2024 Air Quality Annual Status Report (ASR)

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

Date: December 2024

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Executive Summary: Air Quality in Our Area

Overview

Exposure to air pollution is estimated to cause the equivalent of millions of deaths and lost years of healthy life annually. The burden of diseases attributable to air pollution is such that air pollution is now recognised as the single biggest environmental threat to human health.

Air pollution is associated with a number of adverse health impacts. It increases morbidity and mortality from cardiovascular and respiratory disease, and from lung cancer, with increasing evidence of effects on other organ systems. The burden of disease resulting from air pollution also imposes a significant economic burden.

Air pollution particularly affects the most vulnerable in society: children, the elderly, and those with existing heart and lung conditions. There is also often a strong correlation with equalities issues because areas with poor air quality are also often less affluent areas , .

The mortality burden of air pollution within the UK has been previously reported as equivalent to 29,000 to 43,000 deaths at among adults aged 30 and over, with a total estimated healthcare cost to the NHS and social care of £157 million in 2017 .

Air Quality in Walsall

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, pregnant women and those with existing heart and lung conditions. Additionally, people living in less affluent areas are most exposed to dangerous levels of air pollution[2].

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[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

Pollutant trend data shows that over the last ten years levels of roadside nitrogen dioxide have generally decreased. No exceedances of the national air quality objective for nitrogen dioxide have been determined at closest relevant receptors (residencies) for five years, notwithstanding modelled (and measured) exceedances have been reported along certain main arterial roads (the 'classified road network', which incorporates the West Midlands Key Road Network).

Within Walsall urban background nitrogen dioxide levels have reduced at a gradual rate over time, and are at concentrations generally half or less than half of the current national annual mean objective. Notwithstanding, there are borough-wide exceedances of World Health Organisation 2021 Air Quality Targets and Air Quality Guidelines in respect of nitrogen dioxide and $PM_{2.5}$.

Walsall Council now intends to revoke air quality management areas declared for nitrogen dioxide and PM_{10}. The council's air quality monitoring network will be sustained and consideration given to re-locating certain monitoring stations to examine pollutant hot-spots notably in regard to $PM_{2.5}$, and borough-wide modelling of annual pollutant concentrations will continue.

Preparatory work has commenced by the council's Public Health Team on producing an Air Quality Strategy.

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.

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 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.

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.

In order to address and further improve air quality, Walsall Council, along with other West Midlands Councils and partner organisations, has taken forward a number of measures at local, sub-regional and regional levels. The council was a founding (and board) member of the West Midlands Low Emissions Towns and Cities Program (WM LETCP) and participates in the Black Country Ultra Low Emission Vehicle Strategy and Implementation Plan.

In June 2016 the seven Metropolitan Authorities (Birmingham, Coventry, Dudley, Sandwell, Solihull, Walsall and Wolverhampton), along with representatives from the three Local Enterprise Partnerships and five none-constituent Authorities, joined together to form the West Midlands Combined Authority (WMCA).

The WMCA has been established to plan and deliver a transport system across the West Midlands Metropolitan area that will boost the regional economy and improve the daily lives of residents and workers, and will control many of the strategic functions across the region to ensure a common approach.

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

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

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

The West Midlands Integrated Transport Authority (ITA) was replaced by Transport for West Midlands (TFWM) - the transport arm of the Combined Authority - in June 2016 and is continuing to develop the West Midlands Transport Emissions Framework. The Framework forms part of the West Midlands Strategic Transport Plan which has replaced the Local Transport Plan 3, and includes regional policies to accelerate the uptake of ULEVs across the private sector, fleet vehicles and taxis.

There are local and regional strategies which focus on specific areas of transport which outline the region's vision to become an 'engine for growth' through investment in transport infrastructure for this generation:

- Midlands Connect Strategy, 2017

  midlands-connect-strategy-march-2017.pdf (midlandsconnect.uk)

- Movement for Growth: The West Midlands Strategic Transport Plan, 2016

  2016-06-01-mfg-full-document_wmca.pdf

The four Black Country Councils, Dudley, Sandwell, Walsall, and Wolverhampton collaborated to produce a Black Country Air Quality Supplementary Planning Document (which incorporates the WM LETCP Good Practice Air Quality Planning Guidance) to inform planning policy and the decision-making process to ensure a consistent approach to planning across the Black Country. This was adopted as planning policy by Walsall in November 2016

In addition, the council participates in the Black Country Ultra Low Emission Vehicle Strategy and Implementation Plan. The plan will form part of a Black Country Transport Strategy and will help deliver a step change in the number of ULEVs in the region by meeting existing demand and stimulating further demand by providing vehicle owners and operators with the confidence to invest in ULEVs. The Implementation Plan will drive each council's own capital and revenue programmes and inform funding bids to the Local Growth Fund, Combined Authority, Office for Low Emission Vehicles (OLEV), European Structural Investment Fund (ESIF), Horizon 2020 and other appropriate funds. It will also support the wider promotion of ULEVs to the public, other public sector organisations and to businesses.

Walsall council has introduced a number of measures in attempting to reduce pollution levels from vehicles in order for the council to work towards achieving compliance with the relevant air quality objectives.

The measures fall into the following core areas:

- road improvements,
- public transport improvements,
- bus route improvements,
- traffic management,
- promoting travel alternatives,
- promoting low emission vehicles,
- air quality planning and guidance.

Planning Applications

Guidance has been prepared to aid developers bringing forwards schemes in Walsall in context of required air quality considerations. An Interim Position Statement Concerning Air Quality and Proposed Planning Developments has been made available at https://go.walsall.gov.uk/sites/default/files/2023-01/Environmental%20Protection%20-%20Interim%20Position%20Statement%20on%20Air%20Quality%20July%202022%20Ver%201.5.pdf which takes account of air quality guidelines, limits and targets informing how the council's Environmental Protection team responds to planning application consultations. This guidance is to be updated in 2024 to take account of binding limits and targets introduced in 2023.

Additionally, the council applies the Black Country Air Quality Supplementary Planning Document (SPD) as relevant to formal planning applications when determining required conditions.

https://go.walsall.gov.uk/sites/default/files/2023-01/black_country_air_quality_spd_september_2016_0.pdf

To assist appraisal of development control across the borough and inform Public Health initiatives, the council produces whole-borough air quality models in respect of nitrogen dioxide, $PM_{2.5}$ and PM_{10}. These are in-part used to screen the need for air quality interventions and assessments, and are generally updated every one to two years. Nitrogen dioxide modelling outputs are available at:

https://go.walsall.gov.uk/sites/default/files/2023-03/Walsall%20nitrogen%20dioxide%20predicted%20areas%20of%20exeedance.pdf

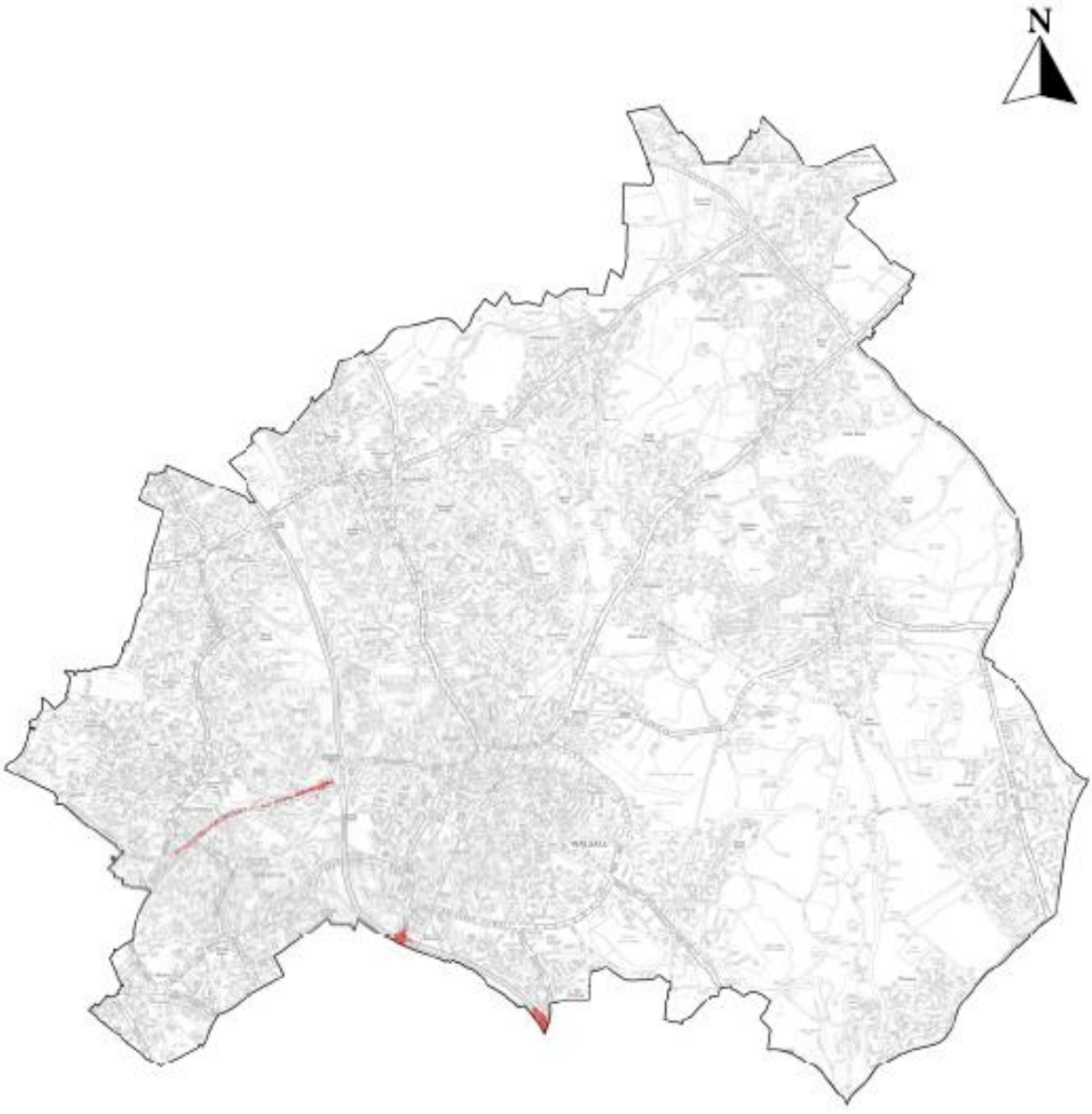
https://go.walsall.gov.uk/sites/default/files/2023-03/Walsall%20nitrogen%20dioxide%20predicted%20areas%20of%20ex%20poss.pdf

Public Health Information

To provide information on a borough-wide basis in regard to likely health impacts, for example when development schemes are appraised, the council models nitrogen dioxide, $PM_{2.5}$ and PM_{10}, validated against continuous monitoring. This takes account of World Health Organisation Air Quality Guidelines along with National Air Quality Objectives and Air Quality Limits.

