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

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Information	Dudley MBC Details
Local Authority Officer	Ruth Burgin
Department	Environmental Safety and Health Team – Environmental Health, Trading Standards & Private Sector Housing
Address	The Council House, Priory Road, Dudley, DY1 1HF
Telephone	0300 555 2345
E-mail	envsafetyhealth.DUE@dudley.gov.uk
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Local Responsibilities and Commitment

This ASR was prepared by the Environmental Safety and Health Team of Dudley Metropolitan Borough Council.

This ASR has been signed off by Heemakshi Shukla, Interim Director of Public Health.

If you have any comments on this ASR, please send them to the Environmental Safety & Health Team at:

The Council House, Priory Road, Dudley, DY1 1HF

0300 555 2345

Envsafetyhealth.DUE@dudley.gov.uk

Executive Summary: Air Quality in Our Area

Air Quality in Dudley Metropolitan Borough Council (DMBC)

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. In the UK, it is estimated that the reduction in healthy life expectancy caused by air pollution is equivalent to 29,000 to 43,000 deaths a year[1].

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. Additionally, people living in less affluent areas are most exposed to dangerous levels of air pollution[2].

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

Table ES 1 - Description of Key Pollutants

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

[1] UK Health Security Agency. Chemical Hazards and Poisons Report, Issue 28, 2022.

[2] Defra. Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

In 2007 Dudley Metropolitan Borough Council (DMBC) declared a borough-wide Air Quality Management Area (AQMA) due to several exceedances of the nitrogen dioxide (NO_2) annual mean objective. No other air pollutants (as listed in table ES 1) exceeded national air quality objectives at the time of the declaration of the AQMA in 2007. The DMBC has continued to meet objectives for all air pollutants except NO_2 since the declaration of the AQMA.

In DMBC the majority of NO_2 emissions originate from road transport sources. During the calendar year of 2024 DMBC maintained 57 diffusion tubes at 49 separate sites. DMBC continues to operate three automatic NO_2 monitoring stations, all three of which now monitor PM_{10} and $PM_{2.5}$.

In 2016, fourteen roadside locations within DMBC showed exceedances of the national air quality NO_2 annual mean objective. In 2019 this had reduced to 6 small areas of exceedance. In 2024 only two areas continued to exceed the National Objective. It should be noted that once a distance adjustment is applied to account for the concentration ‘drop off’ between the diffusion tube location and the nearest relevant receptor, all the tube measurements are compliant. Throughout the course of 2024, 19 sites recorded an increase in NO_2 concentrations compared to the previous year.

The Netherton area is a small hotspot for NO_2, where narrow roads with steep gradients pass between high sided buildings (thus preventing dilution and dispersal of pollutants). The roads are used by a range of HGV delivery vehicles and general commuter traffic, school traffic and other vehicles. In one specific area of the high street where Halesowen Road and Northfield Road meet there are on-street parking bays, bus stops, a pedestrian crossing and a set of traffic lights that compound these issues, resulting in a pollution hotspot.

Due to the road layout and other infrastructure in Netherton it is not practicable to place a fixed air quality monitoring station near enough to the problematic area to gain more reliable results. The current tube locations reflect the ‘worst case scenario’ within the area but are not genuine ‘relevant receptors’ where long term exposure to air pollution occurs. In order to build a better picture of the actual exposure at relevant receptors three additional tubes were added to the sides of household properties further down Halesowen Road. Monitoring of NO_2 began in February 2021 at these three locations. After three years of data collection, measured concentrations at all sites are below the National Objectives.

The Wordsley air quality monitoring station (AQMS) did not show an exceedance of the annual mean NO_2 objective this year. This is further confirmed by the concentrations measured by the diffusion tubes located in triplicate at the monitoring station location. The AQMS in Wordsley had recorded NO_2 exceedances from 2012 to 2019. NO_2 measurements peaked in 2014 with an annual average of 59.9µg/m^3 and dipped down to 33µg/m^3 during 2020 and was 32µg/m^3 in 2024. The Wordsley air quality monitoring station has not exceeded the National Objective since 2019 and we are hopeful that, taking into account measures taken in 2019-2021, it will remain compliant in future years.

Upgrades to buses services operating through Wordsley, as well as changes to the road layout and alterations/upgrades to the traffic lights at two of the main intersections will have contributed to the improvement in air quality in the Wordsley area.

It is expected that ongoing air quality monitoring will continue to show ongoing compliance is maintained and that NO_2 concentrations will continue to reduce in Wordsley and Netherton.

The air quality in the borough continues to comply with the national air quality objectives for particulate matter. PM_{10} and $PM_{2.5}$ will continue to be monitored to compare to National Air Quality Objectives in order to confirm ongoing compliance.

Actions to Improve Air Quality

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

The Environmental Improvement Plan[3] sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term targets for fine particulate matter ($PM_{2.5}$), the pollutant of most harmful to human health. The Air Quality Strategy[4] provides more information on local authorities' responsibilities to work towards these new targets and reduce fine particulate matter in their areas.

[3] Defra. Environmental Improvement Plan 2023, January 2023

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

The Road to Zero[5] details the Government's approach to reduce exhaust emissions from road transport through a number of mechanisms, in balance with the needs of the local community. This is extremely important given that cars are the most popular mode of personal travel, and the majority of Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

The metro extension project to link Brierley Hill, through Dudley to Wednesbury is continuing with the build on the new Dudley interchange almost complete and significant development taking place on Castle Hill Road. The previously derelict Hippodrome building has now been knocked down and a new building is under construction. Further works on other derelict buildings in the area is going ahead. The new Duncan Edwards Leisure centre has been opened; however, parking access there is currently still an issue due to ongoing roadworks. These developments have created significant upheaval to the road network whilst work is underway, however, both are being designed with the aim of improving air quality in the longer term.

Conclusions and Priorities

Monitoring at the three continuous AQMS and measurements from the diffusions tubes in 2024 show a decrease in levels of NO_2 across the borough when compared to 2019 levels. Measured levels of particulate matter (PM_{10} and $PM_{2.5}$) are also typical of the ongoing, steady, downward trend in pollution levels. There are no exceedances of the National Objectives for any of the pollutants we measure once distance correction factors have been utilised, and therefore without relevant exposure, according to current air quality standards, there is no significant risk to human health at the locations where exceedances were previously observed[6].

The Dudley AQAP is currently undergoing a complete overhaul to take account of the West Midlands Combined Authority plans, changes in $PM_{2.5}$ objectives and Transport for West Midlands tram network impacts. Along with all the new buildings, ongoing development and site renovations associated with this work.

[5] DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018

[6] UKHSA: COMEAP statement: response to publication of the World Health Organization Air quality guidelines 2021

The main actions for Dudley Metropolitan Borough Council moving forward in 2025/6 are:

- Fully co-operate and support the West Midlands Combined Authority (WMCA) to achieve strategic air quality improvements across the West Midlands region.
- Continue to work with Transport for West Midlands assisting in the completion of a raft of improvements to the bus fleet and tram network in and around Dudley Metropolitan Borough.
- To work effectively with the West Midlands Combined Authority (WMCA) on strategic and local transport initiatives to improve clean transport provision within Dudley & the wider Metropolitan area.
- Continue to monitor for NO_2, PM_{10} and $PM_{2.5}$ to establish real time data to enable the prioritisation of resources and attention to be focused on the most relevant locations for air quality improvements. Focusing on the 'hotspot' in Netherton.
- Promote measures that encourage the use of public transport, walking, cycling and the uptake of cleaner vehicles, including through responsible land use planning.
- Monitor progress and provide support for the midland metro extension.
- Raise awareness through the ongoing school education programme working in partnership with Public Health and the Road Safety/Transport Team.
- Ensure Air Quality considerations are paramount in both the Metro line extension works and the Portersfield development as well as any other ongoing regeneration developments.
- To increase public awareness of how an individual can positively improve air quality by effectively reducing vehicle emissions; for example, by switching off the vehicle engine when stationary whilst unloading/loading or when waiting in stationary traffic.
- Consider the World Health Organisation guidelines on pollutants and how these can be integrated into Dudley borough's air quality ambitions.

How to get Involved

Everyone can help to improve air quality and, consequently, improve their own and other people's health as well as improving the health of the environment. A reduction in the use of private transport will result in less pollution, less noise and less congestion. DMBC is committed to balancing the economic and social transport needs whilst reducing the need for private travel. DMBC will work in partnership with the West Midlands Combined Authority (WMCA) in developing a West Midlands wide sustainable transport plan and air quality strategy that takes into account regional issues as well as local land use planning.

The WMCA and DMBC share information on sustainable travel options including bus, rail, metro, cycle and walking routes. For further information:

- Encouraging cycling in the West Midlands: https://www.tfwm.org.uk/strategy/sustainable-travel/
- Travel and Transport: https://www.dudley.gov.uk/residents/parking-and-roads/travel-and-transport/
- Cycle Lanes and Routes: https://www.dudley.gov.uk/residents/parking-and-roads/roads-highways-and-pavements/road-markings-and-signage/cycle-lanes-and-routes/

There is a wide range of information available to encourage the public to use different modes of travel in order to improve air quality and improve health. For example:

- Car sharing when travelling for work or leisure purposes and where the use of personal transport is unavoidable, helpful tips on minimising emissions; https://www.dudley.gov.uk/residents/parking-and-roads/travel-and-transport/local-transport-policy/dudley-travel-plan/
- A scheme to encourage residents to use alternative transport to private vehicles for one day per week. In conjunction with this initiative, Economic Regeneration & Transportation at DMBC have developed cycling opportunities. For further information go to: http://www.dudley.gov.uk/resident/parking-roads/road-safety/cycling/cycle-maps/
- There are events, walkways and cycle routes along the Dudley and West Midlands canals network to help promote modal shift and encourage family days out without the need to use private vehicles. Further information can be found at: https://canalrivertrust.org.uk/about-us/our-regions/west-midlands-waterways
- For walking and cycling opportunities in DMBC and wider health advice go to: https://healthydudley.co.uk/

The above measures will help to reduce congestion on the highway network in DMBC, consequently reducing the amount of pollution emitted from vehicles and therefore improving air quality. Personal fitness will also be improved where walking or cycling is the chosen modal shift option. The DMBC Community forum can be utilised by residents and business proprietors to gain greater access to DMBC to discuss ideas and pass on comments. For further information go to: https://www.dudley.gov.uk/council-community/community-forums/

An enquiry can be made or advice requested by email to:

EnvSafetyHealth.DUE@dudley.gov.uk

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1 Local Air Quality Management

This report provides an overview of air quality in Dudley Metropolitan Borough Council (DMBC) during 2024. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), and the relevant Policy and Technical Guidance documents.

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

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

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

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

The whole of the Dudley Borough was declared an AQMA declared by DMBC. A description can be found in Table 2-1. Appendix D: Maps of Monitoring Locations and AQMAs provides a map of the AQMA and also the air quality monitoring locations in relation to the AQMA. The air quality objective pertinent to the current AQMA designation is NO_2 annual mean

Table 2-1 – Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Number of Years Compliant with Air Quality Objective	Name and Date of AQAP Publication	Web Link to AQAP
Dudley AQMA	Declared December 2007	Nitrogen Dioxide (NO_2) Annual Mean	The Dudley Borough AQMA includes the whole area covered by the Dudley Borough Boundary. 9 areas where the annual mean objective for nitrogen dioxide have been identified and these will provide the focus for the new air quality action plan.	NO	65.9	47.9[1]	0 years	Dudley Metropolitan Borough AQAP (June 2024)	Air Quality Action Plan | Dudley Council

[1] Once this data is corrected for relevant exposure, it is below the national objective for NO^2

☒ **DMBC confirm the information on UK-Air regarding their AQMA(s) is up to date**

☒ **DMBC confirm that all current AQAPs have been submitted to Defra**

2.2 Progress and Impact of Measures to address Air Quality in DMBC

DMBC has taken forward a number of direct measures during the current reporting year of 2024 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2-2. There are 33 measures included within Table 2-2, with the type of measure and the progress DMBC have made during the reporting year of 2024 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2-2.

More detail on these measures can be found in the AQAP https://www.dudley.gov.uk/business/environmental-health/pollution-control/air-quality/air-quality-action-plan. Key completed measures are:

- Further anti-idling signage in key areas around schools and other locations identified by residents
- Schools trial 'road closure' project in 2 key locations

DMBC expects the following measure to be completed over the course of the next reporting year:

- The expanded road closure and reduced speed limits around Peters Hill and Brook Primary following successful trials in 2024

The principal challenges and barriers to implementation that DMBC anticipates facing are very limited resources due to short staffing and economic budgetary restrictions within Dudley Council and the wider economy.

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

- 4. New and revised public transport infrastructure to incentivise modal shift from private car use to public transport. Light rail is taking longer than expected and therefore delaying the build of the new bus terminal. This is causing congestion along Castle Hill and Kings Street – where tram lines are being laid and also around Dudley town centre – specifically on the B4177, Priory Road, New Street and Tower Street where the busses now park up on the side of the road depending on their destinations.

Whilst the measures stated above and in Table 2-2 will help to contribute towards compliance, DMBC anticipates that further additional measures not yet prescribed will be

required in subsequent years to achieve compliance and enable the revocation of the AQMA.

