean (P <sub>m</sub> )	Ratio (A <sub>m</sub> / P <sub>m</sub> )	Period Mean (P <sub>m</sub> )	Ratio (A <sub>m</sub> / P <sub>m</sub> )
Manchester Piccadilly	99.7	23.6	24.6	0.959	18.1	1.302
Salford Eccles	99.7	18.0	18.3	0.984	13.9	1.298
Glazebury	99.7	9.9	10.7	0.931	7.3	1.361
Average (R <sub>a</sub> )			0.958		1.320	
Raw Data Annual Mean (M)			28.9		8.7	
Annualised Annual Mean (M x R <sub>a</sub> )			27.7		11.5	

**Table C.9 – Automatic PM<sub>10</sub> Annualisation Summary (concentrations presented in  $\mu\text{g}/\text{m}^3$ )**

Background Site	Annual Data Capture (%)	Annual Mean ( $A_m$ )	TAM1		TRAF	
			Period Mean ( $P_m$ )	Ratio ( $A_m / P_m$ )	Period Mean ( $P_m$ )	Ratio ( $A_m / P_m$ )
Manchester Piccadilly	99.7	15.7	19.0	0.824	13.1	1.194
Salford Eccles	99.7	17.0	19.8	0.859	14.3	1.184
Glazebury	99.7	12.2	14.0	0.870	10.4	1.163
Average ( $R_a$ )			0.851		1.180	
Raw Data Annual Mean (M)			17.7		11.3	
Annualised Annual Mean ( $M \times R_a$ )			15.0		13.4	

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

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO<sub>2</sub> concentration at the nearest location relevant for exposure has been estimated using the NO<sub>2</sub> fall-off with distance calculator available on the LAQM Support website. Where appropriate, automatic annual mean NO<sub>2</sub> concentrations corrected for distance are presented in Table A.3.

One automatic monitoring station recorded an exceedance of the AQO, Manchester Bridge Street (CAP). However, Bridge Street is a roadside only site for CAP compliance monitoring, it does not have any relevant exposure within 50 metres and is unsuitable for distance correction.

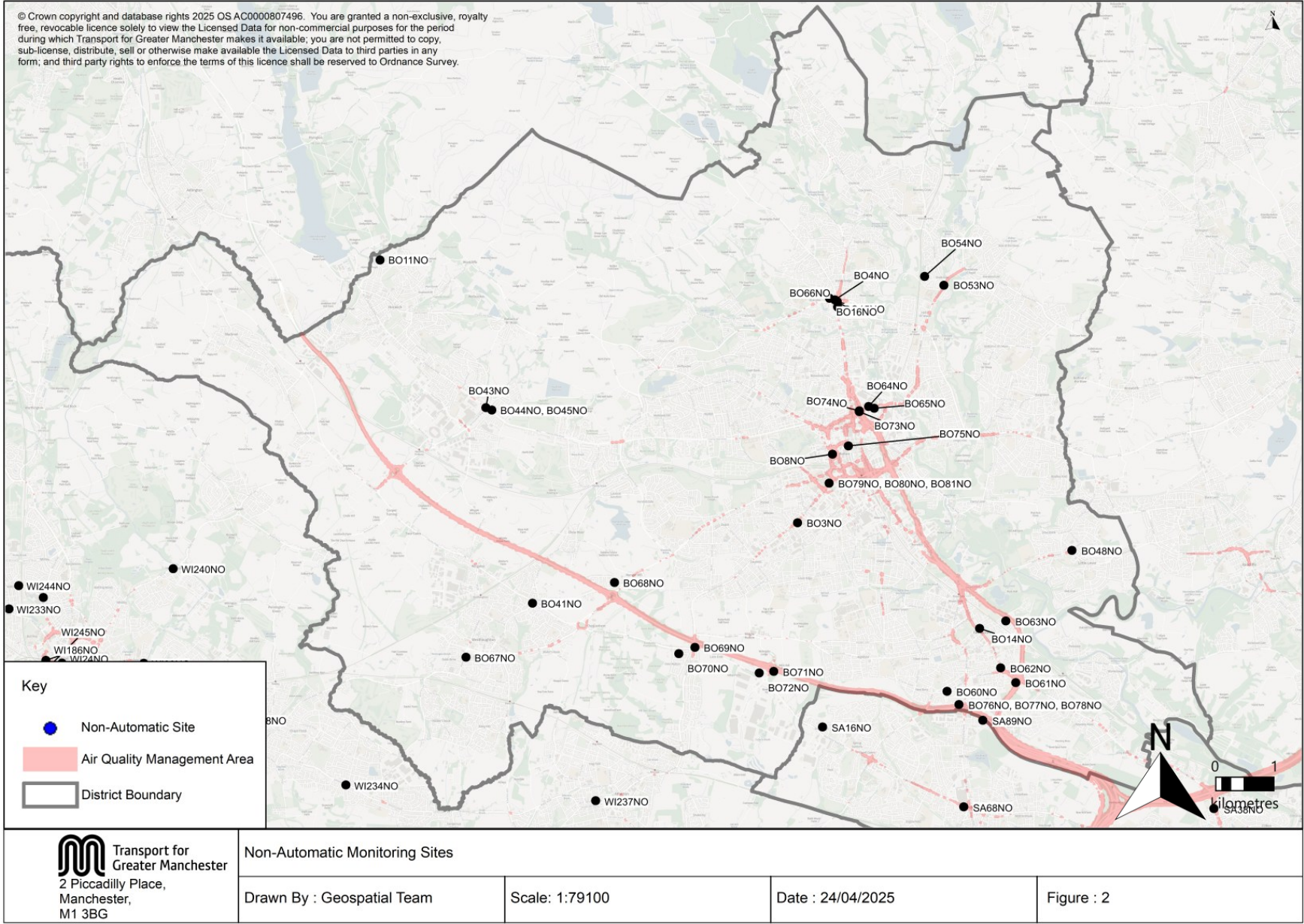
## Appendix D: Map(s) of Monitoring Locations and AQMAs

Maps are presented below for each of the 10 Greater Manchester Local Authorities in alphabetical order, showing monitoring locations and their position relative to the 2016 Air Quality Management Area for nitrogen dioxide annual mean.

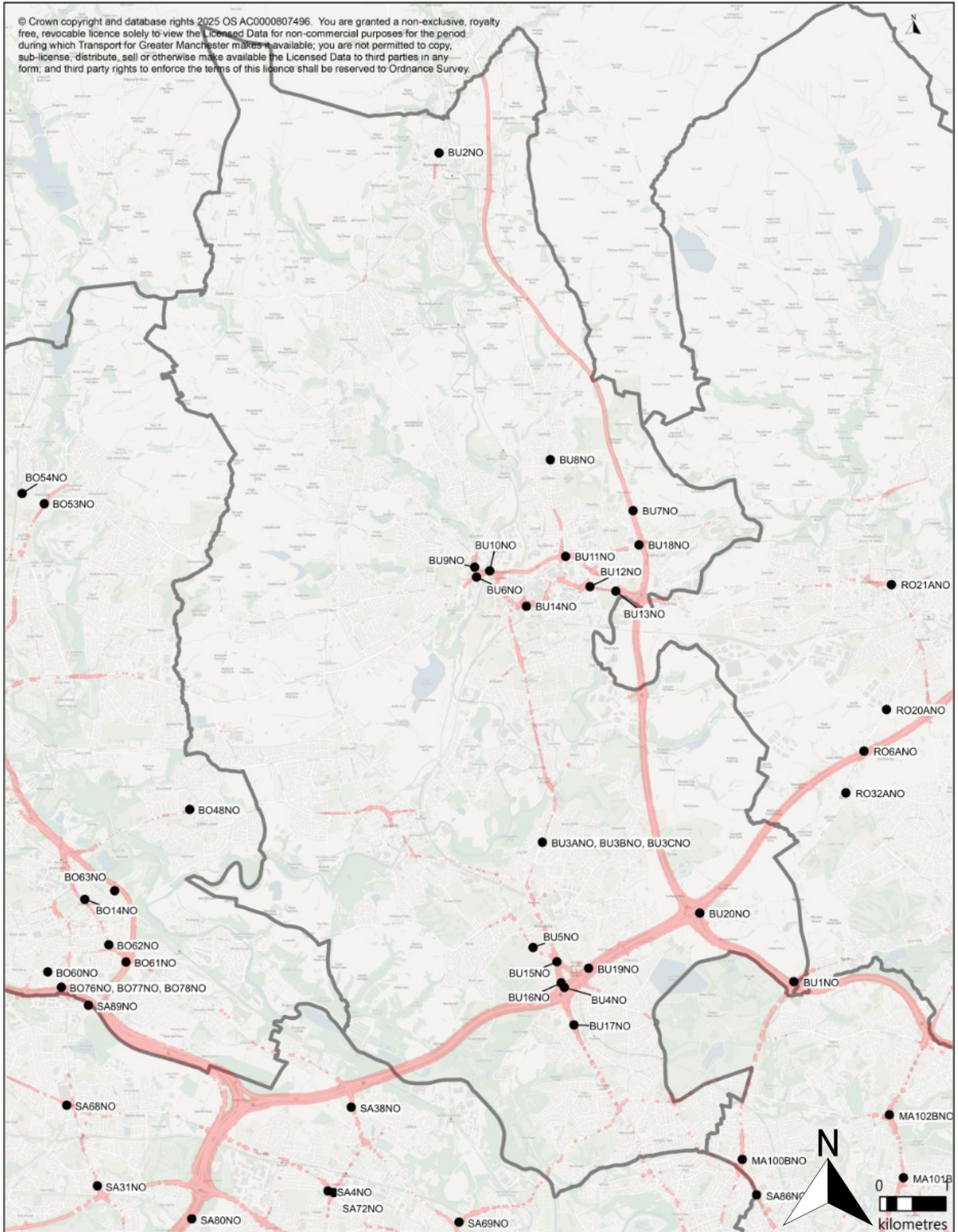
Further details of the monitoring site locations, including the Clean Air Plan locations, can be found through this [link to the Clean Air GM Website data hub](#).

Greater Manchester AQMA boundaries can be found via [this link to the UK Air AQMAs interactive map](#).

Figure D.1 – Map of Non-Automatic Monitoring Sites, Bolton Metropolitan Borough Council



**Figure D.2 – Map of Non-Automatic Monitoring Sites, Bury Metropolitan Borough Council**



Non-Automatic Monitoring Sites

 Transport for Greater Manchester  
2 Piccadilly Place,  
Manchester,  
M1 3BG

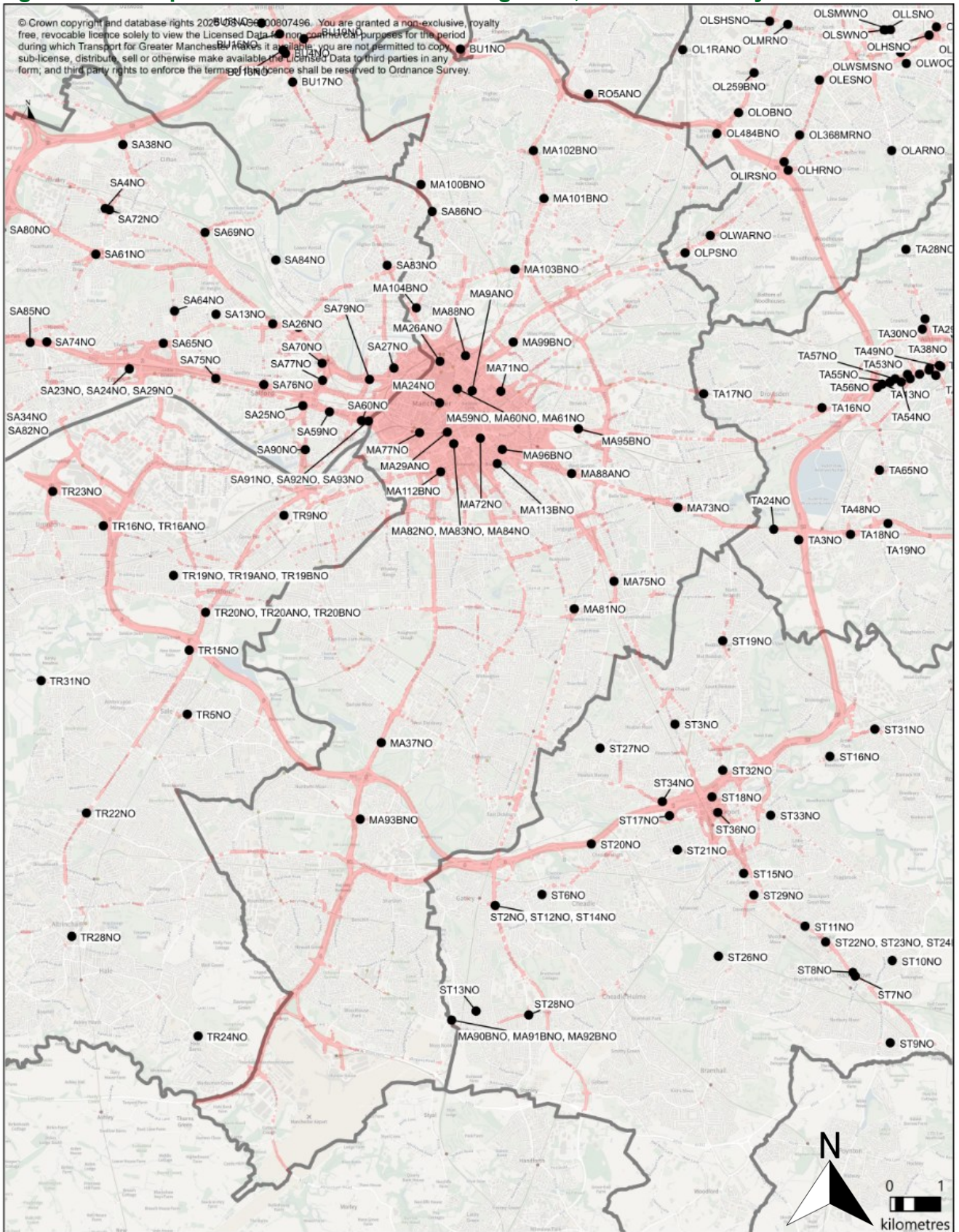
Drawn By : Geospatial Team

Date : 28/04/2025

Scale : 1:71280

Figure : 3

**Figure D.3 – Map of Non-Automatic Monitoring Sites, Manchester City Council**



Non-Automatic Monitoring Sites

 Transport for Greater Manchester  
2 Piccadilly Place,  
Manchester,  
M1 3BG

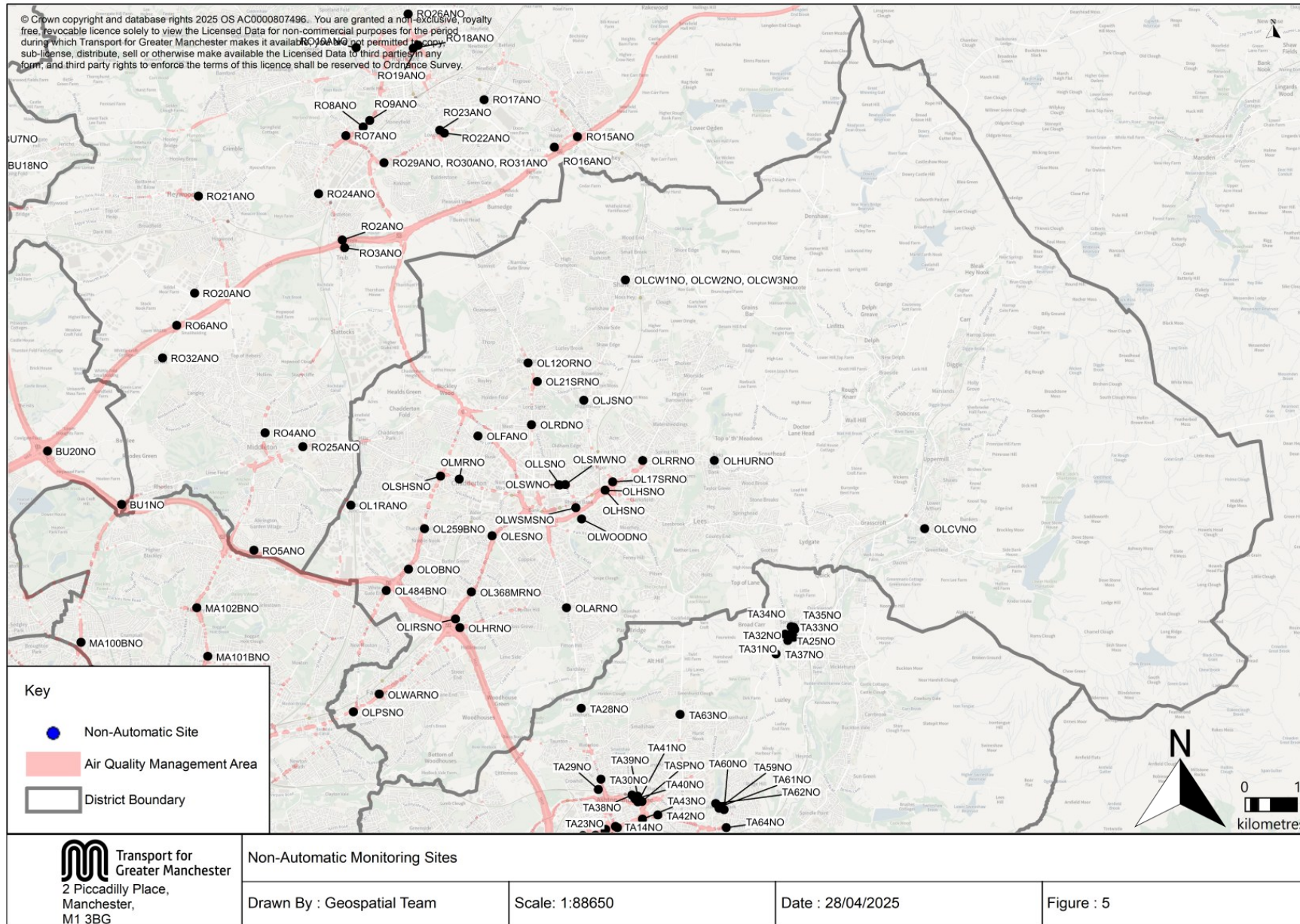
Drawn By : Geospatial Team

Date : 28/04/2025

Scale : 1:93460

Figure : 4

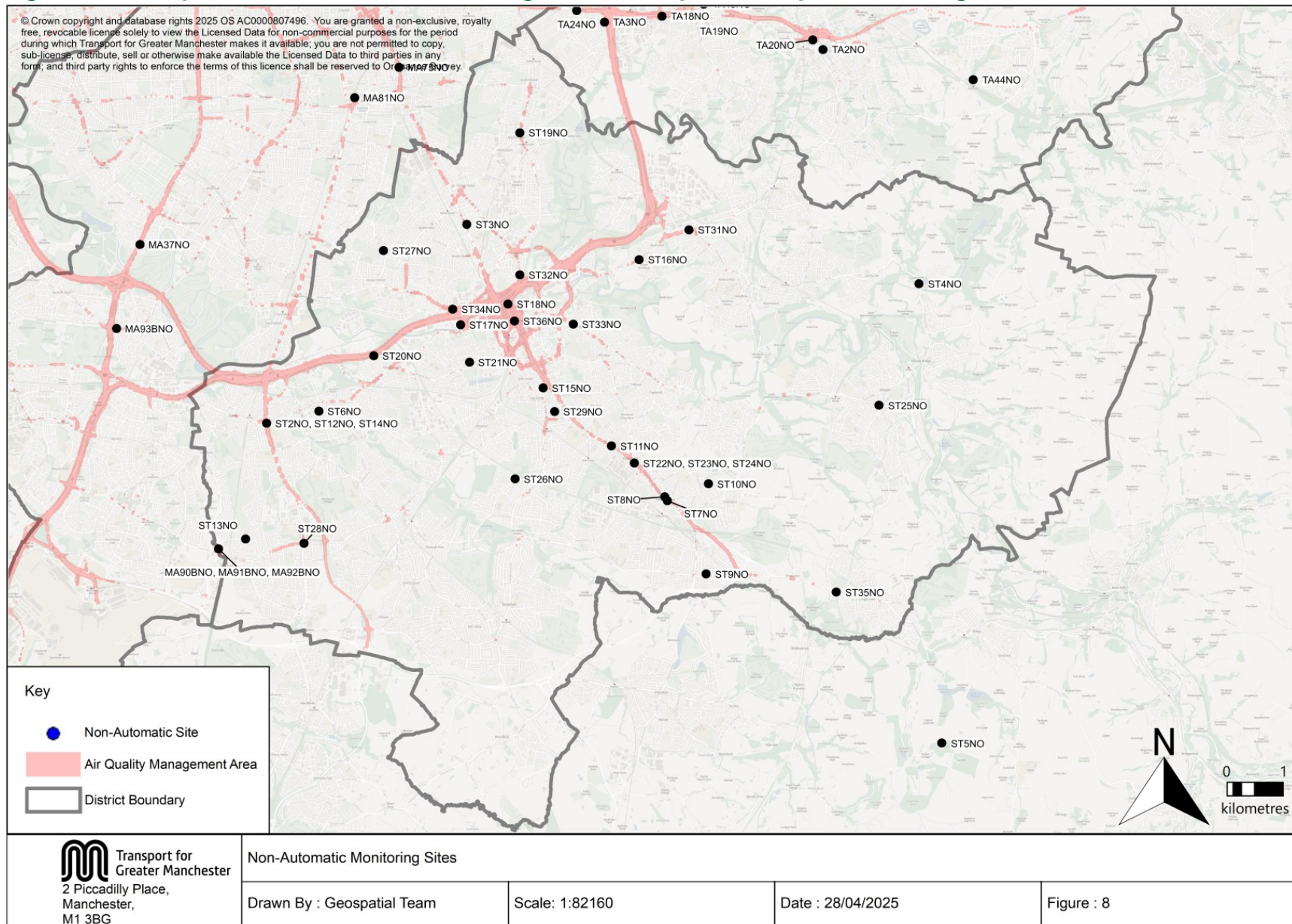
**Figure D.4 – Map of Non-Automatic Monitoring Sites, Oldham Metropolitan Borough Council**