Walsall Metropolitan Borough Council
ADMS Urban Nitrogen Dioxide Air Quality Model 2024

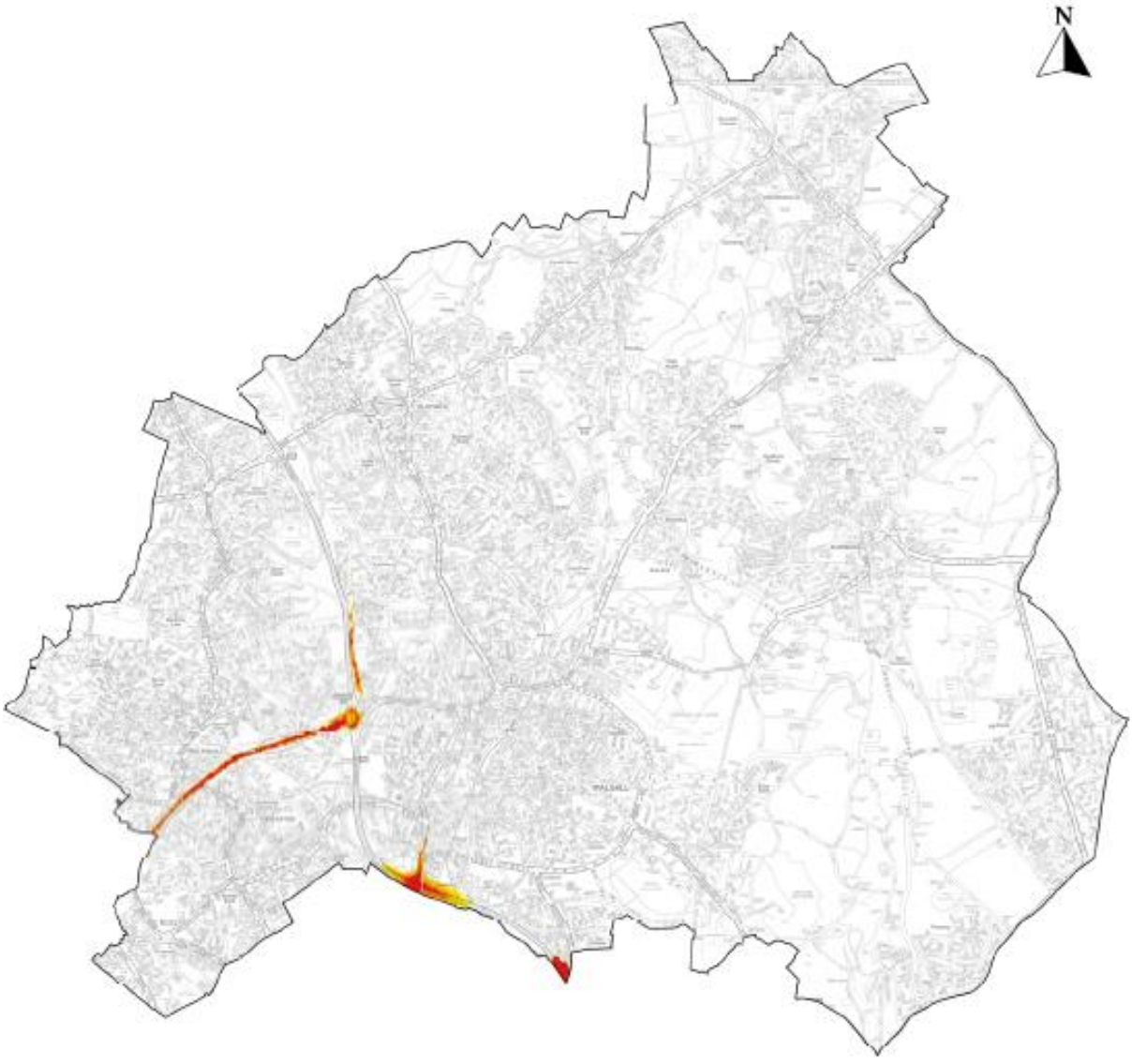
National Air Quality Objective: Predicted Areas of Exceedance (Annual Average Concentration > 40 µg/m^3)



Scale 1:76,000

Walsall Metropolitan Borough Council
ADMS Urban Nitrogen Dioxide Air Quality Model 2024

National Air Quality Objective: Predicted Areas of Exceedance and Possible Concern (Annual Average Concentration > 36 ug/m^3



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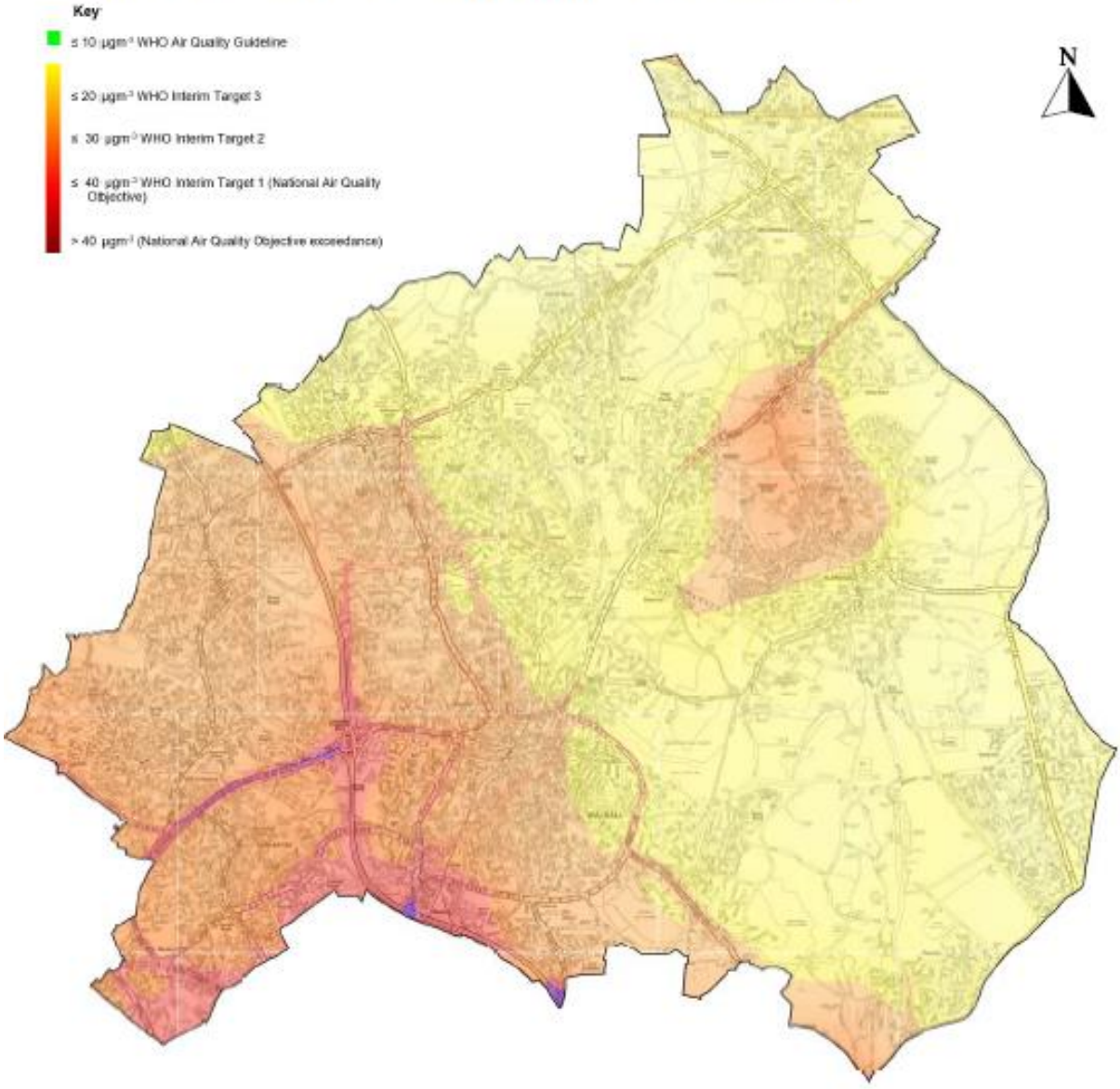
Walsall Metropolitan Borough Council
ADMS Urban Nitrogen Dioxide Air Quality Model 2024

World Health Organisation (2021) Air Quality Guideline Level and Interim Targets µg/m^3