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

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
1	Promotion of active travel in the community	Promoting Travel Alternatives	Promotion of cycling/walking	2021	2031	DMBC, WMCA	N/A	N/A	N/A	Implementation	Reduce NO_x, PM_{10} and $PM_{2.5}$ vehicle emissions with modal shift to active travel. Target is 5 - 10% bike trips by 2029.	1a) Cycle Purchase scheme, use policy for DMDC employees. 1b) Develop marketing tools to promote benefits of cycling on social media, leaflets, posters and user groups. 1c) Develop and promote cycle and walking map and co-benefits of active travel at a Black Country scale in a range of formats, and keep up to date - web based, paper maps and mobile phone app. 1d) Ensure bike ability is offered to all schools in Dudley. 1e) Holding regular cycle forum meetings to develop ideas from cyclists, access should be opened up to encourage participation from novice cyclists. 1f) Implement “smarter choice” measures (see here for more detail https://blackcountryplan.dudley.gov.uk/t1/p2/ and https://www.ciht.org.uk/knowledge-resource-centre/resources/smarter-travel/)	1a) 42 new cyclist 2023/2024 1b) No additional marketing tools this year– info on webpages 1c) Available on webpages 1d) As above 1e) This has been disbanded since staff involved were no replaced. 1f) See website	Lack of finance and reducing staff numbers – not being replaced following retirement/change of job
2	Increase in active travel (walking and cycling) through infrastructure improvements	Transport Planning and Infrastructure	Cycle Network	2021	2031	DMBC, WMCA	N/A	N/A	£1 to £10m	Implementation	Reduce NO_x, PM_{10} and $PM_{2.5}$ vehicle emissions with modal shift to bikes. Target is 5 - 10% bike trips by 2031.	2a) Proposed cycling infrastructure, increase extent of cycle network at the following locations: A4179, quiet route between Cresset Lane and Mullet Park, A4101 and Hawbush via Bull Street, disused rail line conversion, B4180, Bromley lane and Merry Hill segregated cycle track, Standshill Road, Lapwood Avenue and A4100 to Cradley Heath on-road cycle lane. 2b) Increase the provision of secure bicycle parking with good surveillance. At schools the aim is to provide sufficient parking for 20% of secondary school students. 2c) Audit walking and cycling infrastructure to identify new routes on the network and identify improvements to user experience through signage and safety. Including targets of 5,000 new trees along the Brierley Hill inset plan and pedestrian routes all roads meeting International Road Assessment Programme's (IRAP) 3-star rating. 2d) Review feasibility of expanding cycle hire scheme across the whole of the west midlands. 2e) Investigate opportunities for mini-Holland schemes in each district. 2f) Integrate managing short trip canal improvements with proposed cycle infrastructure. 2g) Maintain current and new cycle infrastructure to a high standard. 2h) Establish a consistent approach to regional cycling design from existing UK best practice guidelines and adhere to them for all highway and cycle designs going forward. 2i) Invest in smart technology for district-wide data collection & data assembly to support monitoring and review process.	2a) in place 2b) with individual schools to pursue 2c) no longer possible to maintain audits 2d) no new cycle hire schemes 2e) not an option in current situation 2f)canal towpaths improved by canal trust 2g) ongoing 2h) ongoing 2i) cost prohibitive	As above – WMCA are leading on this as DMBC does not have the finances, but we support where possible

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
3	Promoting active travel through travel plans. Aims to improve air quality and human health through reduced vehicle movements and active travel.	Promoting Travel Alternatives	School travel plans/ Workplace travel plans	N/A	Ongoing	DMBC	N/A	Fully funded	>£10m	Implementation	Reduce NO_x, PM_{10} and $PM_{2.5}$ vehicle emissions with modal shift to active travel.	3a) Public Health to develop an active travel strategy to promote walking and cycling. 3b) 100% of schools to have Travel Plans and sustainable mode share maintained through ongoing engagement with schools. 3c) Encourage home working and active travel in work travel plans especially in areas with high congestion.	3a) active travel strategy developed 3b) all schools invited but some schools are not actively involved 3c) home working no longer being encouraged	Cuts to public health budget Council leadership no longer encourage home working amongst its own staff
4	New and revised public transport infrastructure to incentivise modal shift from private car use to public transport.	Public transport improvements-interchanges stations and services	Public transport improvements-interchanges stations and services	2021	2034	DMBC, WMCA	N/A	N/A	£1m - £10m	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ vehicle emissions with modal shift to public transport. The modelling exercise showed that NO_2 concentrations would be reduced by 3 μgm^{-3} near the Metro station and increases in NO_2 would occur in exceedance areas up to 1.6 μgm^{-3} with NO_2 concentrations exceeding the AQO of 40 μgm^{-3} at 27g and 27gX by <0.2 μgm^{-3}	4a) Improve quality of Dudley bus station facilities with enhanced walking routes to and from the bus stations and surrounding town centre. 4b) Open up connection between Dudley and Brierley Hill Metro link. 4c) Improvements to Brierley Hill bus station facilities. 4d) Bus corridor improvements along the A4123. 4e) Bus corridor improvements along the A4101/A461. 4f) Bus corridor improvements along A4123/Bean Road. 4g) Expansion of bus infrastructure at Merry Hill centre. 4h) Improvements to Lye bus services. 4i) Improve ease of catching bus through expansion of real time information including, at bus stop infrastructure and on buses. 4j) Identify appropriate park and ride locations for the public transport network.	4a) old bus station has now been knocked down – underway 4b) underway 4c) ongoing 4d) in progress 4e) in progress 4g) bus paused in favour of light rail 4h) on hold 4i) on hold 4j) unlikely to go ahead soon-until a more suitable time	Slow progress but underway – heavily dependent on external contracts
5	Review of Dudley bus fares to identify new pricing structure which incentives bus usage.	Promoting Low Emission Transport	Other	2019	Completed?	DMBC, WMCA	N/A	Fully funded	N/A	N/A	Reduce NOx, PM_{10} and $PM_{2.5}$ vehicle emissions with modal shift to public transport.	5a) Recommend new bus pricing structure which encourage bus usage. 5b) Promote bus through ticketing trial targeting businesses and young people.	5a) Review on pause 5b) Collage students have free bus passes	Price increases due to financial climate
6	Reduce traffic volumes and congestion to improve air quality.	Traffic Management	UTC, Congestion management, traffic reduction	2019	2025	DMBC, WMCA	N/A	Fully funded	N/A	N/A	Reduce NOx, PM_{10} and $PM_{2.5}$ with lower emission driving conditions.	6a) Reduction in measured air pollutant concentrations (NO_2 near junctions with signal improvements. 6b) Black Country Councils to work together with the rest of the region to manage region-wide traffic flows through the West Midlands Metropolitan Area Urban Traffic Control (UTC) scheme and further joint working. 6c) The amount and charging of publicly available long stay parking in centres to be managed to encourage commuters to use more sustainable modes.	6a) reduction in pollutants noticeable and ongoing. 6b) challenging to monitor-WMCA leading 6c) car park price increase under discussion	Making progress – although parking is an issue politically sensitive
7	Increase share of low/zero emission buses servicing WMCA's bus network.	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	2019	2030	DMBC, WMCA	N/A	N/A	£1m to £10m	Planning	Reduce NOx, PM_{10} and $PM_{2.5}$ with lower and zero emission buses. The modelling exercise showed that zero emission buses would lead to NO_2 reductions at current exceedance sites of 1.27 – 1.60 μgm^{-3} with concentrations being	7a) Improve buses through: bus retrofits to euro VI standard, new euro VI buses and ultra-low emission buses, minimum euro VI on tendered contracts and additional measures to tackle air pollution. 7b) Achieve a zero-emission bus fleet by 2030 and consider use of zero emission buses in areas that would receive the greatest benefit.	7a) all buses now Euro V1 compliant 7b) under review	Zero emission bus fleet in financial challenging

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
											below the for NO_2 concentrations (40 μgm^{-3}) for all exceedance sites (27g, 27gx, 27j and 34ay).			
8	Encourage and promote uptake of low emission vehicles	Promoting Low Emission Transport	Priority parking for LEV's	2016	Ongoing	WMCA, DMBC	N/A	N/A	N/A	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ with lower and zero emission cars.	Introduce priority parking for LEVs as well as EV charging at Stourbridge Rail Station.	Due April 2026	
9	Encourage the uptake of low and zero emission vehicle usage through planning policy.	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2019	Ongoing	DMBC, WMCA	None	N/A	N/A	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ with lower and zero emission vehicles.	Continue to audit new building developments to check that EV infrastructure is in place.	Ongoing – via planning – all new developments require EV charging facilities	
10	Transitioning DMBC's fleet to low and zero emission vehicles and best practice low emission driving.	Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	2020	Ongoing	DMBC	N/A	N/A	N/A	Implementation	Reduce NOx, PM1- and $PM_{2.5}$ with lower and zero emission vehicles.	10a) Improving the DMBC Fleet - New vehicles purchased to be of latest Euro Standards/electric vehicles. 10b) Provide two courses per year for over 60s.	10a) under review -ongoing 10b) possible future implementation	Finance and technology e.g.; suitability of available vehicles for refuse fleets – EV has been trialled and found to be no suitable for some tasks
11	Installing electric vehicle charging infrastructure to encourage transition to zero emission vehicles.	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2020	2025	WMCA, DMBC	N/A	N/A	N/A	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ with lower and zero emission vehicles.	11a) Support with the installation of an additional 380 standard and 110 fast charging sockets in the Black Country. 11b) Support with equipping all council offices, depots, car parks and sport facilities with charge points.	11a) 2x7.4Kw Chargers on New England, Halesowen More coming in April 2026 11b) under review for the future	Cost, time, resources
12	Promote low and zero emission vehicles to the general public.	Promoting Low Emission Transport	Other	2020	2025	WMCA, DMBC	N/A	N/A	N/A	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ with lower and zero emission vehicles.	Establish a programme to inform and encourage the public and businesses to use ULEVs.	Info available on webpages	Negative press re: EV weight and PM2.5/5
13	Reduce emissions from domestic solid fuel combustion through public awareness campaigns.	Public Information	Other	2018	2025	WMCA, DMBC	N/A	N/A	£50k - £100k this is provided for 13c) - presumably other measures wouldn't affect value of measure?	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ with reduced solid fuel domestic combustion.	13a) Control of bonfires - encourage public to use alternative form of waste disposal. 13b) Raise awareness of air quality issues and potential solutions associated with the use of log burners, fireplaces and bonfires. 13c) Raise awareness of best practice domestic solid fuel burning to minimise emissions.	13a) heavily discourage bonfires and regularly send out letters 13b) ongoing via web pages and distribution of information 13c) webpages and letters to residents	Residents source logs for log burners at cheap rate – arguable less cost to them than electricity and gas.
14	Minimise domestic emissions through policy and regulation	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2018	Ongoing	DMBC	N/A	N/A	N/A	Implementation	Reduce NOx, PM_{10} and Pm2.5 with reduced solid fuel domestic combustion	14a) Expand the smoke control order to cover moored vessels. 14b) Low NO_x boilers installed at new developments 14c) Proposed new - ASHPs at new residential housing development.	14a) not going ahead – minimal advantage and significant cost to DMBC 14b) imposed via planning – all new builds must have low NOx boilers if boilers are required	Small number of moored vessels – legislation is challenging, and cost is not advantageous to DMBC ASHP – cause noise issues and have significant upfront costs

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													14c) under review	
15	Raise public awareness on where to report smoky vehicle emission exhausts so that appropriate action can be taken.	Public Information	Via the Internet (& Twitter)	2018	Ongoing	DMBC	N/A	N/A	N/A	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions from vehicles without functioning emission abatement.	15a) Reporting programme ongoing via Website and by contacting Dudley Council by phone or email or twitter. 15b) Consider making representation to central Government concerning the effective control of emissions from the exhausts of privately owned vehicles.	15a) in place – on the webpages- minute uptake 15b) under review	Public tend not to utilise the service – challenging to identify car ownership via DVLA
16	Undertake on-street parking enforcement of Traffic Regulation Orders	Traffic Management	Workplace parking levy, parking Enforcement on highway	N/A	Ongoing	DMDC	N/A	N/A	Low	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions from vehicles not adhering to public and workplace parking policies.	Number of parking enforcements made.	6024	Dudley borough do not have a ULEZ or CAZ so no income from these initiatives
17	Raise awareness and encourage freight operators to lower fleet emissions	Freight and Delivery Management	Other	N/A	Ongoing	WMCA, DMBC, Industry, Public Sector	N/A	N/A	N/A	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions from freight vehicles. The modelling exercise showed that zero emission LGVs would lead to NO_2, reductions at current exceedance sites of 5.16 – 7.87 μgm^{-3} with concentrations being below the AQO for NO_2 concentrations (40 μgm^{-3}) for all exceedance sites (27g, 27gx, 27j and 34ay).	17a) Provide a platform to engage with stakeholders by enabling them to raise freight related issues and work in partnership with the appropriate organisations to find solutions. 17b) Encourage adoption of lower emission freight vehicles. 17c) Freight Operator Recognition, includes fleet recognition and report detailing the implementation plan. 17d) Driver training; cycle training and awareness, promoting education and awareness of vulnerable road users, vehicle standards.	17a) discussions with WMCA 17b) as above 17c) as above 17d) DMBC fleet have regular training on eco driving	Staff resources and challenges with business engagement
18	Reduce freight vehicle movements through alternative modes and strategic	Freight and Delivery Management	Route Management Plans/ Strategic routing strategy for HGV's	N/A	Ongoing	WMCA, DMBC, Industry, Public Sector	N/A	N/A	N/A	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions	18a) Movement of freight via West Midlands Strategic Rail Freight Corridor rather than by HGV. 18b) Controlling freight vehicle access and routing. From freight vehicles.	Less HGV on Dudley roads according to Highways Dept	WMCA lead – challenges of business
19	Reduce freight vehicles impact on congestion and associated higher emission driving.	Freight and Delivery Management	Quiet & out of hours delivery	N/A	Ongoing	WMCA, DMBC, Industry, Public Sector.	N/A	N/A	N/A	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions from freight vehicles.	Trialling and encouraging out of hour deliveries.	Business lead	Supply and demand
20	Reduce freight vehicle movement through consolidation centres.	Freight and Delivery Management	Freight Consolidation Centre	N/A	Ongoing	WMCA, DMBC, Industry, Public Sector.	N/A	N/A	N/A	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions from freight vehicles.	Establishing urban delivery platforms and specialised consolidation centres.	WMCA lead	Business investment and demand
21	Control routing of freight vehicle movements through appropriate site selection at the planning stage.	Policy Guidance and Development Control	Other policy	N/A	Ongoing	WMCA, DMBC, Industry, Public Sector.	N/A	N/A	N/A	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions from freight vehicles.	Proposals which generate significant freight movements will be directed to sites with satisfactory access to the principal road network.	Ongoing	Business lead
22	Minimise emissions from stationary vehicles.	Traffic Management	Anti-idling enforcement	N/A	Ongoing	DMBC	N/A	N/A	N/A	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions from idling vehicles.	22a) Awareness campaigns with regards to anti-idling. 22b) Training provided to school patrols to enforce Anti Idling.	22a) 20 signs have been placed in key areas 22b) on hold outside of trail area	Staff resources