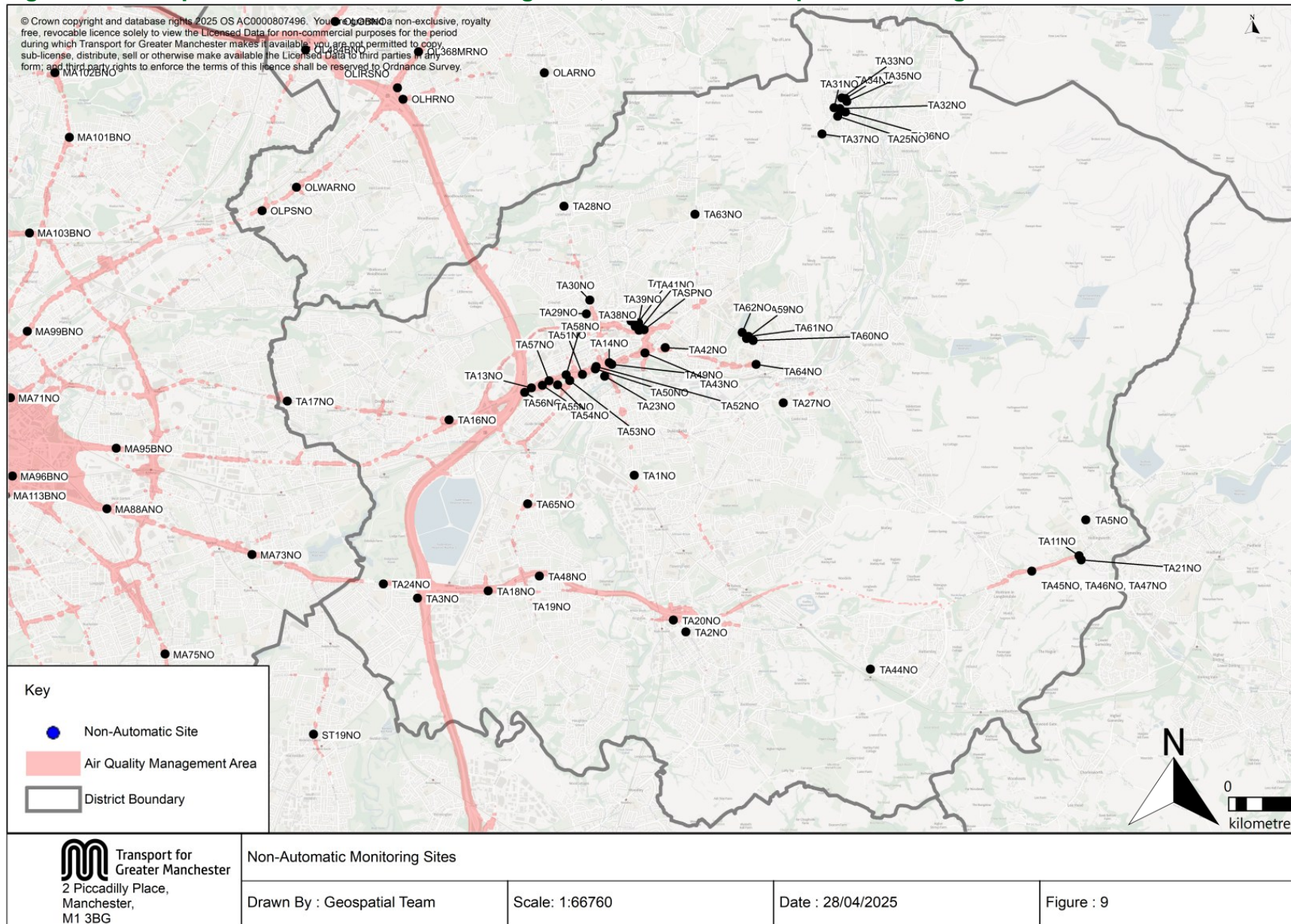




**Figure D.7 – Map of Non-Automatic Monitoring Sites, Stockport Metropolitan Borough Council**



**Figure D.8 – Map of Non-Automatic Monitoring Sites, Tameside Metropolitan Borough Council**



**Figure D.9 – Map of Non-Automatic Monitoring Sites, Trafford Metropolitan Borough Council**

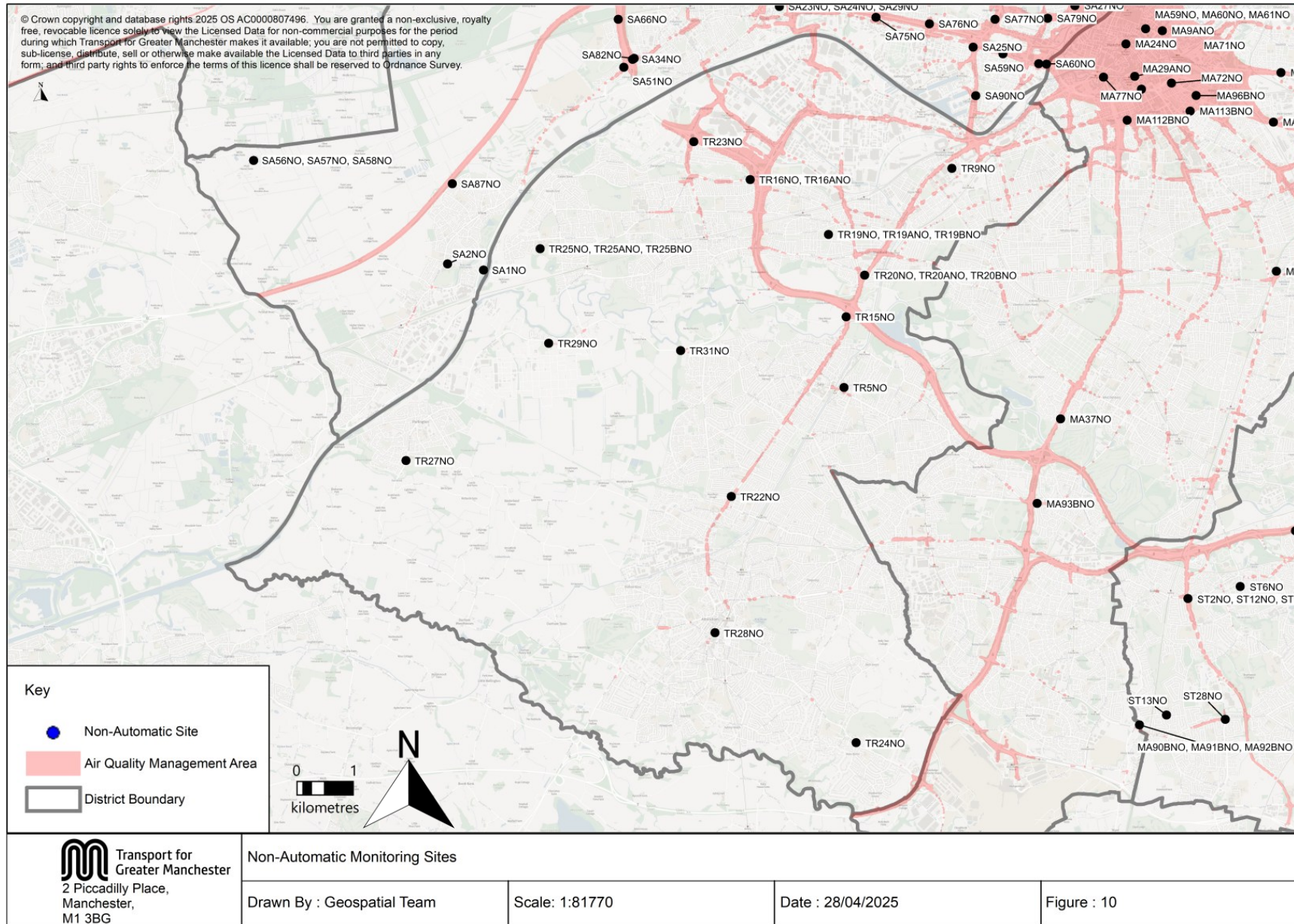
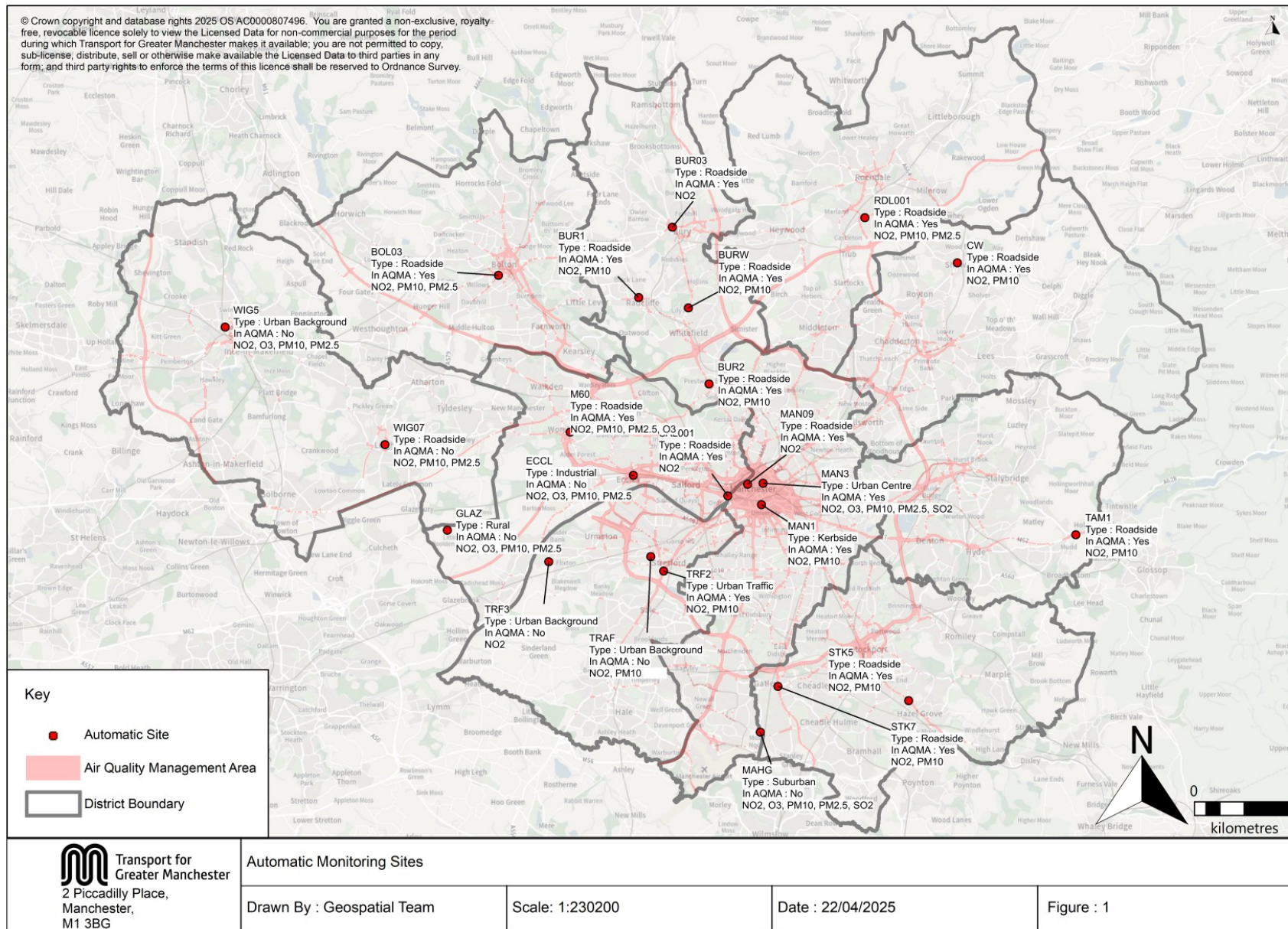




Figure D.11 – Map of Automatic Monitoring Sites



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

**Table E.1 – Air Quality Objectives in England<sup>9</sup>**

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

<sup>9</sup> The units are in microgrammes of pollutant per cubic metre of air (µg/m<sup>3</sup>).

## Glossary of Terms

Abbreviation	Description
$\mu\text{g}/\text{m}^3$	A measure of concentration in terms of mass per unit volume. A concentration of $1 \mu\text{g}/\text{m}^3$ means that one cubic metre of air contains one microgram ( $10^{-6}$ grams) of pollutant.
5YEP	The Greater Manchester 5-Year Environment Plan
AURN	Automatic Urban and Rural Network
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
AQO	Air Quality Objective
ASR	Annual Status Report
BAM	Beta Attenuation Monitors
CAP	Greater Manchester Clean Air Plan
CC	City Council
COMEAP	Committee on the Medical Effects of Air Pollutants
DAQI	Daily Air Quality Index
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
ESU	Equipment Support Unit
FDMS	Filter Dynamics Measurement System
GM	Greater Manchester

GMCA	Greater Manchester Combined Authority
GMAQN	Greater Manchester Air Quality Network
IAQM	Institute of Air Quality Management
LAQM	Local Air Quality Management
LSO	Local Site Operators
MBC	Metropolitan Borough Council
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides
ONS	Office for National Statistics
PM <sub>10</sub>	Airborne particulate matter with an aerodynamic diameter of 10µm or less
PM <sub>2.5</sub>	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SCA	Smoke Control Area
SO <sub>2</sub>	Sulphur Dioxide
TfGM	Transport for Greater Manchester
UKHSA	United Kingdom Health Security Agency
YTA	Youth Travel Ambassadors
WHO	World Health Organisation

## 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.
- Local Air Quality Dashboard, Defra, <https://uk-air.defra.gov.uk/local-authorities-dashboard/>
- 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.
- Background mapping data for local authorities, [https://laqm.defra.gov.uk/air-quality/air-quality-assessment/background-maps/Local Air Quality Management QA QC Framework 'AIR-PT-Rounds 50 to 63 \(June 2022 to June 2024\)'](https://laqm.defra.gov.uk/air-quality/air-quality-assessment/background-maps/Local%20Air%20Quality%20Management%20QA%20QC%20Framework%20%27AIR-PT-Rounds%2050%20to%2063%20(June%202022%20to%20June%202024)%27.), <https://laqm.defra.gov.uk/wp-content/uploads/2021/02/AIR-PT-Rounds-50-to-63-June-2022-to-June-2024.pdf>
- Local Air Quality Management Precision and Accuracy, <https://laqm.defra.gov.uk/air-quality/air-quality-assessment/precision-and-accuracy>
- Air Quality England, <https://www.airqualityengland.co.uk/>
- Bee active cycling, <https://beeactive.tfgm.com/cycling/>
- Bee Network, containing information referred to in the text, <https://tfgm.com/>
- Clean Air GM, containing information referred to in the text, <https://cleanairgm.com/>
- Cycle to work scheme guidance for employers, <https://www.gov.uk/government/publications/cycle-to-work-scheme-implementation-guidance>
- Five-Year Environment Plan on the Greater Manchester Combined Authority website, <https://www.greatermanchester-ca.gov.uk/what-we-do/environment/five-year-environment-plan/>
- GM electric travel, <https://electrictravel.tfgm.com/>
- GM Burn Better, <https://gmgreencity.com/take-action/burn-better-gm/>
- IAQM guidance documents, <https://iaqm.co.uk/guidance/>
- National Rail train timetable information, <https://www.nationalrail.co.uk/>
- National Rail offers for rail travel, <https://www.daysoutguide.co.uk/>
- Smoke Control Area map, <https://uk-air.defra.gov.uk/local-authorities-dashboard/>
- UK Air, containing the information referred to in the text, <https://uk-air.defra.gov.uk/>
- World Health Organisation air quality guidelines, <https://www.who.int/publications/i/item/9789240034228>
- Zap Map electric car charging points, <https://www.zap-map.com/live/>

**Additional references to specific webpages may be included throughout the text.**

## **Appendix F: GM Domestic Burning PM<sub>2.5</sub> Monitoring and Behaviour Research - 2025 Interim Update**

# GM Domestic Burning PM<sub>2.5</sub> Monitoring and Behaviour Research 2025 Interim Update

## Appendix F 2025 GM Combined Annual Status Report

April 2025

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## Summary and Cover Note

Particulate matter pollution is of concern to communities due to health risks and concerns over the increasing use of solid fuel burners in residential areas. Domestic solid fuel burning, both indoor and outdoor, is a significant contributor to fine particulate air pollution (PM<sub>2.5</sub>) emissions in the UK.

In Greater Manchester, the impact of burning behaviours on PM<sub>2.5</sub> levels was unknown. In March 2022, TfGM and the 10 local authorities secured a Defra air quality grant to fund a multi-year project to research the risks of PM<sub>2.5</sub> from domestic solid fuel burning and people's attitudes and behaviours.

The "Think Twice. Burn Better" campaign was launched over winter 2022/2023 to raise awareness of the environmental and health impacts of domestic burning and to encourage safer, cleaner practices. Annual campaigns continue, with the latest in winter 2025/26.

Two research strands support the campaign, one involving behavioural and messaging research to develop the Burn Better campaign and evaluate its effectiveness. The second uses low-cost indicative sensors to monitor seasonal PM<sub>2.5</sub> fluctuations and analyse likely sources.

The overall project will conclude in 2026. This report provides an interim update in two parts covering the behavioural studies and 2024 monitoring data.

Part 1: Behavioural research suggests the campaign has influenced domestic burning behaviours to some degree, with responsible practices reported but waste burning still needing improvement. There is a disconnect between awareness and personal behaviour, but cost and accessibility hinder further change. There is some evidence of increased reflection and willingness to change, such as reduced burning frequency and better appliance maintenance following the "Think Twice. Burn Better" campaigns.

Part 2: 43 MCERTs low-cost indicative monitors were installed across GM from January 2024, including an equal number of background locations and sites thought to have high rates of domestic solid fuel burning. The 2024 monitoring demonstrates the network's capability to provide valuable insights on PM<sub>2.5</sub> across GM, despite operational challenges. Results indicate that while domestic solid fuel burning may contribute to slightly elevated winter concentrations at specific locations over short periods, regional and transboundary sources remain a significant factor in high pollution episodes.

For information on reducing PM emissions, energy efficiency, and sustainable transport, visit [the GM Green City Take Action webpage](#) or [the Clean Air GM website](#). Residents should continue to heat their homes appropriately to remain safe and healthy.

# 1 - Evaluating the Impact of the ‘Think Twice. Burn Better’ Campaign on Domestic Burning Awareness and Behaviour in Greater Manchester

The domestic burning awareness campaign was developed and delivered by Transport for Greater Manchester (TfGM) and GM local authorities during 2024/25. The campaign aimed to raise awareness of cleaner burning practices and successfully generated over 16 million opportunities for people across Greater Manchester to see or hear campaign messages, resulting in more than 9,000 visits to the Burn Better GM Information Hub. There was a multi-channel communications and marketing strategy, which included:

- Traditional media coverage, generating over 3 million opportunities to see or hear the GM #BurnBetter story.
- Over 34 million impressions across social and paid digital channels.
- 16,000+ views of campaign videos and animations on organic social media channels.

This report evaluates the effectiveness of the campaign using a survey approach, with 330 respondents. While the survey achieved a sufficient sample size to draw meaningful insights, the demographics of respondents were skewed towards more affluent and digitally engaged individuals, reflecting the self-selecting nature of participation. This means that while the findings provide valuable indications of attitudes and behaviours among engaged residents, caution should be exercised when generalising the conclusions to the wider Greater Manchester population.

Findings are compared against a baseline survey conducted the previous winter (2023/24), which informed the campaign design. Although this sample was approximately one-third the size of the baseline survey and should be interpreted with appropriate caution, the similar demographic profile of respondents supports meaningful comparison of results. It should also be noted that some survey questions were only relevant to specific subgroups, such as those who burn solid fuels, resulting in smaller sample sizes for those analyses

## Key Findings:

- Responsible burning practices were commonly reported: Many respondents indicated they already used dry or seasoned wood and maintained their appliances regularly. However, these behaviours largely reflect existing good practice rather than being directly attributed to the campaign.

- Waste burning remains an area for improvement: Around half of respondents reported occasionally burning waste materials, highlighting a continued gap in cleaner burning practices and an opportunity for future interventions.
- Disconnect between awareness and personal behaviour: While respondents recognised the broader harms of domestic burning, many were less likely to associate these impacts with their own activities, particularly regarding indoor and local air quality.
- Cost and access barriers persist: Financial pressures — linked to the rising cost of energy and cleaner fuels — were key barriers to behaviour change, even among more affluent respondents.
- Green waste disposal barriers: Comments collected via social media highlighted public concern that reduced access to green waste disposal services and the introduction of charges may inadvertently encourage residents to burn garden waste at home. This perceived inconsistency between waste management policies and air quality campaigns suggests the need for a more joined-up approach to support residents in reducing domestic burning.
- Campaign engagement showed early signs of impact: Among those who had seen or were introduced to the campaign, there was modest evidence of increased reflection and openness to 3 changing behaviours, including reduced burning frequency and improved appliance maintenance.

#### Recommendations:

- Ensure that all key messaging is clearly included within primary campaign materials, recognising that many residents will not seek out additional information beyond what they initially see.
- Deliver messages through trusted community figures and services, especially the Fire Service.
- Incorporate calibrated, real-time local air quality data to improve perceived relevance.
- Address structural barriers, including heating affordability and access to waste disposal.

Findings from this sample suggest that while many residents are committed to responsible burning, there is room for improvement—particularly in awareness of air quality impacts and behavioural follow-through. However, these findings should be interpreted with caution due to the self-selecting, digitally engaged nature of the sample, and the limited number of respondents who had encountered the campaign independently prior to the survey. A holistic and inclusive approach will be essential to drive long-term change.

**The full UoM report has been appended to the end of this document.**

## 2024/25 Campaign overview

The 2024/25 campaign launched in November 2024. A press release was issued by the GMCA on behalf of the 10 local authorities to mark the campaign launch, paid and organic content was rolled out incrementally until the end of February 2025.

Paid channels included electronic billboards, radio, social media (Facebook and Instagram), out of home (digital and print), direct mail (leaflets), and a partnership with Manchester Evening News (print and digital placements).

Organic channels included social media and newsletters, with stakeholder toolkits provided to the GMCA, 10 local authorities, and GM partners to encourage sharing campaign materials via social media and newsletters, with borough-specific messaging as required.

Four dedicated Burn Better GM webpages were developed on the GM Green City website, replacing previous domestic burning content. Paid and organic promotion included links, QR codes or a campaign-specific URL directing to the webpages.

Creative assets featured a key message overlaid on an image of a fireplace or chimney with smoke effects, and the GMCA and Burn Better logos. The key message was phrased as a question and answer to draw attention. A URL or QR code was included on assets when appropriate to direct to a relevant Burn Better GM webpage. Examples of these assets in-situ are shown in Figure 1. Creative asset variations were:

- Did you know? Keeping your stove and chimney clean reduces harmful pollution.
- Did you know? Burning the wrong fuel to heat your home can damage your health.
- Did you know? Tiny particles in fire smoke can harm your health.
- Did you know? In most areas there are rules about what you can burn at home.

Audiences were residents of Greater Manchester, particularly parents, adults aged over 30 living in smoke control areas, and people living in postcode districts containing around 100-200 registered log burners.



**Figure 1 - Burn Better GM Campaign Assets In-situ**

## 2 – 2024 Defra-project PM<sub>2.5</sub> Indicative Monitoring

### Executive Summary

Ricardo, on behalf of TfGM and the 10 GM local authorities, deliver the ‘Greater Manchester PM<sub>2.5</sub> Indicative Monitor Project’, a Defra Air Quality Grant initiative supporting the city-region’s ambition to reduce PM<sub>2.5</sub> concentrations, particularly through addressing domestic solid fuel burning. A network of 43 indicative air quality monitors was deployed across 41 locations in January 2024, with this report summarising findings from the first year of operation (January–December 2024).

### Network Deployment and Data Quality

The monitoring network was established to provide robust evidence on PM<sub>2.5</sub> levels and to evaluate the impact of behaviour change campaigns. Quality assurance and quality control (QA/QC) procedures, including co-location calibration, deployment protocols, and data scaling, confirmed that the regionally scaled sensor data met uncertainty requirements ( $\leq 50\%$ ) for both PM<sub>10</sub> and PM<sub>2.5</sub>.

Operational challenges were encountered across the network, including power supply issues, vandalism, and hardware faults. These were addressed through site repairs, sensor replacements, and improved resilience measures. Additionally, a manufacturer’s operating system update introduced errors in relative humidity compensation, leading to artificially high readings at  $>90\%$  RH. As a result, 2024 data collected under the updated system were excluded from final analyses.

### Key Findings

At a regional level, there was very little difference in the aggregated annual averages for PM<sub>10</sub> and PM<sub>2.5</sub> between background and burning locations across all GM background and burning sites:

	All background sites	All domestic burning sites
PM <sub>10</sub>	11.6 $\mu\text{g}/\text{m}^3$	11.8 $\mu\text{g}/\text{m}^3$
PM <sub>2.5</sub>	7 $\mu\text{g}/\text{m}^3$	7.2 $\mu\text{g}/\text{m}^3$

Regional and Transboundary Influences: Polar plot and back-trajectory analyses revealed that the some or many high PM<sub>10</sub> and PM<sub>2.5</sub> episodes in 2024 were predominantly associated with easterly winds, indicating that elevated concentrations were strongly influenced by regional or transboundary sources rather than solely local emissions.

Domestic Burning Sites: Annual averages between 6:00 pm and 10:00 pm, the period typically associated with domestic heating activity, showed limited differences between

background and domestic burning locations. However, seasonal analyses suggested higher  $PM_{10}$  and  $PM_{2.5}$  levels at domestic burning sites during colder months in some districts (e.g., Manchester, Oldham, Bolton), consistent with increased heating demand. Regression analysis further supports these findings, indicating that both  $PM_{10}$  and  $PM_{2.5}$  in those districts exhibit clearer and stronger negative correlations with temperature across all districts, suggesting that colder conditions are associated with higher particulate concentrations.

Other areas showed no clear evidence of influence from domestic burning influence. It should be noted that these interpretations are based on variable data coverage across the network and the absence of validated readings from October to December 2024 at several boroughs, which introduces uncertainty into the assessment.

Regional Comparisons: Diurnal and seasonal trends highlighted that Greater Manchester experiences more pronounced peaks and seasonal variability in PM concentrations than other European cities such as Amsterdam and Paris, with a similar pattern, broadly comparable, to Greater London. This could be explained through back trajectory analysis for PM during the top ten highest daily concentrations. It shows that air masses predominantly originated from the east. This aligns closely with  $PM_{2.5}$  polar plots, further supporting the interpretation that elevated concentrations were strongly influenced by regional or transboundary sources transported from the east, which may not affect Paris and Amsterdam as much as UK sites.

### **Conclusions and Next Steps**

The first year of monitoring demonstrates the network's capability to provide insights on  $PM_{2.5}$  and  $PM_{10}$  across Greater Manchester, despite operational challenges. Results indicate that while domestic burning may contribute to elevated winter concentrations at specific locations in certain districts, regional and transboundary sources remain a significant factor in high pollution episodes.

Moving forward, continued monitoring over a further winter period 2025/26, will strengthen the evidence base for local and regional air quality management and support Greater Manchester's strategy to reduce the concentration of, and exposure to,  $PM_{2.5}$ .

## 2.1 Introduction

Ricardo is delivering the 'Greater Manchester PM<sub>2.5</sub> Indicative Monitor Project' on behalf of TfGM and the 10 GM LAs. Through this project, Ricardo has established a network of 43 indicative air quality monitors across 41 locations in Greater Manchester. Monitoring began during January 2024 and was initially planned to continue for 24 months. This Defra Air Quality Grant project supports Greater Manchester's aim to reduce PM<sub>2.5</sub> concentrations through a reduction of domestic solid fuel burning and burning the correct fuel in the correct way to reduce emissions. The indicative monitoring network aims to provide an evidence base of PM<sub>2.5</sub> concentrations across Greater Manchester and assess the impact of domestic burning behaviour change campaigns. This annual report covers the first year of monitoring from site installation in January 2024 through to 31 December 2024.

The quality of the particulate measurements is assured by the overarching Monitoring Protocol, aiming to improve MCERTS indicative monitors to be closer to reference measurements. Prior to deployment the sensors were co-located with a reference monitoring site to characterise the responses, assess their performance, and derive correction factors. In addition, Ricardo has employed a quarterly QA/QC ratification regime to each sensor.

The sensors in this monitoring network also monitor additional pollutants (NO, NO<sub>2</sub>, O<sub>3</sub>, CO and CO<sub>2</sub>). These pollutants are not covered by the MCERTS indicative certification and higher uncertainty. As such, they are not considered in this report, which instead focuses on the PM fractions.

This report details the QA/QC methodology applied to the network and the performance of the co-located sensors during 2024, the QA/QC issues experienced during the monitoring period, details of the monitoring network and the issues experienced, data analysis across the whole monitoring network including summary statistics and back trajectory analysis, detailed data analysis for each District including a comparison of concentrations from background and domestic burning sites, an assessment of regional background concentration trends and conclusions from the data analysis.

### 2.1.2 Air Pollutants

#### **Particulate Matter (PM)**

Particulate matter in the atmosphere has many man-made and natural sources and can vary widely in its physical and chemical composition, and size. For air quality PM is typically classified into two sizes - PM<sub>10</sub> is the concentration of particles with an effective median diameter of 10 micrometres (µm) and PM<sub>2.5</sub> the concentration of particles with an effective median diameter of 2.5 µm. PM<sub>2.5</sub> is sometimes known as fine

particulate matter. Fine particulate matter is a particular concern to human health, as the particles are small enough to penetrate deep into the lungs.

### Nitrogen Dioxide (NO<sub>2</sub>)

NO<sub>2</sub> is a gas mainly formed from combustion processes such as wood burning and vehicle emissions. When breathed in NO<sub>2</sub> can irritate the throat and lungs and worsen symptoms in those with underlying respiratory issues. NO<sub>2</sub> is involved in the formation of photochemical smog and acid rain and may cause damage to crops and vegetation.