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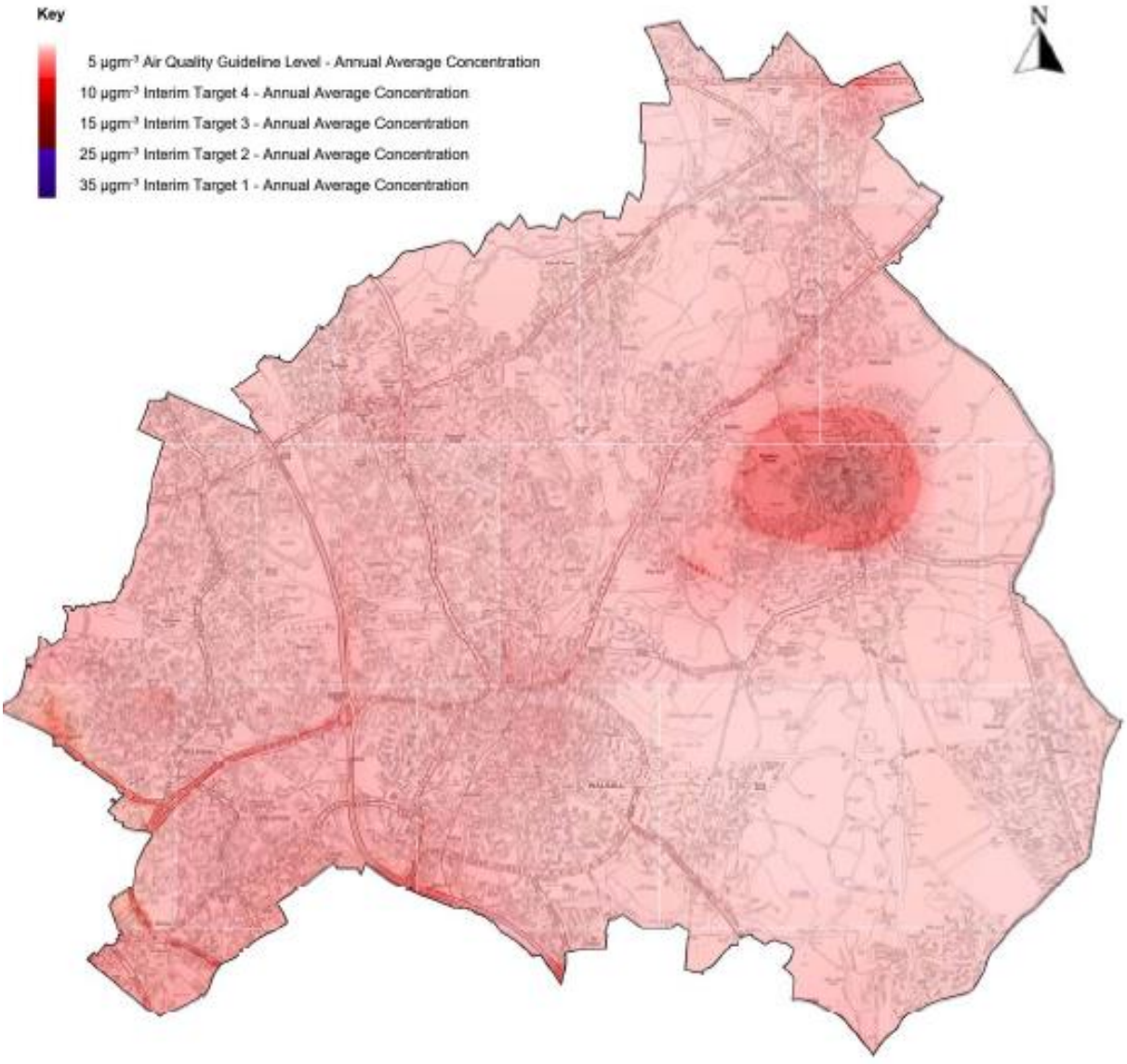
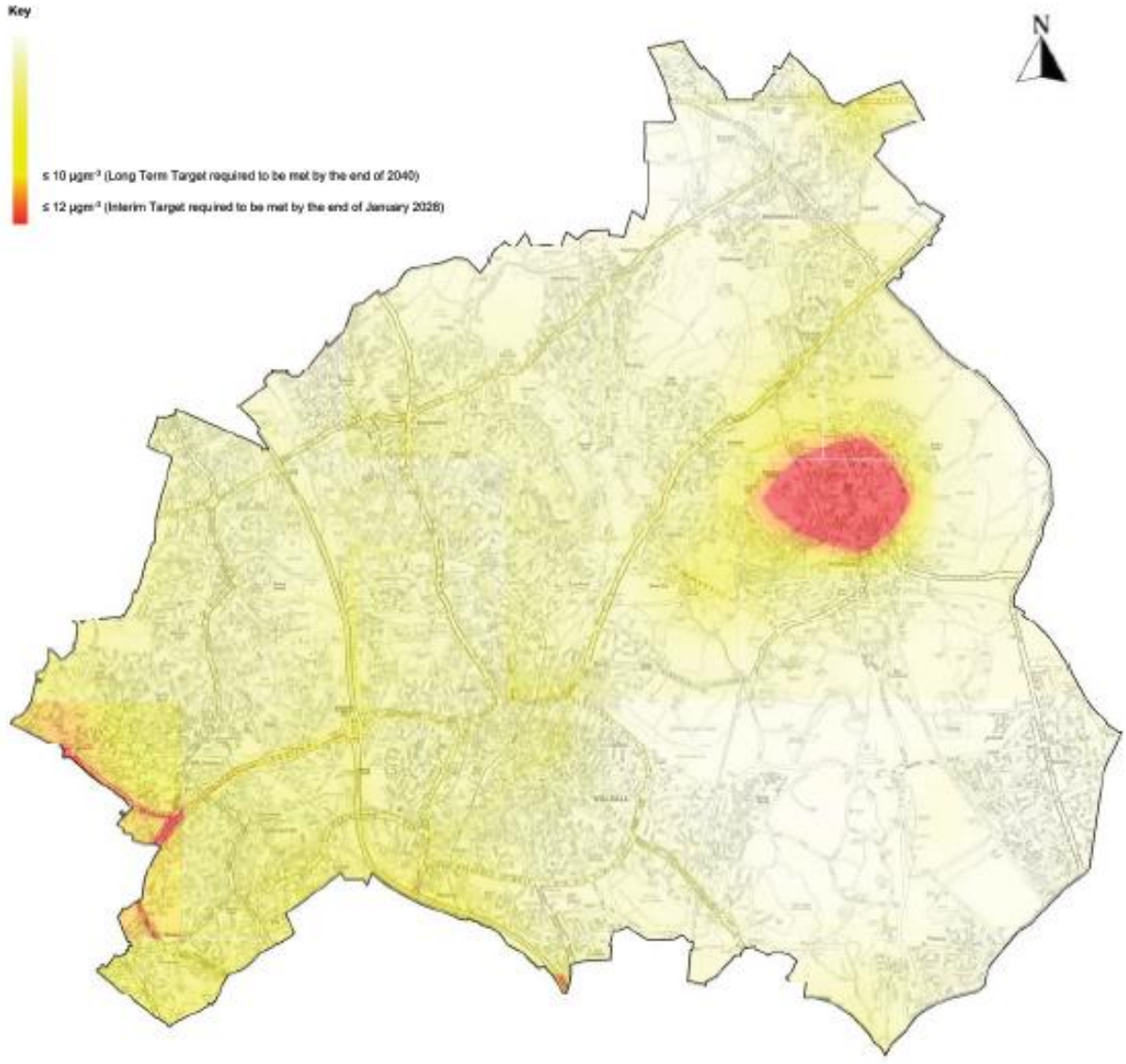
Walsall Metropolitan Borough Council
ADMS Urban PM2.5 National Atmospheric Emissions Inventory (2019) and Explicit Roads Model 2024
World Health Organisation (2021) Air Quality Guidelines and Interim Targets
(Annual Average Concentrations µg/m^3)



Scale 1:76,000

Walsall Metropolitan Borough Council
ADMS Urban $PM_{2.5}$ National Atmpsheric Emissions Inventory and Explict Roads Model 2024

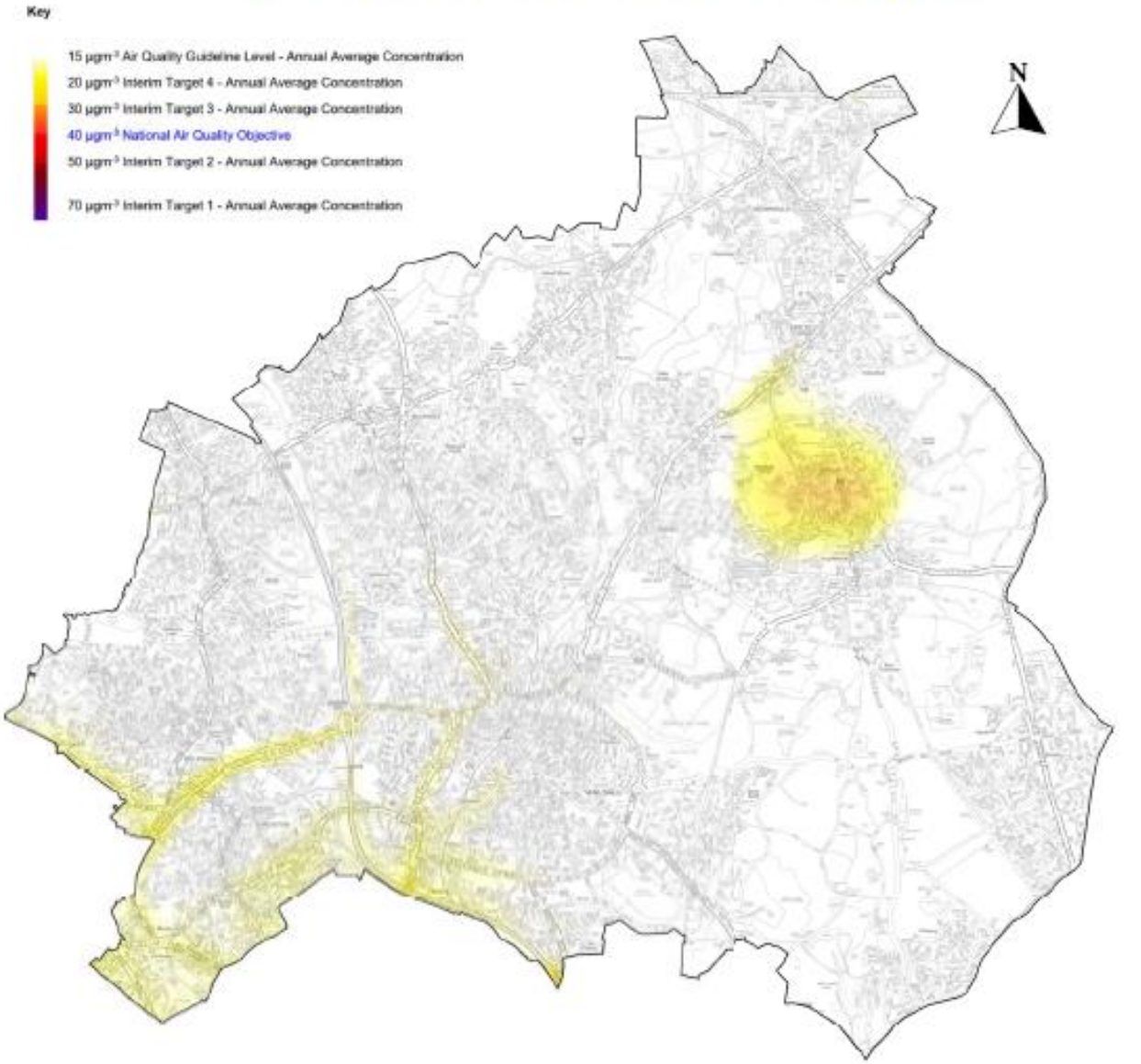
Air Quality 2040 Target and 2028 Interim Target: Predicted Areas of Exceedance (Annual Average Concentrations $\mu g/m^3$)



Scale 1:76,000

Walsall Metropolitan Borough Council
ADMS Urban PM_{10} 2024
National Atmospheric Emission Inventory (2021)

World Health Organisation (2021) Air Quality Guideline, Interim Targets and National Air Quality Objectives



Scale 1:76,000

Transport Projects and Initiatives

The Strategic Transport Team have developed and delivered a number of schemes in the last two years that may be of interest in terms of potential improvements to air quality (as listed below, with links to the publicly accessible information for each project). These are in addition to the re-construction of M6 J10.