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23	Ensure new developments do not cause exceedances of air quality standards and that best practice low emission operations are adopted.	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2011	2027	WMCA, DMBC and Developers	Developers	Not funded	£1 to £10m	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions from new developments.	23a) Promote transport schemes and road alterations that include effective green infrastructure to reduce exposure to poor air quality. 23b) Continue the requirement of new developments to adhere to DMBC's supplementary Black Country air quality planning guidance and West Midlands Low Emissions Town & Cities Programme Good Practise Air Quality Planning Guidance. 23c) Monitoring the effectiveness of air quality planning recommendation. 23d) New residential and other sensitive development should be located where air quality meets national air quality objectives. 23e) Ensure that developers promote walking and cycling at new developments. Percentage of developments to install cycleways and townscape improvements. 23f) Ensure that all new developments have infrastructure for electric vehicle charging. This will include a minimum proportion of properties with electric charging or development generated vehicle trips from electric vehicles to be agreed with developer. 23g) co-benefits of ecological features and improvements to air quality to be considered during master planning. 23h) Air quality damage cost contributions from developers will be used to improve environment and green infrastructure. 23i) Minimise dust emissions during construction through planning conditions and construction environmental management plans, to include promotion of offsite construction and manufacturing. 23j) Adopt WMCA's upcoming air quality neutral and/or air quality positive guidance and air quality planning guidance document. 23k) Development in Halesowen should ensure new streets prioritise cyclists and pedestrians.	23a) in place – ongoing 23b) ongoing 23c) ongoing and regular review 23d) continuing 23e) continuing 23f) enforced under planning requirements 23g) ongoing although minimal interventions have occurred 23h) non this year 23i) ongoing consideration in all planning applications 23j) in place and ongoing 23k) ongoing – no new development in Halesowen this year	All in place and regularly monitored as and when planning applications are received
24	Improve energy efficiency and use of renewable/low emission energy source in domestic and commercial scenarios	Policy Guidance and Development Control	Other policy	2021	2041	WMCA, DMBC, housing associations, homeowners, private landlords and national government.	N/A	Not funded	>£10m	Implementation	Reduce greenhouse gases and NOx, PM_{10} and $PM_{2.5}$ emissions from new developments.	24a) Assisting WMCA with the implementation of Energy efficiency measures, low-carbon heating across 73,400 commercial buildings. 24b) Assisting WMCA with the implementation of Energy efficiency measures, low-carbon heating across 1.1 million residential homes. 24c) Assisting WMCA with the implementation of renewable energy from solar panels with 830 MWp on residential, 705 MWp on commercial and 96MWp on industrial buildings. Land-use to have 59 MW Wind and 448 MWp of solar PV.	24a) ongoing 24b) ongoing 24c) ongoing	WMCA lead – DMBC assist and support as and when required – staff resources depending
25	Audit commercial and residential fuel usage to identify whether there are efficiency gains to be made.	Policy Guidance and Development Control	Low Emissions Strategy	2024	2027	WMCA, DMBC, housing associations, homeowners, private landlords and national government.	N/A	Not funded	£1m - £10m	Planning	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions from residential and commercial properties by using low emission fuels and improving energy efficiency.	25a) Reduce fuel combustion by improving home energy efficiency. 25b) Assist WMCA with smoke control area expansion review. 25c) Undertake audits of the local authority commercial building stock to determine what measures can be implemented. 25d) Air quality innovation zones to sit alongside other	25a) promotion ongoing – dependant on take up 25b) no plan to expend DMBC SCA however	Staffing resources and financial budgets. Some building stock being sold due to budget difficulties

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												programmes such as net zero neighbourhoods and industrial decarbonisation programmes.	DMBC will support other LAs as required 25c) All DMBC buildings under review. Council House and St James Road now have ASHP. 25d) Trial in Brockmoor Area ongoing results in 2025	
26	Reduce emissions from taxis through DMBC's taxi licensing.	Promoting Low Emission Transport	Taxi Licensing conditions	2023	Ongoing	DMBC	N/A	Not funded	N/A	Planning	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions from taxis.	Consideration to be given to a new taxi licensing requirement.	Proposals for new taxi licensing rejected due to competition	Wolverhampton licensing regime is easier for the taxi community to utilise – any changes to DMBC taxi licensing tends to push taxis way from DMBC and over to Wolverhampton
27	Travel Plan for DMBC staff to reduce commuting by personal car trips.	Alternatives to private vehicle use	Car & lift sharing schemes	2017	Ongoing	DMBC	N/A	N/A	N/A	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions from DMBC staff commutes.	Consideration to be given to audits on staff's model of transport for commutes.	No staff audits conducted this year	Leadership move to encourage staff back into the offices
28	Use of regional data and cross practice working groups to support neighbouring local authorities and other organisations to reduce air pollutant emissions.	Policy Guidance and Development Control	Regional Groups Co-ordinating programmes to develop Area wide Strategies to reduce emissions and improve air quality	2024	2025	DMBC, WMCA	N/A	N/A	£100k - £500k	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions from various sources.	28a) Use a centralised West Midlands air quality network website as a data store to enable various analyses such as trends and the quantification of the impact of air quality measures. 28b) We will be involved in regional approaches to government on policy and resources to tackle air quality challenges (DEFRA, HMT and key partners, e.g., Environment Agency, National Highways). 28c) Attend council wide climate change group to ensure that measures to reduce carbon also lead to improvements to air pollutant emissions. 28d) Engage with WMCA's idea sharing platform to ensure DMBC benefits from air quality measures in neighbouring boroughs.	28a) new PM monitoring network in place and dashboard working 28b) supporting as and when possible 28c) attendance ongoing 28d) ongoing	Regular attendance at meetings is challenging due to extremely limited staff resources
29	Minimise emissions from biomass boiler.	Promoting Low Emission Plant	Other policy	N/A	Ongoing	DMBC, WMCA	N/A	N/A	N/A	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions from various sources.	Record locations of Biomass Installations and enforcement of environmental permitting regulations where applicable.	None in this year – some investigative work underway to identify undeclared installations	Staff resources
30	Provide tools online to raise awareness and reduce exposure to poor air quality within Dudley.	Public Information	Via the internet	2024	2027	WMCA lead, DMBC	N/A	N/A	£1 million - £10 million	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ concentrations	30a) DMBC will support the creation of a route planning tool with modelled/real time air quality information so that people can reduce exposure when walking and/or make the decision to take public transport. 30b) DMBC will support the roll out tools to warn and update residents of poor air quality and supported by regional/local healthcare system. 30c) DMBC will support the development of tools to reduce exposure to poor air quality outside of the home, such as journey planners linked to pollution modelling and real time data.	30a) WMVA lead – no further progress this year 30b) as above – monitoring dashboard online via WMCA webpages 30c) will support as required – WMCA lead 30d) Dashboard now live	WMCA leading – staffing resources are an issue for DMBC

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
												30d) DMBC will support a centralised online public resource and/or platform for engagement and behaviour change co-ordination across the West Midlands.		
31	Air quality information campaigns for residents within DMBC to develop understanding on what it is and how to minimise personal impact and exposure.	Public Information	Other	2022	2026	WMCA lead, DMBC	N/A	N/A	£100k - £500k	Implementation	Lower NOx, PM_{10} and $PM_{2.5}$ emissions from residents and exposure to these pollutant concentrations.	31a) Encourage the community to undertake audits, especially on how existing infrastructure impacts vulnerable groups around key sites such as schools, medical facilities and retirement homes. 31b) Use health professionals to educate and disseminate targeted air quality information to vulnerable and at-risk patients. 31c) Awareness Raising Campaign to reduce idling vehicles. 31d) Use trusted advisors to disseminate air quality messaging (including faith leaders, GPs, nurses, fire service etc). 31e) Provide advice on how residents can use planting, green spaces/infrastructure to improve health and reduce air pollutant exposure.	31a) no further progress – ongoing 31b) WMCA leading – new website is now live 31c) no further progress on this – ongoing 31d) Asthma network awareness raising and GP engagement at local surgeries ongoing 31e) WMCA lead – no further progress	Staff resourcing at DMBC
32	Air Quality Monitoring Improvements through $PM_{2.5}$ and NO_2 sensors	Public Information	Via the internet	2024	2029	WMCA lead, DLUHC, DMBC	WMCA, DLUHC	Fully funded	£500k - £1m	Implementation	Reduce NOx, PM_{10} and $PM_{2.5}$ emissions	32a) Install 13 sensors in Dudley. 32b) Host the data on WMCA website.	32a) installation complete 32b) data live on WMCA platform	Completed – ongoing data available
33	Reduce emissions through behavioural change	Public Information	Other	2024	2025	WMCA, DMBC	Defra	Fully funded	£50,000	Implementation	Reduce particulate emissions	Behavioural change trial to reduce particulate matter emissions in Dudley.	Complete – data available via WMCA	Complete – data available via WMCA

Note: Where the information was not available, this has been denoted with N/A.

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

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy[6], local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter ($PM_{2.5}$)). There is clear evidence that $PM_{2.5}$ (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

The measured $PM_{2.5}$ concentrations in DMBC are below the AQS objective across all sites in 2024

DMBC is taking the following measures to address $PM_{2.5}$:

- Encouraging the use of public transport, cycling and/or walking as well as encouraging the uptake of low emission vehicles for business fleets and public transport. Improving public transport services, walkways and cycle paths will improve general health, ease congestion on the roads and reduce emissions of $PM_{2.5}$.
- Educating residents and businesses through various media with respect to improving air quality through responsible actions.
- Planning and development conditions to control and, where possible, improve air quality. Policy guidance could assist in improving air quality when regeneration projects are being planned out. Developers will be encouraged to incorporate alternative travel options through travel plans, improved and segregated cycle paths to link to existing local networks, incorporate electric vehicle charging points, provide facilities for other ultra-low emission vehicles and any other innovative mitigation measures that facilitate a change in road transport behaviour, thus minimising emissions of $PM_{2.5}$.
- The control of emissions from industrial processes including combustion processes. Effective regulation of environmental permits issued by DMBC to ensure that industry complies with current legislation controlling emissions of particulate matter. The increased use of biomass as a fuel to meet renewable energy targets may give rise to increased emissions of $PM_{2.5}$ if combustion plants are not well managed.

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

- The control of emissions from solid fuel domestic heating through the consolidated Dudley Borough Smoke Control Order that regulates every premises located in the Dudley Borough, excluding the waterways.. Recent changes to the Smoke Control Area are being reviewed in the hope they will enable us to conduct more enforcement action against non-compliant wood burning stoves and those using non complaint fuels.
- The enforcement of legislation to ensure members of the public and contractors use appropriate methods of waste disposal to reduce $PM_{2.5}$ emissions from burning.
- Reducing traffic congestion through the careful management of road infrastructure, improved traffic and pedestrian signals, speed restrictions and parking enforcement. Reducing obstructions on congested roads will keep traffic flowing efficiently and therefore reduce emissions of $PM_{2.5}$.
- Dudley Council House has undergone extensive renovation programme, incorporating air sources heat pumps and other energy/carbon efficient technologies and materials.

All of the above measures will support the reduction of NO_2 as well as PM.

In terms of the Smoke Control Area, we have not put forward any prosecutions or carried out any enforcement other than to send warning letters for both smoke nuisance from bonfires and smoke nuisance from log burners. No fines have been issued as the problems have been resolved satisfactorily using informal actions.