### Ozone (O<sub>3</sub>)

Ozone is a secondary pollutant mostly produced by the reaction between NO<sub>2</sub> and hydrocarbons, in the presence of sunlight. Ozone levels are usually highest in rural areas, particularly when the weather is still, hot, and sunny. Urban ozone concentrations have been increasing over the last few years. Ozone can irritate the throat, eyes, and nose at high concentrations, and can damage vegetation/crops.

### Carbon Monoxide (CO)

Carbon Monoxide is produced during combustion processes under conditions of limited oxygen. Exposure to low levels can result in dizziness, nausea and headaches.

### Carbon Dioxide (CO<sub>2</sub>)

CO<sub>2</sub> is a greenhouse gas formed from combustion activities. CO<sub>2</sub> emissions in the UK have generally been decreasing since the 1990's.

## 2.1 Relevant pollution Limit Values

Table 1 shows the legal limits for NO<sub>2</sub>, PM, and O<sub>3</sub>, for local authorities in England as set out in the [Air Quality Standards Regulations 2010](#).

**Table 1 - Limit values for different pollutants**

Pollutant	Symbol	Applies	Concentration	Unit	Averaging period	Permitted exceedances each year
Particles	PM <sub>10</sub>	UK	50	µg/m <sup>3</sup>	24 hours	35
Particles	PM <sub>10</sub>	UK	40	µg/m <sup>3</sup>	1 year	
Fine particles	PM <sub>2.5</sub>	UK (Except Scotland)	20	µg/m <sup>3</sup>	1 year	
Nitrogen dioxide	NO <sub>2</sub>	UK	200	µg/m <sup>3</sup>	1 hour	18
Nitrogen dioxide	NO <sub>2</sub>	UK	40	µg/m <sup>3</sup>	1 year	
Ozone	O <sub>3</sub>	UK	100	µg/m <sup>3</sup>	Max. daily 8 hours	10
Carbon monoxide	CO	UK	10	mg/m <sup>3</sup>	Max. daily 8 hours	

## 2.2 Methodology

### QA/QC Methods

There are two critical aspects in terms of quality control of the sensor data: firstly, there needs to be confidence and evidence that sensor systems respond to pollutants in a consistent and scalable manner. Secondly, to provide an indication of absolute concentrations, the potential accuracy of individual sensor systems must be assessed. To achieve this, the overarching Monitoring Protocol for the sensor network consisted of four stages that form part of the quality assurance/quality control (QA/QC) regime:

- Co-location (“calibration”)
- Deployment
- Data collection and dissemination
- Data processing and scaling

The main objective of the QA/QC regime is to ensure that the PM<sub>2.5</sub> and PM<sub>10</sub> measurements meet the MCERTS indicative measurements with a measurement uncertainty of ≤ 50%.

A sensor co-location with a reference site was the second stage in the QA/QC process, after selecting the most appropriate sensor systems, and was used to ensure that all instruments were working correctly, and to characterise their response, assess their performance and derive initial correction factors. All 43 sensor systems were co-located before deployment at the [London Harlington AURN site](#) for at least five days.

#### *Sensor intra-comparison*

To assess the relationship between sensor systems, three sensor systems are co-located at [Manchester Piccadilly reference site](#) throughout the monitoring programme. This allows a direct comparison of the sensors, when positioned in the same location ensuring that all sensors are sampling the same ambient conditions.

#### *Sensor inter-comparison*

The co-location also enables direct comparison to reference analysers. This comparison provides information regarding the potential accuracy of the sensors. In this case, correction factors for slope and/or offset can be derived, and the sensor measurements corrected to improve the accuracy. The data from Manchester Piccadilly were fully ratified at the time of carrying out the inter-comparison analysis.

#### *Reference sites*

The following was carried out as part of the QA/QC of the reference sites:

- 2-weekly site visits to check operation of Fidas instruments
- 6-monthly site servicing
- 6-monthly site audits
- Data ratification

Ricardo carried out 6-monthly audits as part of the QA/QC and holds ISO 17025 accreditation for the flow checks of PM analysers. ISO 17025 accreditation provides complete confidence that the analyser calibration factors are traceable to national metrology standards, that the calibration methods are sufficient and fit for purpose, and that the uncertainties are appropriate for data reporting purposes. The following instrument functional checks are undertaken at each audit, where applicable:

- Leak and flow checks, to ensure that ambient air reaches the analysers, without being compromised in any way.
- Particulate analyser flowrates. Any error in the flow through these particulate analysers is directly reflected in an error in the final measure of particulate concentration.
- Assessment of station infrastructure and operational procedures. Any deficiencies in site infrastructure or operational procedures, which may affect data quality or safe operation of the site, are noted.
- Assessing changes in local site environment. During the visit, a record of any changes in the site environment, for example any increase or decreased traffic flow due to road layout changes, construction activity, encroachment of the site by vegetation etc.

Data ratification pulls together information from the audits, servicing, repairs, calibrations; removes unreliable data; and scales the raw data into mass concentrations for direct comparison to the air quality objectives. This QA/QC process ensures that the resultant data meet the relevant Data Quality Objective for reference measurements.

#### *Data ratification – sensor network*

Data ratification is an important process that reviews all co-location and calibration data, information from analyser/sensor intervention and repairs, and any other information available for a particular site or analyser/sensor over the whole ratification period. The results from the independent QA/QC audits of the reference analysers are also incorporated to take account of any problems detected during the QA/QC audits such as instrument leaks or flow faults, and faulty instrument configurations.

For this study, there are two aspects to the data ratification regime: the ratification of the reference monitoring data from the Greater Manchester monitoring network and AURN Piccadilly site, which was carried out by Ricardo; and the data ratification of the sensor network. The co-location and inter-comparison analyses feed into this process with the final ratified datasets used for any future analysis.

## Co-location Data Analysis

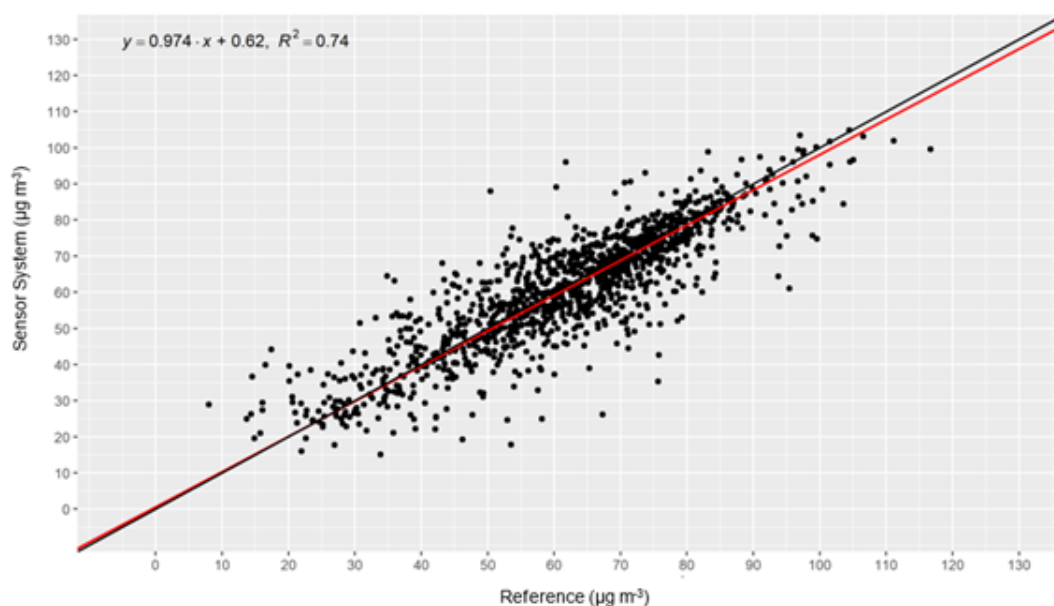
### Linear regression

Linear regression analysis was used to investigate the relationships between the sensors and reference sites, as well as the relationships between sensors. Three key statistics are provided in the linear regression model: the slope (b) and intercept (a) of the regression line and the coefficient of determination ( $R^2$ ). Both the slope and intercept provide a relationship of the form  $y = a + bx$ , where x and y are the data pairs, and where x is the recorded measurements from the reference analysers and y the sensor, unless comparing sensor with sensor. The value of  $R^2$  is given between 0 – 1 with a value closer to 1 indicating a stronger correlation and more accurate model between the two datasets under investigation. For this study, the following ranges in correlation are defined:

- 0 - 0.2 = weak
- 0.2 - 0.4 = mild
- 0.4 - 0.6 = moderate
- 0.6 - 0.8 = moderately strong
- 0.8 - 1.0 = strong

Figure 2 shows an example comparison between a sensor system and a reference site. All sensor systems have been compared against each other and the reference site(s) to assess the network performance. Generally, the weaker the correlation, the more uncertainty there is in the derived linear regression line/model and the more uncertainty there will be in the corrected sensor data.

As an example, the results shown in Figure 2 would be used to correct the sensor data - Where  $C_{Cor}$  is the corrected sensor concentration;  $C_{Raw}$  is the raw sensor measurement as supplied; b is the slope; and a is the intercept.

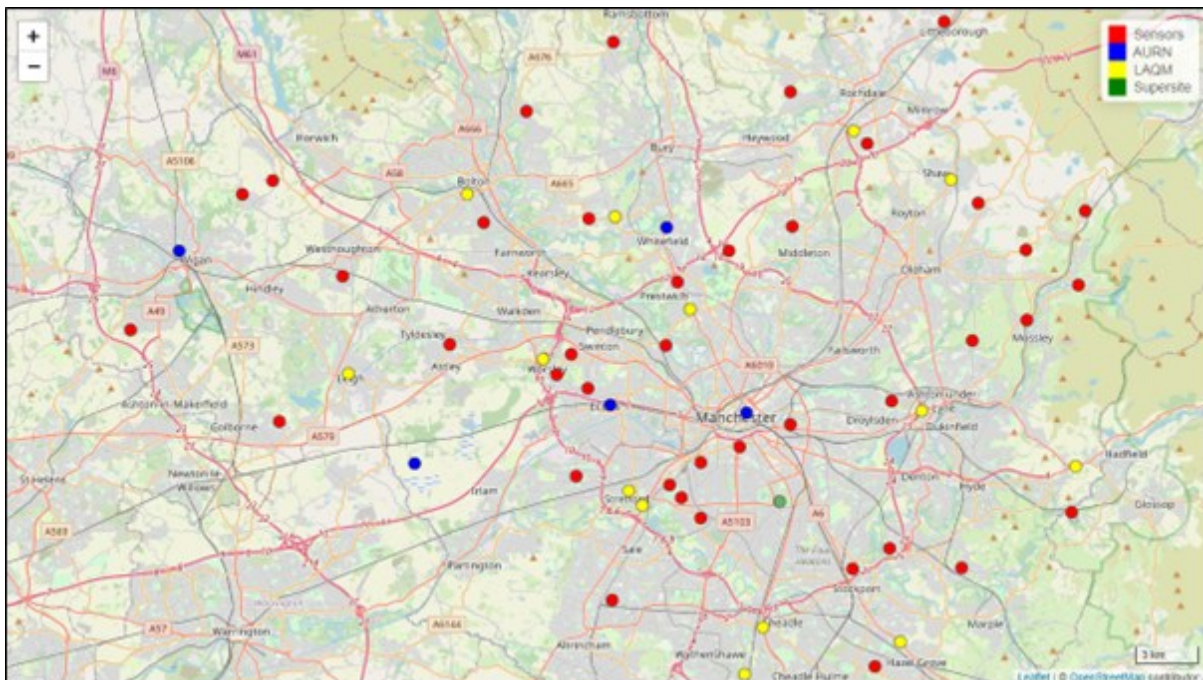


**Figure 2 - Example of scatter plot with linear regression line.**

### Regionally scaled data

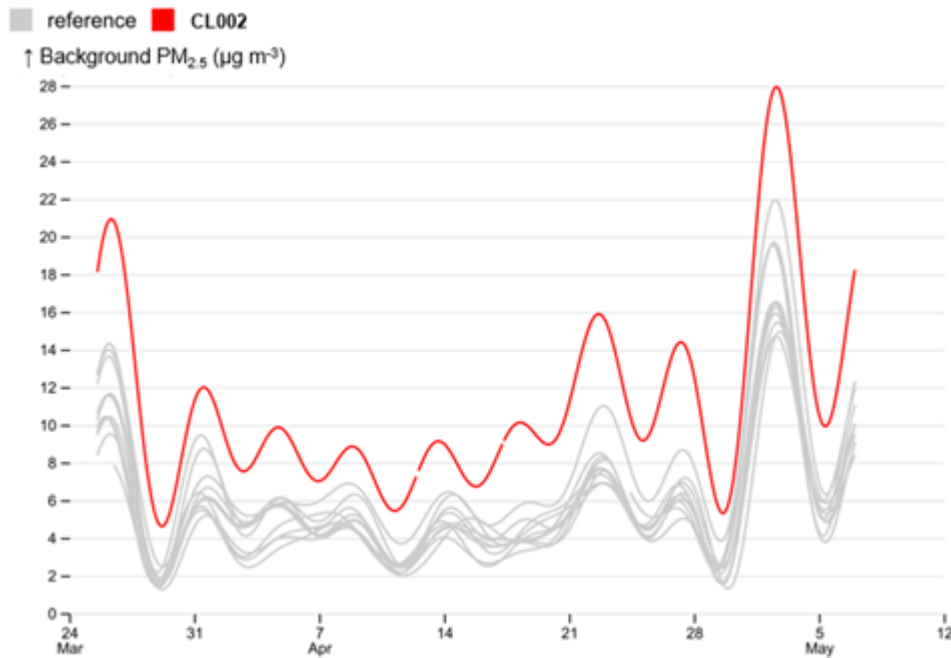
As part of this project, a methodology for regionally correcting PM<sub>2.5</sub> and PM<sub>10</sub> data was tested and applied to the TfGM network. The main advantage of using such a methodology was removing the requirement to co-locate all 43 instruments at a reference monitoring site on a regular basis to derive scaling factors to correct the data. Such a regime would have been impractical and cost-prohibitive due to the size of the network.

As a result, a network correction was applied by extracting a concentration signal that is consistent across a wide area – in this case Greater Manchester. This shared signal can be thought of as the background signal with the assumption that the underlying trends in background PM concentrations will remain consistent across large areas. Reference monitoring sites across Greater Manchester were utilised for the regional correction of the sensor network – these sites are shown in Figure 3.



**Figure 3 - Map of GM sensor network together with AURN and LAQM reference sites utilised for the regional correction.**

An example of the extracted regional signal for both a sensor system within the GM network and the reference network is shown in Figure 4. These sensor and reference signals were then compared directly to derive daily offset and slope correction for each sensor system in the network.



**Figure 4 - “Regional signal” extraction applied as part of the regional correction methodology.**

#### *Measurement uncertainty*

An assessment of measurement uncertainty was carried out using the procedures as defined in the following Standards and Technical Specification:

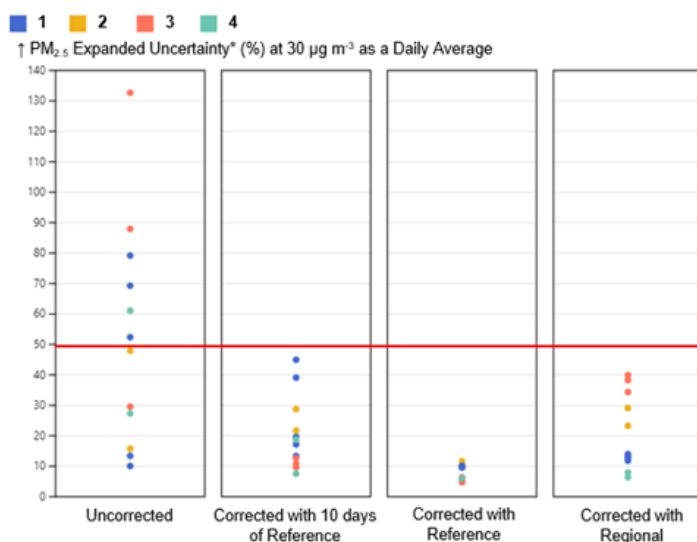
- BS EN 16450:2017. Ambient air — Automated measuring systems for the measurement of the concentration of particulate matter (PM<sub>10</sub>; PM<sub>2.5</sub>)
- CEN TS 17660-2:2024 Air quality. Performance evaluation of air quality sensor systems. Particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>) in ambient air

The measurement uncertainties are reported as relative expanded uncertainties using a coverage factor of two ( $k = 2$ ), at a confidence interval of 95% at the relevant Limit Value (30 µg/m<sup>3</sup> as a daily average for PM<sub>2.5</sub> and 50 µg/m<sup>3</sup> for PM<sub>10</sub>). **It should be noted that this study is not an assessment for the formal classification of the sensors and only provides an indication of the measurement uncertainty of the sensor systems.**

To validate the regional correction of the sensor network, the methodology was tested using four co-location sites throughout the UK. Figure 5 shows the measurement uncertainties for PM<sub>2.5</sub> from 12 sensor systems using four correction methods:

1. No correction applied (uncorrected)
2. Using a 10-day co-location every three months to derive scaling factors (corrected with 10 days of reference)
3. Corrected on an ongoing basis using the co-located reference measurements (corrected with reference) – best possible result.
4. Scaled using the regional correction (corrected with regional)

The tests show that the regional correction method provides similar results to carrying out a 3-monthly co-location with sensors meeting the uncertainty requirement of ≤50%.



**Figure 5 - Expanded uncertainty of the instruments from four co-location sites in the UK using a variety of correction methods.**

As part of the uncertainty calculations the between reference analyser ( $u(bs, RM)$ ) and between sensor uncertainty ( $u(bs, s)$ ) were also assessed. This provides an indication of the error between two or more instruments and is achieved by running two or more instruments together during the field tests. However, if only one reference instrument is used then a set of default uncertainties have been provided in CEN TS17660-2:2024.

Table 2 shows reference instruments at the co-location site (Manchester Piccadilly) with the default  $u(bs, RM)$  values used. For the sensors,  $u(bs, s)$  has been calculated using three co-located sensor systems and the method detailed in CEN/TS17660-2:2024. All the co-located sensors met the requirement  $\leq 3 \mu\text{g}/\text{m}^3$  for indicative measurements when scaled using the co-location factors but is further improved if a regional correction is applied. This validates the regional correction methodology.

**Table 2 - Default between sampler uncertainties for Fidas 200 and calculated between sensor uncertainties for Praxis Urban at Piccadilly, 2024.**

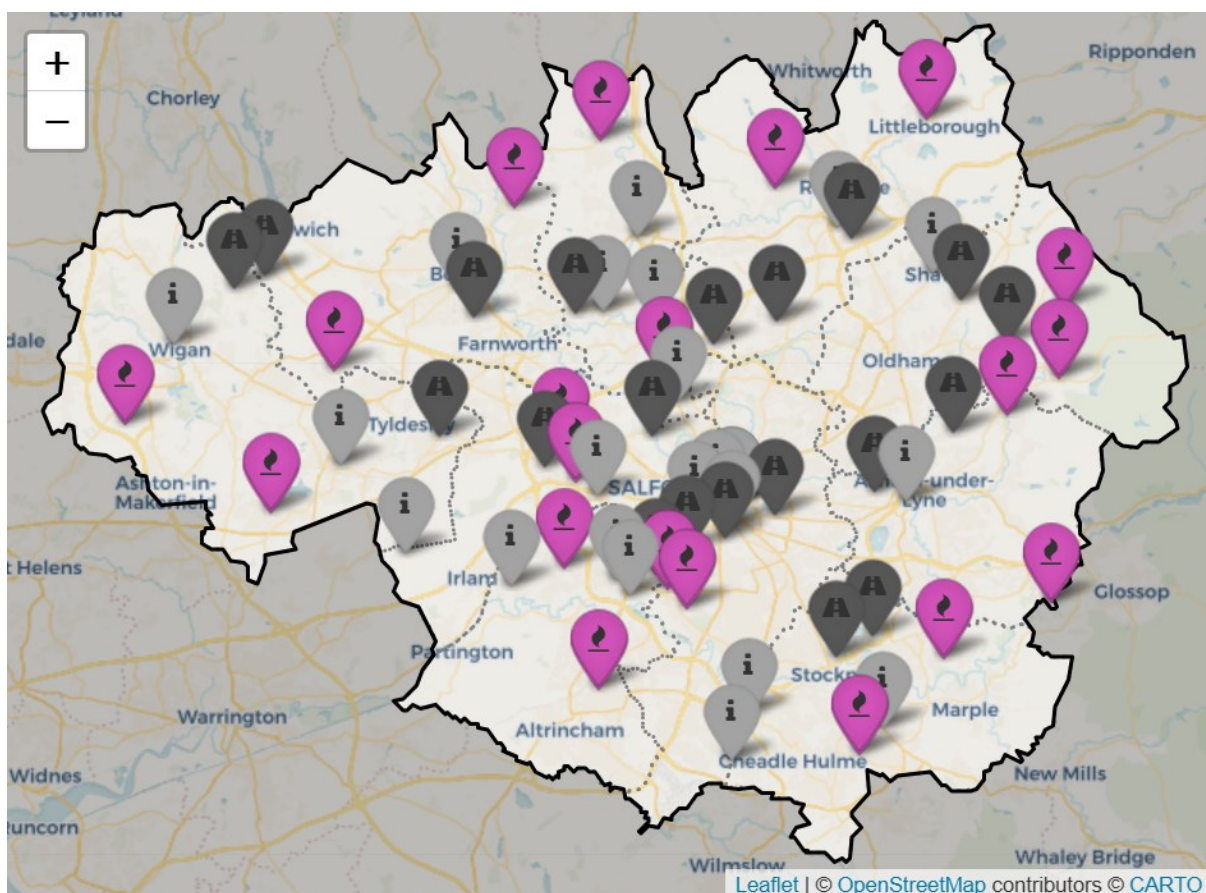
Pollutant	Manufacturer	Instrument	$u(bs, RM)/u(bs, s)$ ( $\mu\text{g}/\text{m}^3$ )
PM <sub>10</sub>	Palas	Fidas 200	0.65
PM <sub>2.5</sub>	Palas	Fidas 200	0.41
<b>Unscaled data</b>			
PM <sub>10</sub>	Emsol	Praxis Urban	4.43
PM <sub>2.5</sub>	Emsol	Praxis Urban	2.36
<b>Scaled data using co-locations</b>			
PM <sub>10</sub>	Emsol	Praxis Urban	1.68
PM <sub>2.5</sub>	Emsol	Praxis Urban	1.67
<b>Regionally scaled data</b>			
PM <sub>10</sub>	Emsol	Praxis Urban	1.13
PM <sub>2.5</sub>	Emsol	Praxis Urban	0.65

## 2.3 Air Quality Monitoring Network

### Monitoring Locations

The network monitors at 41 locations across Greater Manchester. In each of the 10 boroughs there are two sites selected as potentially areas of high burning activity and two sites selected to represent background concentrations. A summary of site information is presented as part of the map in Figure 6.

The map shows indicative sensor and reference monitoring across each district. The indicative monitoring locations are marked with background (dark grey) or domestic burning (purple) icons on the map. Reference sites belong to the AURN and Greater Manchester air quality monitoring networks and are coloured in light grey.



**Figure 6 - Location of monitoring sites in Greater Manchester**

### Network Update

#### Network Issues

##### eEMC Chip Fault

In August 2024, a memory error degraded eEMC chips in several sensors, preventing data sampling and storage. Hard resets offered a temporary solution, and by September, 23 sensors were affected, creating coverage gaps due to limited spares. The

issue arose as the original supplier went into liquidations and its IP acquired by another company, who developed an operating system update to store data on SD cards. This solution became available on 14 October 2024, after which affected sensors could be repaired. A new online portal was launched, temporarily disrupting integration with Ricardo's systems until API compatibility was resolved in February 2025. Delays in producing SD cards contributed to further outages, but full network functionality resumed in May 2025 following complete system updates.

#### **Temperature and Relative Humidity (T/rH) Sensor Failure**

In October 2024, a fault developed in the T/rH sensor component of several network units, causing poor performance and service level failures. Sixteen sensors experienced critical T/rH failures, resulting in inaccurate readings or loss of communication. Repairs involved sending sensors to EMSOL, then validating them for at least one week at a reference site. The combination of T/rH failures, eEMC chip issues, and long repair times led to a shortage of spare sensors for monitoring.

#### ***Specific Site Issues***

Intermittent power supply issues were experienced at several sites across the year, many of these were quickly resolved and monitoring resumed

Monitoring at a site in Stockport was reviewed due to vandalism risk. A decision was made to use the replacement sensor as a spare and increase network resilience.

#### ***QA/QC Issues – New Operating System and Relative Humidity***

During the delivery of the project the operating system of the instruments was updated by the manufacturer. It was identified that the update introduced an error into the way in which relative humidity (RH) was compensated for within the algorithms used and resulted in high concentrations of both PM<sub>10</sub> and PM<sub>2.5</sub> at high RH.