- WM cycle hire: Welcome to West Midlands Cycle Hire - West Midlands Cycle Hire (wmcyclehire.co.uk)

  The West Midlands Cycle Hire scheme offers pedal and electric bikes across the West Midlands. Users can rent bikes from docking stations strategically placed across the West Midlands. Within Walsall, the scheme is centred upon the Town Centre.

- A34 Sprint (Phase 1 delivered, Phase 2 = 24/25): What is Sprint | Transport for West Midlands (tfwm.org.uk) Sprint is a bus priority corridor linking Walsall Town Centre with Birmingham City Centre, Solihull and Birmingham International Airport along the A34 . The scheme will see the introduction bus priority infrastructure and new zero emission buses.
- Connecting Bentley Phase II (Active Travel Fund, Tranche 2): Have Your Say Today - Connecting Bentley Phase 2 - ATF T2 - Walsall Active Travel (commonplace.is)

  Walsall Council has successfully introduced a new two-way cycle route on Wolverhampton Road West, between Churchill Road and Queen Elizabeth Avenue in Bentley, using Active Travel Tranche 2 (ATF T2) funding.

- School Streets (ATF T2): Have Your Say Today - School Streets Development - ATF T2 - Walsall Active Travel (commonplace.is)

  Walsall Council has successfully introduced ‘School Streets’ at 10 locations across the borough. Measures on the selected Schools Streets include: Road closures at certain times of the school day, new 20mph zones and new controlled parking zones.

- NCN5 Improvements (Veolia Environmental Trust/GRCF): Have Your Say Today - NCN5 Cycle Path Improvements - Veolia Environmental Trust and GRCF - Walsall Active Travel (commonplace.is)

  Walsall Council have resurfaced the section of National Cycle Network Route 5 (NCN5) path, between Mill Lane and Cartbridge Crescent, behind the back of Ryecroft Cemetery. This project was funded by the Veolia Environmental Trust, and the Green Recovery Challenge Fund (GRCF).

- Bloxwich Cycling and Walking Improvements (Towns Fund): Have Your Say Today - Bloxwich Cycling and Walking Improvements - Walsall Engagement Hub (commonplace.is)

  Walsall Council is currently in the process of delivering a number of cycling and walking improvements in the Elmore Green Road area of Bloxwich, with the aim of improving connectivity between Bloxwich Town Centre and Bloxwich Rail Station for pedestrians and cyclists.

Schemes to be delivered in the next 12 months are as follows:

- Active Travel Fund, Tranche 3 - Noose Lane to Pinson Road Cycle Scheme (joint City of Wolverhampton Council – Walsall Council scheme) – A dedicated, segregated where possible, cycle lane from Noose Lane / A454 Willenhall Road to Pinson Road, via Somerford Place. In development, due for construction in 2024.
- Active Travel Fund, Tranche 4 - Pinson Road to Rose Hill Cycle Scheme – A dedicated, segregated where possible, cycle lane from Pinson Road / New Road junction, via New Road, Dale Island and Rose Hill to Rose Hill / Bilston Lane junction. In development, due for construction in 2024.
- Levelling Up Fund Tranche 2, Movement Package: Railway Lane Improvements – Clearance and redevelopment of Railway Lane from East Acres to the north of the Wolverhampton-Walsall Railway Line to facilitate a shared walking and cycling route. Construction completion expected by Spring 2024.
- Willenhall Greenway Route - A shared walking and cycling route from Willenhall Memorial Park westbound to Anson Road, including upgraded crossing points and the enhancement of on street walking and cycling facilities on Stringes Lane to create a continuous route. Part complete, remaining section to Noose Lane to be complete by March 2024.
- Rose Hill / Bilston Lane Junction - The proposed conversion of the existing priority junction at Rose Hill / Bilston Lane to a three-arm compact roundabout, with improved pedestrian/cycle facilities. The scheme is currently in the preliminary design stage and will be followed by a public engagement exercise and detailed design in early 2024. The scheme is proposed for construction in 2024/2025.
- On-street Residential Charge-point Scheme (ORCS) – The installation of 35 no. 7kW charge-points (two sockets at each charge-point providing a total of 70 sockets)

across the borough funded through the Office of Zero Emission Vehicles (OZEV) ORCS scheme. The installation of charge points is expected to be complete by Spring 2024.

- Pelsall EV Charging Hub – The installation of 14 no. 7kW charge-points in an existing car park and 2 on-street rapid charge-points in dedicated parking bays on Pelsall High Street, funded through the Office of Zero Emission Vehicles (OZEV) LEVI Pilot scheme. This scheme is subject to consultation and will be live by March 2025 at the latest.

The council's Active Sustainable Travel and Road Safety (A*STARS) programme is offered to education establishments across the borough, with over 80% of primary schools taking part. A*STARS promotes the use of sustainable and active modes of travel coupled with road safety education. Whilst this encourages people to travel more via active modes, such as walking, cycling and scooting, the road safety education remains key to increasing people's road safety awareness when travelling on the network. A lack of confidence and experience on the road can be seen as a barrier to travelling by active modes.

Through the A*STARS programme the council runs borough-wide campaigns such as 'Move More Month', 'Walk to School Week' and 'Bike Week' where on average 22,000 resources are sent to schools. The council also assists schools in setting up 5 Minute Walk Zones, Walking Buses, Lets Walk Together Events, Park and Stride Schemes, all of which are designed to promote active school travel.

Schools can also participate in the council's bespoke WOW (walking and wheeling) initiative, where children record their daily journey and are awarded a badge each half-term for achieving an average of 3 active journeys per week.

Other road safety education initiatives on offer include pedestrian training; Bikeability (cycle training); Scooterbility; Learn to Ride (bikes) leisure cycle rides and cycle maintenance sessions.

The council conducts an annual travel survey amongst its A*STARS schools, which allows comparisons to be drawn with Walsall and the national picture and helps to create bespoke Action Plans for A*STARS schools, with targeted initiatives to increase active and sustainable travel. Last year Walsall's active travel figures (primary and secondary) was 16% higher than national, and car use was 4% lower than national.

https://www.astarswalsall.co.uk/

Traffic Enforcement

The council operates new traffic enforcement of school streets, which has made an impact on vehicles sitting outside schools with engines running. This was first implanted 2 years ago, and subject to enforcement since September 25th 2023 at 10 schools. This has made a notable difference to traffic movement in these locations during mornings and afternoons.

Major and Minor Traffic Schemes and Improvements

Schemes delivered in the last two years, along with proposed schemes, comprise:

Delivered	**Category**
Active Travel Fund, Bentley Lane / Churchill Road / Queen Elizabeth Avenue	Cycling / walking
Active Travel Fund, Wolverhampton Road (Churchill Road to JCT 10 M6)	Cycling / walking
Bentley Lane – Traffic Calming	Traffic Calming
Elmore Green Road – Footpath and pelican crossing	Cycling / walking
George Street - Humped crossing	Walking / TC
Hawes Road – Safer streets	Walking / Environment
High Street Brownhills Public Open Space	Environment
Hollyhedge Lane, Build-outs	Traffic Calming
Narrow Lane – Transit Site	Environment
National Cycle Network NCN5 Cycle route – A461 Lichfield Road	Cycling / walking
Old Birchills- Route action	Traffic Calming
Pool Hayes Lane - Humped zebra crossing	Walking
Safer Routes to School - Birmingham Rd near Tynings Lane zebra crossing	Walking / SRTS

Safer Routes to School - Bluecoat Secondary Improvements to zebra crossing	Walking / SRTS
Safer Routes to School - Queen Marys Grammer School	Walking / SRTS
The Greenway — Cycle/pedestrian route	Cycling / walking
Wednesbury Road Route action	Traffic Calming
Proposed	
A34 Somerfield Road – Cycle scheme / Pelican Crossing	Cycling / walking
A41 Moxley Gyratory – Junction improvement & Route	Cycling / walking
ATF A454 Somerford Road Cycle route into Wolverhampton	Cycling / walking
ATF - Bentley Mill Way	Cycling / walking
ATF B4484 Rose Hill to Pinson Road	Cycling / walking
ATF Birchills (Jct 10-Pleck Road)	Cycling / walking
Broad Meadow, Aldridge – Car Park	Environment Imp
Fingerpost, Pelsall Junction	Junction Improvement
Green Lane – Footbridge	Cycling / walking
Kendricks Road – Cycle link and link to Railway Station	Cycling / walking
Local Safety Scheme - A34 Green Lane - Somerfield Rd - High St	Cycling / walking
Local Safety Scheme - Aldridge Rd, Streetly	Traffic Calming
Local Safety Scheme - B4210 Bloxwich Rd / High St	Cycling / walking
Local Safety Scheme - Bentley Road North	Traffic Calming
Norton Road (York's Bridge) – New bridge	Network improvement

Railway Lane — Active travel route	Cycling / walking
Rosehill/Bilston Lane junction	Junction Improvement
Rushall Square – Junction Improvement	Junction Imp.
Sutton Road / Commonwealth Way	Cycling / walking
Sutton Road / Longwood Lane – Signals	Junction Imp.
Wolverhampton Street – Public realm	Cycling / walking

West Midlands Combined Authority

Stemming from West Midlands Combined Authority (WMCA) Air Quality Action Plan is a region-wide plan setting out a raft of measures to significantly improve air quality and the health of local people that will begin with a series of priority measures to be delivered with £1 million of government air quality funding.

https://www.wmca.org.uk/news/1m-action-plan-to-improve-west-midlands-air-quality/#:~:text=A%20region%2Dwide%20plan%20setting,of%20government%20air%20quality%20funding

The measures include:

- Installing a network of air quality sensors that will provide real-time, publicly accessible data on pollution levels across the region
- Education and awareness campaigns in communities, including schools, to improve knowledge and understanding of main sources of pollution and their health impact
- Development of an alert system when pollution levels are high
- Research into the potential to positively impact air quality by reducing speed limits on high-speed roads and in urban centres
- Devising regional targets that exceed current national and international guidelines on levels of $PM_{2.5}$ and PM_{10} particulates, and nitrogen dioxide (NO_2).