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

This section sets out the monitoring undertaken within 2024 by DMBC and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2020 and 2024 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

DMBC undertook automatic (continuous) monitoring at 3 sites during 2024. Table A.1 in Appendix A shows the details of the automatic monitoring sites. The Air Quality Monitoring and Annual Status Reports | Dudley Council page presents automatic monitoring results for DMBC, with automatic monitoring results also available through the UK-Air website.

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

3.1.2 Non-Automatic Monitoring Sites

DMBC undertook non-automatic (i.e. passive) monitoring of NO_2 at 49 sites (utilising 57 tubes – with 4 sets of triplicates) during 2024. Table A.2 in Appendix A presents the details of the non-automatic sites.

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

3.2 Individual Pollutants

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

3.2.1 Nitrogen Dioxide (NO_2)

Table A.3 and Table A.4 in Appendix A compare the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40µg/m^3. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

For diffusion tubes, the full 2024 dataset of monthly mean values is provided in Appendix B. Note that the concentration data presented in Table B.1 includes distance corrected values, only where relevant.

Table A.5 in Appendix A compares the ratified continuous monitored NO_2 hourly mean concentrations for the past five years with the air quality objective of 200µg/m^3, not to be exceeded more than 18 times per year.

There have been no exceedances of NO_2 at any of the 3 Automatic Monitoring sites in Dudley Borough. Of 57 diffusion tubes in place across the borough, 3 have an annual average measure exceeding the National Objective, however once this data is corrected for relevant exposure, they become compliant. These 3 tubes are located several meters apart along the same section of road in Netherton, near the top of a hill where a very busy junction frequently blocks traffic. The tubes are all on the side of the road where vehicles are driving up hill. The tubes are approximately 1m from the kerbside attached to drain pipes at the front of retail and shop premises.

Table 3-1 below shows an urban background measurement site for Netherton – Belper Row, along with 7 locations which are located sequentially down the hill from the top section of the hill to the bottom of the hill.

Table 3-1 Measured annual mean NO_2 concentrations in Netherton, µg/m³

Site ID	Monitoring Location	NO_2 Annual Mean Concentration (µg/m^3)				
		2020	2021	2022	2023	2024
60	Belper Row (downpipe)	14.7	16.3	16.8	14.4	14.7
27g	Halesowen Road	**53.4**	**51.2**	**49.9**	**46.6**	**47.6**
27gX	Halesowen Road	**52.9**	**53.2**	**53.6**	**48.1**	**47.9**
27j	Halesowen Road	**48.2**	**46.7**	**46.5**	**42.7**	**42.7**
27P	Halesowen Road	34.2	35.3	34.8	33.7	34.8
28a	Castleton Street		22.5	20.2	18.3	19.1
28b	Halesowen Road South		24.5	26.3	24.1	24.3
g/28c	Halesowen Road -Festival House		29.7	29.7	26.6	26.9

The results shown in Table 3-1 do not exceed 60µg/m^3, which indicates that an exceedance of the 1-hour mean objective is unlikely at these sites.

In addition it is important to note that once these figures have been adjusted for relevant exposure (Table 3-2) which allows for the reduction in concentrations (dispersal effect) of NO_2 from the measurement location to the nearest location of relevant exposure i.e. residential locations all of these measurements show compliance with the National Objective.

Table 3-2 Measured annual mean NO_2 concentrations in Netherton adjusted for relevant exposure

Site ID	Monitoring Location	NO_2 Annual Mean Concentration at nearest relevant exposure, 2024, µg/m^3
27g	Halesowen Road	32.0
27gX	Halesowen Road	32.1
27j	Halesowen Road	29.4

3.2.2 Particulate Matter (PM_{10})

Table A.6 in Appendix A: Monitoring Results compares the ratified and adjusted monitored PM_{10} annual mean concentrations for the past five years with the air quality objective of 40µg/m^3.

Table A.7 in Appendix A compares the ratified continuous monitored PM_{10} daily mean concentrations for the past five years with the 24-hour average air quality objective of 50µg/m^3, not to be exceeded more than 35 times per year.
No exceedances of relevant objectives were measured in DMBC in 2024.

3.2.3 Particulate Matter ($PM_{2.5}$)

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

The $PM_{2.5}$ AQS Objective of 20µg/m^3 was not exceeded at any site in 2024 neither was the new target of 10µg/m^3 likely to be introduced. The $PM_{2.5}$ annual mean was:

- 6.8µg/m^3 at Central which did not exceed the objective. The data capture was 99.8% which is greater than the 75% requirement.
- Cradley Colley Gate was 8.9 µg/m^3. The data capture was 100% which is greater than the 75% requirement.

- Wordsley was 8.1 µg/m^3. The data capture was 97.5% which is greater than the 75% requirement.

The $PM_{2.5}$ annual means do not need annualising using the methodology in the Technical Guidance (7.140) because the data capture rate was greater than 75% at each site.

3.2.4 Sulphur Dioxide (SO_2)

DMBC did not monitor SO_2 during 2024.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA?	Which AQMA? (1)	Monitoring Technique	Distance to Relevant Exposure (m) (2)	Distance to kerb of nearest road (m) (1)	Inlet Height (m)
DMBC 1	Central Dudley	Urban Background	394286	290384	NO2, PM10, PM2.5	Yes	Dudley AQMA	Chemiluminescent; TEOM(VCM)	N/A	50	3.3
DMBC 2	Colley Gate	Roadside	394243	284626	NO2, PM10, PM2.5	Yes	Dudley AQMA	Chemiluminescent; TEOM(VCM)	21.0	3.5	1.5
DMBC 4	Wordsley	Roadside	389134	286893	NO2, PM10, PM2.5	Yes	Dudley AQMA	Chemiluminescent; TEOM(VCM)	7.0	3.3	1.5

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) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
13b	Between 41 & 43, Padarn Close	Suburban	391105	293975	NO2	Yes - Dudley AQMA	N/a	10.0	No	3.0
32	White Horse Inn, Dudley St	Roadside	391853	293650	NO2	Yes - Dudley AQMA	0.9	2.6	No	3.0
32b	Nationwide B/Soc, 23 Dudley St, Sedgley	Roadside	391875	293650	NO2	Yes - Dudley AQMA	0.4	2.7	No	3.1
32e	Mode Salon, 20 High St	Roadside	391823	293788	NO2	Yes - Dudley AQMA	0.1	2.9	No	3.3
32f	o/s Insurance Co, 34 High St	Roadside	391825	293830	NO2	Yes - Dudley AQMA	0.3	1.2	No	2.9
62b	Downpipe 76 Birmingham Road	Roadside	395597	290560	NO2	Yes - Dudley AQMA	0.1	6.5	No	2.5
62e	Soil pipe 60 Birmingham Road	Roadside	395402	290568	NO2	Yes - Dudley AQMA	0.1	10.0	No	2.0
50e	The Shovel Inn The Lye, Pedmore Road	Roadside	392005	284144	NO2	Yes - Dudley AQMA	0.2	2.8	No	2.9
x	o/s Tesco Petrol Oldswinford	Roadside	390565	283389	NO2	Yes - Dudley AQMA	4.0	2.0	No	3.0
51	31 Morvale Gardens	Urban Background	392155	284349	NO2	Yes - Dudley AQMA	0.2	10.0	No	2.0
21c	o/s 36 Clent View	Suburban	388457	282895	NO2	Yes - Dudley AQMA	2.0	2.0	No	3.0
16m	o/s 27 New Road, Stourbridge	Roadside	390177	284074	NO2	Yes - Dudley AQMA	0.6	2.0	No	3.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
34a, 34ab, 34ac	Dentist AQMS High Street Wordsley	Roadside	389135	286893	NO2	Yes - Dudley AQMA	2.0	3.2	Yes	3.0
34ay	Pampered Paws 88 High Street	Roadside	389133	286910	NO2	Yes - Dudley AQMA	2.0	1.6	No	2.7
34h	Rose & Crown 22 High Street (bottom of hill)	Roadside	389245	286707	NO2	Yes - Dudley AQMA	N/a	2.0	No	2.5
54	o/s 371 Himley Road	Roadside	391159	290740	NO2	Yes - Dudley AQMA	0.4	2.4	No	3.0
57a	o/s 16 Burton Road	Roadside	392577	291949	NO2	Yes - Dudley AQMA	0.4	2.0	No	3.0
10f, 10g, 10h	3-5 St James' Road AQMS	Urban Background	394282	290385	NO2	Yes - Dudley AQMA	N/a	30.0	Yes	3.0
63	Castle Grounds (Next to Fellows PH)	Roadside	394647	290507	NO2	Yes - Dudley AQMA	2.5	2.6	No	3.0
63c	o/s Hairdressers Hall Street	Roadside	394719	290191	NO2	Yes - Dudley AQMA	2.0	2.0	No	3.2
64	o/s 44 Claughton Street	Roadside	394939	290302	NO2	Yes - Dudley AQMA	2.0	2.0	No	3.0
65a, 65b, 65c	ped x DE way (near Flood Street Island)	Roadside	394631	289985	NO2	Yes - Dudley AQMA	N/a	8.0	Yes	2.2
5w	Boa Vista Coffee Shop, 1-5 New Street	Roadside	394530	290358	NO2	Yes - Dudley AQMA	0.2	1.7	No	3.0
3A	43 Drews Holloway (downpipe)	Roadside	394550	284373	NO2	Yes - Dudley AQMA	0.2	4.3	No	2.8

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
3bx	Butchers shop, 31 Windmill Hill	Roadside	394499	284408	NO2	Yes - Dudley AQMA	0.0	4.7	No	2.4
3e	Trico Enamels, 76 Windmill Hill	Roadside	394384	284543	NO2	Yes - Dudley AQMA	0.2	2.7	No	2.6
3gx	103 Windmill Hill, Cradley	Roadside	394321	284596	NO2	Yes - Dudley AQMA	0.2	2.1	No	3.3
3X, 3Y, 3Z	AQMS Labour Club Colley Gate, Cradley	Roadside	394238	284626	NO2	Yes - Dudley AQMA	10.0	4.0	Yes	3.5
3u	o/s NISA carpark 116 Colley Gate, Cradley	Roadside	394225	284643	NO2	Yes - Dudley AQMA	0.0	2.0	No	3.0
15B	30 Stourbridge Road	Roadside	396391	283759	NO2	Yes - Dudley AQMA	0.2	2.5	No	3.0
33	119 High Street Pensnett	Roadside	390989	289254	NO2	Yes - Dudley AQMA	0.0	6.0	No	2.2
33Q	High Oak Public House	Roadside	391060	289207	NO2	Yes - Dudley AQMA	5.4	2.9	No	2.6
33ex	Birds Meadow Pensnett	Suburban	391027	289410	NO2	Yes - Dudley AQMA	N/a	1.9	No	3.0
30	166 High Street (Cornerways - opp 3A's Chippy)	Roadside	393125	286009	NO2	Yes - Dudley AQMA	0.2	2.7	No	3.5
30eX	196 High St Quarry Bank (downpipe)	Roadside	392976	286070	NO2	Yes - Dudley AQMA	0.2	2.3	No	3.0
30g	Conservative Club, 29 High Street, Quarry Bank	Roadside	392943	286098	NO2	Yes - Dudley AQMA	0.2	2.3	No	2.9

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
30t	7 King St Quarry Bank	Urban Background	393038	285843	NO2	Yes - Dudley AQMA	N/a	1.6	No	2.7
60	1a Belper Row (downpipe)	Urban Background	395215	287554	NO2	Yes - Dudley AQMA	0.2	2.0	No	3.0
27g	Silks Solicitors, 48 Halesowen Road	Roadside	394417	288178	NO2	Yes - Dudley AQMA	10.0	1.5	No	2.7
27gX	Silks Solicitors, 52 Halesowen Road	Roadside	394417	288171	NO2	Yes - Dudley AQMA	10.0	1.5	No	2.7
27j	Empty Shop 54 Halesowen Road	Roadside	394416	288169	NO2	Yes - Dudley AQMA	10.0	1.6	No	2.7
27p	NISA, 93 Halesowen Road	Roadside	394474	288029	NO2	Yes - Dudley AQMA	2.0	2.7	No	2.9
35c	Buffery Road	Roadside	395068	289552	NO2	Yes - Dudley AQMA	0.0	3.0	No	3.0
14	B'dazzled Jewellers 104 High St	Roadside	391845	287081	NO2	Yes - Dudley AQMA	0.5	4.8	No	3.1
45c	o/s 21 Mill Street (next to Kings head)	Roadside	391889	287308	NO2	Yes - Dudley AQMA	0.5	1.5	No	3.0
49	o/s 42/44 Talbot Street	Urban Background	391678	287306	NO2	Yes - Dudley AQMA	0.2	1.5	No	3.1
28a	Castleton Street	Roadside	394412	288059	NO2	Yes - Dudley AQMA	0.2	2.0	No	2.7
28b	Bathroom Shop Halesowen Road	Roadside	394547	287928	NO2	Yes - Dudley AQMA	0.2	3.0	No	3.4
28c	Festival House Halesowen Road	Roadside	394410	288115	NO2	Yes - Dudley AQMA	0.0	4.0	No	3.0

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_2 Monitoring Results: Automatic Monitoring (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
DMBC 1	394286	290384	Urban Background	96.8	96.8	14.0	15.0	15.0	13.1	13.4
DMBC 2	394243	284626	Roadside	99.4	99.4	28.0	29.0	25.0	22.7	20.3
DMBC 4	389134	286893	Roadside	99.5	99.5	33.0	**40.0**	38.0	36.8	32.0

☒ **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_2 annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2024.**

Notes:

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

Exceedances of the NO_2 annual mean objective of 40µg/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.