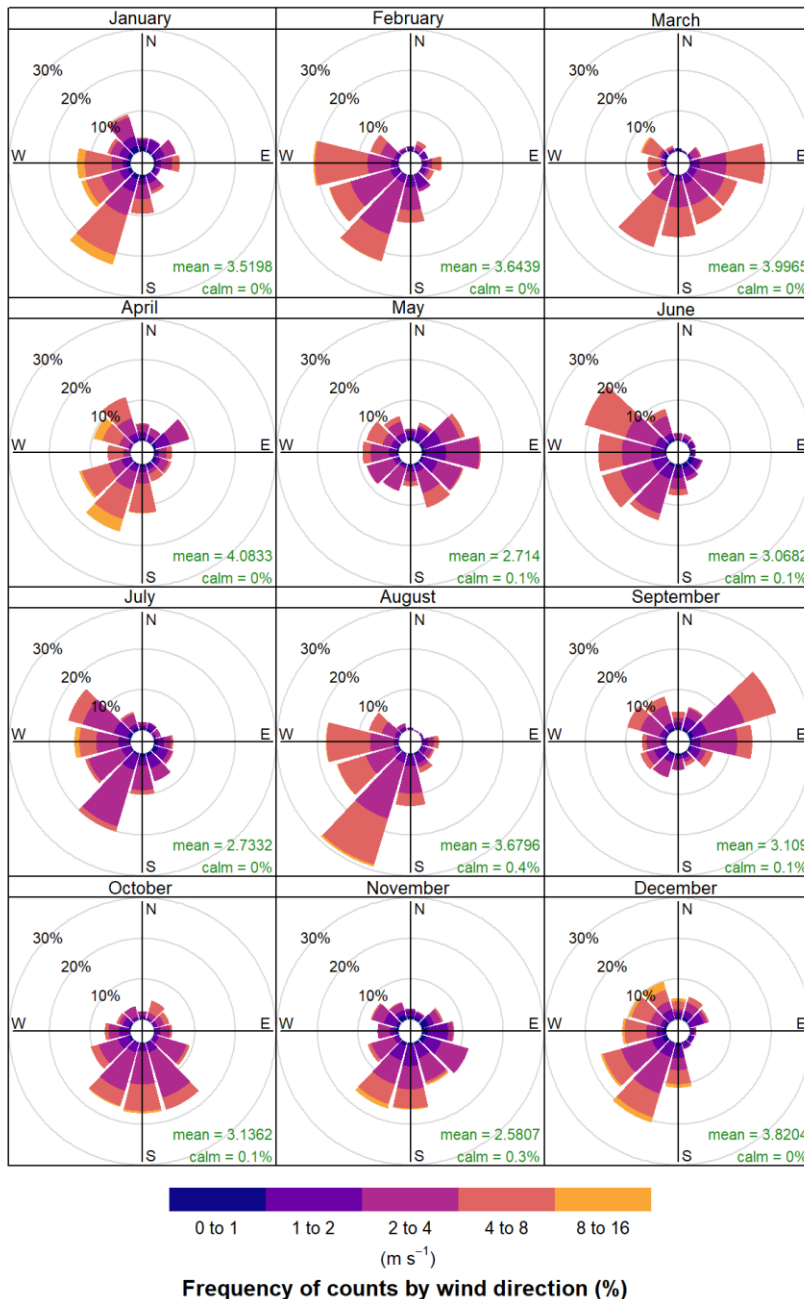
To determine whether this was in fact the case, a machine learning technique, 'boosted regression trees,' was used to investigate the relative influences of meteorological factors.

It was quickly identified that at RH > 90 %, PM concentrations increased significantly which was in direct contrast to what is seen in the reference network. The decision was therefore taken to reject all 2024 data from the OS update until the end of the year. The impact on further data will be reported following the ratification of the 2025 dataset.

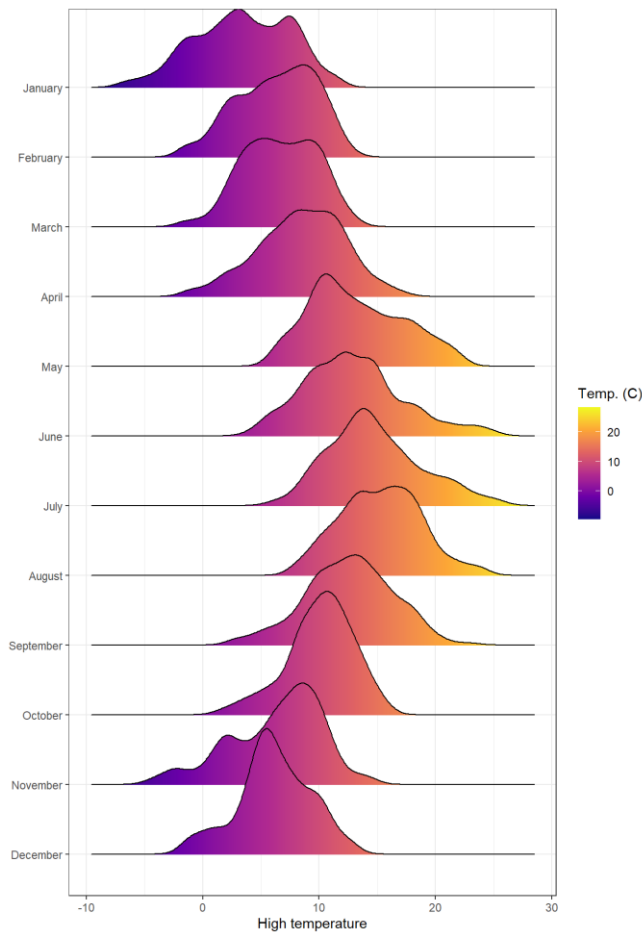
## 2.4 Data Analysis - All Districts

### Meteorological Conditions

The plots below provide information on the meteorological conditions (wind speed, wind direction and temperature) during 2024 in GM, Figure 7 and 8.



**Figure 7 - Wind roses showing the wind speed and wind direction for each month in GM during 2024.**



**Figure 8 - Temperature profiles in GM during 2024. Each ridge represents the distribution of air temperature for that month. The height of the ridge shows how common that the temperature is.**

### Summary Statistics

The “Annual Mean Bar Chart” presents the annual mean concentrations for all monitoring sites by pollutant. It only displays the data of monitoring sites that achieved at least 75% data capture.

The aggregated annual averages of PM<sub>10</sub> for all background sites and all domestic burning sites are shown in Figure 9:

Background: 11.6 µg/m<sup>3</sup>, and Domestic Burning: 11.8 µg/m<sup>3</sup>.

The aggregated annual averages of PM<sub>2.5</sub> for all background sites and all domestic burning sites are shown in Figure 10:

Background: 7 µg/m<sup>3</sup>, and Domestic Burning: 7.2 µg/m<sup>3</sup>.

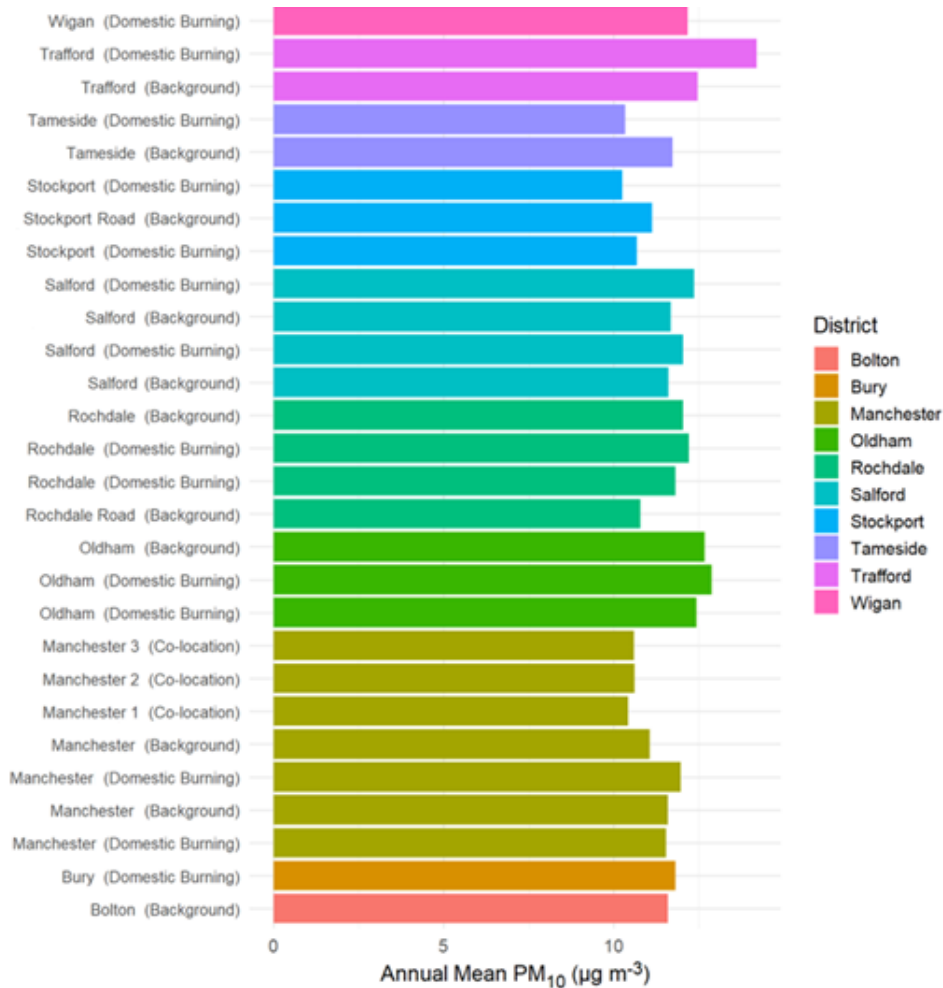


Figure 9 - Annual Mean PM<sub>10</sub> concentrations

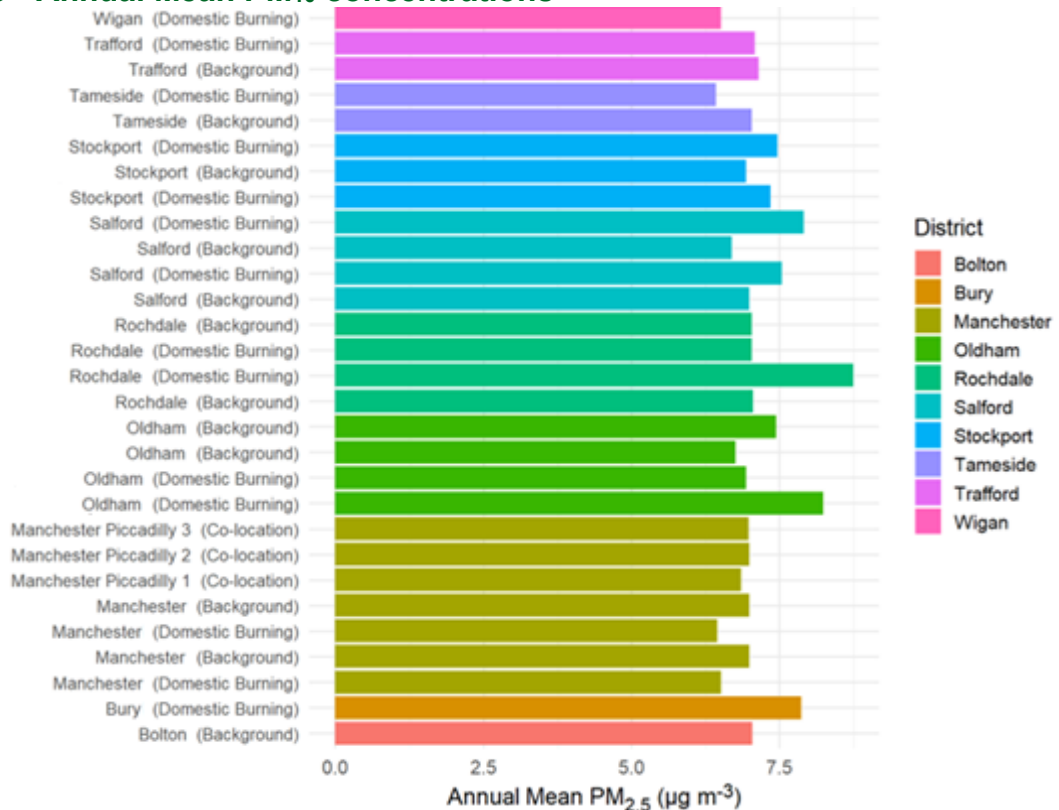


Figure 10 - Annual Mean PM<sub>2.5</sub> concentrations

## Polar plot map

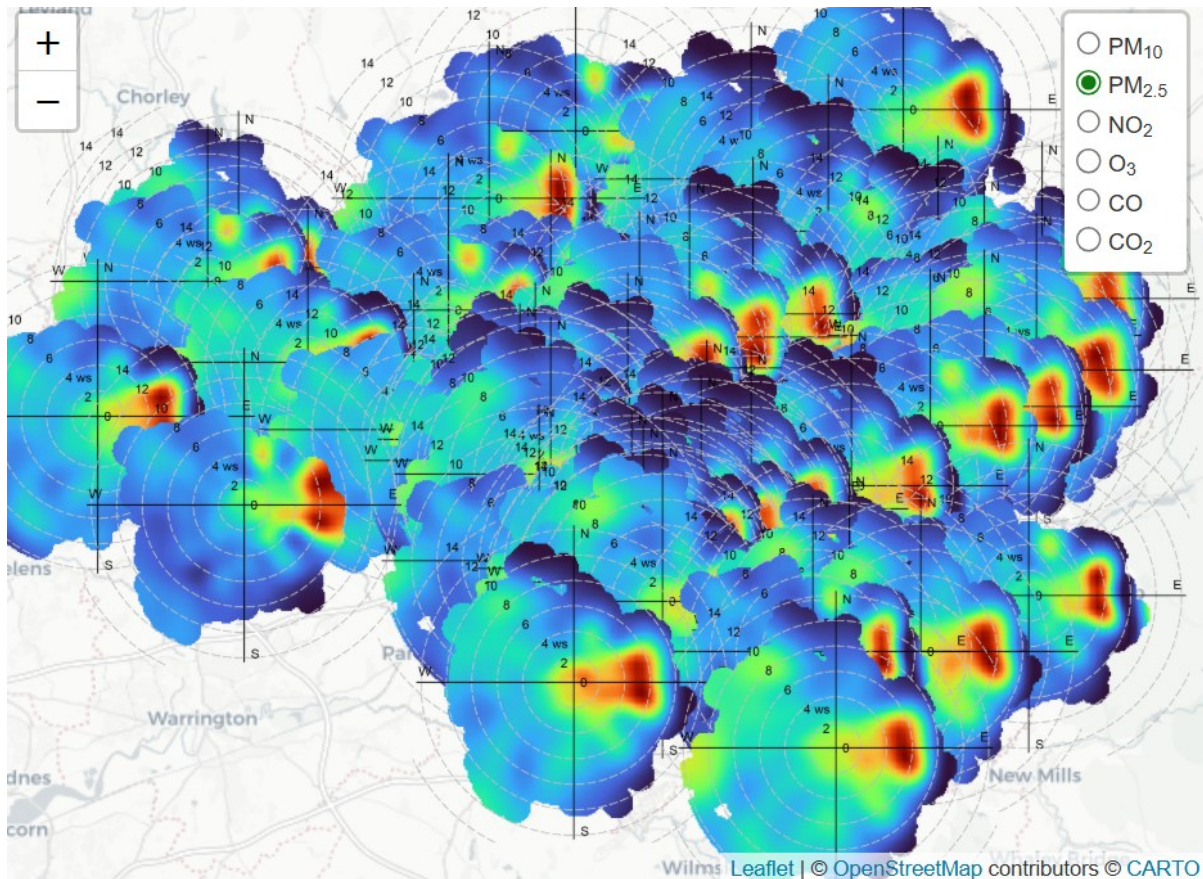
The map below shows polar plots for each pollutant at each monitoring station superimposed on the region to help understand the relative strength and direction of sources (Figure 11). The distance from the plot origin shows the wind speed.

These plots are useful to help identify primary pollutants which are emitted directly into the atmosphere, especially when multiple plots are used in conjunction to ‘triangulate’ a common source. For pollutants with a secondary component (i.e. formed through chemical reactions in the atmosphere, e.g.  $\text{NO}_2$ ,  $\text{PM}_{2.5}$  and  $\text{O}_3$ ) the directional signature seen in the measurements may not be as strong.

The polar map analysis for Greater Manchester indicates that some of the highest  $\text{PM}_{10}$  concentration events in 2024 were consistently associated with winds from the east under higher wind speed conditions. This suggests that this elevated  $\text{PM}_{10}$  levels are not primarily linked to localised emissions but are more likely influenced by regional or transboundary sources transported from the east. At many monitoring stations, additional peaks in  $\text{PM}_{10}$  were observed under different wind directions, which are more likely associated with localised emission sources.

For  $\text{PM}_{2.5}$ , the analysis shows that the highest concentrations also occurred during periods of easterly winds at higher wind speeds. Unlike  $\text{PM}_{10}$ , this was the only highest concentration event that can be seen under polar plots across almost all monitoring stations, further supporting the interpretation that regional or transboundary sources from the east is a significant contributor to elevated  $\text{PM}_{2.5}$  levels in the area.

Bivariate polar plots determine how concentrations vary with wind speed and wind direction. The distance from the plot origin represents wind speed, while pollutant concentrations are indicated by a colour scale specific to the concentration range of each station. Redder colours indicate higher concentrations, while bluer colours represent the lowest. **It is important to note that the same colour at two different sites does not necessarily represent the same concentration.**



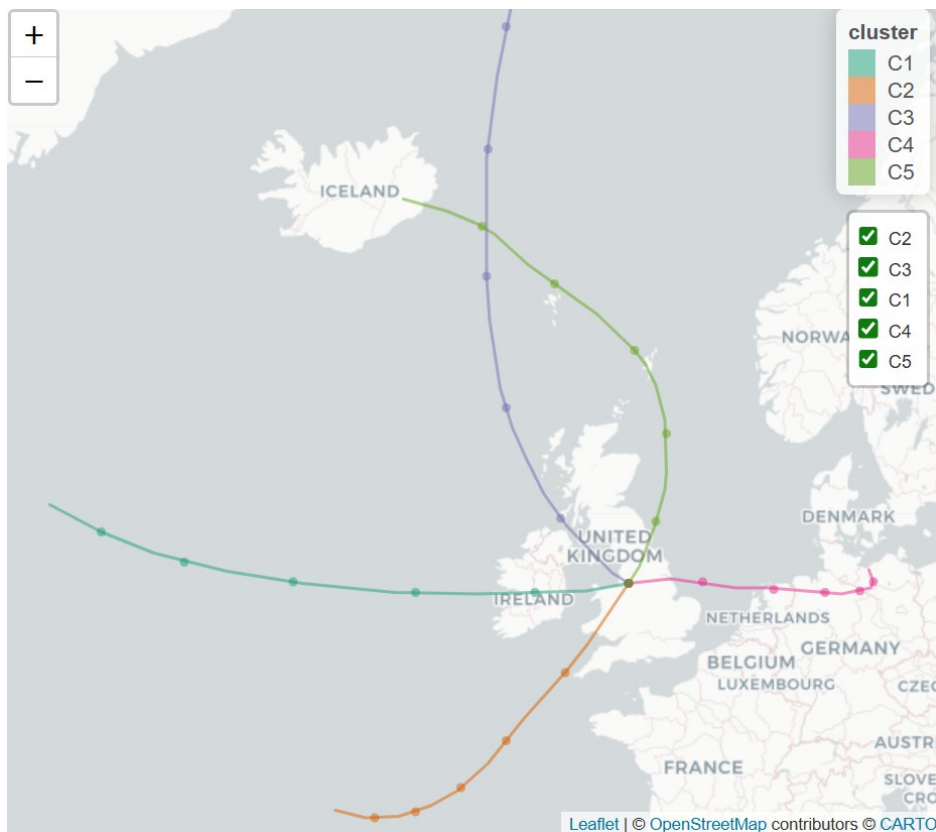
**Figure 11 - Polar map showing polar plots of all sites for PM<sub>2.5</sub>.**

### Back Trajectory Analysis

The back trajectory plot shows data from the HYSPLIT model ([NOAA HYSPLIT](#)) run in analysis mode. This shows the 72-hour air mass back trajectories for the period covered by the report. The plot in Figure 12 statistically groups the trajectories into similar clusters and shows the proportion of time during the report period that each represents. This is useful to get an overview of air mass origins during the report period. A plot of the trajectories associated with the top 10 measured concentrations is also presented in the next section.

Air mass back trajectories over these spatial scales do not vary locally so the receptor location used in this report has been selected from a range of national receptor locations maintained by Ricardo. The receptor point is used here is Glazebury.

## Trajectory clusters



**Figure 12 - Trajectory plot for 72-hour air mass back trajectories for the reporting period grouped into 5 clusters**

### Trajectories associated with top ten most polluted days

The average daily concentration for each pollutant across all the sites is calculated, with the top 10 most polluted days identified and linked to its back trajectory data in the plot below.

The back trajectory analysis for  $PM_{2.5}$  during the top ten highest daily concentrations shows that air masses predominantly originated from the east. This aligns closely with the  $PM_{2.5}$  polar plots, further supporting the interpretation that elevated concentrations were strongly influenced by regional or transboundary sources transported from the east, Figure 13.

In contrast, the  $PM_{10}$  back trajectories for the top ten highest daily concentrations indicate a more mixed picture. While many episodes were also associated with easterly air masses, others originated from a variety of directions. This suggests that, alongside regional contributions, local emission sources played a role in driving the observed  $PM_{10}$  episodes, Figure 14. This interpretation is consistent with the patterns seen in the  $PM_{10}$  polar plots.

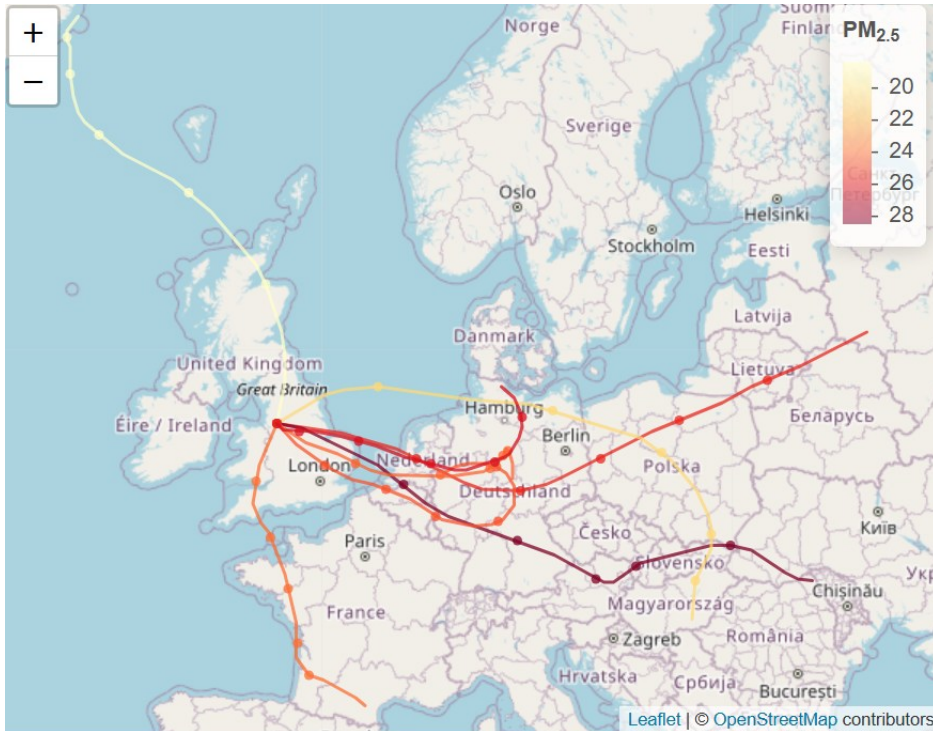


Figure 13 - Trajectory plot for top ten highest daily PM<sub>2.5</sub> concentration

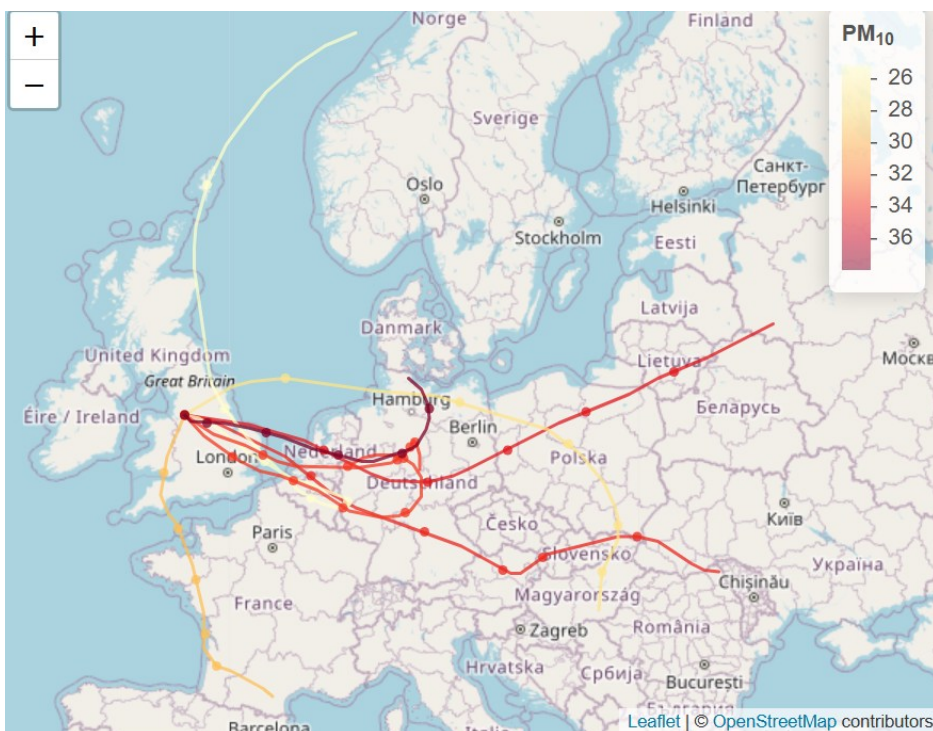


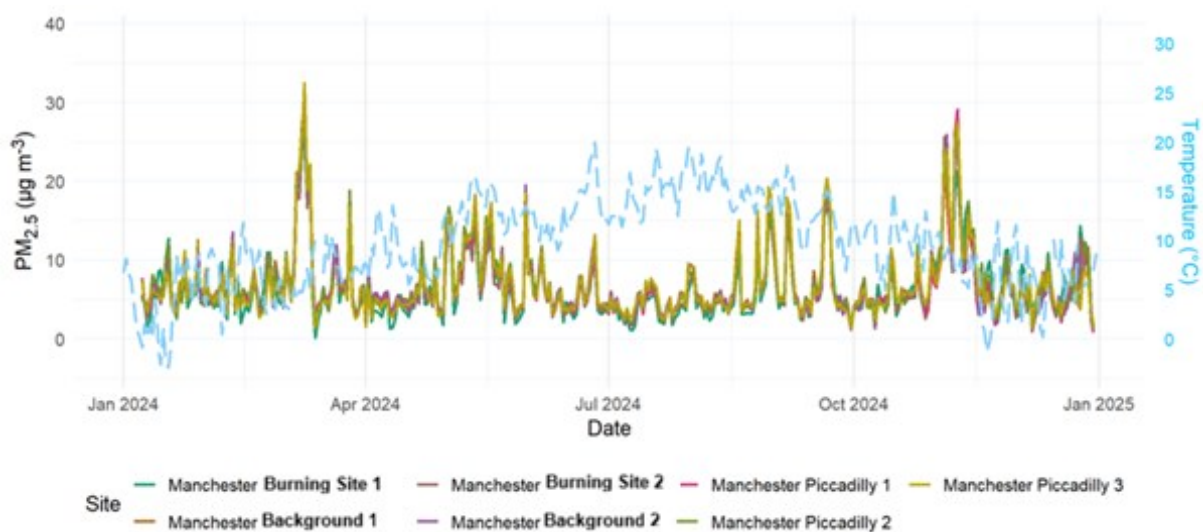
Figure 14 - Trajectory plot for top ten highest daily PM<sub>10</sub> concentration

## 2.5 Data Analysis - Per District

The images used in the following sections show data from the borough of Manchester (unless indicated otherwise). This is due to the network issues identified above; these data are used for consistency as they offer the most complete measurements for 2024.