These initial measures will be delivered over the next two years and are part of the WMCA's wider Air Quality Framework – a longer-term document that sets out measures that must be considered in partnership with local authorities, central government, businesses and local

communities to accelerate improvements to air quality on a regional scale. https://www.wmca.org.uk/documents/environment-energy/air-quality/west-midlands-combined-authority-air-quality-framework-reference-document-2023/

Whilst this document has been produced by the WMCA working with its constituent local authorities, it will require a collaborative approach to enable delivery of air quality benefits for all. This will include local and regional government, but also the commitment of local businesses and communities. Financial investment will be required to implement, and then sustain, some of the options identified.

Reflecting the range of approaches that will need to be taken (145 options have been appraised), this Framework has grouped the appraised options into the following categories.

Engagement and behaviour change:

- Domestic emissions and indoor air quality
- Transport
- Natural and built environment
- Commercial, industrial and agriculture
- Public health
- Planning, policy, governance, and mechanisms for change
- Monitoring and digital
- Climate/net zero considerations.

Each of the options has undergone appraisal against the following criteria:

- Health outcomes, including direct improvement to human health and reduced health inequalities.
- Spatial impact, including whether a regional approach brings benefit.
- Alignment with local and national policy.
- Feasibility of implementation, timescales and cost ?
- Co-benefits – do the measures have any additional environmental, social or economic benefit ?

Given air pollution is both produced and experienced locally and regionally, any emissions reduction (by industry, transport, and housing) as a result of the implementation of the Framework will have immediate local and regional benefits.

In March 2023 the WMCA was granted DEFRA air quality funding to support the work already being undertaken between the WMCA and the seven West Midlands local

authorities to tackle air pollution. The purpose of the grant is to improve the knowledge of people who live and work in the West Midlands concerning air quality, and the steps individuals can take to reduce their exposure to air pollution. This will be done through the following:

- Installation and maintenance of a low cost sensor network focussing on $PM_{2.5}$ across the West Midlands region.
- A West Midlands website (including a data platform)
- Behaviour change, which will include seven behaviour change campaigns (one in each West Midlands local authorities); a West Midlands Communications Toolkit; 21 awareness raising events; and improving air quality literacy.

The West Midlands Combined Authority (WMCA) is increasing its role in supporting the seven West Midlands local authorities in their efforts to improve local air quality. The WMCA has produced an overriding Strategic Economic Plan which includes a regional transport plan, produced by Transport for West Midlands. This plan is now recognised as the WMCA's Movement for Growth https://www.tfwm.org.uk/who-we-are/our-strategy/movement-for-growth-wmltp4/ strategic transport plan and provides a framework for the key transport challenges in the region, with significant investment programmes planned over the next 13 years or so. This plan includes a Sustainable Travel Team working in conjunction with the seven Metropolitan local authorities to support local businesses, education sites and individuals, enabling them to make smarter travel choices resulting in improvements to air quality.

Black Country Ultra Low Emissions Strategy

The Black Country Transport – Ultra Low Emission Vehicle Strategy was agreed in May 2020. This is a strategic transport partnership between Dudley, Sandwell, Walsall and Wolverhampton Councils. The overarching aim is to accelerate the uptake of ULEVs across the area before the planned nationwide ban on the sale of petrol and diesel vehicles in 2030. It sets out ambitious targets that should be met to ensure that there is an EV charging infrastructure that will both promote the switch to ULEV's as well meet the growing demand for electric vehicles.

WM-Air

WM-Air - the West Midlands Air Quality Improvement Programme - is an initiative to support the improvement of air quality, and associated health, environmental and economic benefits, in the West Midlands.

Air pollution in the West Midlands affects some 2.8 million people, reducing average life expectancy by up to 6 months, and is responsible for direct and indirect economic costs of several hundred million pounds per year. Air quality is therefore a key priority for local and regional government, and for the health and wellbeing of the region's population.

WM-Air will provides improved understanding of pollution sources and levels in the region, and new capabilities to predict air quality, health and economic impacts of potential policy measures. It supports the application of these to specific case studies across the West Midlands.

WM-Air lists project partners as:

- West Midlands Combined Authority (WMCA)
- Transport for West Midlands (TfWM)
- Birmingham City Council (BCC)
- Coventry City Council (CCC)
- Low Emissions Towns & Cities Partnership (LETCP)
- Birmingham & Solihull NHS STP (STP)
- Midlands Trees and Design Action Group (TDAG)
- B'ham & Solihull Local Enterprise Partnership (LEP)
- Amey Plc
- Calthorpe Estates
- Network Rail
- Arup
- High Speed Two (HS2) Limited
- Temple Group
- AEA Ricardo
- Walsall Council
- Sustrans West Midlands
- National Express
- Amazon Web Services (AWS)
- Forest Research
- NHS Sustainable Development Unit
- The Floow

https://www.birmingham.ac.uk/schools/gees/research/projects/wm-air/index.aspx

Public Health Walsall

Walsall Council has formed an Air Quality Alliance to provide a multi-professional forum for sharing of ideas and evidence-based practice to reduce negative health and environmental impacts of poor air quality, alongside identifying collaborative opportunities.

Terms of reference are to include a set of areas for action, identifying all relevant and planned work in these areas and any shortcomings. This is intended to raise the profile of air quality in professional and political communities, and highlight the health, environmental and financial benefits associated with addressing air quality impacts, which requires collective actions.

The air quality alliance can act as a vehicle for national, regional and local campaigns and to ensure air quality actions feed into the wider sustainability agenda.

The alliance will act as a catalyst to initiate a Black Country Air Quality Alliance,

Principal membership will comprise, but not be limited to, transport, planning and environmental protection representatives of the council, working with the UK Heath Security Agency, the West Midlands Combined Authority and consultants, with options to co-opt others onto the alliance, and contribute to meetings.

The alliance aims to facilitate cross-boundary and cross-departmental solutions to problems posed by poor air quality, and will feed into the (Public) Health Protection Forum, and report as required to the council's Health and Wellbeing Board.

Conclusions and Priorities

Based on continuous monitoring station results, Walsall has seen overall downward trends in pollutant concentrations.

Walsall has only recorded one exceedance of the NO_2 national air quality objective in 2023 at Wolverhampton Road. On fall-off with distance calculations, this does not predict an exceedance at relevant receptors.

In terms of PM_{10}, Walsall has not monitored any exceedance of the National Air Quality Objective for either the annual or 24-hour values.

For $PM_{2.5}$, Walsall has not recorded any exceedance of 10 µg/m^3 at its continuous monitoring stations.

Walsall will continue to operate its network of automatic continuous air quality monitoring stations to establish how trends in pollutant concentrations have established post-Covid,

with reference to national air quality objectives, air quality targets and air quality limits. The overall aim, so far as is practicable and deliverable, is to seek compliance with World Health Organisation Air Quality Guideline levels and interim targets to safeguard public health, recognising in particular that it has been previously reported there are no safe levels for particulate matter.

Based on predictive air quality models for 2024, Walsall Council will review its priorities for detailed examination of pollutant hot-spots for NO_2, PM_{10} and $PM_{2.5}$. In particular, work will continue to examine $PM_{2.5}$ in the Aldridge area, and NO_2 in the locality of J9. M6 motorway and A454 Black Country Route.

Walsall's Air Quality Alliance aims to reduce the negative health and environmental impacts of poor air quality, and to identify opportunities for collaboration will be a main focus from 2024 onwards. The over-arching intention is to develop within this framework a Walsall Air Quality Strategy, and in-turn this can inform a new Air Quality Action Plan.

The recently approved West Midlands Combined Authority Air Quality Framework and Implementation Plan will provide a key focus for air quality in Walsall. It contains potential options that could be enacted to address poor air quality and inequality of exposure. Produced in collaboration with partners and stakeholders, it is designed to complement existing air quality management and activities, whilst reducing the burden on resources. Collaboration across the West Midlands region will increase along with funding for air quality work. The Framework Implementation Plan identifies areas that can be started straight away.

The introduction of an air quality monitoring site adjacent to the Black Country Route A454 in 2018 previously confirmed an exceedance of the annual mean objective for nitrogen dioxide. Defra's Pollution Climate Mapping indicated exceedance of the annual mean nitrogen dioxide objective on the Black Country Route (A454) west of Junction 10 of the M6. For 2022, however, no exceedances have been identified at relevant receptors.

Walsall Council continues to develop and maintained a borough-wide road traffic-based air quality model in respect of NO_2, PM_{10} and $PM_{2.5}$ verified against continuous monitoring data.

Local Engagement and How to get Involved

Walsall Metropolitan Borough Council aims to engage with a wide variety of departments and organisations, as well as its citizens when designing measures to improve local air

quality. This takes many forms, including various consultations, as well as community-based projects and initiatives. Walsall's Air Quality Action Plan is to be reviewed in 2024 and as necessary will draw upon engagement from teams across the council involved in transport, regeneration, public health, road safety, planning and traffic enforcement.

The council is part of a number of region-wide initiatives developed to encourage residents in their lifestyle choices, including:

• Black Country Walking & Cycling Strategy & Implementation Plan, 2017 provides a vision for cycling and walking in the Black Country that reflects its ambition to significantly increase these modes as an integral component of the transport and regeneration activities as well as one of the approaches to get more people active every day.

https://go.walsall.gov.uk/sites/default/files/202207/Black%20Country%20cycling%20and%20walking%20strategy.pdf

• Black Country Ultra Low Emission Vehicle Strategy January, 2017. This is designed to deliver a network of electric vehicle charging points and ULEV public service vehicles. Residents can recommend a location for a residential on-street vehicle charging point.

https://www.blackcountrylep.co.uk/upload/files/Smart%20City/Black%20Country%20ULEV%20Strategy%20final%20v10%20Jan%202017.pdf

• Smoke Control Areas- information is available on areas within Walsall that are designated as Smoke Control Areas (SCAs) as set out in the Clean Air Act 1993. These are primarily established to prevent smoke emissions from domestic chimneys associated with the burning of unauthorised fuels other than in "exempt appliances".

Smoke control areas | Walsall Council Smoke control areas | Walsall Council

• Health Improvement within Walsall offers support for health and well-being via a number of means

https://go.walsall.gov.uk/sport-and-leisure/activities/health-improvement

• Reduction of energy and disposal bills and reduction of carbon emissions from businesses can be improved by simple measures

https://go.walsall.gov.uk/business/support-your-business/reduce-your-energy-anddisposal-bills

• Reporting a bonfire and burning waste. Emissions from bonfires can be frustrating for local residents and businesses in Walsall. Smoke and ash is bad for people's health, especially if they have a respiratory medical condition. Complaints are investigated by council officers.

https://go.walsall.gov.uk/people-and-communities/protecting-ourenvironment/bonfires-and-burning-waste

• The Government's Clean Air Strategy sets out plans for dealing with all sources of air pollution, making our air healthier to breathe, protecting nature and boosting the economy. https://www.gov.uk/government/publications/clean-air-strategy-2019

• The Government's Workplace Charging Scheme is a voucher-based scheme that provides eligible applicants with support towards the upfront costs of the purchase and installation of electric vehicle (EV) charge-points.

https://www.gov.uk/guidance/workplace-charging-scheme-guidance-for-applicants

• Go Jauntly provides an app for free walking routes around the borough to increase interest and uptake in walking.

https://www.gojauntly.com/

• Finding out about air quality and accessing relevant information is provided via a council web platform.