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

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

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

Table A.4 – Annual Mean NO_2 Monitoring Results: Non-Automatic Monitoring (µg/m^3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2024 (%) [2]	2020	2021	2022	2023	2024
13b	391105	293975	Suburban	100.0	100.0	10.3	9.6	10.3	8.2	8.1
32	391853	293650	Roadside	100.0	100.0	27.7	28.5	30.8	29.2	29.6
32b	391875	293650	Roadside	90.6	90.6	27.8	28.5	31.5	31.6	29.2
32e	391823	293788	Roadside	100.0	100.0	29.4	31.9	32.8	30.9	28.1
32f	391825	293830	Roadside	100.0	100.0	30.0	31.1	31.7	31.0	28.3
62b	395597	290560	Roadside	100.0	100.0	35.2	35.0	33.9	31.5	26.1
62e	395402	290568	Roadside	100.0	100.0	28.9	28.6	29.1	26.5	24.8
50e	392005	284144	Roadside	100.0	100.0	19.2	12.0	13.2	21.1	10.9
x	390565	283389	Roadside	100.0	100.0	26.4	28.4	27.8	24.3	24.3
51	392155	284349	Urban Background	100.0	100.0	18.6	25.6	26.7	24.9	22.8
21c	388457	282895	Suburban	100.0	100.0	17.5	29.1	30.4	27.2	26.5
16m	390177	284074	Roadside	100.0	100.0	18.8	8.4	9.0	7.4	7.0
34a, 34ab, 34ac	389135	286893	Roadside	100.0	100.0	30.4	33.8	34.9	23.0	31.1

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2024 (%) [2]	2020	2021	2022	2023	2024
34ay	389133	286910	Roadside	100.0	100.0	36.4	40.9	40.3	37.9	38.0
34h	389245	286707	Roadside	100.0	100.0	21.0	23.6	25.2	21.9	19.0
54	391159	290740	Roadside	100.0	100.0	27.4	28.3	25.6	24.1	26.7
57a	392577	291949	Roadside	83.0	83.0	27.8	30.5	31.8	29.2	28.5
10f, 10g, 10h	394282	290385	Urban Background	100.0	100.0	16.6	16.5	17.3	14.9	15.4
63	394647	290507	Roadside	100.0	100.0	28.0	26.5	26.9	27.8	30.4
63c	394719	290191	Roadside	100.0	100.0	31.9	32.6	33.6	30.3	28.7
64	394939	290302	Roadside	100.0	100.0	28.5	28.0	27.6	25.1	25.9
65a, 65b, 65c	394631	289985	Roadside	100.0	100.0		39.4	35.8	31.1	28.6
5w	394530	290358	Roadside	100.0	100.0	27.1	26.6	30.7	28.8	34.1
3A	394550	284373	Roadside	100.0	100.0	30.9	31.0	33.2	30.4	29.1
3bx	394499	284408	Roadside	90.6	90.6	31.7	32.4	33.7	32.0	30.6
3e	394384	284543	Roadside	75.0	75.0	30.8	33.1	32.0	28.9	25.2
3gx	394321	284596	Roadside	100.0	100.0	30.6	30.3	32.6	29.0	26.8

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2024 (%) [2]	2020	2021	2022	2023	2024
3X, 3Y, 3Z	394238	284626	Roadside	100.0	100.0	24.1	24.4	24.1	21.1	20.9
3u	394225	284643	Roadside	100.0	100.0	26.1	26.8	28.5	22.0	22.0
15B	396391	283759	Roadside	100.0	100.0	27.6	27.7	29.0	27.1	24.7
33	390989	289254	Roadside	100.0	100.0	22.8	24.2	25.0	22.9	20.6
33Q	391060	289207	Roadside	90.6	90.6	28.5	28.5	28.7	27.4	25.2
33ex	391027	289410	Suburban	100.0	100.0	14.3	14.2	15.4	12.7	12.7
30	393125	286009	Roadside	100.0	100.0	37.2	37.4	39.4	39.1	40.0
30eX	392976	286070	Roadside	100.0	100.0	34.3	35.2	38.2	34.0	33.7
30g	392943	286098	Roadside	100.0	100.0	27.8	29.8	33.1	29.6	29.0
30t	393038	285843	Urban Background	100.0	100.0	14.5	17.5	17.9	13.1	13.0
60	395215	287554	Urban Background	100.0	100.0	16.0	15.8	16.8	14.4	14.7
27g	394417	288178	Roadside	100.0	100.0	51.4	49.4	49.9	46.6	47.6
27gX	394417	288171	Roadside	100.0	100.0	48.7	51.3	53.6	28.1	47.9
27j	394416	288169	Roadside	83.0	83.0	46.3	45.0	46.5	42.7	42.7

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2024 (%) [2]	2020	2021	2022	2023	2024
27p	394474	288029	Roadside	100.0	100.0	32.2	34.0	34.8	33.7	34.8
35c	395068	289552	Roadside	100.0	100.0	32.4	31.9	33.7	32.0	30.1
14	391845	287081	Roadside	100.0	100.0	27.1	27.4	28.0	21.5	25.6
45c	391889	287308	Roadside	100.0	100.0	26.7	29.9	29.9	27.2	27.8
49	391678	287306	Urban Background	100.0	100.0	15.0	14.2	17.7	12.2	11.9
28a	394412	288059	Roadside	75.0	75.0		21.7	20.2	18.3	19.1
28b	394547	287928	Roadside	83.0	83.0		23.6	26.3	24.1	24.3
28c	394410	288115	Roadside	100.0	100.0		28.7	29.7	26.6	26.9

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

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

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

Notes:

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

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

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

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

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

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

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

Figure A.1 – Trends in Annual Mean NO_2 Concentrations

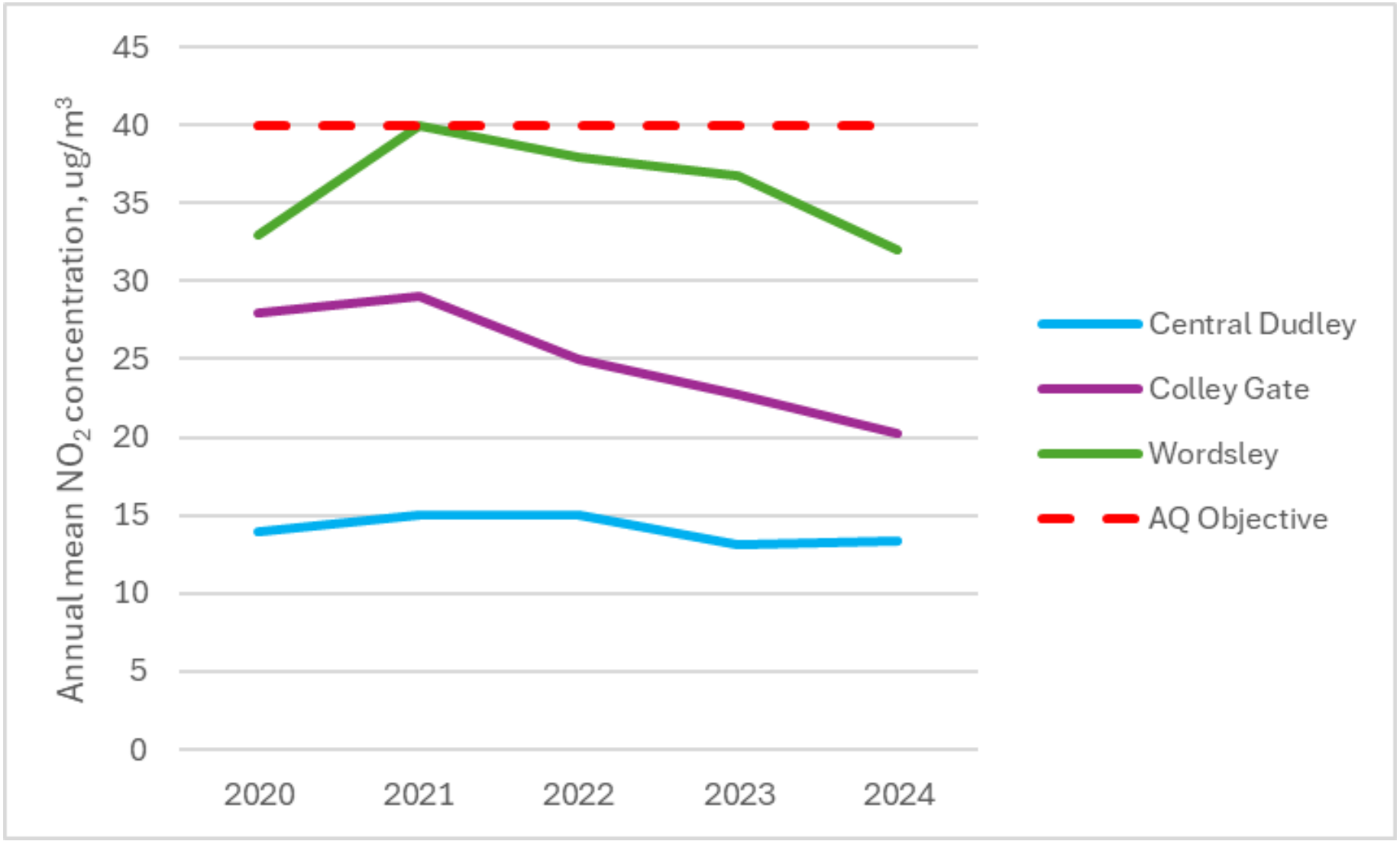


Table A.5 – 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
DMBC 1	394286	290384	Urban Background	96.8	96.8	0	0	0	0	0
DMBC 2	394243	284626	Roadside	99.4	99.4	0	0	0	0	0
DMBC 4	389134	286893	Roadside	99.5	99.5	0	0	0	0	0

Notes:

Results are presented as the number of 1-hour periods where concentrations greater than 200µg/m^3 have been recorded.

Exceedances of the NO_2 1-hour mean objective (200µg/m^3 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%).

Table A.6 – Annual Mean PM_{10} Monitoring Results (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
DMBC 1	394286	290384	Urban Background	98.8	98.8	14.0	14.0	13.0	13.1	10.9
DMBC 2	394243	284626	Roadside	100.0	100.0	-	-	14.0	15.0	12.3
DMBC 4	389134	286893	Roadside	97.5	97.5	11.0	13.0	13.0	12.0	13.9

☒ **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^3.

Exceedances of the PM_{10} annual mean objective of 40µg/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%).

Figure A.2 – Trends in Annual Mean PM_{10} Concentrations

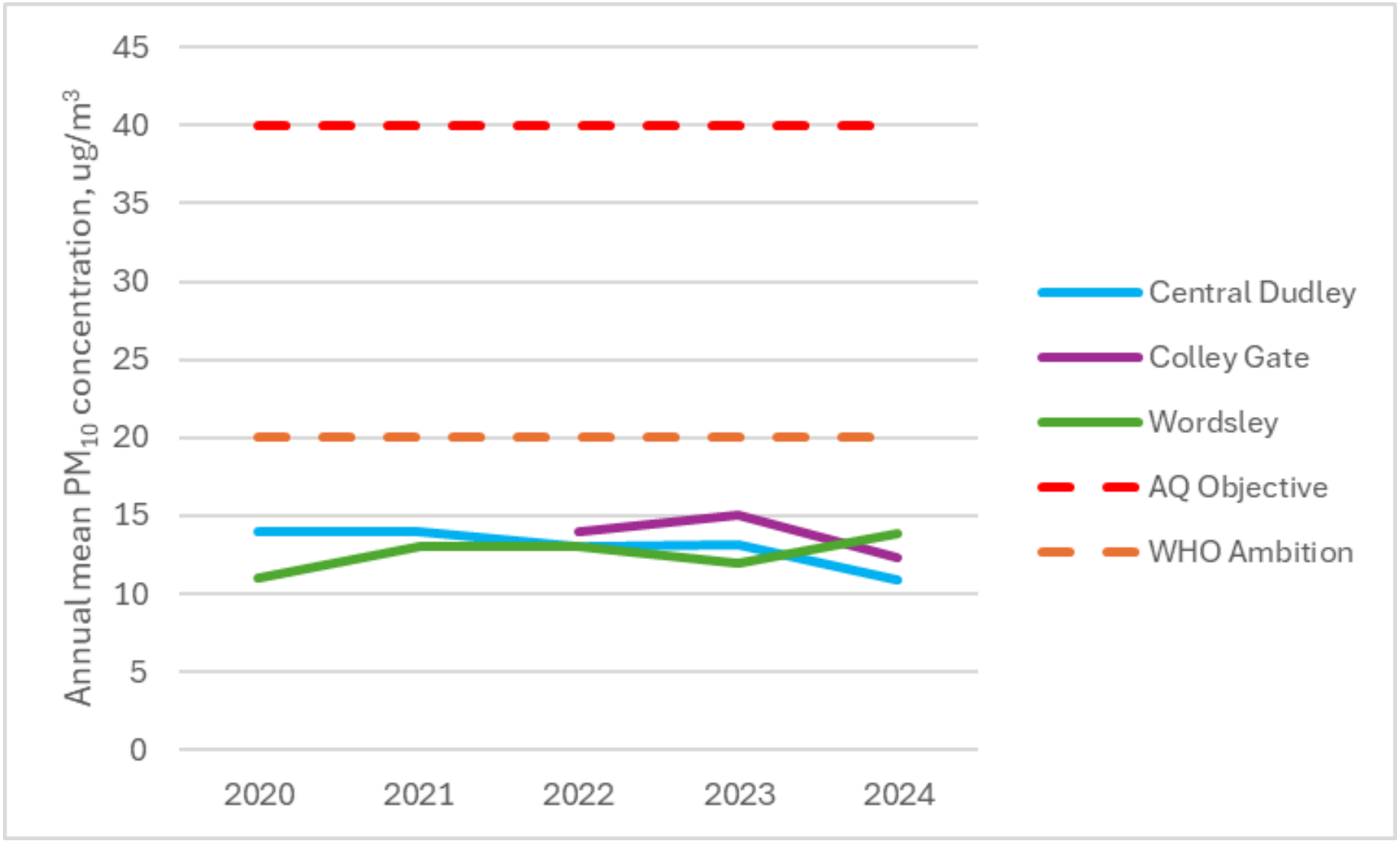


Table A.7 – 24-Hour Mean PM_{10} Monitoring Results, Number of PM_{10} 24-Hour Means > 50µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
DMBC 1	394286	290384	Urban Background	98.8	98.8	1	0	0	0	1
DMBC 2	394243	284626	Roadside	100.0	100.0	0	2	1	0	1
DMBC 4	389134	286893	Roadside	97.5	97.5	-	-	1	1	1

Notes:

Results are presented as the number of 24-hour periods where daily mean concentrations greater than 50µg/m^3 have been recorded.