### Time Series

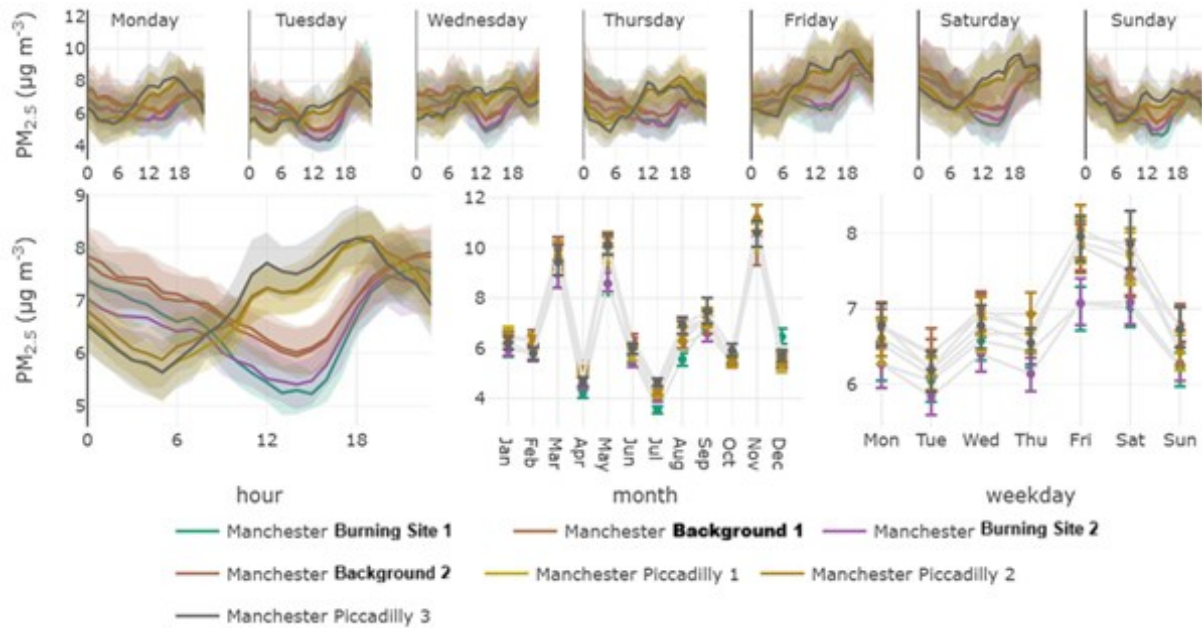
The plot in Figure 15 below shows the time series of PM<sub>2.5</sub> concentrations for 2024. A daily average resolution has been chosen as the most appropriate metric over a variety of different time windows. Temperature has also been plotted on a secondary y-axis to assess whether variations in pollutant concentrations are associated with domestic burning, which typically occurs during colder weather conditions.



**Figure 15 - Time series plot of daily average PM<sub>2.5</sub> concentration in Manchester.**

### Trend Analysis

The plot in Figure 16 below shows how PM<sub>2.5</sub> concentration varies with hour of the day, day of week, and month of year. These plots often help explain variations in concentrations according to the emissions activity associated with them. For example, we may expect to see an increase in PM<sub>2.5</sub> in the evenings during the winter months for areas where domestic burning is prevalent.

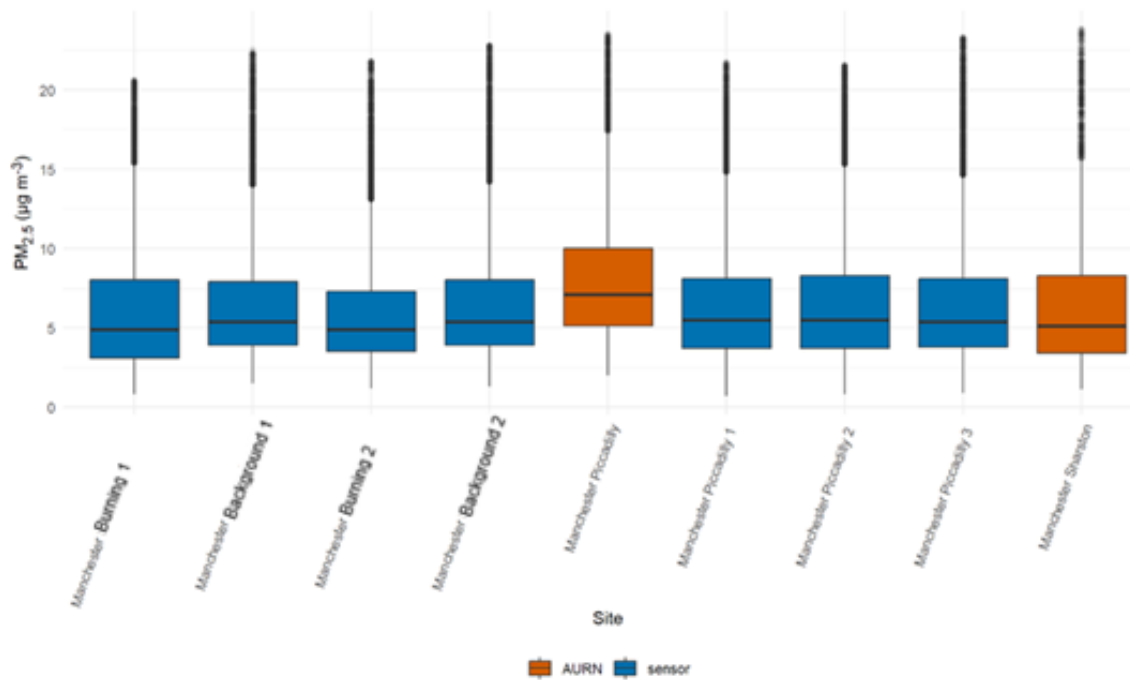


**Figure 16 - Time variation plot of PM<sub>2.5</sub> concentration in Manchester.**

### Comparison to Reference Measurements

The plot in Figure 17 below compares pollutant concentration measurements obtained from sensors and reference analysers operated by the Council and the AURN network, where available. To improve clarity of presentation, only values within the 2.5% – 97.5% quantile range are shown, thereby excluding extreme outliers.

The box represents the interquartile range (IQR), showing the middle 50% of the data, with the lower edge indicating the 25th percentile (Q1) and the upper edge indicating the 75th percentile (Q3). The line inside the box denotes the median (50th percentile) of the dataset. Whiskers extend from the box to the minimum and maximum values within 1.5 times the IQR from the quartiles. Outlier values beyond the whiskers are plotted as points.



**Figure 17 - Box plot for comparing sensor data with Council and AURN data on PM<sub>2.5</sub> concentration in Manchester.**

### Comparison of concentrations from background and domestic burning sites

It is important to acknowledge that other external factors may influence the results and interpretation. While some monitoring locations are designated as domestic burning areas based on Council building control HETAS records, or smoke complaint information, it is uncertain whether solid fuel burning remains prevalent in these areas, or how frequently it occurs. Conversely, at the time of writing it is unknown whether solid fuel appliances have been installed recently near background sites. These uncertainties should be considered when interpreting differences between domestic burning and background sites.

### *Bolton*

The annual average concentrations for Bolton do not indicate any obvious differences between the background and the domestic burning locations for the pollutants. The seasonal differences however do show that PM<sub>10</sub> and PM<sub>2.5</sub> are generally higher at the domestic burning sites than background during January which may be related to influences from domestic burning during the colder period. Both PM show weak negative relationships with temperature ( $R^2 < 0.02$ ), indicating that cooler evenings are only slightly associated with higher particulate levels. However, there are no PM<sub>10</sub>, PM<sub>2.5</sub>, or CO data for the period between October and December, which may affect the completeness of the seasonal comparison.

### Bury

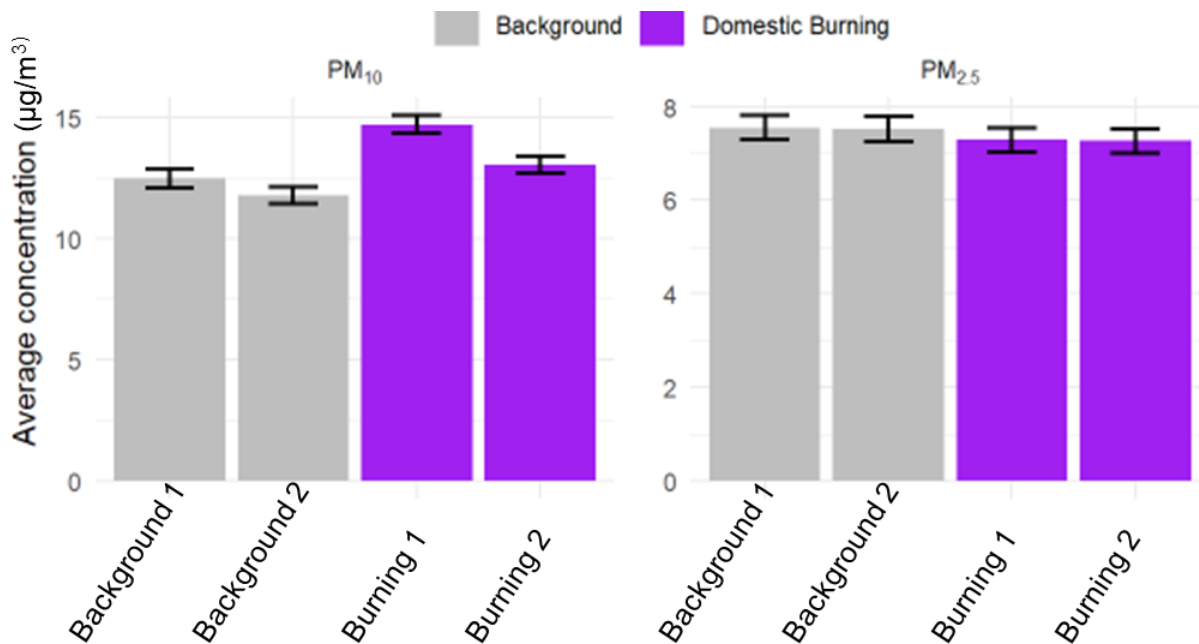
There is no clear difference observed in the annual average concentrations of pollutants for the background and domestic burning locations in Bury. The seasonal differences indicate some increase in PM<sub>10</sub>, PM<sub>2.5</sub> and NO<sub>2</sub> over the colder months, although for December, the average NO<sub>2</sub> concentrations are lower at the domestic burning sites compared to the background. Moderate negative slopes ( $R^2 = 0.02-0.04$ ) suggest that particulate concentrations rise modestly as temperatures fall. However, there is no PM<sub>10</sub>, PM<sub>2.5</sub>, or CO data for the period between October and December, which may affect the completeness of the seasonal comparison.

### Manchester

The annual average and seasonal bar charts indicate that PM<sub>10</sub> is typically higher at the domestic burning sites compared to the background sites. PM<sub>2.5</sub> and NO<sub>2</sub> are also higher during the colder winter months which suggests some possible influence from domestic burning during the colder period. Also, the regression analysis shows PM levels decline noticeably with higher temperatures, with PM<sub>2.5</sub> showing a stronger fit ( $R^2 = 0.06$ ), consistent with evening heating emissions

### Annual Average

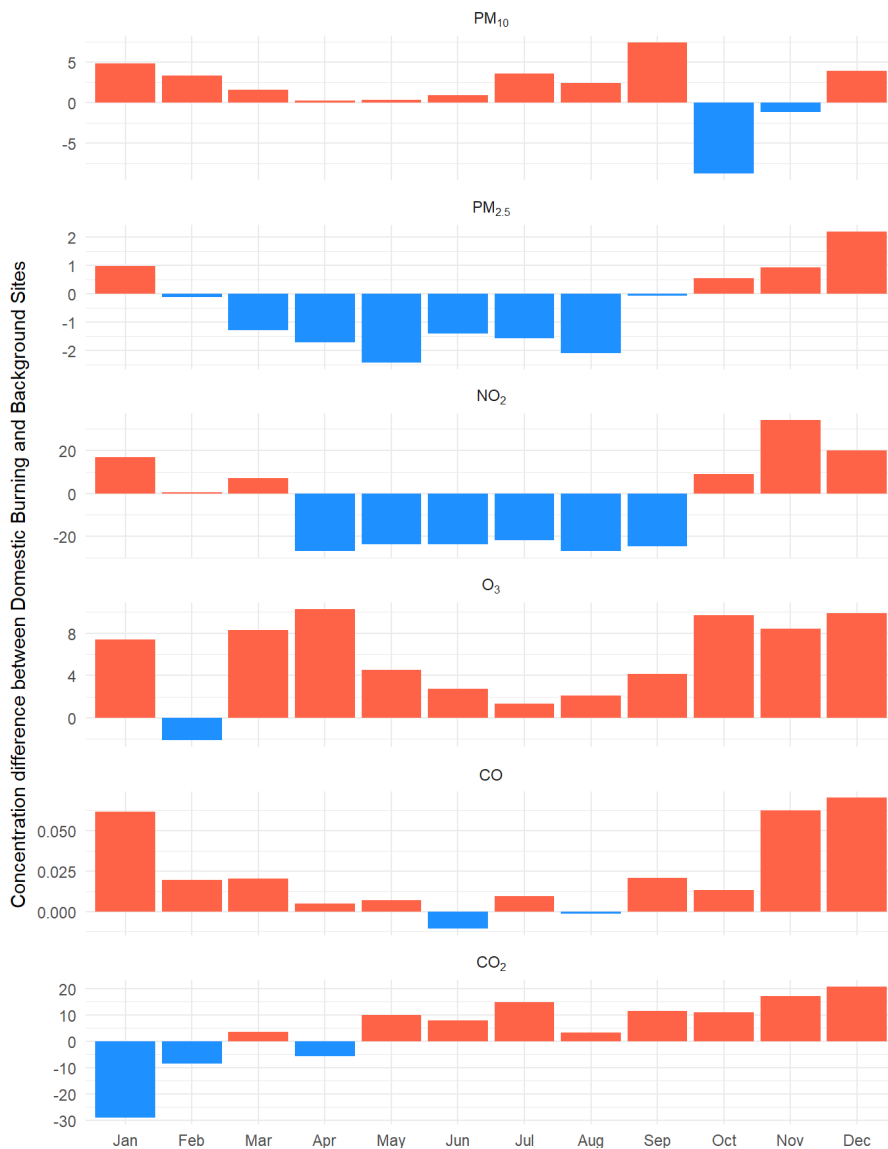
As domestic burning for heating typically occurs during the evening, the annual average concentrations between 6:00 pm and 10:00 pm have been compared, Figure 18. This plot presents pollutant concentrations at sites designated as background and domestic burning, providing insight into the contribution of domestic heating activities to local air quality.



**Figure 18 - 2024 Annual average PM concentration between 6:00 pm and 10:00 pm for Manchester Sites.**

## Seasonal Difference

Figure 20 illustrates concentration differences between domestic burning sites and background sites. By subtracting the background concentrations, districts showing positive differences during colder months, where concentrations at domestic burning sites are higher, are likely to be influenced by domestic burning or other seasonal activities. Presenting these differences on a monthly basis highlights how impacts vary with seasonal patterns and weather conditions.



**Figure 19 – Monthly concentration difference between domestic burning and background sites in Manchester by pollutant between 6-10 pm. Units = µg/m<sup>3</sup>, CO and CO<sub>2</sub> unit = mg/m<sup>3</sup>.**

## Oldham

There is some indication that at some sites, concentrations of NO<sub>2</sub> and PM<sub>2.5</sub> are higher at domestic burning sites than background sites. However, not for PM<sub>10</sub>. The seasonal difference between the domestic burning and background sites is positive from Jan to May and Sep to Dec, which may be related to domestic burning emissions. Although for

NO<sub>2</sub>, it is positive nearly all year round. Both PM concentrations increase as temperature decrease, with moderate correlations ( $R^2 = 0.03-0.04$ ).

#### *Rochdale*

There is no clear indication of pollutant concentrations at domestic burning sites being higher than background. There is seasonal variation all year, changes are not obviously linked to colder temperatures. Regression analysis shows weak negative slopes and very low  $R^2$  values ( $<0.02$ ) imply that temperature only explains little of the PM variation

#### *Salford*

The annual average concentrations do not show a clear increase in concentrations at domestic burning sites compared to background across pollutants. Seasonal analysis indicates PM<sub>10</sub>, PM<sub>2.5</sub> and NO<sub>2</sub> concentrations at domestic burning sites compared with background may be higher during winter months, but positive differences are observed during the summer too. Stronger linear relationships observed, both PM<sub>10</sub> and PM<sub>2.5</sub> decline clearly with temperature ( $R^2$  up to 0.07), showing colder evenings strongly coincide with higher PM levels.

#### *Stockport*

There is no strong indication that domestic burning sites measure higher annual average concentrations of the pollutants in Stockport, apart from ozone at domestic burning sites. Although seasonal patterns for PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub> and CO, show higher positive differences observed during the autumn/winter months, and lower (or negative) differences in spring/summer. Regression analysis shows a weak negative slope and very low  $R^2$  value ( $<0.01$ ) for PM<sub>10</sub> and a small negative trend for PM<sub>2.5</sub> ( $R^2 = 0.04$ )

#### *Tameside*

There is no clear indication of pollutant concentrations at domestic burning sites being higher than background from the annual average. There is seasonal variation over the year, and any changes are not obviously linked to colder temperatures. PM<sub>10</sub> shows no temperature dependence ( $R^2 = 0$ ), while PM<sub>2.5</sub> decreases modestly as temperature drops ( $R^2 = 0.03$ ), suggesting a limited relationship with the temperature.

#### *Trafford*

There is no clear difference observed in the annual average concentrations of pollutants for the background and domestic burning locations in Trafford. PM<sub>10</sub> concentrations at the domestic burning sites are higher in Oct/Nov and Dec, but this is not observed in any other pollutants. Both PM<sub>10</sub> and PM<sub>2.5</sub> exhibit stronger negative slopes ( $R^2 = 0.05$ ), indicating there is still a rise under colder conditions.

#### *Wigan*

For Wigan, the pollutant concentrations at domestic burning sites are higher than at the background during the warmer months, which suggests that domestic burning

emissions are not having an impact on the measured concentrations at domestic burning sites.  $PM_{10}$  shows a near-zero slope in regression plot, while  $PM_{2.5}$  declines slightly with very low  $R^2$  value ( $<0.01$ ), suggesting temperature only explains little of the PM variation. However, there is no data for the period between October and December, which may affect the completeness of the seasonal comparison.

## 2.6 Regional Background Concentration Trends

To assess regional background concentration trends, data from reference analysers operated by the Council and the AURN network in Greater London have been used as a basis for comparison. This provides an indication of how local concentrations relate to wider regional patterns. For an international perspective, datasets from the European Environment Agency (EEA) have been included, with selected sites in Greater Amsterdam and Paris. These cities were chosen based on data availability and comparability of pollutants measured. Only urban background and suburban background monitoring stations have been selected. The monitoring site locations were in Greater London, Greater Amsterdam, and Paris (greater city).

The following plots present normalised time series for each pollutant. Normalisation has been applied as the focus of this analysis is on concentration trends over time, rather than on absolute concentration levels. The plots compare regional and international datasets with measurements from sensors with background type in Greater Manchester, Figure 21 and 22.

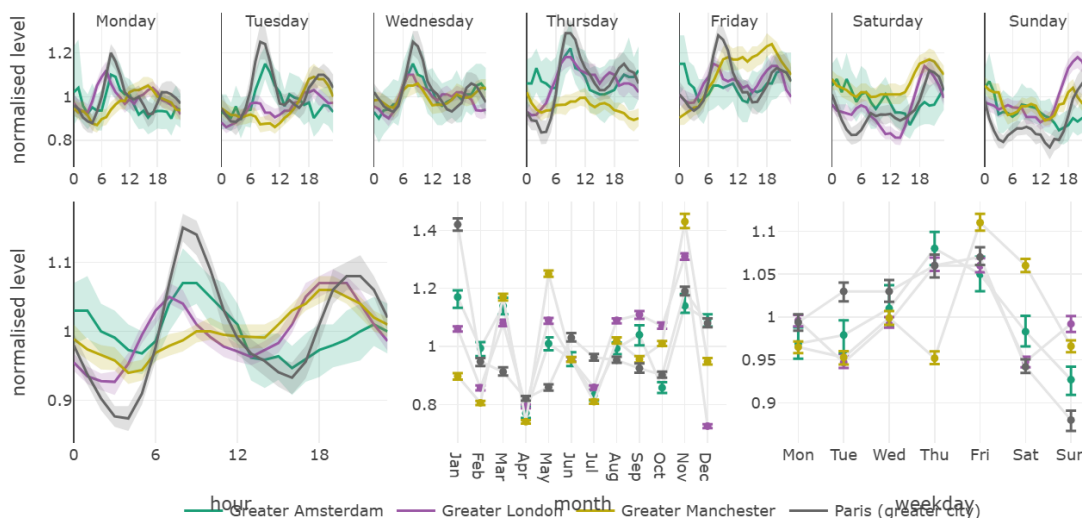
The  $PM_{10}$  diurnal plot indicates that Paris (greater city) and Greater London both exhibit typical diurnal cycles, with distinct peaks in the morning and evening. The variation in Paris (greater city) was larger than in Greater London. Greater Amsterdam displayed a similar pattern to Greater London, though the evening peak was smaller. Greater Manchester also showed two clear peaks, though the morning peak was smaller than that observed in Greater London.

Monthly variation plots show that Greater Manchester records higher  $PM_{10}$  concentrations in March, May, and November, whereas Greater London displays highest concentration in November. In comparison, Greater Amsterdam and Paris (greater city) show a more seasonal pattern, with higher concentrations across some colder months (January, November, and December).

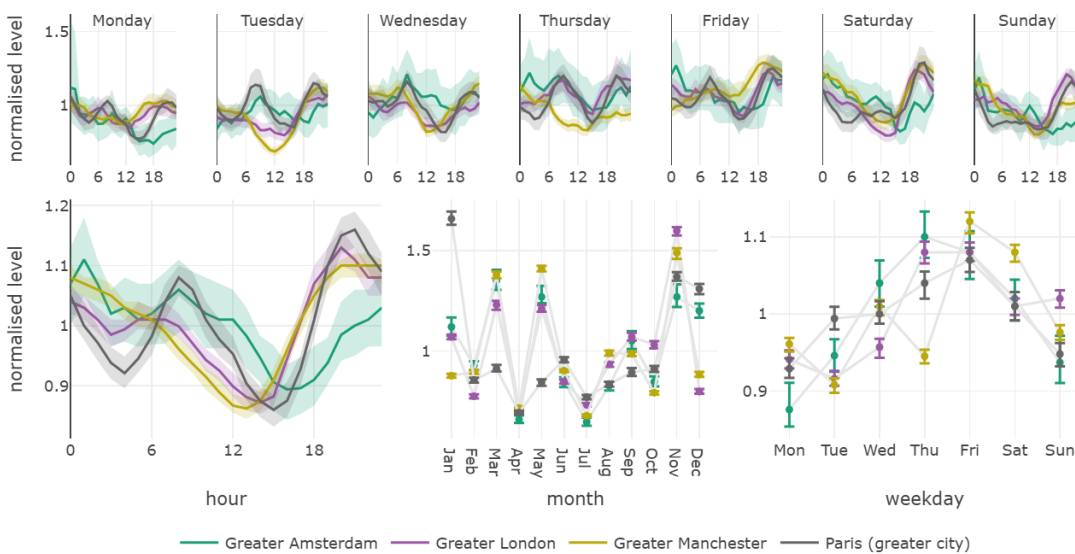
The  $PM_{2.5}$  diurnal plot shows broadly consistent patterns across all cities, with one peak in the morning and another in the evening, reflecting there could be some common regional activities. The monthly variation plots indicate that Greater Manchester and Greater London experience similar fluctuations throughout the year, with higher concentrations observed during March, April, and November. Greater Amsterdam shows a comparable pattern, though the November peak is much smaller. In contrast,

Paris (greater city) displays a seasonal pattern consistent with its PM<sub>10</sub> trends, characterised by higher concentrations during January, November, and December.

Examination of both PM monthly variation plots indicates that Greater Manchester and Greater London probably experienced notable PM episodes in March, May, and November 2024. According to DEFRA’s Accredited official statistics - [Particulate matter \(PM<sub>10</sub>/PM<sub>2.5</sub>\)](#), the elevated concentrations observed in March are likely associated with early spring conditions when nitrates transported from agricultural activities across continental Europe contributing to the formation of secondary fine particulate matter. DEFRA’s [Air Pollution in the UK 2024](#) report also notes that volcanic eruptions in Iceland during May 2024 resulted in the highest recorded SO<sub>2</sub> impacts in the UK for that year, which may have influenced local PM levels. Furthermore, the report highlights that activities surrounding Bonfire Night (5 November) led to short-term episodes of elevated PM<sub>10</sub> and PM<sub>2.5</sub> concentrations, further explaining the peaks observed in November.