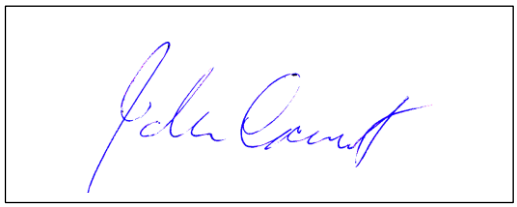
https://go.walsall.gov.uk/people-and-communities/protecting-our-environment/airquality

Local Responsibilities and Commitment

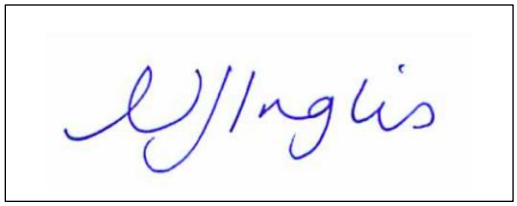
This ASR was prepared by Environmental Protection of Walsall Council with the support and agreement of the following officers and services:

- Curtis Dean – Senior Environmental Protection Offices
  Environmental Protection. Place & Environment
- Alana Saunders – Road Safety Manager.
  Transportation and Strategy. Place & Environment
- Jag Raan – Major Projects Minor Improvements Manager
  Transportation and Strategy. Place & Environment
- Uma Viswanathan – Consultant in Public Health
  Public Health Walsall
- Jason Bishop – Team Leader – Planning and Building Control Technical
  Planning and Building Control. Regeneration and Economy
- Dan Johnson – Strategic Transport Manager
  Transportation and Strategy. Place and Environment
- Matt Crowton – Group Manager. Strategic Transport Manager
  Transportation and Strategy. Place and Environment

This ASR has been approved by:



John Grant Environmental Protection Manager



Nadia Inglis Director of Public Health

If you have any comments on this ASR please send them to Environmental Protection at:

Walsall Metropolitan Borough Council

Environmental Protection

Place & Environment

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1 Local Air Quality Management

This report provides an overview of air quality in Walsall during 2023. 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 Walsall Council to improve air quality and any progress that has been made.

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

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

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

A summary of AQMAs declared by Walsall Council can be found in Table 2.1. The table presents a description of the AQMAs that are currently designated within Walsall. Appendix D: Map(s) of Monitoring Locations and AQMAs provides maps of AQMAs and also the air quality monitoring locations in relation to the AQMAs. The air quality objectives pertinent to the current AQMA designations are as follows:

- NO_2 annual mean and hourly limit;
- PM_{10} 24-hour mean;

The council will revoke AQMA 2008 relating to Particulate Matter PM_{10} as this is now obsolete and has a dormant status.

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
Walsall AQMA 2006	August 2006	• NO_2 annual mean • 1 hour mean	Whole borough declaration	NO	46 µg/m^3 (measured annual mean at Bescot Road, J9 M6 motorway)	41.4 µg/m^3 (measured annual mean at Wolverhampton Road)	Not compliant	Walsall Council Air Quality Action Plan 2009	Air Quality Action Plan - June 2009_0.pdf (walsall.gov.uk)
Walsall AQMA 2008	February 2008 (Now redundant)	PM_{10} 24 hour mean	An area encompassing numbers 1 to 11 and 4 to14 Nutmeg Grove, Chuckery	NO	70 exceedances	No longer monitored following compliance		Chuckery PM_{10} Air Quality Action Plan 2010	N/A

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

☒ Walsall Council **confirm that all current AQAPs have been submitted to Defra.**

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

Walsall Council's 2023 ASR was accepted by DEFRA, commenting that the report is well structured, detailed, and provides the information specified in the Guidance. Additional comments were provided that are designed to help inform future reports:

1. The Walsall AQMA 2008 must be revoked as soon as possible. Should Walsall need help with the process for revocation they are encouraged to contact the LAQM Helpdesk.

   Comment: This AQMA concerns PM_{10} in the area of Chuckery, centred on an A2 IPPC Ferrous Foundry process. Revocation of the AQMA has purposely been delayed on account of consideration of developments at the foundry and future production changes. As of September 2024 onwards, however, matters have taken an unexpected course that has seen the start of decommissioning of the plant with all production ceasing. In light of this, the council will now formally proceed with revoking the AQMA.

2. Good progress has been made in implementing actions to improve air quality in the borough. For example, between 2021 and 2022, 13 Major and Minor Traffic Schemes and Improvements have been delivered.

   Comment: As reported, traffic schemes and associated work is continuing.

3. The figures showing where the AQMAs are located could benefit from having a scale bar and north arrow, as well as being a smaller scale.

   Comment: This has been noted, and attended to as seen appropriate in this ASR.

4. The Council operates 6 automatic monitoring sites and has no diffusion tube sites. Only 1 of the sites represents relevant exposure and therefore a high reliance is placed on using the "Nitrogen dioxide fall off with distance" calculator to ascertain whether the annual mean air quality objective is met. Paragraph 7.83 of TG22, states that "wherever possible, local authorities should ensure that monitoring locations are representative of exposure". The Council are therefore encouraged to monitor at sites of relevant exposure, where possible.

Comment: The council disagrees with this comment. Pollutant fall-off for distance calculations in respect to NO_2 is only utilised for two monitoring sites, and based on this ASR the council is now considering revoking the NO_2 AQMA.

5. The Council do not currently undergo any non-automatic monitoring. Although it is not a requirement, the results from the automatic monitors can be better validated with supporting diffusion tube monitoring.

   Comment: The council disagrees with this comment. Having participated in the NETCEN Working Group on Harmonisation of Diffusion Tube Methods –Background And Objectives project as a UKAS accredited organisation for diffusion tube analysis, the council ultimately took a strategic decision to cease all diffusion tube indicative monitoring as this cannot validate continuous analysers, neither should it be used in the validation of air quality models. Diffusion tube monitoring was subsequently replaced by borough-wide predictive modelling of NO_2 concentrations, validated *inter alia* by continuous monitoring. This is a continuing process.

6. The links to Action Plans do not work. This should be checked in future ASRs.

   Comment: All links were functional at the time of ASR submission.

7. Walsall is encouraged to update their Action Plan every 5 years and for it to target specific hotspots, where reductions in pollutant concentrations are still required.

   Comment: No exceedances of the NAQO are again measured or predicted at relevant receptors. The council will therefore not update the Air Quality Action Plan, and will revert to preparation of an Air Quality Strategy.

Walsall Council has taken forward a number of direct measures during the current reporting year of 2023 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. 29 measures are included within Table 2.2, with the type of measure and the progress the council has made during the reporting year of 2023 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.2.

West Midlands Combined Authority (WMCA)

The West Midlands Combined Authority Air Quality Framework, established in 2022 and adopted in November 2023, sets out actions the WMCA in collaboration with regional partners could undertake to improve air quality across the region, building on the work local authorities have already delivered, and is continuing to deliver. This expands upon the

initiatives previously developed by the WMCA Sustainable Travel Team under the Transport for West Midlands (TfWM) arm of the WMCA and is designed to accelerate this work and complement Air Quality Action Plans across the West Midlands authorities.

An air quality Framework Delivery Group has been set up with representatives from key partners with the aim to align air quality work strategically across the region. When the Framework was adopted by the WMCA board, funding for prioritised options was also granted. These options are to be delivered through Task and Finish Groups.

The Framework has identified options that are priority air quality measures to be progressed/delivered between 2024 and 2026. A collaborative approach is required for success, therefore Walsall Council has been working with the Environment Team at the WMCA and the University of Birmingham's WM-Air Team who are supporting its delivery.

Defra Air Quality Project

The WMCA also received a £1 million Defra Air Quality Grant in March 2023 to help fund the delivery of priority air quality measures across the region. In Walsall this will allow funding for:

- 13 low-cost air quality sensors that will measure a range of common pollutants including NO_2 and $PM_{2.5}$. These will be part of a network of c.90 sensors across the West Midlands region. The data will be hosted on a dedicated web platform so that real-time air quality information is available to all.
- investigative air quality sampling to determine whether three brickworks located in the Aldridge area constitute a $PM_{2.5}$ hotspot as suggested by the council's air quality modelling data.

The project was launched in April 2023 and is set to run until March 2025 by which time all outputs must have been delivered.

Black Country Transport Ultra-Low Emission Vehicle Strategy

Walsall Council remains supportive of the Black Country Transport – Ultra Low Emission Vehicle Strategy that was agreed in May 2020. This is a strategic transport partnership between Dudley, Sandwell, Walsall and Wolverhampton Councils to accelerate the uptake of ULEVs across the area before the planned nationwide ban on the sale of petrol and diesel vehicles in 2035. It sets out targets that should be met to ensure that there is an EV charging infrastructure that encourages the switch to ULEV's and meets growing demand for EVs.

Key Completed Measures

- Black country – ULEV Strategy – provision of electric charging infrastructure across Walsall and other black country local authorities. On-street charge-points installed.
- Review of homeworking for Walsall Council – move to long-term home-working and hybrid working. New policy implemented 2023.
- A34 Sprint Bus Priority Corridor. Phase 1 implemented.
- Connecting Bentley Phase II. Completed.
- School Streets Traffic Management. Completed.
- National Cycling Network Path Improvements NCN 5. Completed.
- Levelling Up Fund Tranche 2, Movement Package. Scheme 1 & 2 completed.
- Planning Consultations – Policy Guidance & Development Control. Completed.
- M6 J.10 Transport and Infrastructure scheme. Completed.
- Upgrading of real-time air pollution monitoring network. Completed.
- Bloxwich Cycling and Walking Improvements scheme. Completed.
- Smoke Control Area fixed penalty provisions are now to be administered.

The council expects the following measures to be completed over the course of the next reporting year:

- Black country – ULEV Strategy – provision of electric charging infrastructure across Walsall and other black country local authorities. Remaining charge-points to be delivered in 2024/5.
- Active Travel Fund Tranche 3 and Tranche 4.
- On-street residential charge point scheme.
- Information on air pollution and its impact on health, including how to reduce exposure, will be included on the new 'Black Country 0-18 Healthier Together' website. This is aimed at parents, carers and health professionals, and has the built-in capability of being translated into many different languages.