Exceedances of the PM_{10} 24-hour mean objective (50µg/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%).

Table A.8 – Annual Mean $PM_{2.5}$ Monitoring Results (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
DMBC 1	394286	290384	Urban Background	98.8	98.8	-	-	6.0	6.0	6.8
DMBC 2	394243	284626	Roadside	100.0	100.0	9.0	10.0	10.0	8.0	8.9
DMBC 4	389134	286893	Roadside	97.5	97.5	-	-	8.0	8.0	8.1

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

Notes:

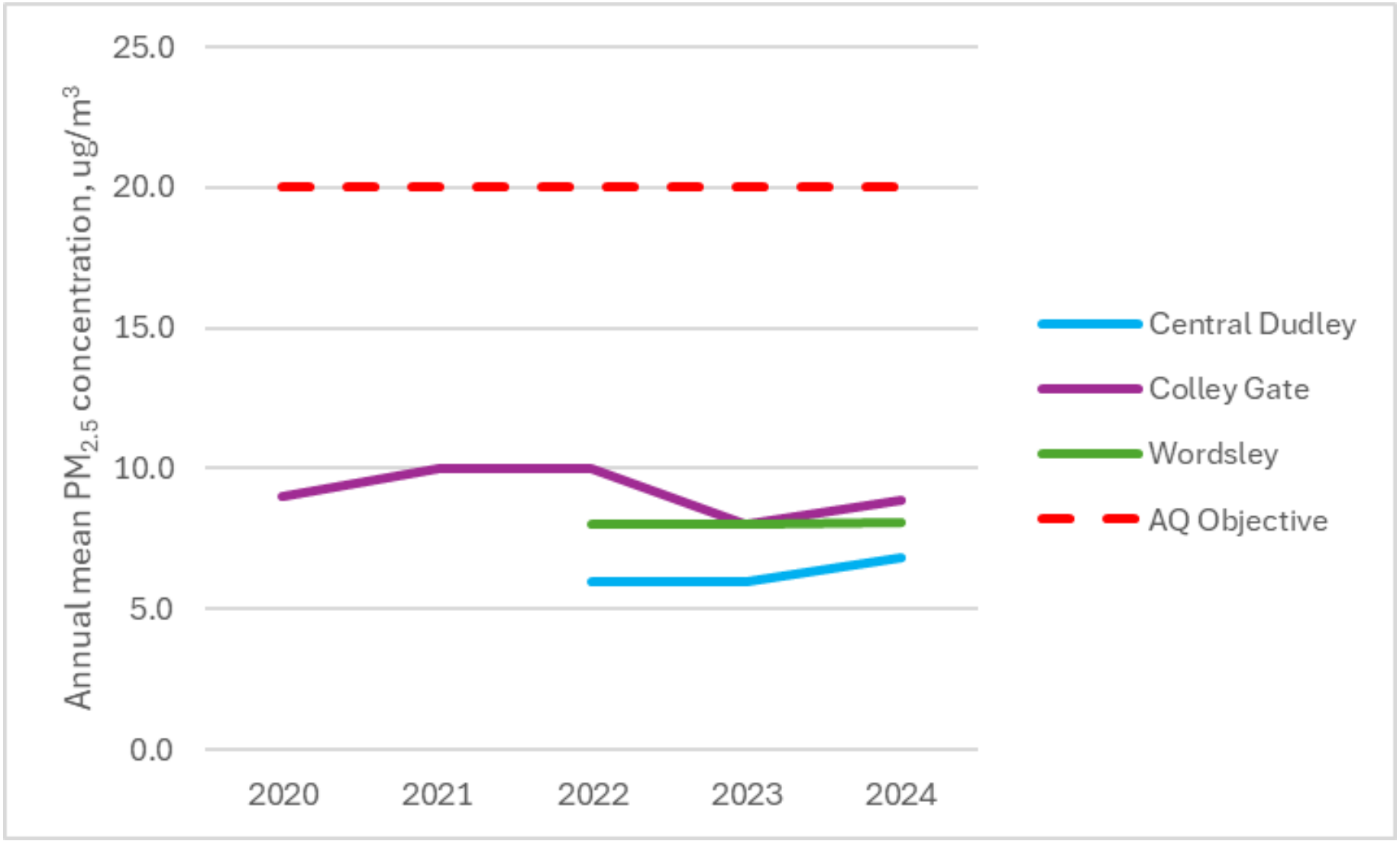
The annual mean concentrations are presented as µg/m^3.

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%).

Figure A.3 – Trends in Annual Mean $PM_{2.5}$ Concentrations



Appendix B: Full Monthly Diffusion Tube Results for 2024

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

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
13b	391105	293975	13.8	12.6	10.8	7.0	8.0	4.8	5.7	5.9	8.8	11.5	16.0	11.2	9.7	8.1	-	
32	391853	293650	37.0	39.6	34.9	34.1	35.4	32.6	30.7	32.3	36.0	41.3	42.1	27.5	35.3	29.6	-	
32b	391875	293650	32.2	34.6	36.0	37.7	41.4	28.0	30.1	26.6	42.7		42.9	30.0	34.8	29.2	-	
32e	391823	293788	29.5	32.7	36.9	32.3	39.4	26.0	29.6	27.0	40.4	36.0	41.9	29.7	33.4	28.1	-	
32f	391825	293830	29.0	35.8	35.7	33.0	37.3	23.4	30.9	27.4	35.5	44.3	39.6	31.9	33.6	28.3	-	
62b	395597	290560	30.0	37.0	36.9	35.6	33.4	25.3	23.6	23.3	31.6	30.6	34.4	30.7	31.0	26.1	-	
62e	395402	290568	28.6	36.8	30.7	28.6	28.7	28.1	24.3	28.1	23.0	30.4	34.2	32.2	29.5	24.8	-	
50e	392005	284144	16.5	16.2	11.8	9.9	10.7	8.0	9.9	10.2	13.9	14.7	19.4	14.6	13.0	10.9	-	
x	390565	283389	30.1	35.1	30.2	27.7	30.8	22.3	23.3	22.2	28.8	30.3	37.3	29.3	29.0	24.3	-	
51	392155	284349	28.6	29.8	25.7	22.1	26.4	23.2	20.0	21.9	35.5	29.9	34.3	27.6	27.1	22.8	-	
21c	388457	282895	31.8	38.4	30.9	25.7	32.5	25.0	26.6	26.3	31.3	38.1	42.9	29.2	31.6	26.5	-	
16m	390177	284074	13.4	9.2	8.8	5.9	6.6	4.6	5.8	5.3	8.6	9.3	13.9	8.9	8.4	7.0	-	
34a	389135	286893	33.3	35.6	33.4	37.5	36.8	31.8	34.1	30.4	39.7	41.0	42.2	33.4	-	-	-	Triplicate Site with 34a, 34ab and 34ac - Annual data provided for 34ac only
34ab	389135	286893	38.5	39.2	38.3	38.8	38.4	39.7	37.1	32.1	40.8	43.0	51.2	41.4	-	-	-	Triplicate Site with 34a, 34ab and 34ac - Annual data provided for 34ac only
34ac	389135	286893	35.5	39.6	33.2	37.0	38.0	34.1	32.5	27.7	35.6	40.3	40.2	33.1	37.1	31.1	-	Triplicate Site with 34a, 34ab and 34ac - Annual data provided for 34ac only
34ay	389133	286910	43.9	48.8	43.7	50.3	47.2	46.0	40.6	42.9	37.2	51.1	51.3	39.6	45.2	38.0	32.9	
34h	389245	286707	26.8	24.8	22.4	20.9	21.2	21.2	19.1	19.3	23.0	22.0	27.6	23.5	22.6	19.0	-	
54	391159	290740	34.5	37.0	34.2	28.5	30.3	29.1	30.4	28.4	27.9	34.3	35.6	31.7	31.8	26.7	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
57a	392577	291949	34.1	30.9	29.6	30.9	38.3	31.2	35.1	31.9	37.5	40.2			34.0	28.5	-	
10f	394282	290385	22.4	22.8	19.9	14.5	15.6	11.4	13.8	13.3	19.4	23.4	29.5	20.5	-	-	-	Triplicate Site with 10f, 10g and 10h - Annual data provided for 10h only
10g	394282	290385	21.5	21.3	18.4	15.3	15.9	10.0	13.9	12.3	17.4	22.8	30.5	20.7	-	-	-	Triplicate Site with 10f, 10g and 10h - Annual data provided for 10h only
10h	394282	290385	22.4	21.7	18.4	13.7	15.5	11.3	13.9	13.0	17.7	20.6	26.6	19.5	18.4	15.4	-	Triplicate Site with 10f, 10g and 10h - Annual data provided for 10h only
63	394647	290507	31.4	31.5	26.4	41.1	40.2	37.5	41.8	33.0	50.8	38.9	44.7	17.5	36.2	30.4	-	
63c	394719	290191	39.0	34.3	33.2	31.5	36.8	28.2	31.8	28.6	45.2	34.0	37.3	30.7	34.2	28.7	-	
64	394939	290302	38.7	39.4	39.7	26.2	23.7	27.4	27.2	27.3	28.2	27.4	33.3	30.9	30.8	25.9	-	
65a	394631	289985	36.0	39.0	37.8	34.5	34.0	23.8	30.5	30.8	33.2	39.9	43.5	33.8	-	-	-	Triplicate Site with 65a, 65b and 65c - Annual data provided for 65c only
65b	394631	289985	39.1	40.6	39.8	32.5	33.1	23.3	29.0	31.6	37.4	40.2	39.3	33.1	-	-	-	Triplicate Site with 65a, 65b and 65c - Annual data provided for 65c only
65c	394631	289985	36.7	35.5	35.4	30.5	32.7	22.0	28.0	27.2	38.0	33.7	40.4	30.6	34.1	28.6	-	Triplicate Site with 65a, 65b and 65c - Annual data provided for 65c only
5w	394530	290358	40.4	44.9	38.0	39.4	36.2	39.3	40.9	39.4	37.6	43.7	47.7	39.3	40.6	34.1	-	
3A	394550	284373	37.5	31.0	29.1	34.2	34.5	33.5	31.5	33.6	38.4	36.1	42.8	34.2	34.7	29.1	-	
3bx	394499	284408	38.0	38.5	36.8	38.7	33.3	31.4	32.2	32.2	35.0		45.4	39.2	36.4	30.6	-	
3e	394384	284543	31.6	30.7	29.1	28.9	38.7	27.6	28.6	26.8				28.5	30.1	25.2	-	
3gx	394321	284596	36.3	39.7	31.1	30.0	30.9	31.0	32.6	20.8	27.5	32.0	38.7	32.6	31.9	26.8	-	
3X	394238	284626	30.3	26.5	22.8	22.1	24.5	19.7	21.8	34.1	26.3	28.0	32.6	25.2	-	-	-	Triplicate Site with 3X, 3Y and 3Z - Annual data provided for 3Z only
3Y	394238	284626	29.6	27.8	21.6	22.3	22.8	20.4	17.9	19.7	26.8	27.0	33.9	27.3	-	-	-	Triplicate Site with 3X, 3Y and 3Z - Annual data provided for 3Z only
3Z	394238	284626	28.2	27.2	20.5	22.2	21.6	19.2	19.2	19.1	25.8	26.5	32.1	25.0	24.9	20.9	-	Triplicate Site with 3X, 3Y and 3Z - Annual data provided for 3Z only
3u	394225	284643	33.2	29.7	25.5	21.1	24.0	21.4	22.1	21.4	24.1	30.0	35.2	26.1	26.2	22.0	-	
15B	396391	283759	36.1	32.0	25.6	24.6	30.6	23.9	23.1	21.4	34.2	30.7	38.8	31.2	29.4	24.7	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
33	390989	289254	28.9	26.0	23.3	22.0	24.9	17.8	20.2	18.0	25.5	29.3	32.2	26.0	24.5	20.6	-	
33Q	391060	289207	33.3	31.8	30.7	28.3	29.9	25.4	26.1		27.8	32.2	36.3	28.5	30.0	25.2	-	
33ex	391027	289410	21.5	20.3	16.5	11.7	11.2	7.3	10.0	10.1	11.8	19.4	24.5	17.2	15.1	12.7	-	
30	393125	286009	47.8	51.2	45.2	44.7	48.1	47.0	46.0	46.9	40.7	48.4	57.4	47.6	47.6	40.0	39.4	
30eX	392976	286070	41.9	43.7	38.0	37.2	39.5	38.5	36.2	36.5	36.1	45.3	48.3	39.9	40.1	33.7	-	
30g	392943	286098	39.2	34.5	28.1	33.0	35.9	32.7	33.4	32.2	36.8	34.3	39.3	34.6	34.5	29.0	-	
30t	393038	285843	22.7	19.9	15.1	11.7	11.7	8.6	9.6	10.1	15.6	17.7	23.8	19.0	15.5	13.0	-	
60	395215	287554	24.3	21.9	15.1	13.9	14.4	11.7	13.1	12.1	16.3	18.6	27.0	22.0	17.5	14.7	-	
27g	394417	288178	60.3	58.2	52.3	56.9	57.2	57.0	55.5	50.8	56.2	55.0	68.8	52.2	56.7	**47.6**	32.0	
27gX	394417	288171	55.2	60.9	54.9	59.9	60.2	61.2	52.4	53.0	49.9	54.3	64.9	57.4	57.0	**47.9**	32.1	
27j	394416	288169	50.4	53.4	48.9	50.7	52.9	51.3	47.4	47.0	51.8	54.5			50.8	**42.7**	29.4	
27p	394474	288029	42.5	41.0	39.6	40.1	45.8	33.1	36.2	32.5	48.9	45.5	52.5	38.9	41.4	34.8	-	
35c	395068	289552	34.3	42.5	37.5	33.4	33.8	33.3	31.8	31.8	31.6	36.5	46.3	37.9	35.9	30.1	-	
14	391845	287081	35.6	33.4	28.4	28.8	29.5	29.7	27.3	24.2	31.6	30.6	36.8	30.2	30.5	25.6	-	
45c	391889	287308	34.6	26.1	28.7	31.1	37.7	29.2	31.2	27.8	36.8	39.4	42.5	32.6	33.2	27.8	-	
49	391678	287306	20.7	17.5	12.7	9.9	10.8	8.0	9.8	9.2	14.5	15.5	24.6	16.2	14.1	11.9	-	
28a	394412	288059	27.3	26.0	20.0	19.8	22.0	16.9	17.9				31.1	23.5	22.7	19.1	-	
28b	394547	287928	34.4	34.3	28.8	28.3	27.9	27.5	26.4	25.0	27.1	29.5			28.9	24.3	-	
28c	394410	288115	34.6	32.8	28.6	32.2	34.2	30.2	30.4	26.7	30.6	35.6	41.5	26.5	32.0	26.9	-	