**Figure 20 - Normalised time variation plot of PM<sub>10</sub> concentration compared to other cities.**



**Figure 21 - Normalised time variation plot of PM<sub>2.5</sub> concentration compared to other cities.**

## 2.7 Conclusions

This report assesses particulate matter concentrations across Greater Manchester for the period 01 January 2024 to 31 December 2024, based on the indicative monitoring network and supporting reference sites. The monitoring locations across the region have had QA/QC processes applied under the Monitoring Protocol to ensure that the results presented are robust. Additional pollutants, such as gases were measured, but as they are not covered by the MCERTS indicative certification they are not included.

The general statistics and analysis show the concentration means and data capture rates for the reporting period. With support from the meteorological condition data, the polar maps and back trajectory analysis further highlight the combined influence of local sources and regional or transboundary transport of PM in the GM region.

Conclusions should be read in the context of the limitations of the study, namely technical issues affecting some data collection and uncertainties around the prevalence of solid fuel burning in the target areas or its frequency.

At a regional level, there was very little difference in aggregated annual averages for PM<sub>10</sub> and PM<sub>2.5</sub> between background and burning locations across all GM background and burning sites. However, due to poor data capture across the network in the winter period, it was not possible to determine differences for some districts. Where more complete district-level analysis was available, differences between background and domestic burning sites were minimal or not apparent. Time series plots alongside temperature, diurnal and trend analyses, and box plot comparisons with reference sites provide a clearer picture of the characteristics of each site.

Finally, the regional background comparison places Greater Manchester within a wider national and international context. Results show that Greater Manchester trends align closely with Greater London. Both likely experienced notable PM episodes in March, May, and November 2024, while Greater Amsterdam was also likely affected by the March and May episodes.

Taken together, this report provides an initial understanding of particulate matter in Greater Manchester. It demonstrates the value of having a robust QA/QC procedure in place when using indicative monitoring networks when the aim is to identify local and regional drivers of air quality, and to provide a solid evidence base to inform future air quality management across the region. This study also shows the inherent challenges when operating a low-cost sensor network and that it can only be regarded as providing indicative data to supplement other networks.

The indicative monitoring will continue through the 2025/26 winter burning period to gather more information on how PM levels vary through the year. It is hoped that more comprehensive measurements can be included in a final report.

# Evaluating the Impact of the ‘Think Twice. Burn Better’ Campaign on Domestic Burning Awareness and Behaviour in Greater Manchester - University of Manchester Report, 2025

# **Evaluating the Impact of the ‘Think Twice. Burn Better’ Campaign on Domestic Burning Awareness and Behaviour in Greater Manchester**

Dr. Emily Matthews, Dr. Joanna Barrow, Prof. James Evans, Dr. Amanda  
Lea-Langton and Prof. Hugh Coe.



## Executive Summary

Domestic burning, including the use of wood-burning stoves and open fires, remains a significant contributor to air pollution in the UK. In Greater Manchester, local authorities launched the "**Think Twice. Burn Better**" campaign to raise awareness of the environmental and health impacts of domestic burning and encourage safer, cleaner practices.

This report evaluates the effectiveness of the campaign using a survey approach, with 330 respondents. While the survey achieved a sufficient sample size to draw meaningful insights, the demographics of respondents were skewed towards more affluent and digitally engaged individuals, reflecting the self-selecting nature of participation. This means that while the findings provide valuable indications of attitudes and behaviours among engaged residents, caution should be exercised when generalising the conclusions to the wider Greater Manchester population.

Findings are compared against a baseline survey conducted the previous winter (2023/24), which informed the campaign design. Although this sample was approximately one-third the size of the baseline survey and should be interpreted with appropriate caution, the similar demographic profile of respondents supports meaningful comparison of results. It should also be noted that some survey questions were only relevant to specific subgroups, such as those who burn solid fuels, resulting in smaller sample sizes for those analyses.

### Key Findings:

- **Responsible burning practices were commonly reported:** Many respondents indicated they already used dry or seasoned wood and maintained their appliances regularly. However, these behaviours largely reflect existing good practice rather than being directly attributed to the campaign.
- **Waste burning remains an area for improvement:** Around half of respondents reported occasionally burning waste materials, highlighting a continued gap in cleaner burning practices and an opportunity for future interventions.
- **Disconnect between awareness and personal behaviour:** While respondents recognised the broader harms of domestic burning, many were less likely to associate these impacts with their own activities, particularly regarding indoor and local air quality.
- **Cost and access barriers persist:** Financial pressures — linked to the rising cost of energy and cleaner fuels — were key barriers to behaviour change, even among more affluent respondents.
- **Green waste disposal barriers:** Comments collected via social media highlighted public concern that reduced access to green waste disposal services and the introduction of charges may inadvertently encourage residents to burn garden waste at home. This perceived inconsistency between waste management policies and air quality campaigns suggests the need for a more joined-up approach to support residents in reducing domestic burning.
- **Campaign engagement showed early signs of impact:** Among those who had seen or were introduced to the campaign, there was modest evidence of increased reflection and openness to

changing behaviours, including reduced burning frequency and improved appliance maintenance.

**Recommendations:**

- Ensure that all key messaging is clearly included within primary campaign materials, recognising that many residents will not seek out additional information beyond what they initially see.
- Deliver messages through trusted community figures and services, especially the Fire Service
- Incorporate calibrated, real-time local air quality data to improve perceived relevance.
- Address structural barriers, including heating affordability and access to waste disposal.

Findings from this sample suggest that while many residents are committed to responsible burning, there is room for improvement—particularly in awareness of air quality impacts and behavioural follow-through. However, these findings should be interpreted with caution due to the self-selecting, digitally engaged nature of the sample, and the limited number of respondents who had encountered the campaign independently prior to the survey. A holistic and inclusive approach will be essential to drive long-term change.

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## Introduction

Domestic burning, including the use of wood-burning stoves, open fires, and other solid fuel appliances, remains a significant contributor to air pollution in the UK. Emissions from domestic burning release fine particulate matter (PM<sub>2.5</sub>), nitrogen oxides (NO<sub>x</sub>), and other harmful pollutants, which negatively impact both air quality and public health. Exposure to PM<sub>2.5</sub> is linked to serious health conditions, including respiratory and cardiovascular diseases, with vulnerable populations—such as children and older adults—being particularly at risk (For example, Buka et al., 2006, Gauderman et al., 2004, Simoni et al., 2015).

In response to these concerns, the UK government has implemented various regulatory measures to reduce harmful emissions from domestic burning. Key legislation includes the Clean Air Act (1993) and the Environment Act (2021), which enable the creation of Smoke Control Areas where only approved fuels and appliances may be used. Recent policy changes, such as the 2021 ban on the sale of wet wood and household coal, aim to curb pollution by encouraging the adoption of cleaner fuels.

Despite these measures, changing public behaviour remains a challenge. Many households continue to burn solid fuels for heating, aesthetics, or to offset rising energy costs, while misconceptions persist regarding the environmental and health impacts of domestic burning. Previous public education initiatives, such as the *Burn Right* campaign, have applied behavioural science approaches to encourage cleaner domestic burning practices. These campaigns have typically focused on promoting simple, practical actions — such as using dry, seasoned wood, maintaining appliances, and following good burning techniques — often by highlighting social norms, providing accessible advice, and supporting informed choices.

In recent years, similar initiatives have been undertaken by local authorities at a borough or city level. For example, the London Wood Burning Project (delivered by the London Borough of Camden, with the support of the Mayor of London) combined public awareness messaging with targeted behaviour change interventions. This included seasonal campaigns using social media, radio advertisements, direct mail, and partnerships with chimney sweeps to promote best practices such as using Ready to Burn-certified fuels and maintaining appliances. The project emphasised health impacts and offered practical advice, aiming to shift both attitudes and behaviours.

Recognising the important role of behaviour change, Greater Manchester Combined Authority (GMCA) launched the *Think Twice. Burn Better* campaign. The *Think Twice. Burn Better* campaign was designed to raise awareness of the health and environmental harms associated with domestic burning and to encourage the adoption of cleaner, safer burning practices. The campaign targeted residents across Greater Manchester using a multi-channel approach, including social media adverts, posters in public spaces, online videos, radio broadcasts, and collaboration with Local Authority networks. By providing clear, accessible information, the campaign sought to equip individuals with practical steps they could take to burn more responsibly while improving local air quality.

To inform this campaign, an initial baseline survey was conducted during Winter 2023/24. This survey gathered data on domestic burning habits, public awareness of the environmental and health impacts of

burning, and understanding of relevant legislation. Key findings from the baseline survey highlighted significant knowledge gaps and a need for clearer public information. Building on these insights, this follow-up report evaluates the effectiveness of the *Think Twice. Burn Better* campaign using data from a second survey conducted in Winter 2024/25. The primary objectives are to assess any changes in awareness, attitudes, and behaviours among residents since the campaign's launch, and to identify opportunities for strengthening future interventions. Findings from this evaluation will inform ongoing efforts to reduce domestic burning emissions and support Greater Manchester's ambition to achieve cleaner, healthier air for all residents.

## Methods

### Survey Dissemination Strategy

This phase of the research involved a short online survey, created using Qualtrics (University of Manchester approved software). The questions were designed to collect information about participants' burning practices and attitudes towards solid fuel burning in relation to environment and health implications. The survey also sought to ascertain whether respondents had seen the "*Think Twice, Burn Better*" publicity campaign materials, to gauge their response and likelihood of changing their solid fuel burning behaviours. Basic demographic information was also collected.

Survey completion was kept to approximately 5 minutes to maximise response rate and participants were offered entry into a prize draw to win one of four £100 shopping vouchers. The survey was hosted on the GM Green City website ([bit.ly/GMburnbetter](http://bit.ly/GMburnbetter)). To increase the response rate, the weblink and QR code linking directly to the survey page were also promoted through separate publicity materials (posters and flyers), which were distributed via newsletters, email lists, local radio, and social media. Besides the distribution of publicity materials, an invitation to complete the survey was emailed to the 170 respondents who participated in the baseline survey in winter 2023/24 and agreed to be contacted about further elements of the study.

This study was conducted with ethical approval from the University of Manchester, all participants indicated their agreement to take part in accordance with the participant information supplied at the start of the survey.

### Demographic Profile of Respondents

A total of 330 people responded to the survey. The survey respondents were predominantly in full-time employment, a smaller proportion were in part-time work or retired. Only 3% identified as unemployed and 1% in education. In terms of income, the majority of respondents (43%) reported a household income between £60,000 and £99,999, with a large proportion (17%) earning over £100,000. A small minority (3%) reported earning less than £20,000. Educational attainment among respondents was high, with most holding a university bachelor's degree or a graduate/professional qualification. Few had no qualifications or only GCSE-level education. These figures suggest that the surveyed population was relatively affluent and well educated. The ethnic composition of the sample was overwhelmingly white, with only a small proportion (5 %) identifying as belonging to other ethnic groups. Age distribution was relatively balanced, with the largest proportion of respondents falling within the 45–54 and 55–64 age brackets. Regarding gender identity, the sample was nearly evenly split between male and female respondents, with very few identifying as non-binary or preferring to self-describe.

### Considerations for Validity and Representativeness

With 330 responses, the sample size is sufficient to observe meaningful trends, with a margin of error of

approximately  $\pm 5.4\%$  at a 95% confidence level (assuming 2.2 million adults in Greater Manchester)<sup>4</sup>. While the sample was self-selecting and skewed toward more affluent, well-educated, and predominantly white respondents, this demographic spread is broadly reflective of the population most likely to use log burners. As such, we can draw valid conclusions about this particular sample, and the findings offer relevant insights into the behaviours and attitudes of likely wood-burning households in Greater Manchester. However, the results should not be taken as statistically representative of the entire adult population, and caution is advised when generalising to underrepresented groups.

## Campaign Dissemination Strategy

The domestic burning awareness campaign was developed and delivered by Transport for Greater Manchester (TfGM) during 2024/25. The campaign aimed to raise awareness of cleaner burning practices and successfully generated over 16 million opportunities for people across Greater Manchester to see or hear campaign messages, resulting in more than 9,000 visits to the Burn Better GM Information Hub. TfGM employed a multi-channel communications and marketing strategy, which included:

- Traditional media coverage, generating over 3 million opportunities to see or hear the GM #BurnBetter story.
- Over 34 million impressions across social and paid digital channels.
- 16,000+ views of campaign videos and animations on organic social media channels.

### Paid Media and Targeted Outreach

- The campaign achieved over 13.4 million combined impacts/impressions through paid media and organic social media content.
- Radio advertising contributed approximately 2.55 million impacts, representing potential listener reach.
- Paid social media activity was delivered in two phases, targeting:
  - Parents
  - Adults aged 30+
  - Residents in smoke control areas and postcode districts with 200+ registered log burners.
  - Phase one delivered nearly 1.5 million impressions and 5,000 clicks (0.33% click-through rate).
  - Phase two generated 3.5 million impressions and 7,000+ clicks (0.21% click-through rate).

### Leaflet and Outdoor Advertising

- Double-sided A5 leaflets were distributed to almost 80,000 households in areas with a high concentration of log burners (based on appliance registration and Energy Performance Certificate data).
- Out-of-home (OOH) advertising was placed in high-priority areas (100+ registered burners), including:
  - Digital billboards (D48s)
  - 6-sheet posters

- Kiosks
- Double royal posters
- Bus stop Passenger Information Panels (BIPs)
- Bus headliners

## Summary of Initial Survey on Domestic Burning in Greater Manchester (Winter 2023/24)

The initial phase of this research, conducted during Winter 2023/24, aimed to establish a baseline understanding of domestic burning habits, motivations, and levels of awareness among Greater Manchester residents. This foundational study employed a mixed-methods approach, combining a large-scale online survey with in-depth focus group discussions. In total, 959 residents participated in the survey, with additional qualitative insights gathered through community-based group sessions. The findings were pivotal in shaping the “Think Twice. Burn Better” campaign, providing critical direction for messaging and intervention strategies.

### Key Findings

#### **Prevalence and Motivations for Burning:**

Over half (55%) of respondents reported burning solid fuels or garden waste, either indoors or outdoors. Indoor burning was primarily for secondary heating, with many also citing financial savings or for social purposes. Outdoor burning was more often for social and recreational purposes, particularly in warmer months.

#### **Fuel Types and Practices:**

Most indoor burners used dry or seasoned wood and smokeless coal, indicating a general alignment with cleaner burning practices. However, waste wood and foraged fuels were still used by a minority. Awareness of proper drying practices was mixed—while many avoided burning chemically treated wood, fewer consistently measured wood moisture levels.

#### **Impact of Energy Prices:**

The recent energy crisis had a clear influence, with around 35% of participants burning more frequently to offset rising utility costs. Some respondents had also installed new solid fuel appliances as a more affordable heating option.

#### **Awareness and Misconceptions:**

At the time of the survey, domestic burning was the largest source of PM<sub>25</sub> emissions in the UK. While most participants were aware of the health impacts of PM<sub>25</sub>, only a minority correctly identified domestic burning as the main source. The majority believed transport or industry were the primary contributors. Awareness of Smoke Control Areas (SCAs) was also limited—nearly half of all respondents were unaware or unsure of whether they lived in one.

#### **Demographic Profile:**

Indoor burners were typically homeowners, middle-to-high earners, and more likely to have grown up in households with solid fuel appliances. Outdoor burners were more demographically diverse, with greater

representation from renters, lower-income groups, and ethnic minorities.

### **Readiness for Behaviour Change:**

The survey found generally positive attitudes towards burning responsibly. Many respondents expressed willingness to change if they knew their actions could impact air quality and health.

### **Insights from Focus Groups**

The focus groups provided valuable insights into the motivations and challenges surrounding domestic burning. Financial considerations emerged as a major driver, with many participants installing log burners to reduce heating costs, particularly during the recent energy crisis. However, participants also acknowledged that responsible burning—using dry wood and maintaining appliances—can still be costly, making cleaner practices less accessible to all households.

Aesthetic and emotional reasons were also important, with fires described as enhancing the atmosphere and comfort of the home, especially during social occasions. While some participants were aware of the health risks associated with domestic burning, particularly exposure to PM2.5, many perceived other sources, such as traffic and industry, as greater threats to air quality. A few participants reported changing their burning habits significantly after recognising the health impacts.

In terms of campaign messaging, participants preferred clear, balanced, and evidence-based information. Materials perceived as manipulative or scaremongering were less effective. Trusted messengers included academics, government bodies, the fire service, and chimney sweeps, while organisations with perceived vested interests were viewed with scepticism. Participants also highlighted structural barriers, such as limited access to waste disposal services, and suggested that broader support for waste management could help reduce poor burning practices.

Overall, the findings highlight the complex mix of practical, emotional, and informational factors that influence domestic burning behaviours.

## **Summary of Recommendations from the Initial Survey Report**

The initial report concluded with a range of targeted recommendations to support the development of more effective behaviour change campaigns and cleaner domestic burning practices. These were shaped by both the survey data and insights from the focus groups:

### **1. Educate on the Health Impacts of Domestic Burning**

There was widespread unawareness of domestic burning as the leading source of PM2.5 pollution. Campaigns should prioritise clear, accessible information about the health risks of PM2.5 exposure.

### **2. Improve Public Understanding of Smoke Control Areas (SCAs)**

Awareness of SCAs was low, with many unsure whether they lived in one or owned compliant appliances. It was recommended that councils create interactive tools to help residents check SCA status and legal compliance.

### 3. Use Trusted Messengers

Professionals such as chimney sweeps, the fire service, and health professionals were identified as highly trusted sources of information. Councils should involve these figures in campaign messaging to improve reach and credibility.

### 4. Address Cost and Energy Security

The energy crisis prompted many to burn more frequently or adopt solid fuel as a primary heating source. Campaigns should be mindful of this by offering cost comparisons and promote energy-efficient alternatives.

### 5. Tailor Messaging to Burners' Motivations

Many residents already follow best practices and are motivated by cost savings or efficiency. Campaigns should highlight the personal benefits of burning correctly—such as better heat output, reduced chimney fire risk, and fuel savings—while avoiding guilt-based framing.

### 6. Provide Visual and Practical Tools

- **Infographics** comparing emissions by appliance type
- **Practical guides** for correct fire-lighting (e.g. the "upside-down" method)
- **Compliance-checking tools** for stove legality in SCAs
- **Moisture monitoring tips** for drying self-sourced fuel

# Findings from the 2024/25 Survey

## Overview of Participants' Burning Habits

This survey provides an overview of domestic solid fuel burning practices and attitudes among respondents in Greater Manchester. A more detailed account was presented from an initial baseline survey conducted in Winter 2023/24. In this recent survey we focus on the motivations and habits of indoor burners. The findings triangulate with the initial survey, highlighting the variety of burning methods, motivations, seasonal usage patterns, frequency, appliance longevity, fuel types, and fuel preparation habits.

### Types of Burning Activities

The majority of respondents (69%) reported using domestic wood or multi-fuel stoves. Other notable activities included barbecuing (charcoal, non-gas) (34%) and fire pits (26%). Bonfires, patio heaters/chimineas, and leaf burners were less common but still notable. Domestic open fires and solid fuel boilers were reported by fewer respondents, perhaps indicating a preference for modern appliances over traditional methods.

### Motivations for Burning Solid Fuels

The overwhelming reason given for indoor burning related to heating, with the majority (90%) stating that they burn solid fuels alongside other heating options. Almost half of the sample indicated social reasons and pleasure as a motivation for indoor burning (48%), showing that burning is not purely functional but aligned to lifestyle choices. Financial considerations were cited by a fifth of the sample (21%), indicating that cost influences the behaviour of some. Sustainability was mentioned by 15%, suggesting some perceive burning as an eco-friendly option, potentially due to misconceptions about wood being a carbon-neutral fuel.

### Seasonal and Frequency Patterns

Burning practices are highly seasonal, with winter being the peak usage period for almost all respondents. Half the sample (50%) indicate that they use their appliances in the autumn, with less usage in spring (25%) and summer (5%). During peak periods, most respondents burn solid fuels a few days per week (36%) or daily (28%), indicating regular reliance on these appliances. A smaller portion used them less frequently, suggesting a group of occasional users driven by weather conditions or special occasions.

### Duration of Appliance Ownership

The majority of the respondents had owned their appliance for five or more years (60%). Almost a third (32%) had bought their appliance within the last four years. The motivations for burning solid fuels were consistent across the varying ownership duration, with the exception of 'sustainability' which was more important to those who have had their appliance for five years or more.

### Types of Fuels Used

Dry or seasoned wood was the most consistently used fuel, with many respondents using it "most of the

time" (22%) or "always" (77%). Higher polluting fuels, such as waste or foraged wood and household coal, were only used regularly by a small percentage of the respondents. However, it is possible that some participants may have confused household coal with smokeless coal, so these figures should be interpreted with caution. Almost half of respondents admitted to occasionally using waste wood and as such, this could be an area for improvement. Despite being an approved fuel for indoor appliances, smokeless fuels were only regularly used by a small percentage of respondents. Of those using waste or foraged wood, just over a third (37%) test to ensure the correct moisture content before burning, where almost half (46%) claim that they dry their wood but don't test the actual moisture content.

### Do you currently (within the past 12 months) burn solid fuels (e.g. coal, wood, charcoal) or garden waste in any of the following ways?

163 Responses

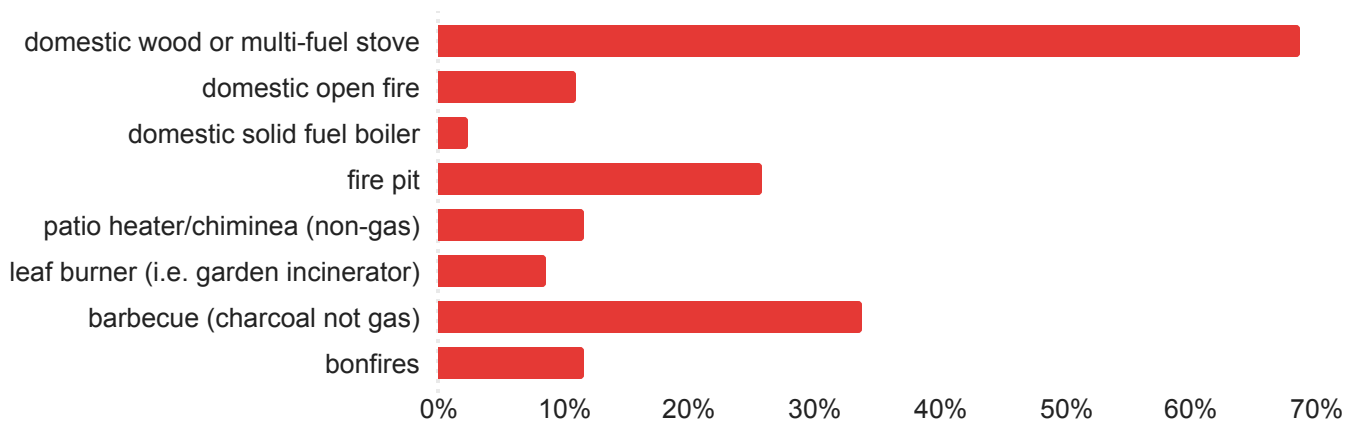


Figure 1: Type of solid fuel appliance used by respondents

Please answer the following questions for your indoor appliance(s) only.  
Do you burn solid fuels for any of the following reasons?

126 Responses

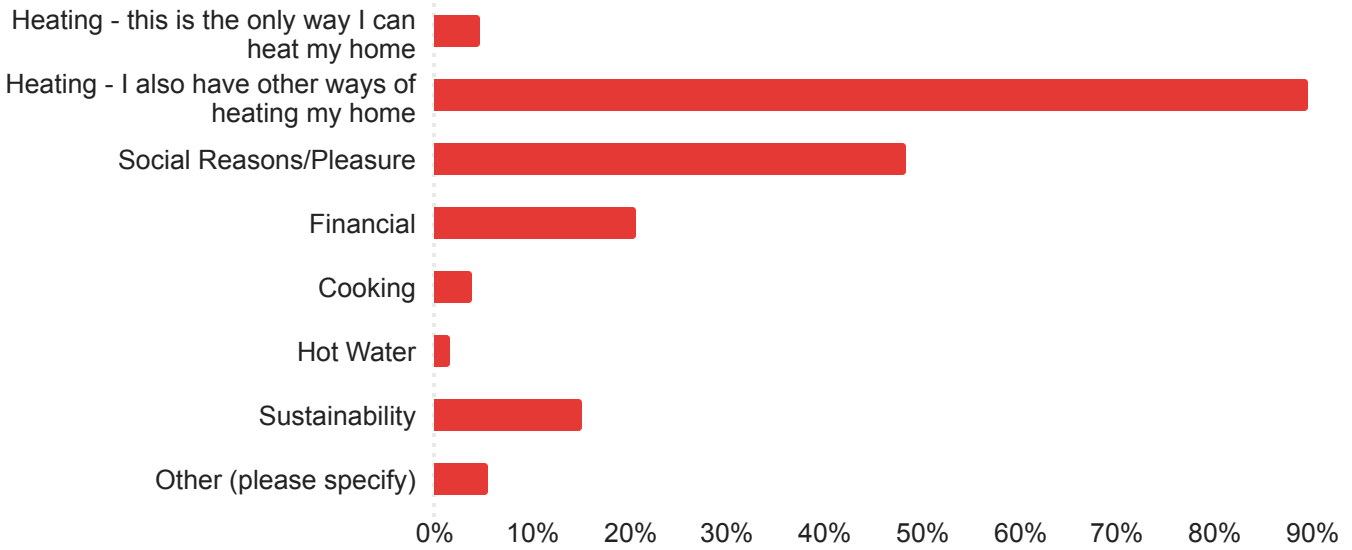


Figure 2: Motivation for solid fuel burning

What fuel do you burn in your main appliance?