The council's priorities for the coming year are:

- Revocation of the Chuckery (PM_{10}) AQMA.
- Revocation of whole-borough (NO_2) AQMA.
- Review of strategic air quality monitoring network needs and re-assignment of monitoring stations as appropriate.
- Continued development of borough-wide air quality models.
- Assessment of identified $PM_{2.5}$ hot-spots.

- Development of an Air Quality Strategy for Walsall.
- Integration of interim planning guidance on air quality with development control.
- Aid deployment of air quality monitors as part of WMCA Air Quality Framework.
- Targeted monitoring of air pollution potential hot-spots.

The council has worked to implement these measures in partnership with the following stakeholders during 2023:

- Black Country local authorities
- West Midlands local authorities
- AECOM
- Department for Environment Food and Rural Affairs (DEFRA)
- EarthSense
- NHS Black Country Integrated Care Board - Children and Young People with Asthma Transformation Team
- University of Birmingham
- West Midlands Combined Authority
- Transport for West Midlands
- Matts Monitors Ltd.

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

- Staff resources – including continuing long-term absenteeism.
- Recruitment – availability of suitable personnel.
- Council budgetary constraints – ability to re-align team structures.
- Service area structures and delineation of responsibilities
- Technical resources

Walsall Council anticipates that the measures stated above and in Table 2.2 will achieve compliance in Walsall AQMA 2006.

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	Defra AQ Grant Funding	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	**Black Country - ULEV Strategy - provision of electric charging infrastructure across Walsall and other black country local authorities**	Promoting Low Emission Transport	Other	2022	2032	Walsall MBC and Black Country Authorities	Walsall MBC and Black Country Authorities External grants	NO	Partially Funded	£1 million - £10 million	Implementation	By 2025 transport emissions reduction of 10% NO_x and 35% PM	Reduction in NO_x and PM	Strategy was adopted by cabinet in April 2022 x3 on-street charge-points installed September 2024 (Remaining tranche 1 on-street charge-points to be delivered in Q3 and Q4 2024/25)	N/A
2	**Review of homeworking for Walsall Council – move to long-term home-working and hybrid working**	Promoting Travel Alternatives	Encourage / Facilitate home-working	2020	2023	Walsall MBC	Walsall MBC and Black Country Authorities	NO	Funded	£50k - £100k	Completed	Reduction in pollution from staff commuting and official work journeys around the district.	Reduction in car Mileage payments. Reduction in car parking uptake.	New policy implemented 2023.	Limited requirements for attendance at council workplaces
3	**Promotion of Cycling**	Promoting Travel Alternatives	Promotion of cycling	2022	2030	Walsall MBC	Walsall MBC and Transport for West Midlands	NO	Funded	£50k - £100k	Implementation	Reduced vehicle usage and vehicle emissions	Local target to be aligned to WM LTP5 cycling target	Implementation on-going.	First phase successful.
4	**A34 Sprint Bus Priority Corridor**	Promoting Travel Alternatives	Other	2022	2025	West Midlands Combined Authority, Dept. for Transport & other 3rd parties	West Midlands Combined Authority, Dept. for Transport & other 3rd parties	YES	Funded	> £10 million	Implementation	SPRINT vehicles to be zero emission at point of use	Bus patronage increase (Phase 2) Bus journey time reduction (Phase 2)	Phase 1 implemented 2022 Hydrogen fuelled buses in service on #51 service Phase 2 at detail design stage	First phase completed. Second phase start date delayed because of TfWM capital cost pressures and possible transition to franchised bus network.
5	**Connecting Bentley Phase II**	Promoting Travel Alternatives	Promotion of cycling	2022	2022	Walsall MBC	Active Travel Fund, Tranche 2	NO	Funded	£100k - £500k	Completed	Moving towards Active travel	Number of cycle trips	Completed	N/A

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
6	**School Streets**	Traffic Management	Other	2020	2021	Walsall MBC	Active Travel Fund, Tranche 1 and Tranche 2	NO	Funded	£50k - £100k	Completed	Yes. Reduced vehicle usage.	Reduced congestion and emissions outside schools	Completed	Funding & Staffing Resources
7	**National Cycling Network Path Improvements NCN5**	Promoting Travel Alternatives	Promotion of cycling	2022	2022	Walsall MBC	Veolia Environmental Trust, and the Green Recovery Challenge Fund	NO	Funded	£100k - £500k	Completed	Yes. Reduced vehicle usage.	Number of cycle trips	Completed	N/A
8	**Active Travel Fund, Tranche 3**	Promoting Travel Alternatives	Promotion of cycling		2025	Walsall MBC & Wolverhampton City Council	Active Travel Fund, Tranche 3	NO	Funded	£1 million - £10 million	Planning	Yes. Reduced vehicle usage.	Cycle counts Shared use and dedicated cycle lane infrastructure improved/new	Due for implementation in 2024/25 (led by Wolverhampton City Council)	N/A
9	**Active Travel Fund, Tranche 4**	Promoting Travel Alternatives	Promotion of cycling		2025	Walsall MBC	Active Travel Fund, Tranche 4	NO	Funded	£1 million - £10 million	Planning	Yes. Reduced vehicle usage.	Cycle counts Shared use and dedicated cycle lane infrastructure improved/new	Due for implementation in 2024/25 subject to consultation outcome September 2024.	N/A
10	**Levelling Up Fund Tranche 2, Movement Package**	Transport Planning and Infrastructure	Promotion of cycling	2023	2026	Walsall MBC	Levelling Up Fund Tranche 2	NO	Funded	£1 million - £10 million	Implementation	Yes. Reduced vehicle usage.	Cycle counts Shared use and dedicated cycle lane infrastructure improved/new	Scheme 1 - Greenway Route completed, Scheme 2 - Railway lane completed, Scheme 3 in development	N/A
11	**On-street Residential Charge-point Scheme**	Promoting Low Emission Transport	Other		2025	Black Country Transport, Walsall MBC	Office of Zero Emission Vehicles	NO	Funded	£100k - £500k	Implementation	Yes. Promotion of low emission technology.	35 charge-points (providing 70 sockets) by Q1 2024/25	Delayed - due for completion Spring 2025	N/A
12	**Pelsall EV Charging Hub**	Promoting Low Emission Transport	Other		2025	Black Country Transport, Walsall MBC	Office of Zero Emission Vehicles	NO	Funded	£100k - £500k	Planning	Yes. Promotion of low emission technology.	Delivery of charge points	Due for completion Spring 2025	N/A

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
13	**Active Sustainable Travel and Road Safety (A*STARS) programme**	Promoting Travel Alternatives	Promotion of walking	2015	2030	Walsall MBC	Walsall MBC	NO	Funded	£50k - £100k	Implementation	Yes. Promotion of active travel.	Proportion of pupils accessing school via active modes	On-going	Funding & Staffing Resources
14	**Walking and Wheeling (A*STARS)**	Promoting Travel Alternatives	Promotion of walking	2016	2030	Walsall MBC	Walsall MBC	NO	Funded	£10k - 50k	Implementation	Yes. Promotion of active travel.	Annual Travel Survey (A Stars)	On-going	Funding & Staffing Resources
15	**Scooterbility (A*STARS)**	Promoting Travel Alternatives	Other	2016	2030	Walsall MBC	Walsall MBC	NO	Funded	< £10k	Implementation	Yes. Promotion of active travel.	Annual Travel Survey (A Stars)	On-going	Funding & Staffing Resources
16	**Traffic Enforcement**	Traffic Management	UTC, Congestion management, traffic reduction	2022	2030	Walsall MBC	Walsall MBC	NO	Funded	£100k - £500k	Implementation	Yes. Reduced traffic congestion	None	On-going	Funding & Staffing Resources
17	**Bus lane Enforcement**	Traffic Management	UTC, Congestion management, traffic reduction	2018	2030	Walsall MBC	Walsall MBC	NO	Funded	£100k - £500k	Implementation	Yes. Reduced traffic congestion	None	On-going	Funding & Staffing Resources
18	**New Willenhall Railway Station**	Alternatives to private vehicle use	Rail based Park & Ride	2023	2026	Transport for West Midlands; West Midlands Trains; Network Rail; Walsall MBC; Kier Group Ltd.;SLC-AECOM Joint Venture+G30	DfT WMCA	NO	Funded	> £10 million	Implementation	Alternative travel mode.	Modal shift car to rail	Due to open 2026	
19	**New Darlaston Railway Station**	Alternatives to private vehicle use	Rail based Park & Ride	2023	2026	Transport for West Midlands; West Midlands Trains; Network Rail; Walsall MBC; Kier Group Ltd.;SLC-AECOM Joint Venture+G30	DfT WMCA	NO	Funded	> £10 million	Implementation	Alternative travel mode.	Modal shift car to rail	Due to open 2026	