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

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

☐ **Local bias adjustment factor used.**

☒ **National bias adjustment factor used.**

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

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

Notes:

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

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

See Appendix C for details on bias adjustment and annualisation.

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

New or Changed Sources Identified Within DMBC During 2024

DMBC has not identified any new sources relating to air quality within the reporting year of 2024.

Additional Air Quality Works Undertaken by DMBC During 2024

DMBC has not completed any additional works within the reporting year of 2024.

QA/QC of Diffusion Tube Monitoring

The current text laboratory, Gradko, participates in two centralised QA/QC schemes:

AIR, which is an independent analytical proficiency-testing (PT) scheme , operated by Laboratory of the government Chemist (LGC) Standards and supported by the Health and Safety Laboratory (HSL). The scheme, which started in April 2014, combines two long running PT schemes: LGC Standards STACKS PT Scheme and HSL WASP PT Scheme.

All tubes were prepared using 20% TEA in water and were collated in adherence to the 2024 monitoring calendar.

Figure C. 1 DMBC bias adjustment factor

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 04/25

Follow the steps below in the correct order to show the results of relevant co-location studies
Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods
Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet
This spreadsheet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.

This spreadsheet will be updated at the end of June 2025
LAQM Helpdesk Website

The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.

Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.

Step 1: Select the Laboratory that Analyses Your Tubes from the Drop-Down List
If a laboratory is not shown, we have no data for this laboratory.

Step 2: Select a Preparation Method from the Drop-Down List
If a preparation method is not shown, we have no data for this method at this laboratory.

Step 3: Select a Year from the Drop-Down List
If a year is not shown, we have no data[2]

Step 4:
Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution.
Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.
If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953

Analysed By[1]	Method (To change your selection, choose (All) from the pop-up list)	Year[5] (To change your selection, choose (All))	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision[6]	Bias Adjustment Factor (A) (Cm/Dm)
Gradko	20% TEA in water	2024	UV	Belfast City Council	10	24	20	19.3%	G	**0.83**
Gradko	20% TEA in water	2024	R	Belfast City Council	12	43	34	28.8%	G	**0.78**
Gradko	20% TEA in water	2024	R	Belfast City Council	12	24	21	13.9%	G	**0.88**
Gradko	20% TEA in water	2024	R	Belfast City Council	12	34	27	25.5%	G	**0.80**
Gradko	20% TEA in water	2024	R	Blackburn With Darwen Bc	12	22	17	32.9%	G	**0.75**
Gradko	20% TEA in water	2024	R	Bath & North East Somerset	12	25	20	22.6%	G	**0.82**
Gradko	20% TEA in water	2024	R	Cambridge City Council	12	19	15	28.5%	G	**0.78**
Gradko	20% TEA in water	2024	UB	Plymouth City Council	12	16	14	13.8%	G	**0.88**
Gradko	20% TEA in water	2024	R	Plymouth City Council	12	31	23	33.4%	S	**0.75**
Gradko	20% TEA in water	2024	R	Monmouthshire County Council	12	29	24	19.4%	G	**0.84**
Gradko	20% TEA in water	2024	KS	Marylebone Road Intercomparison	11	41	36	16.1%	G	**0.86**
Gradko	20% TEA in water	2024	R	Lisburn & Castlereagh City Council	12	24	19	27.8%	G	**0.78**
Gradko	20% TEA in water	2024	R	Ards And North Down Borough Council	11	28	20	44.5%	G	**0.69**
Gradko	20% TEA in water	2024	R	Eastleigh Borough Council	12	29	24	20.3%	G	**0.83**
Gradko	20% TEA in water	2024	UB	Eastleigh Borough Council	12	19	17	12.4%	G	**0.89**
Gradko	20% TEA in water	2024	R	Eastleigh Borough Council	12	19	17	12.0%	G	**0.89**
Gradko	20% TEA in water	2024	R	Gateshead Council	12	20	18	13.9%	G	**0.88**
Gradko	20% TEA in water	2024	R	Gateshead Council	11	20	17	19.7%	G	**0.84**
Gradko	20% TEA in water	2024	R	Gateshead Council	12	24	20	21.7%	G	**0.82**
Gradko	20% TEA in water	2024	R	Gateshead Council	12	27	23	19.0%	G	**0.84**
Gradko	20% TEA in water	2024	R	Gateshead Council	12	28	30	-6.0%	G	**1.06**
Gradko	20% TEA in water	2024	R	Brighton & Hove City Council	11	34	27	26.3%	G	**0.79**
Gradko	20% TEA in water	2024	R	Liverpool City Council	12	34	25	35.7%	G	**0.74**
Gradko	20% TEA in water	2024	KS	Liverpool City Council	10	52	47	10.2%	G	**0.91**
Gradko	20% TEA in water	2024	R	Nottingham City Council	10	29	26	12.2%	G	**0.89**
Gradko	20% TEA in water	2024	R	Wychavon District Council	10	29	26	14.7%	G	**0.87**
Gradko	20% TEA in water	2024	R	Worcestershire	12	12	12	-3.4%	G	**1.04**
Gradko	20% TEA in water	2024		**Overall Factor[3] (27 studies)**					Use	**0.84**

Diffusion Tube Annualisation

All diffusion tube monitoring locations within DMBC recorded data capture of more than 75% therefore annualisation was not required.

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2024 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG22 provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO_x/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

DMBC have applied a national bias adjustment factor of 0.84 to the 2024 monitoring data. A summary of bias adjustment factors used by DMBC over the past five years is presented in Table C.1.

Table C.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	04/25	0.84
2023	National	09/24	0.81
2022	National	09/23	0.84
2021	National	09/20	0.81
2020	National	09/21	0.81

NO_2 Fall-off with Distance from the Road

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

Table C.2 – Non-Automatic NO_2 Fall off With Distance Calculations (concentrations presented in µg/m^3)

Site ID	Distance (m): Monitoring Site to Kerb	Distance (m): Receptor to Kerb	Monitored Concentration (Annualised and Bias Adjusted	Background Concentration	Concentration Predicted at Receptor	Comments
34ay	1.6	3.6	38.0	9.8	32.9	
30	2.7	2.9	40.0	11.2	39.4	Predicted concentration at Receptor within 10% the AQS objective.
27g	1.5	11.5	47.6	12.6	32.0	
27gX	1.5	11.5	47.9	12.61445	32.1	
27j	1.6	11.6	42.7	12.61445	29.4	

The distance correction factor has only been applied to the annual mean measurement at the five sites in Table C.1 – Bias Adjustment Factor

The distance correction is important due to the tube being located in areas where there are known elevated concentrations of NO_2 but no relevant risk – due to limited exposure potential.

No other diffusion tubes NO_2 monitoring locations within DMBC require distance correction during 2024.

QA/QC of Automatic Monitoring

The chemiluminescent NO_2 analysers are housed in an air-conditioned environment and are operated according to manufacturers' instructions. Calibration of instruments is carried out once every month by DMBC personnel. The calibration is performed with zero air from the analyser's internal generators which contain charcoal and Purafil to remove any trace of oxides of nitrogen from the sample stream and a certificated gas cylinder of nitric oxide supplied by BOC. 15-minute averaged data is collected and scaled using the determined calibration factors. All instruments are serviced at 6-monthly intervals by engineers from Environmental Technology plc and are covered by that firm's service contract.

Air Quality Data Management (Geoff Broughton) manages and ratifies the data in line with all required DEFRA expectations.

PM_{10} and $PM_{2.5}$ Monitoring Adjustment

The TEOM of PM_{10}/$PM_{2.5}$ monitors utilised within DMBC do not require the application of a correction factor.

Automatic Monitoring Annualisation

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

NO_2 Fall-off with Distance from the Road

The automatic NO_2 monitoring sites within DMBC do not require fall-off with distance from the road calculation.

Appendix D: Maps of Monitoring Locations and AQMAs

Figure D.1 – Map of Non-Automatic Monitoring Sites and Automatic Monitoring Sites in Dudley Metropolitan Borough area

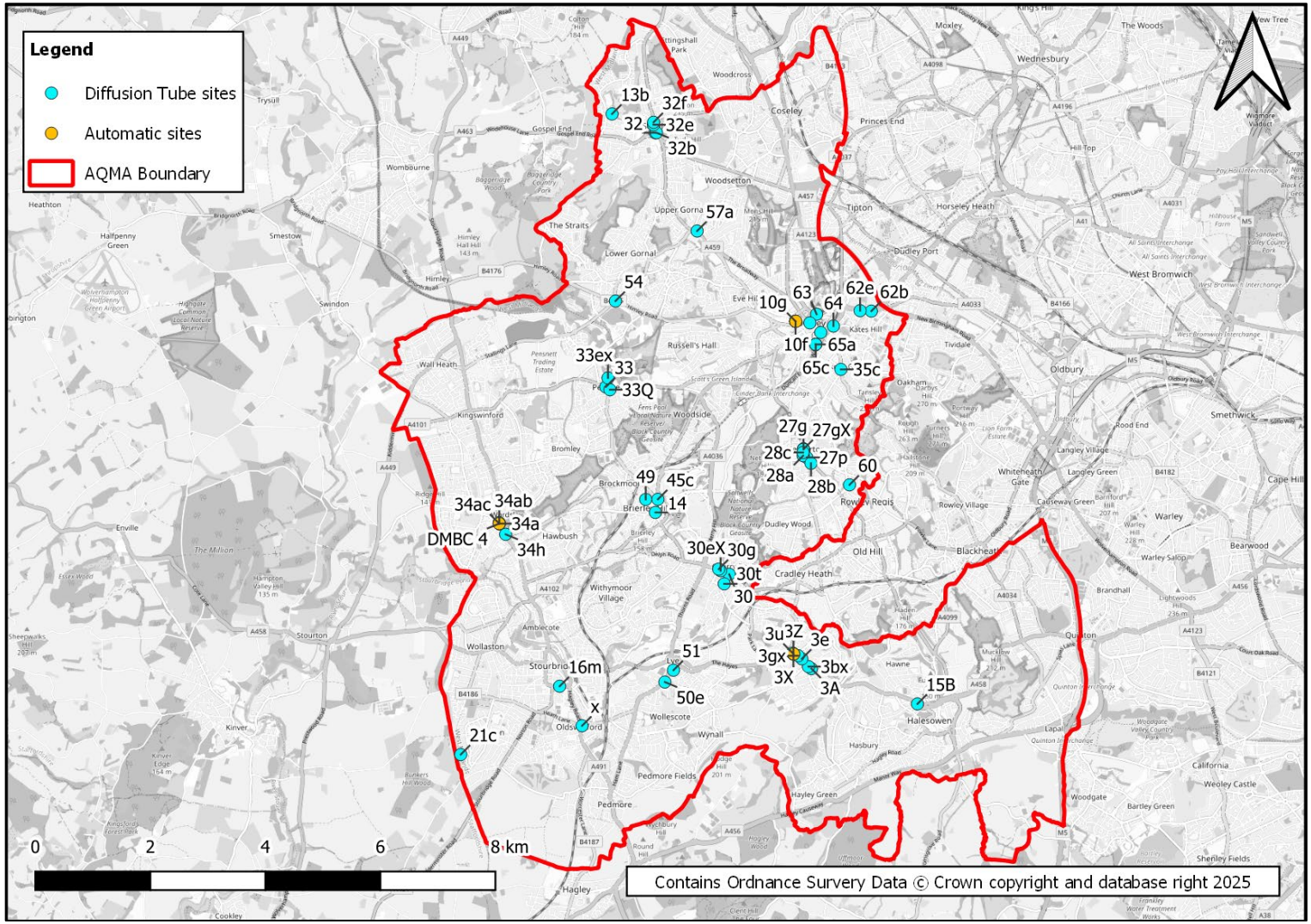


Figure D.2 – Map of Non-Automatic Monitoring Sites and Automatic Monitoring Sites in Dudley