124 Responses

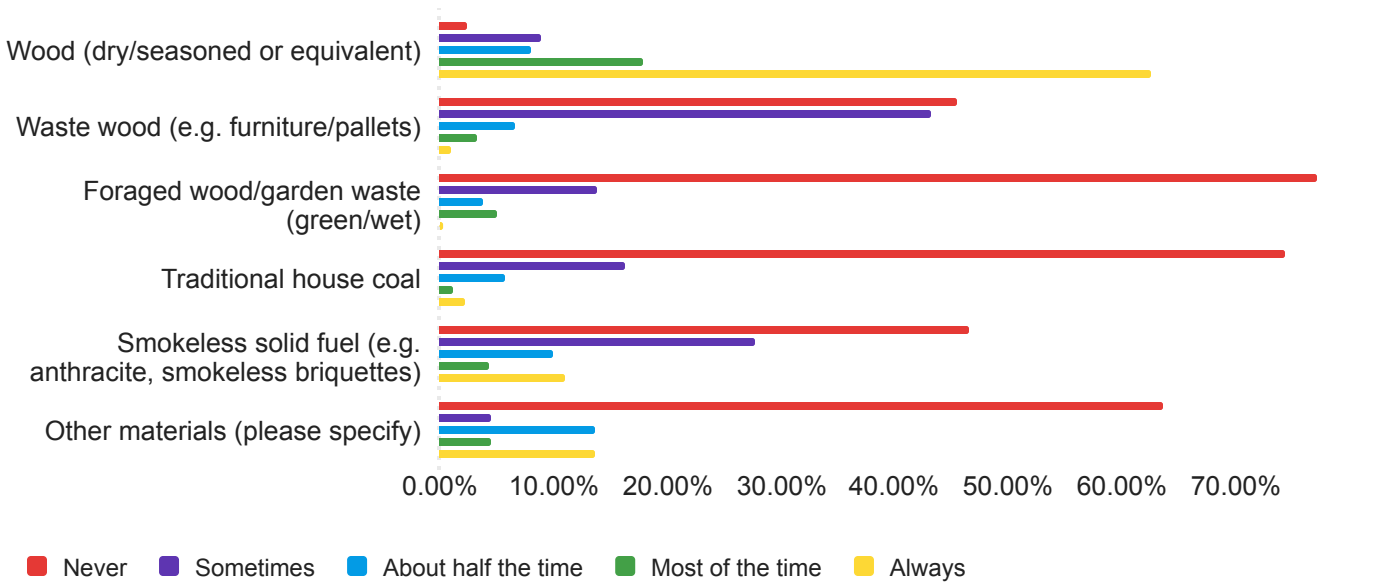


Figure 3: Type of solid fuels burned by respondents

### Do you ensure that any foraged or waste wood is dried to below 20% moisture?

52 Responses

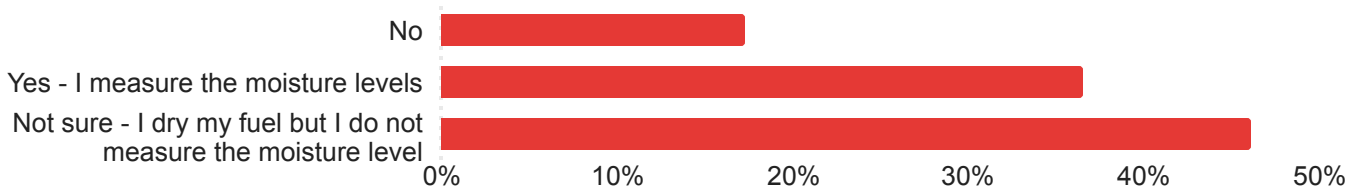


Figure 4: Adherence to drying practices for waste or foraged wood

### What time of year do you typically use your appliance(s)?

125 Responses

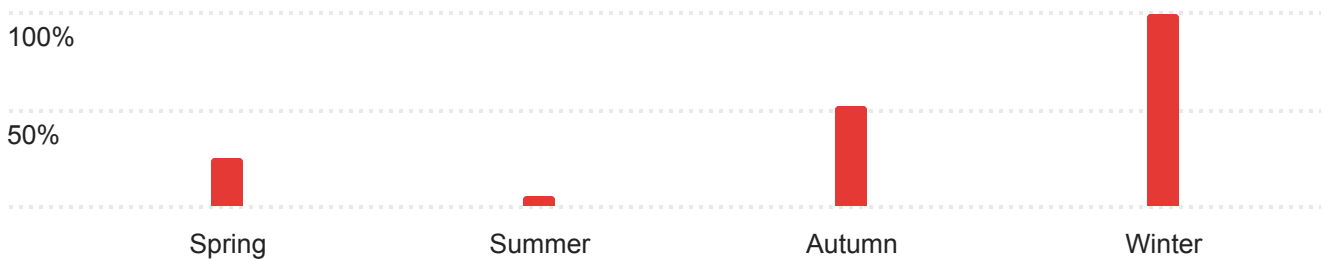


Figure 5: Time of year that respondents use indoor solid fuel appliance(s)

### During peak usage, how often do you burn solid fuels?

124 Responses

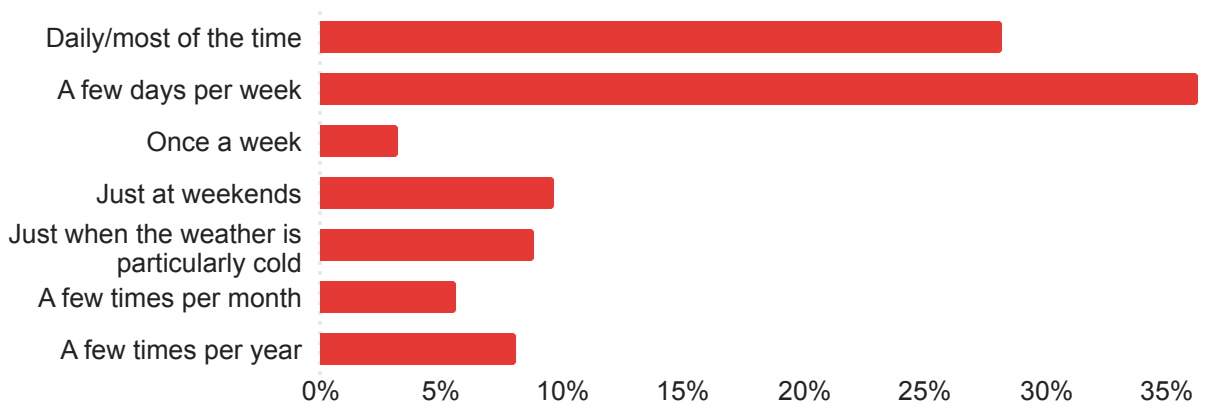


Figure 6: Frequency of burning for indoor burners

## How long have you had your main solid fuel appliance?

123 Responses

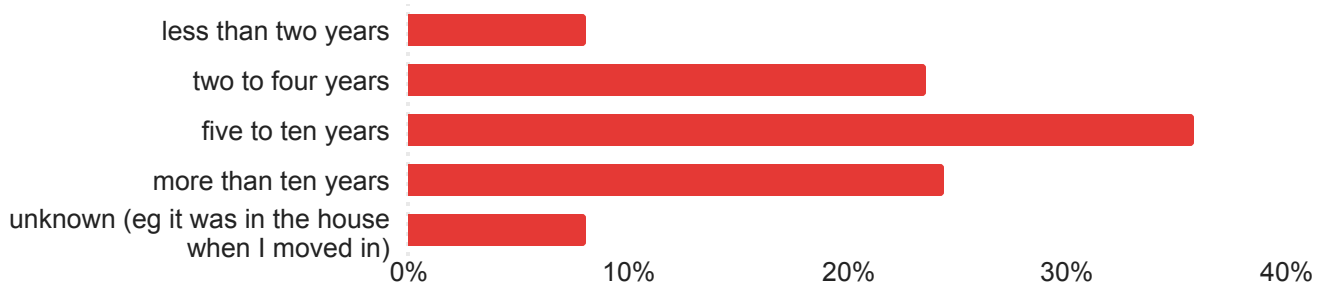


Figure 7: Duration of ownership of indoor solid fuel appliances

## Campaign Engagement

The survey results provide insights into public engagement with the *"Think Twice. Burn Better"* campaign materials. The majority (over 75%) reported that they had not seen any campaign materials. This suggests that the campaign's reach may have been limited, or that the visibility of its materials was insufficient to capture public attention. However, it should be noted that the campaign achieved extensive delivery, generating over 16 million opportunities for people across Greater Manchester to see or hear campaign messaging. This apparent disconnect may reflect limitations in the survey's modest, self-selecting sample as well as the challenge of translating broad reach into public recall and engagement.

Among those who did engage with the campaign, social media emerged as the most effective channel, with the highest proportion of respondents (13%) indicating that they had seen campaign content on these platforms. This highlights the potential of digital outreach, particularly via social media, for future campaigns targeting domestic burning behaviours. Other channels, such as physical posters at bus stops, news releases, billboards, and radio, saw considerably lower levels of engagement, each accounting for less than 10% of respondents.

Furthermore, the survey explored whether respondents who had engaged with the campaign materials outside of the survey had interacted with QR codes or website links. The vast majority (80%) stated that they did not use these digital resources. A small proportion (11%) of respondents reported using QR codes or website links, with a further minority indicating an intention to do so in future. While based on a limited number of responses (n=70), this is consistent with overall campaign analytics: over 16 million opportunities for people to see or hear the messaging resulted in just over 9,000 visits to the campaign website (0.06%). This suggests that future campaigns should ensure all key messages are included within the main campaign assets, as the public may be unlikely to engage with supplementary online resources.

While social media emerged as a key channel for disseminating campaign information, the available data indicates that overall engagement with campaign resources — particularly supplementary digital content — was limited among survey respondents.

## Which of the following 'Think Twice. Burn Better' campaign materials have you seen or engaged with?

330 Responses

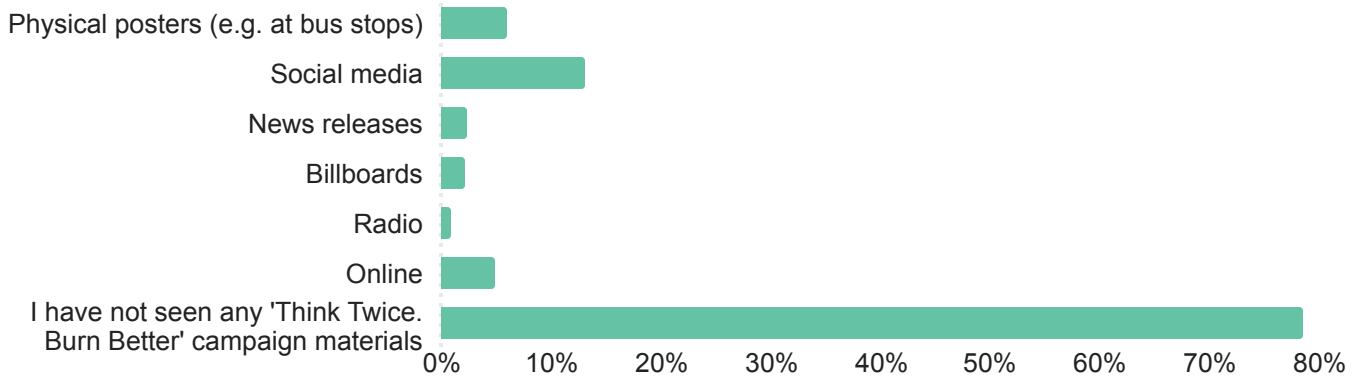


Figure 8: Level of engagement with the 'Think Twice. Burn Better' campaign

## Did you use any QR codes or website links provided on the campaign materials?

71 Responses

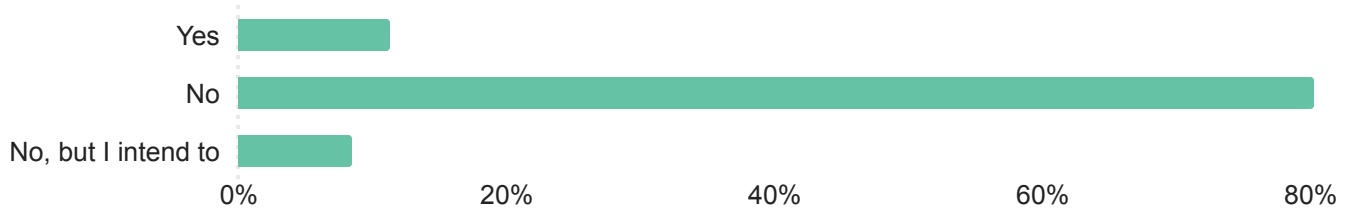


Figure 9: Level engagement with supplementary digital resources

## Perceptions of the 'Think Twice. Burn Better' Campaign Materials

The survey also sought respondents' perceptions of the "Think Twice. Burn Better" campaign materials by asking them to rank their level of agreement with various statements. The responses provide insights into how the campaign was received in terms of credibility, relevance, educational value, and engagement. However, only 244 people (74%) responded to this section, giving a margin of error of approximately  $\pm 5.3\%$  at a slightly reduced confidence level of 90%. However, it is important again to note that confidence is only applicable for this sample and as such cannot be extrapolated to the whole population of Greater Manchester and not all demographics are sufficiently represented.

### **Credibility of Campaign Materials:**

Survey responses indicate that perceptions of the campaign materials and website as credible sources of information on better burning practices were mixed. While 45% of respondents selected 'agree' or 'strongly agree'—with 'agree' being the most common response—a larger proportion selected 'neither agree nor disagree,' and a smaller percentage expressed disagreement. This distribution suggests that, although a large segment of the audience found the information trustworthy, there remains an opportunity to enhance the campaign's perceived authority and resonance across a broader demographic.

### **Educational Impact – Rules and Guidelines for Burning:**

When asked if they learned something new about the rules and guidelines for burning at home, most respondents selected *neither agree nor disagree* suggesting that the campaign had limited effectiveness in increasing awareness or delivering new, impactful information about domestic burning regulations. However, the campaign successfully provided new information to around one in three participants. Some respondents chose *disagree* or *strongly disagree*, which may indicate that the educational component did not reach or resonate with all segments of the audience. It is also possible that some respondents selected these options because they were already aware of the relevant legislation and guidelines prior to the campaign.

### **Educational Impact – Impacts of Burning at Home:**

When asked if they learned something new about the impacts of burning at home, a similar pattern emerged, with most respondents selecting *neither agree nor disagree*. The responses were evenly distributed between those who agreed and disagreed, further suggesting that the campaign did not significantly enhance understanding of the environmental and health consequences of domestic burning. This balanced response may indicate that while some found the information useful, others either felt they already knew the risks or did not find the campaign's messaging persuasive or memorable.

### **Thought-Provoking Nature of the Materials:**

The campaign materials were more positively received in terms of encouraging reflection, with a large number of respondents agreeing that they were thought-provoking. This suggests that the campaign successfully engaged many participants in considering domestic burning practices. However, a notable proportion of respondents selected neutral responses. This indicates that while the materials were informative, there may be opportunities to enhance their impact by incorporating more compelling content to prompt deeper consideration and drive behaviour change. It should be noted that these findings are based on a self-selecting sample, likely biased towards individuals already interested in or concerned about air quality and domestic burning, which may overrepresent positive perceptions of the materials.

### **Relevance of the Campaign Materials:**

Relevance was one of the strongest areas of positive feedback. A large majority of respondents agreed that the materials were relevant, indicating that the campaign addressed issues that resonated with the audience. This suggests that the core themes and topics of the campaign aligned well with public interests and concerns. However, as the survey relied on a self-selecting sample, these findings may be biased towards individuals who are more engaged with environmental or domestic burning issues, and may not fully represent the views of the wider Greater Manchester population.

# Rank the following statements about the 'Think Twice. Burn Better' campaign materials

244 Responses

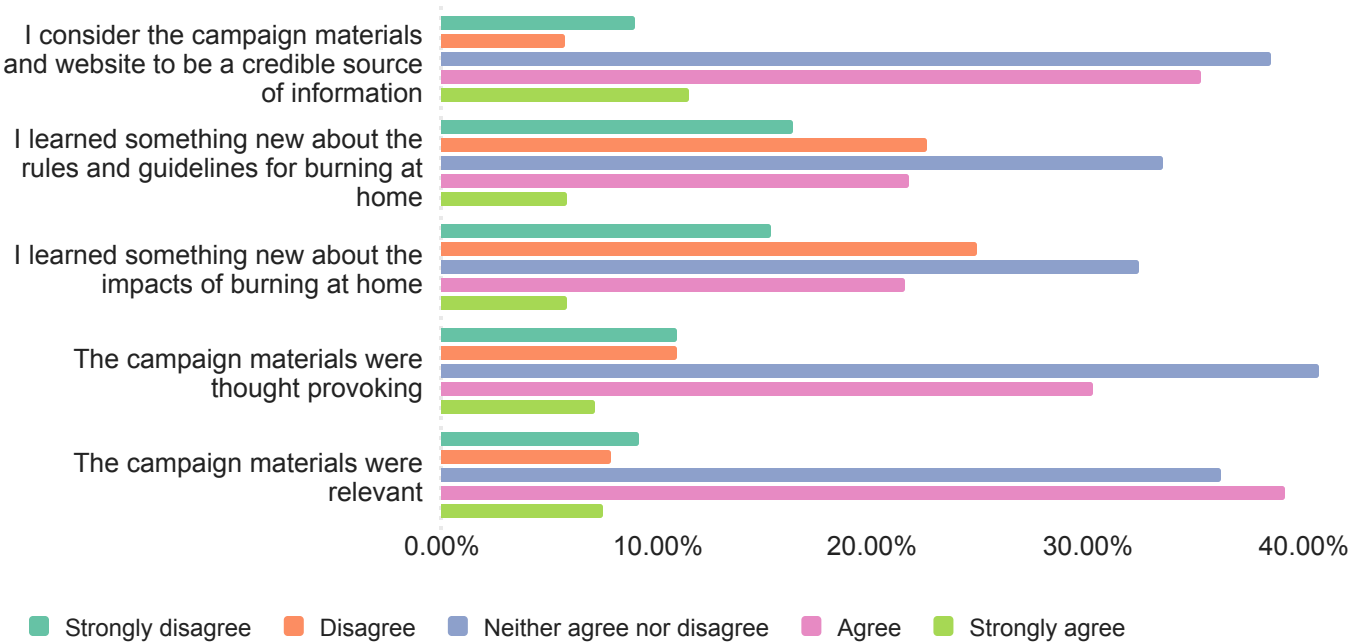


Figure 10: Assessment of the campaign's educational and engagement impact

## Suggestions for Improvement and Public Feedback

A total of 122 participants (34%) provided written responses to the open-ended question about how the "Think Twice. Burn Better" campaign could be improved. While qualitative in nature and based on a smaller subset of the total sample, these responses offer rich insight into public perceptions, with recurring themes around visibility, messaging clarity, and health-related information.

### 1. Increased Visibility and Coverage

A common theme was the need for broader campaign reach and visibility. Several respondents mentioned they had not seen the campaign materials at all, indicating that future efforts may benefit from wider distribution across multiple platforms. Suggestions included more physical materials in public spaces and targeting densely populated areas.

- “More coverage. Not sure what the scope of this campaign was. I haven’t seen it.”
- “Even more physical posters—especially in busier areas.”
- “Better rollout – I haven’t seen the materials anywhere.”

### 2. Enhanced Clarity and Messaging

Respondents also expressed the need for clearer messaging, particularly around actionable steps and

alternative practices. Some noted that the campaign appeared to legitimise burning rather than discourage it, while others felt the messaging lacked practical guidance.

- *“The messaging is still legitimizing ‘burning’ and implies that burning better is somehow safer. We need to move to messaging about heating homes without burning wherever possible.”*
- *“Seems to be predicated on burning. It’s too soft; it makes it seem like burning is a valid choice without highlighting the alternatives.”*
- *“Needs clearer instructions on how to burn safely—maybe more step-by-step advice.”*

### **3. Greater Emphasis on Health Impacts**

Another prominent suggestion was to place more emphasis on the health consequences of domestic burning. Respondents felt that highlighting the direct effects on personal and community health could have made the campaign more impactful.

- *“Focus more on the health impacts of burning—especially on children’s health.”*
- *“Explain how burning affects indoor and outdoor air quality and the potential health risks.”*
- *“More on how burning contributes to asthma and respiratory problems would have been useful.”*

### **4. Accessibility and Targeted Outreach**

A few comments raised the issue of accessibility, suggesting that messaging should consider the needs of different audiences, particularly those in fuel poverty or without access to cleaner alternatives.

- *“How are people living in poverty supposed to burn fuel safely and cheaply?”*
- *“The campaign should also discuss affordable, accessible alternatives for heating.”*

## Campaign Impact

The data from this sample suggests that the *Think Twice. Burn Better* campaign may have had some influence on domestic burning behaviours, though the extent of its impact appears to be mixed. These responses are from a subsample of 155 indoor burners (47%). The data from this reduced sample has a confidence level of 90% with a margin of error of approximately  $\pm 6.6\%$ .

### Changes in Burning Frequency

The campaign had some success in reducing the frequency of burning amongst respondents who had interacted with campaign prior to this survey. Around one in four respondents (24%) indicated that they now burn less since encountering the campaign and a further 17% are considering reducing their frequency. Furthermore, 22% of respondents who were introduced to the campaign by this survey indicated that would consider reducing their frequency. This indicates that while the campaign successfully raised awareness among some individuals, there remains a large group of people who are either resistant to change or may require more targeted messaging.

### Influence on Fuel Choice

The campaign's influence on fuel choice appeared limited, with the majority of respondents reporting no change to their burning practices. However, it is important to recognise that many participants already reported using dry or seasoned wood, aligning with recommended best practices — a trend also reflected in many of the 'other' free-text responses. A small percentage has however indicated a willingness to change their fuel choices and practices (3-6%)

Despite this positive baseline, around half of respondents indicated that they sometimes burn waste materials, which remains a concern given the associated air quality impacts. Those who reported burning waste or foraged wood did not show a greater tendency to adopt cleaner burning behaviours following the campaign. This highlights an opportunity for future interventions to place greater emphasis on discouraging the use of unsuitable fuels and providing clearer alternatives.

### Appliance Maintenance and Cleaning

Survey responses suggest that a proportion of participants were prompted to reconsider their appliance maintenance habits after encountering the campaign. Among those who had not previously engaged with the campaign, 18% stated that they would increase the frequency of chimney sweeping or appliance maintenance. Among those who had prior engagement with the campaign, this figure rose to 28%, suggesting a potentially stronger impact where exposure was earlier or more sustained.

However, a substantial proportion of respondents indicated no intention to change their maintenance habits — 45% among those with no prior campaign engagement and 30% among those who had previously engaged — highlighting an ongoing challenge. It is also important to note that many respondents selected "Other," often specifying that regular chimney sweeping was already part of their routine.

### Knowledge and Awareness of Regulations and Best Practices

Survey responses indicate that knowledge of Smoke Control Areas (SCAs) remains mixed among participants. Among respondents who had previously engaged with the *Think Twice. Burn Better* campaign, 60% reported living in an SCA, compared to 43% of those with no prior campaign engagement. Where suitable data was available, postcode analysis revealed that 89% of respondents included in the analysis correctly identified whether they lived in a Smoke Control Area, based on postcode coverage. Some postcodes with partial SCA coverage were excluded from the analysis.

However, uncertainty remains high: around one in four respondents who had previously engaged with the survey were unsure whether they lived in an SCA, and around one in three respondents without prior engagement. These findings suggest that although prior campaign engagement may improve awareness, there is still a proportion of the population who lack clarity about SCA regulations. This highlights the need for simplified and clearer communication about SCAs in future public education efforts, ensuring residents understand both the existence and the purpose of these regulations.

When asked whether they felt they had enough information to make better choices about burning fuel, approximately three-quarters of respondents said "Yes," while smaller proportions reported feeling unsure or said they lacked sufficient information. This suggests that, while many respondents feel relatively well-informed, there remains an opportunity to further strengthen public understanding — particularly around regulatory requirements and best practice advice.

### Since encountering the "Think Twice. Burn Better" campaign, have you or do you intend to change how often you burn fuel at home?

155 Responses

Field	Yes - I now burn less often	Yes - I now burn more often	Not currently, but I am considering it	No
No prior engagement	2%	4%	22%	73%
Previously engaged with campaign	24%	0%	17%	59%

*Table 1: Assessment of the campaign's impact on domestic burning frequency*

## Has the campaign influenced your choice of fuel type?

156 Responses

Field	Yes - I now only burn fuels approved for my appliance	Yes - I now burn less waste materials	Yes - I now ensure my wood is dried to below 20% moisture	Not currently, but I am considering it	No	Other (please specify)
All	3%	4%	6%	12%	64%	21%
Waste	4%	6%	6%	8%	69%	14%
Wet	0%	0%	6%	6%	83%	11%

Table 2: Assessment of the campaign's impact on solid fuel choice

## Have you or will you take any steps to maintain or clean your appliance since seeing the campaign?

152 Responses

Field	Yes - I will increase the frequency of my chimney sweeps and/or appliance maintenance	Not currently, but I am considering it	No	Other (please specify)
No prior engagement	18%	13%	45%	24%
Previously engaged with campaign	28%	7%	30%	35%

Table 3: Assessment of the campaign's impact on solid fuel appliance maintenance

## Do you live in a smoke control area?

244 Responses

Field	Yes	No	Unsure	I don't know what a smoke control area is
Previously engaged with campaign	60%	12%	25%	4%
No prior engagement	43%	12%	34%	11%

Table 4: Knowledge of smoke control areas among respondents

Do you feel you have enough information to make better choices when burning fuel?

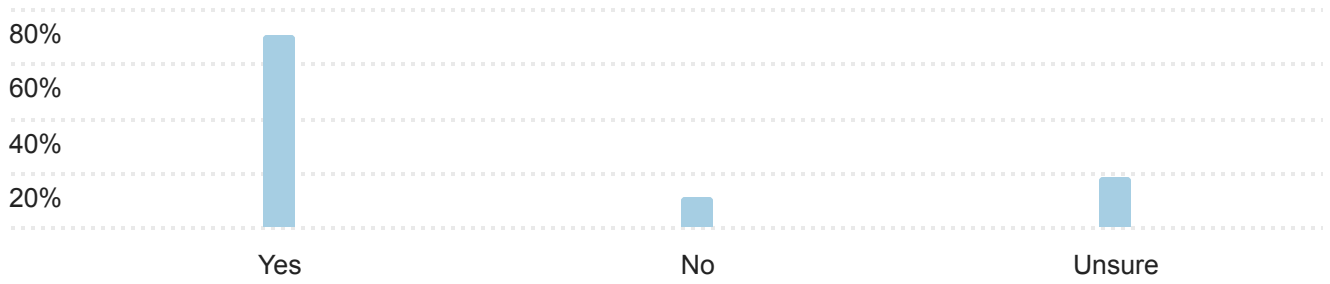


Figure 11: Level of perceived sufficient knowledge on best burning practices among respondents

## Barriers to change

Respondents revealed that financial barriers are a key factor influencing home burning habits. The cost of alternative heating methods, such as gas and electricity, was the most significant financial concern, with the highest proportion of respondents selecting *agree* and *strongly agree*. This is particularly notable given the relatively affluent respondent population, with 60% reporting a household income of at least £60,000. Concerns about the cost of cleaner solid fuels (e.g., dry or seasoned wood) were also substantial, with a notable share of respondents expressing strong agreement. However, despite these financial concerns, most respondents reported already using cleaner fuels, suggesting that while cost is a factor, it has not prevented many households from adopting best burning practices.

Fewer respondents expressed concern about the cost of appliance and chimney maintenance, though the findings still indicate that for some, even relatively small additional expenses could be a barrier to further positive behaviour changes. These results highlight that, even among higher-income households, pressures related to the cost of living and broader economic uncertainty may influence decision-making. Future campaigns may benefit from addressing these financial concerns directly, whether by promoting cost-effective solutions, highlighting long-term savings, or increasing awareness of available financial support schemes.

Beyond financial considerations, some respondents indicated that they already believe they burn responsibly, reducing their perceived need to adjust their habits. There also remains a group of respondents who are unwilling or unable to change their burning practices. This resistance may be linked to practical limitations, lack of viable alternatives, or entrenched behaviours.

Additionally, feedback received through social media posts promoting the survey—though not submitted directly—highlighted public concerns that new charges for garden waste collection by some councils may inadvertently discourage efforts to reduce air pollution from domestic burning. Some respondents also expressed the view that domestic burning should not be a priority for intervention when, in their opinion, other, larger sources of air pollution exist, such as industrial facilities like the Drax power station. This perspective suggests that some individuals may feel justified in continuing to burn, including polluting fuels, especially when they perceive larger environmental issues or economic and political challenges are being overlooked. Such attitudes point to the need for future campaigns to contextualise domestic burning within the broader air quality landscape, emphasising shared responsibility while addressing perceptions of fairness and accountability.

### Perceptions of Personal Impact vs. Awareness of Negative Effects

The survey results reveal an interesting disconnect between respondents' general awareness of the negative impacts of solid fuel burning and their perceptions of their own contribution to air quality issues. While most respondents indicated that they believe the information on the negative impacts of solid fuel burning, a much smaller proportion agreed that their own burning habits negatively affect air quality—whether outdoors in their local area or within their homes. Interestingly, respondents' views remained largely consistent regardless of whether they burned fuel daily or only occasionally.

Additionally, although many respondents expressed concern about the impacts of air quality on their own and their family's health, this concern did not always translate into recognition of how their own burning practices might contribute to these health risks. This suggests that while health messaging resonates, there remains a perception that the responsibility for poor air quality lies elsewhere.

Interestingly, some respondents acknowledged that indoor air quality can be affected by a variety of household activities beyond domestic burning, such as cooking, burning candles, or smoking. This broader understanding of air pollution sources may lead some individuals to downplay the relative impact of their burning habits, particularly if they perceive other indoor sources as more significant or unavoidable.

Several factors may contribute to this perception gap. Respondents may believe that their fuel choices or appliance maintenance habits mitigate any potential harm, or they may consider their level of burning too minimal to have a significant impact. Others might assume that outdoor air pollution is primarily driven by larger, more visible sources, distancing their domestic practices from broader environmental concerns. This divergence between awareness, health concerns, and perceived personal responsibility represents a key barrier to behaviour change. Highlighting how even small-scale and modern domestic burning techniques contributes to wider pollution and health issues could be crucial in encouraging more sustainable practices.

#### Trusted Sources and Implications for Barriers to Change

Trust in the source of information plays an important role in influencing behaviour change. Survey results show that the Fire Service, academics, and local councils were the most trusted sources of advice on better burning practices. Trust was slightly lower for chimney sweeps and healthcare workers, and few respondents selected "Other." These findings suggest that even when accurate information is available, the effectiveness of messaging may be limited if it does not come from a source that the public perceives as credible. A lack of trusted messengers may therefore act as a barrier to behaviour change. Future campaigns could benefit from greater collaboration with trusted professions — particularly the Fire Service — to strengthen message delivery and reinforce public trust.

In the baseline report, chimney sweeps were identified as a potential partner group for promoting better burning practices, given their direct contact with households and opportunities to offer advice during maintenance visits. However, in this follow-up survey, respondents showed lower levels of trust in chimney sweeps compared to other professions such as the Fire Service, academics, and Local Authorities.

This suggests that while chimney sweeps may still play a valuable supporting role in reinforcing best practices at the point of service, future campaigns should prioritise involving professions that the public already perceives as highly credible. Collaboration with chimney sweeps could be strengthened by aligning their advice with messaging from more trusted organisations, helping to bolster their influence in public engagement strategies.

## Which of the following might affect your home burning habits?

149 Responses

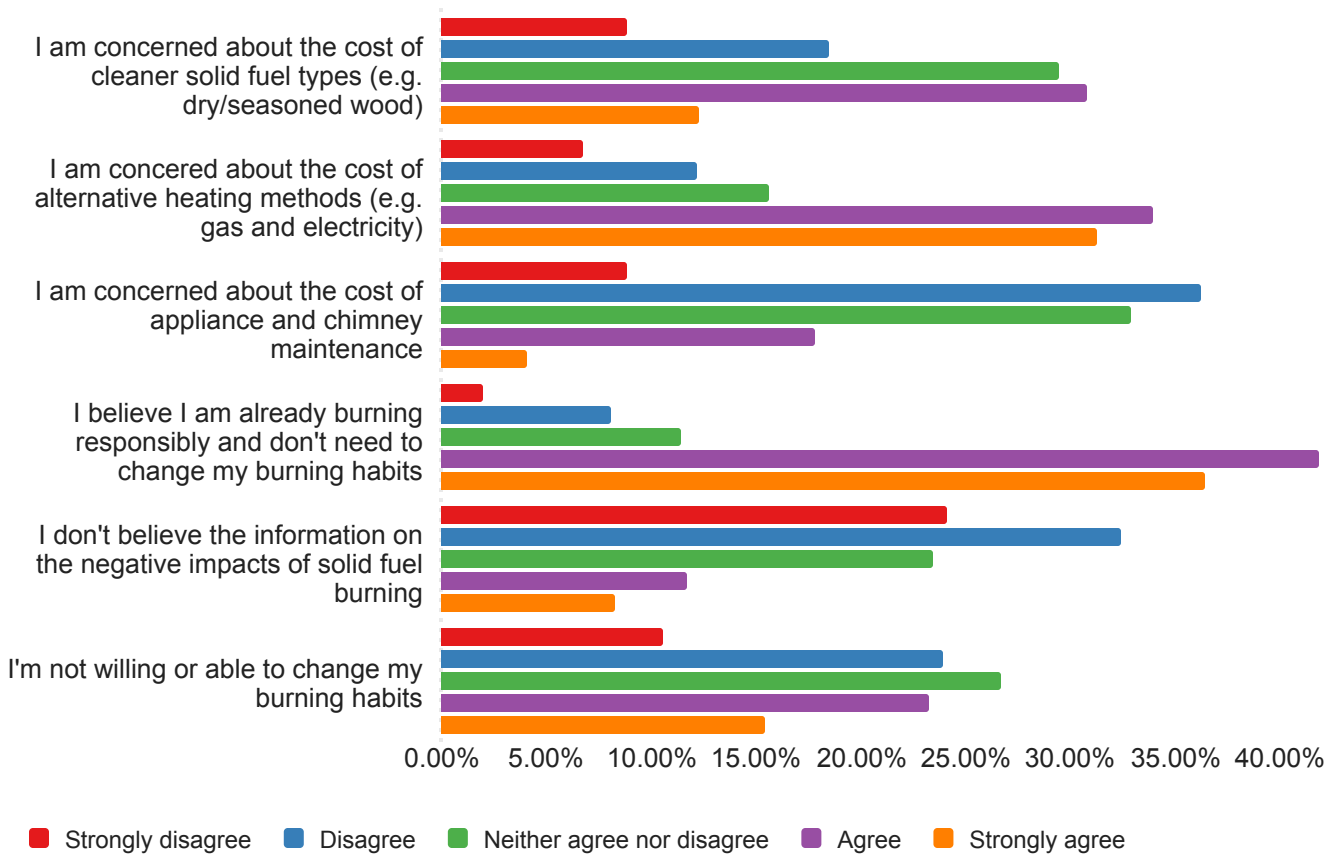


Figure 12: Potential barriers to changing home burning habits

148 Responses

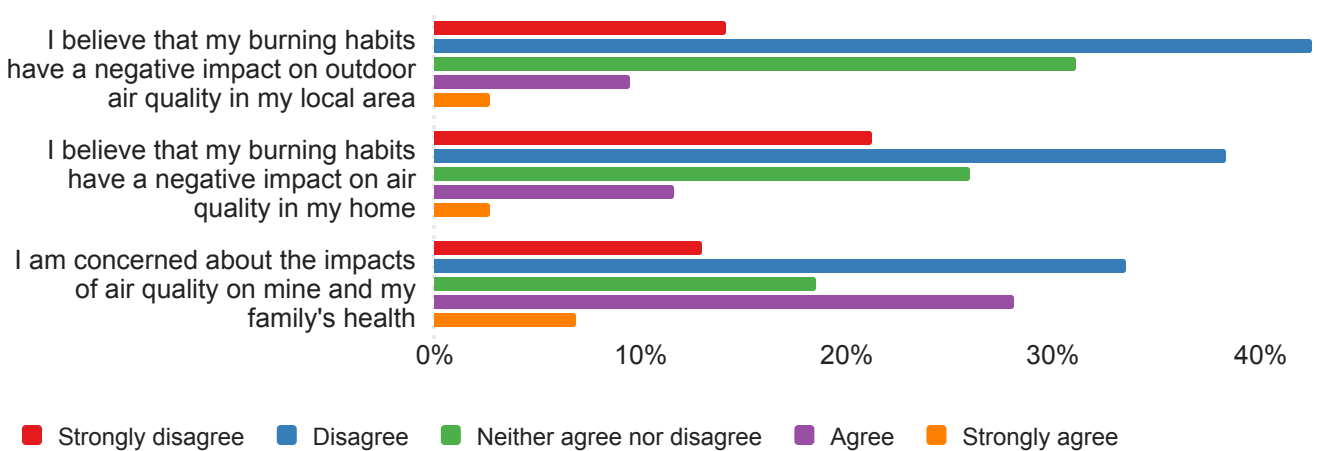


Figure 13: Level of personal accountability for impact of burning on outdoor air quality and inside the home.

## Which of these professions do you consider to be a trusted source of information on better burning practices?

217 Responses

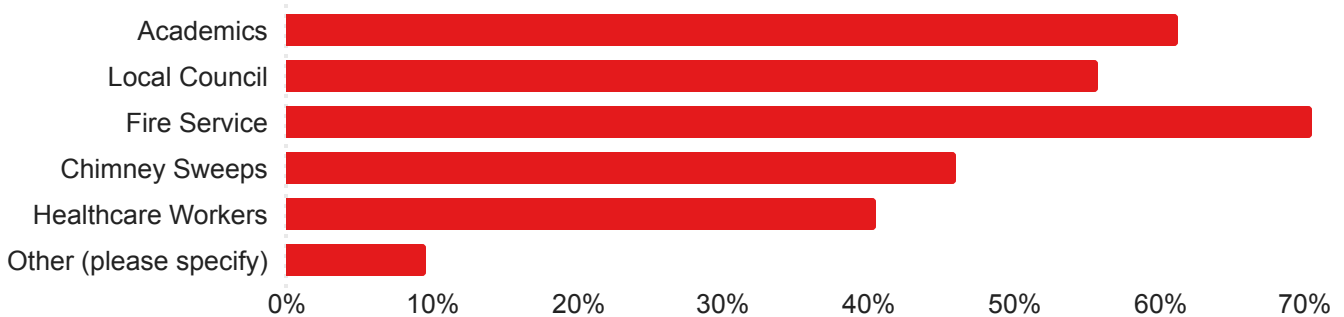


Figure 14: Trusted sources of information on burning practices

## Additional Support to Encourage Better Burning Practices, Pubic Feedback

Feedback comments from respondents provided suggestions for additional support or information that the "Think Twice, Burn Better" campaign could consider to help to encourage people to adopt better burning practices. The main focus was on improving the reach and quality of the publicity, providing more detailed and specific information, and tackling the cost of alternative heat sources and waste disposal methods. Some respondents consider that they are responsible and already observe best practices.

### 1. More specific information

Respondents indicated that clearer and more detailed information would help people to make more informed decisions about their burning practices. Specifically, information about the health and environmental effects of burning (including accurate air quality figures), and cost comparisons between solid fuel burning and other forms of central heating.

- "Info packs that you can get sent to your house"
- "Clear figures on cost comparison between central heating and burning solid fuel"
- "Unbiased studies based on all aspects of wood burning without 100% focus on air quality. Comparisons of air quality in rooms with an eco-design stove and a room where a full English breakfast is being fried with no extractor fan. The health benefits of a home warmed with solid fuel and a home with no heating"
- "Going beyond the basics of "don't burn wet wood"; appliance usage (such as air controls, slowly opening the door, not overloading, etc.) are also influential yet often neglected by these campaigns"

### 2. Reduce energy costs

Concerns were expressed about high energy costs, one key reason cited for burning solid fuels was to

off-set the cost of gas and electricity bills. Respondents suggested that providing more affordable heating options would be a motivation to burn better (an opportunity to present cleaner burning methods that are also more affordable).

- *"The 2 factors that influence my burning are - cost of heating a solid floor ground floor house in the winter by electric being undesirable, resilience to utilities disruption of having a log burner, the social desire of having a log burner running when guests are visiting in the winter, reducing humidity/condensing damp by having a heat and ventilation source that significantly dries the air."*

### **3. Improved waste disposal provision**

Another cost-related point was raised in relation to people burning waste materials. Some respondents suggest that due to the removal of green bins has resulted in more people burning their waste. It was also mentioned that permits are not available for trade vehicles to deposit domestic waste at refuse sites, therefore, if a household has no private vehicle, they struggle to dispose of their waste.

- *"I burn household wood and paper in the garden as am unable to take my company van to the recycling depot. I have applied for a permit but without evidence that I own the vehicle - which I don't have as it is a fleet vehicle - you will not issue one. This practice is discrimination of people who work in a trade and needs to change. I have an eco van that I cannot use to take my home rubbish to the tip - yet a gas guzzler car can. What option do I have except to pay £280 for a skip or burn it"*

## Summary of Key Findings

### Campaign Reach and Engagement

Only 25% of respondents reported seeing or engaging with the *Think Twice. Burn Better* campaign materials. While this does not necessarily indicate limited campaign reach—given the campaign generated over 16 million opportunities to see or hear the messaging—it may suggest a disconnect between exposure and recall or engagement. This is likely influenced by the fact that the survey was promoted through separate channels and not solely via campaign assets. The campaign drove over 9,000 visits to the information hub, but this represents only 0.06% of total exposure, suggesting limited public follow-up beyond initial impressions. Several respondents expressed frustration at not having encountered the materials, despite actively seeking this type of information.

All respondents were invited to evaluate the campaign materials—either those they had encountered externally or the examples shown within the survey. Feedback was generally positive: most found the materials thought-provoking and relevant, suggesting that the issues surrounding domestic burning are recognised as important and that there is an appetite for clearer information. However, this feedback is likely biased due to the self-selecting nature of the sample, which may overrepresent individuals already engaged or concerned with environmental and air quality issues.

Engagement with supplementary digital resources—such as QR codes and website links—was also limited. Only 11% of respondents reported using these methods, and click-through rates from paid social media were similarly low (0.21–0.33%). This suggests that future campaigns should ensure all key messaging is delivered within the main campaign assets, as the public is unlikely to actively seek out additional information through optional resources.

### Educational Impact

Some respondents indicated improved understanding about the rules, guidelines, and health impacts associated with domestic burning. However, some respondents disagreed, this could potentially be because they were already aware of relevant legislation. Similarly, while many acknowledged learning about the health and environmental impacts of burning, a large proportion remained neutral or disagreed, suggesting that clearer and more compelling messaging may be required to reach all the target audience groups.

### Perceptions of Personal Impact

A notable disconnect emerged between general awareness of the negative impacts of domestic burning and perceptions of personal responsibility. Although most respondents believed the information provided about the harmful effects of burning, far fewer agreed that their own burning practices negatively affect indoor or outdoor air quality. While many expressed concerns about air pollution's health impacts, these concerns did not always translate into acknowledgment of their own contributions. Some respondents also noted that indoor air quality is affected by other activities, such as cooking and candle use, potentially diminishing the perceived significance of burning as a source of pollution.

### Impact on Fuel Choice

The campaign had a limited impact on fuel choice across the overall respondent group. Around two-thirds of all respondents reported no change in the fuels they use following exposure to the campaign. A small proportion — approximately one in ten — indicated they had made changes or were considering doing so, such as switching to approved fuels, burning less waste material, or ensuring wood is properly dried.

Among the small number of respondents who reported burning waste or wet wood, changes were similarly limited. Waste burners showed slightly more responsiveness, with a few indicating reduced burning of waste materials, while those burning wet wood showed little evidence of change. However, it is important to note that these subgroups made up only a small fraction of total survey responses, and findings should be interpreted with caution.

### Barriers to Change

Financial concerns emerged as a key barrier to behaviour change. The cost of alternative heating methods, such as gas and electricity, received the highest level of agreement, reflecting the ongoing impact of the recent energy crisis. This was particularly notable given the relatively affluent respondent population. However, despite concerns about the cost of cleaner fuels, most respondents reported already using them, indicating that while affordability is a factor, it has not prevented many from adopting best burning practices.

The cost of appliance maintenance also posed challenges, with some respondents indicating that even small additional expenses could deter them from making changes. Feedback further revealed that many residents view solid fuel burning as a more affordable, resilient, and socially desirable option—particularly in colder months—highlighting the importance of promoting cleaner burning methods that are also cost-effective. Some respondents expressed interest in receiving more detailed and practical information, such as cost comparisons between fuel types and central heating, air quality data, and step-by-step guidance on efficient stove use.

Beyond financial barriers, some respondents believed they already burned responsibly, while others expressed scepticism about the campaign's focus on domestic burning when larger pollution sources, such as industrial facilities, remain unaddressed. Additionally, concerns were raised about the impact of local waste policies. Several respondents cited the removal of green waste bins and restricted access to recycling sites for trade vehicles as contributing factors to increased domestic burning, particularly of waste materials. These insights suggest that logistical and policy-related barriers—alongside economic pressures—must be considered when designing future interventions.

## Limitations

### Sample Representation

Achieving a representative sample is a common challenge in research of this type. Initially, the recruitment strategy focused on embedding a link to the survey within the campaign website. However, this approach resulted in a low number of responses via that route— only 20 completions over a six-week period (from late November to mid-January). This limited uptake reflects broader patterns observed elsewhere in the survey: that individuals viewing campaign materials were unlikely to seek supplementary information by visiting the website.

A follow-on recruitment strategy, which had always been planned, involved directly re-contacting participants from the baseline survey. This step was deliberately delayed to allow sufficient time for any behaviour changes prompted by the campaign to occur. In addition to contacting baseline participants, further outreach was conducted in collaboration with Local Authority networks. From mid-January onwards, responses were boosted through targeted promotion via local newsletters, email distribution lists, social media, and other community channels. These efforts, which were largely independent of the main campaign activity, helped bring the total number of responses to 330.

As with the baseline survey, the resulting sample was skewed towards a more affluent, highly educated, and predominantly white demographic. This pattern is typical for voluntary participation surveys disseminated through digital and networked channels. Achieving a more demographically diverse sample would require substantially greater financial and logistical resources, which were beyond the scope of this project.

While the survey was completed by a modest, self-selecting sample, the demographic and behavioural profile of burners in this survey was similar to that observed in the larger baseline survey conducted the previous year. This consistency provides additional confidence that the findings reasonably reflect the views and behaviours of the burner population in Greater Manchester, supporting the reliability of year-on-year comparisons and campaign impact assessment.

### Sample Response Rate

The overall response rate for the follow-up survey was relatively lower compared to the baseline survey. During the baseline survey, responses were boosted through the purchase of ~300 paid survey completions and enhanced support from Local Authority networks and social media promotion. In contrast, the follow-up survey relied more heavily on organic engagement, supported by Local Authority promotion, without the use of purchased responses.

In the baseline phase, targeted leafletting was also undertaken to encourage participation in low-response areas. However, there was limited evidence that this approach significantly improved engagement. While greater resource investment was possible during the baseline survey, financial and time constraints limited the scope of recruitment activities for the follow-up survey.

## Online Advertising and Digital Divide

The survey was predominantly advertised online, which introduces a digital divide bias. Individuals without regular internet access, or those who are less comfortable using digital technologies, are likely to be underrepresented in the sample. This may particularly affect older adults, lower-income households, and residents in more rural areas. As a result, the survey findings may better reflect the views of more digitally engaged and connected populations, and caution should be exercised when generalising the results to all residents across Greater Manchester.

## Recommendations

### Additional Messaging for Best Burning Practices

Both surveys indicate that many respondents are already following best burning practices, as promoted in the campaign materials. Furthermore, participants in this study have demonstrated a willingness to burn responsibly, suggesting that future messaging could be more effective by building on this existing commitment.

Additional messaging could focus on refining best practices, such as:

- **Using moisture meters:** Raising awareness of the benefits of using moisture probes to ensure wood is properly dried before burning, helping to reduce emissions and improve efficiency.
- **Promoting cleaner ignition techniques:** Encouraging the adoption of the "top-down" fire-lighting method, which can improve flue draught, support more stable combustion, and help reduce the release of particulates into the room (HETAS). Despite its benefits, awareness and uptake of this technique remain relatively low.

By emphasising these practical steps, future campaigns can further support and reinforce responsible burning habits among those already committed to reducing their environmental impact.

### Incorporate Real-Time Air Quality Monitoring

This survey has highlighted a disconnect between individuals' perceptions of their own burning habits and the broader impact of solid fuel use on air quality. Providing localised, near real-time air quality data may help improve public understanding by making the effects of domestic burning more tangible to residents. Displaying pollution spikes linked to burning activity—through online dashboards, mobile apps, or public displays—may encourage greater awareness and accountability, reinforcing the importance of cleaner burning practices.

### Focus Key Messaging on Primary Materials

This survey suggests that residents are unlikely to seek supplementary information from additional resources, such as a website. To maximise engagement and impact, all essential messaging should be clearly conveyed within the main campaign materials, such as posters, leaflets, and social media posts. Simplifying and reinforcing key messages within these primary materials will help ensure that important guidance reaches a wider audience, even among those less inclined to seek further details independently.

## Leverage the Fire Service as a Trusted Source of Information

The survey results indicate that the fire service is one of the most trusted sources of information on better burning practices. Given this high level of trust, future public engagement efforts should actively involve fire services in delivering key messages on cleaner burning. By integrating air quality messaging into existing fire safety initiatives, councils can enhance the credibility and reach of their campaign.

## Campaign Reach

The survey shows that many participants either think they are already burning responsibly or feel that they are well-informed about the issues relating to solid burning. However, within the scope of this research, we may not have been able to fully understand the extent of people's burning habits, due to limitation of the sample. There may be broader population of burners who were not represented in the sample and who may not be following best practices. Understanding their motivations and willingness to change behaviour may be different.

Engaging with diverse sample populations is a common issue in research. To achieve more representative samples often requires more innovative, creative participatory engagement methods. This is resource heavy, as time must be invested in developing relationships with communities to maximise recruitment ensuring that the marginalised/hard to reach can be included. Then using creative interactive approaches such as cooking sessions, photo voice, mapping, sewing, walking to facilitate discussion by creating informal, non-threatening environments.

## Conclusion

This evaluation suggests that the *Think Twice. Burn Better* campaign has made a positive contribution towards raising awareness and encouraging reflection on domestic burning practices among Greater Manchester residents. Encouragingly, around one in four respondents who had engaged with the campaign prior to the survey reported burning less frequently, with a similar proportion considering reducing their burning in the future. Even among those newly introduced to the campaign during the survey, around one in five indicated they intend to burn less frequently. These findings provide early evidence that the campaign materials are capable of prompting positive behaviour change when individuals are directly engaged.

In terms of appliance maintenance, around one in three respondents who had interacted with the campaign reported an intention to sweep chimneys or maintain appliances more frequently. While many participants already practised regular maintenance, the campaign appears to have helped reinforce good behaviours where relevant.

The influence of the campaign on fuel choice was more limited, with most respondents reporting no change to the types of fuels they use. However, this finding must be seen in the context that many participants were already using dry or seasoned wood, aligning with best practice guidance. Nonetheless, around half of respondents reported occasionally burning waste materials, highlighting an important area for continued public engagement.

A key success of the campaign was the high relevance perceived by respondents. A large majority agreed that the campaign materials were relevant to their circumstances and concerns, suggesting that the core themes resonated strongly with public interests and experiences. This alignment with public priorities offers a solid foundation for future campaigns.

While the results are encouraging, they should be interpreted with caution. The survey was completed by a modest-sized, self-selecting sample that may not fully represent the broader Greater Manchester population. In several sections, findings are based on smaller subsamples (e.g. domestic burners or those who evaluated campaign materials), which further limits generalisability. Furthermore, reported behavioural intentions do not necessarily guarantee long-term changes.

Other barriers to improvement remain, including cost-of-living pressures, restricted access to waste disposal, and perceptions that larger pollution sources should be prioritised. These structural and contextual factors must be considered alongside public awareness efforts.

Overall, the findings provide promising early evidence that the campaign has helped support behaviour change and maintain engagement with air quality issues. Building on these achievements — through wider campaign reach, greater collaboration with trusted messengers, and integration of real-time local air quality feedback — could strengthen future outcomes. A holistic approach, recognising financial, social, and infrastructural realities, will be essential to achieving sustainable and equitable progress in reducing domestic burning emissions across Greater Manchester.

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