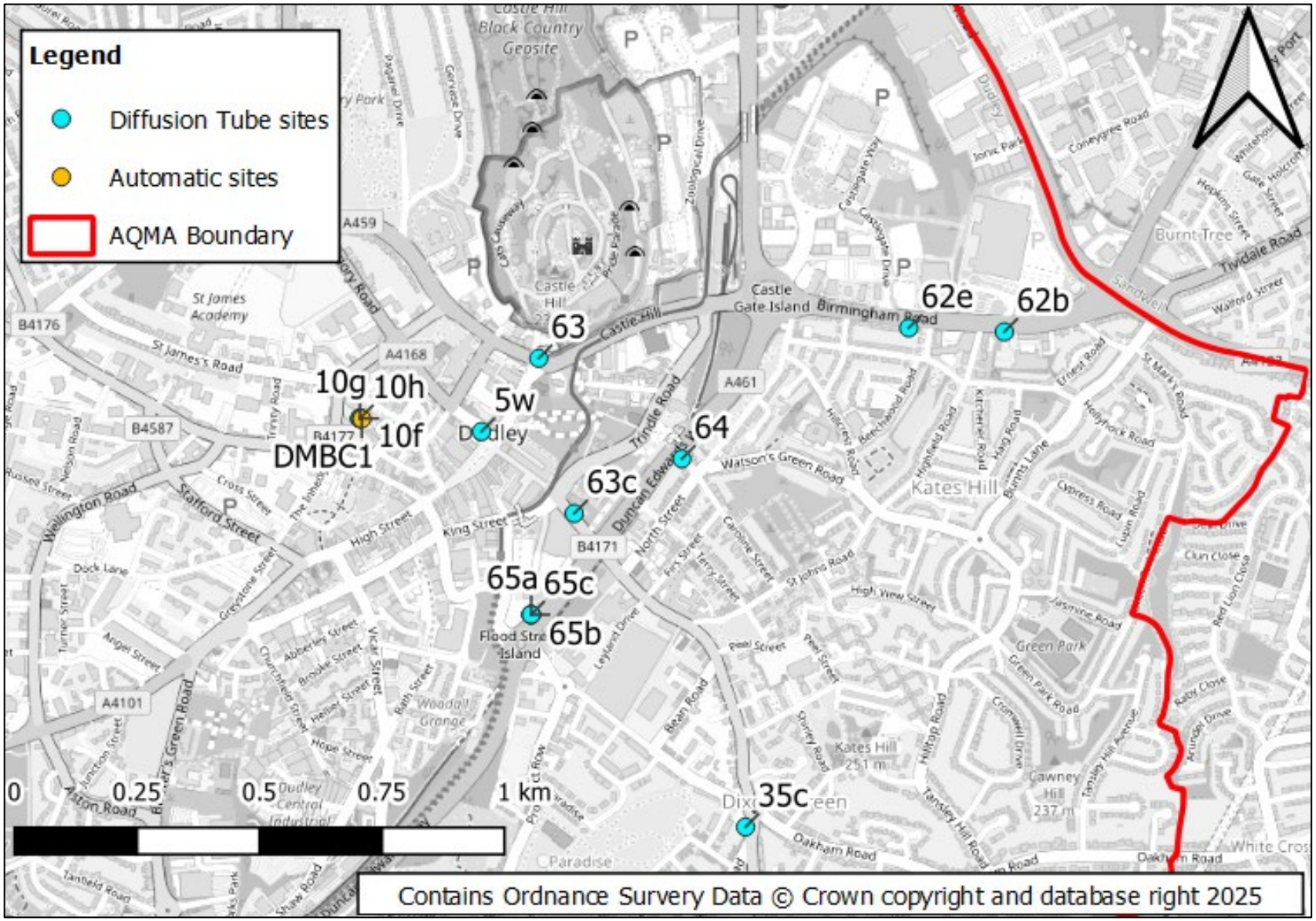


Figure D.3 – Map of Non-Automatic Monitoring Sites and Automatic Monitoring Sites in Dudley Central

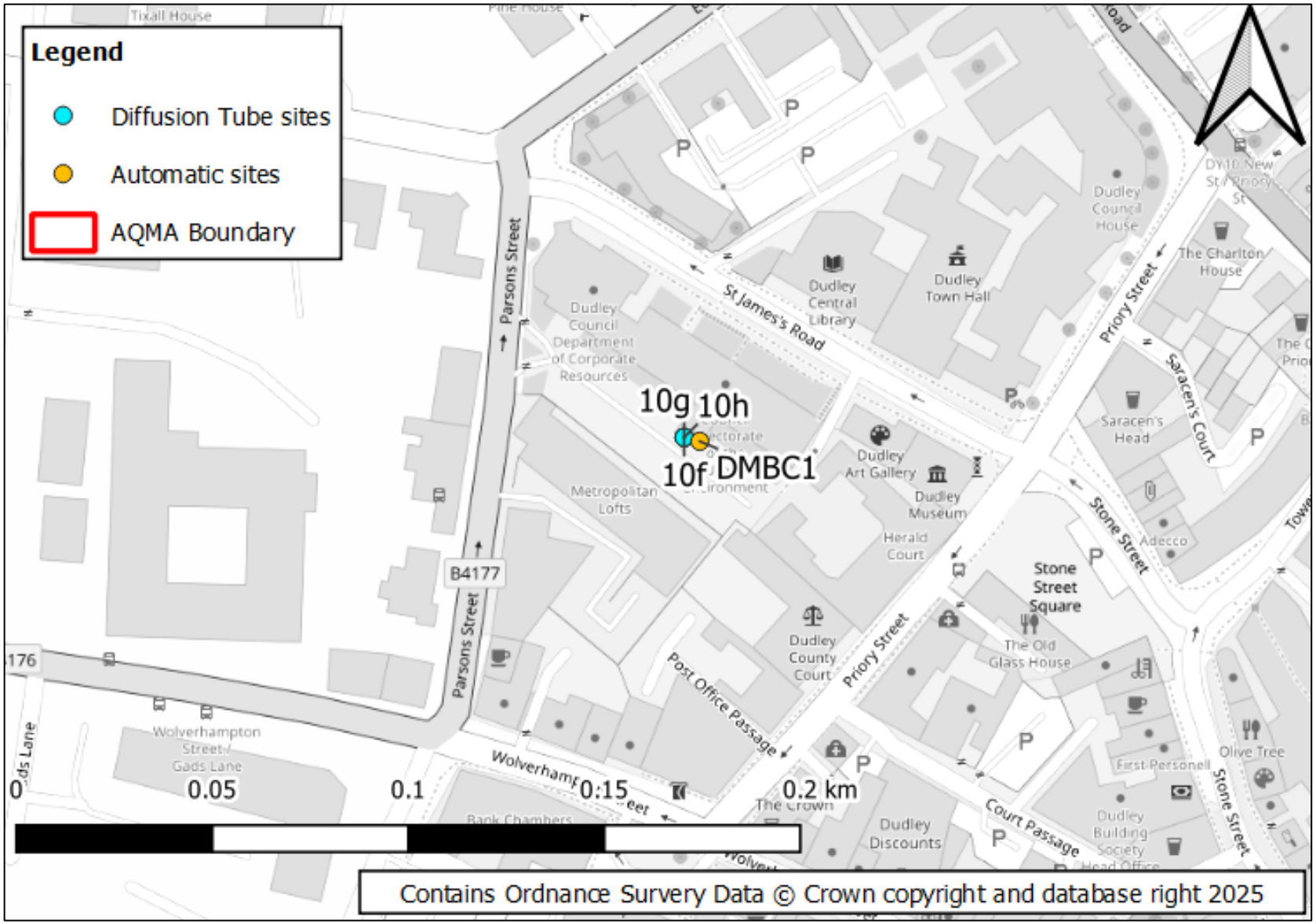


Figure D.4 – Map of Non-Automatic Monitoring Sites and Automatic Monitoring Sites in Cradley

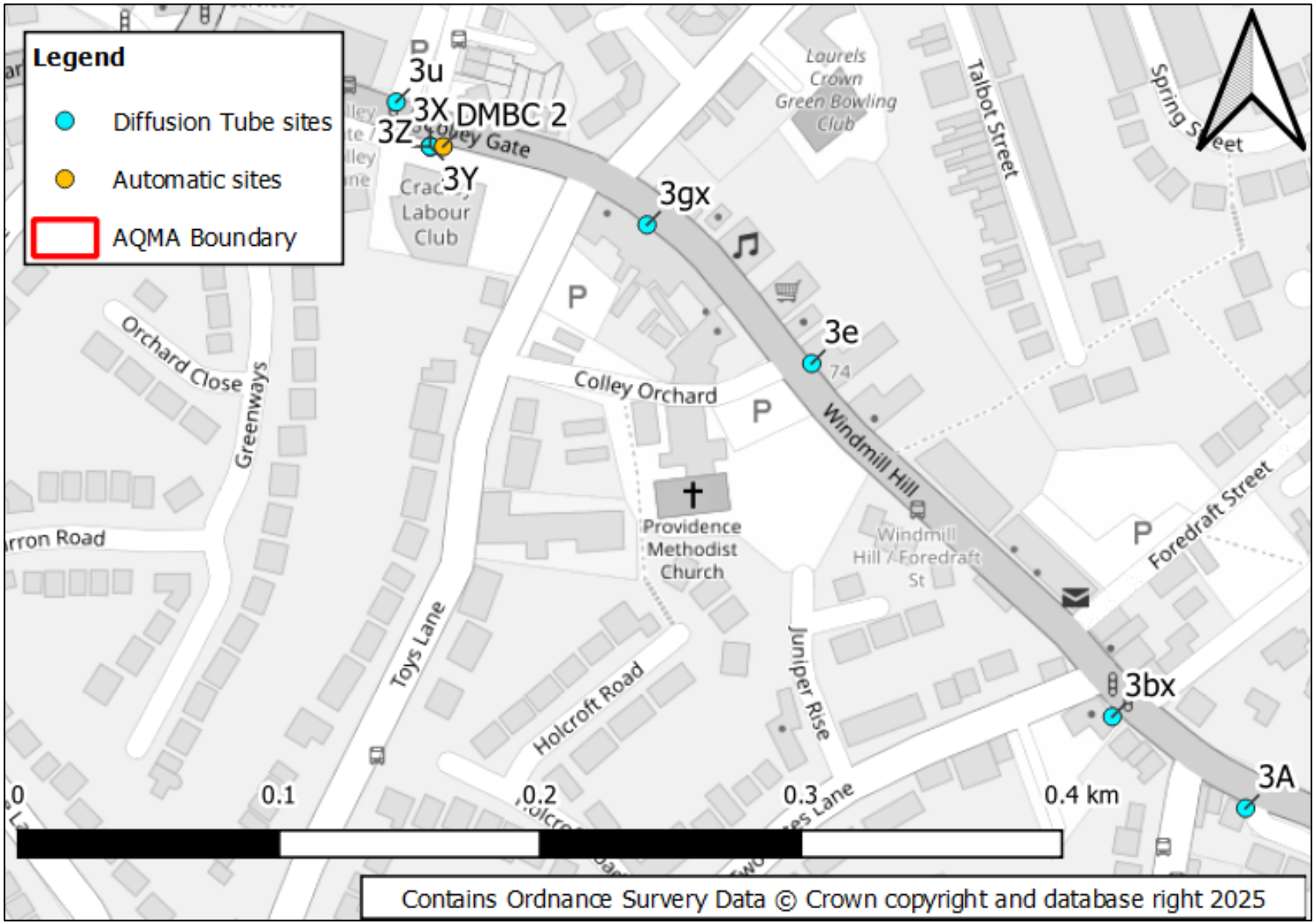


Figure D.5 – Map of Non-Automatic Monitoring Sites and Automatic Monitoring Sites in Wordsley

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[7]

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

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

Glossary of Terms

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

References

- Local Air Quality Management Technical Guidance LAQM.TG22. August 2022. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
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