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
20	**Planning Consultations**	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2014	2016	Birmingham City Council; Coventry City Council; Dudley MBC; Sandwell MBC; Solihull MBC; Walsall MBC; Wolverhampton City Council	Birmingham City Council; Coventry City Council; Dudley MBC; Sandwell MBC; Solihull MBC; Walsall MBC; Wolverhampton City Council	YES	Funded	£100k - £500k	Completed	Policy Guidance Documents to improve vehicle emissions	Production of Planning Policy, Procurement Policy and Strategy	Completed	
21	**5 Minute Walk Zone PART OF MEASURE 16**	Promoting Travel Alternatives	Promotion of walking	2016	2030	Walsall MBC	Walsall MBC	NO	Funded	£10k - 50k	Implementation	Yes. Promotion of active travel.	Annual Travel Survey (A Stars)	On-going	Funding & Staffing Resources
22	**Walking Bus PART OF MEASURE 16**	Promoting Travel Alternatives	Promotion of walking	2016	2030	Walsall MBC	Walsall MBC	NO	Funded	£10k - 50k	Implementation	Yes. Promotion of active travel.	Annual Travel Survey (A Stars)	On-going	Funding & Staffing Resources
23	**Pedestrian Training PART OF MEASURE 16**	Promoting Travel Alternatives	Promotion of walking	2016	2030	Walsall MBC	Walsall MBC	NO	Funded	£10k - 50k	Implementation	Yes. Promotion of active travel.	Annual Travel Survey (A Stars)	On-going	Funding & Staffing Resources
24	**Transition Training PART OF MEASURE 16**	Public Information	Other	2016	2030	Walsall MBC	Walsall MBC	NO	Funded	£10k - 50k	Implementation	Yes. Promotion of active travel.	Annual Travel Survey (A Stars)	On-going	Funding & Staffing Resources
25	**Web**	Public Information	Via the Internet	2012	2040	Walsall MBC	Walsall MBC	NO	Funded	£100k - £500k	Implementation	Yes. Policy advise and information.	Web access	On-going	Funding & Staffing Resources
26	**M6 J.10**	Transport Planning and Infrastructure	Other	2020	2024	Walsall MBC / Highways England	Walsall MBC / Highways England	NO	Funded	> £10 million	Implementation	Possible	Cost neutral or improvement of NAQO	Scheme completed	N/A
27	**Upgrade real-time air pollution monitoring network**	Other	Other	2020	2022	Walsall MBC	Walsall MBC	NO	Funded	£100k - £500k	Completed	NO	90% data capture	Completed	On-going staff resources and funding for service and maintenance
28	**West Midlands Combined Authority Air Quality Framework and Implementation Plan**	Other	Other	2023	2030	West Midlands Combined Authority and West Midlands Local Authorities	West Midlands Combined Authority	YES	Funded	£500k - £1 million	Planning	NO	Wide-ranging interventions and monitoring to achieve annual reductions in air pollutants	Action Plan for delivery approved. Moving to implementation	Staff resources
29	**Bloxwich Cycling and Walking Improvements**	Promoting Travel Alternatives	Promotion of walking	2023	2024	Walsall MBC	Bloxwich Town Deal Funding	NO	Funded	£100k - £500k	Implementation	Yes. Reduced vehicle usage.	None	Scheme completed	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 Public Health Outcomes Framework sets out a vision for public health, that is to improve and protect the nation's health, and improve the health of the poorest fastest. The framework focuses on the two high level outcomes hoped to be achieved across the public health system and beyond:

1. Increased healthy life expectancy;
2. Reduced differences in life expectancy and healthy life expectancy between communities

This importance of $PM_{2.5}$ is reflected by its inclusion as a key indicator of mortality in the Public Health Outcomes Framework and is defined in Indicator D01 as the 'fraction of mortality attributable to particulate air pollution'. This is the mortality burden associated with long term exposure to particulate air pollution at current levels and is expressed as the percentage of annual deaths from all causes in those aged 30 and older.

In Walsall, the latest data demonstrated that the fraction of mortality attributable to particulate air pollution was 6.3% in 2022, compared with a mean of 5.8% for England.

Comparing Walsall with the West Midlands constituent local authorities, Walsall is the third highest borough in terms of concentrations of $PM_{2.5}$ associated with excess mortality in the Public Health Outcomes Framework (Indicator D01).

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

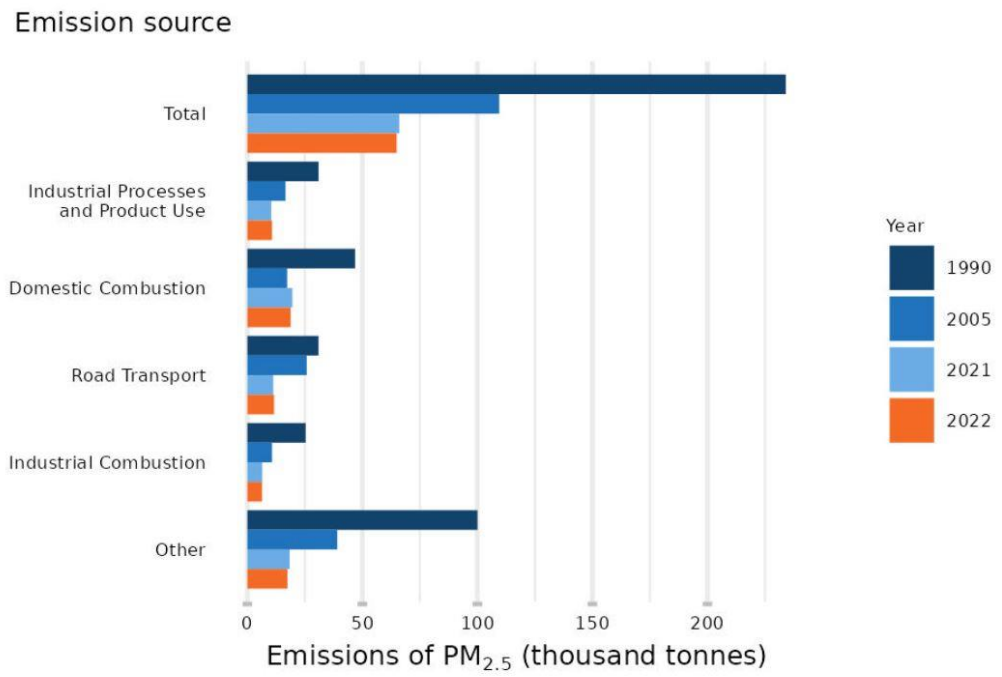
Table 2.3 – Public Health England Indicator D01 Reporting on $PM_{2.5}$ Across the West Midlands

D01 - Fraction of mortality attributable to particulate air pollution (new method) **New data** 2022 — Proportion - %

Area	Recent Trend	Count	Value	95% Lower CI	95% Upper CI
England	–	-	5.8	-	-
West Midlands region (statistical)	–	-	5.7	-	-
Sandwell	–	-	6.7	-	-
Birmingham	–	-	6.4	-	-
Walsall	–	-	6.3	-	-
Coventry	–	-	6.0	-	-
Solihull	–	-	6.0	-	-
Wolverhampton	–	-	5.8	-	-
Dudley	–	-	5.8	-	-

Understanding the main sources of anthropogenic $PM_{2.5}$ is important when it comes to determining strategies to reduce it. The latest Defra statistics on source apportionment of $PM_{2.5}$ is shown in Figure 2.1 with domestic combustion accounting for 29% of the total anthropogenic $PM_{2.5}$ being created in the UK in 2022.

Figure 2.1- UK 2022 Annual Emissions of $PM_{2.5}$ by Major Emission Sources



Industrial combustion is a major source of particulate matter (PM) emissions. Emissions from this source contributed 10 per cent of $PM_{2.5}$ emissions and 5 per cent of PM_{10} emissions in 2022. PM emissions from industrial combustion have reduced in the long term as the use of coal as a fuel has fallen. Emissions from this source however have been relatively stable

since 2008, with only a small drop overall, as reductions in emissions from the industrial combustion of fossil fuels have been largely offset by an increase in the industrial combustion of biomass-based fuels. Industrial combustion of biomass-based fuels contributed less than 1 per cent of total $PM_{2.5}$ emissions in the years prior to 2009 but has since risen to represent 6 per cent of total $PM_{2.5}$ emissions in 2022.

Emissions from industrial processes and product use, which contributed 16 per cent of total $PM_{2.5}$ emissions and contributed 38 per cent of total PM_{10} emissions in 2022, have also remained stable in recent years. However, emissions from this source have decreased in the longer term as the manufacturing output of chemical and steel industries have reduced in the UK, alongside improvements to emission controls for these processes. In 2022 construction and demolition was the most emitting sector within this source, followed by iron and steel production and the production of other mineral products (particularly the manufacture of 'non-fletton' bricks, i.e. bricks made from clay).

Domestic combustion covers households burning a variety of fuels including wood, coal, solid smokeless fuels, and fuels derived from waste such as coffee logs. This was a major source of PM emissions in 2022, as it contributed 29 per cent of total $PM_{2.5}$ emissions and 15 per cent of total PM_{10} emissions. Most emissions from this source come from households burning wood in stoves and open fires. The use of wood as a fuel contributed 75 per cent of both total $PM_{2.5}$ and PM_{10} emissions from domestic combustion in 2022. Domestic combustion of wood contributed 22 per cent of overall $PM_{2.5}$ emissions and contributed 11 per cent of overall PM_{10} emissions in 2022. Emissions of $PM_{2.5}$ and PM_{10} from domestic wood burning increased by 56 per cent between 2012 and 2022. In the 1970s, 1980s and 1990s, coal combustion was the primary source of PM emissions from households; yet the use of coal as a fuel has fallen over time (in 2022 the combustion of coal contributed 12 per cent of $PM_{2.5}$ emissions from domestic combustion).

Road transport continues to be a major source of PM emissions, as it contributed 18 per cent of total $PM_{2.5}$ emissions and 16 per cent of total PM_{10} emissions in 2022. Road transport emissions are made up of both exhaust emissions and non-exhaust emissions (brake, tyre and road wear). Exhaust emissions have decreased markedly from 1996 to 2022 due to stricter emissions standards (decreased by 93 per cent for both $PM_{2.5}$ and PM_{10}). Non-exhaust emissions however (brake, tyre and road wear) have increased by 15 per cent for $PM_{2.5}$ and increased by 14 per cent for PM_{10} between 1996 and 2022, as the overall number of kilometres travelled by vehicles each year in the UK has increased over this period. This means that most PM emissions from road transport derive from non-exhaust emissions,

which alone contributed 15 per cent of total $PM_{2.5}$ emissions and 14 per cent of total PM_{10} emissions in 2022.

Given that there is no safe level of exposure to $PM_{2.5}$ Walsall MBC has a public health duty to ensure that measures are taken that not only ensure that annual levels do not rise above 10 μgm^{-3} but that we also aim to reduce them so that they are closer to the WHO guideline of 5 μgm^{-3}.

During Autumn/Winter 2015 a joint $PM_{2.5}$ project commenced with support from Public Health Walsall. Using Public Health Transformation funding, the council initially deployed four $PM_{2.5}$ monitors (Partisol type 2025 gravimetric units, EU reference method) at the then existing air quality monitoring stations (*viz.* M6 Motorway Junction 9; Wolverhampton Road (A454), Walsall; Bloxwich Lane, Bentley; and Primley Avenue, Alumwell). A fifth urban background monitoring station was deployed in January 2016 at Rough Hay Primary School, Rough Hay Road, Darlaston to provide $PM_{2.5}$ (and O_3 and NO_x) data.

In 2018 all council air quality monitoring ceased at Primley Avenue, and $PM_{2.5}$ monitoring commenced at the Black Country Route (A454) site.

The $PM_{2.5}$ project has provided data that is used to verify and refine Walsall's ADMS (Urban) $PM_{2.5}$ air quality model, and in-turn assist public health impact analysis that can include statistics related to respiratory illness, hospital admissions, cardio-vascular disease/illness, prevalence of asthma etc. It is envisaged that this will continue to provide a focus on needs for intervention in context of the Public Health Outcomes Framework.

In summary the key outcomes set out for this initiative are therefore:

- To inform reviews and updates of the council's position on $PM_{2.5}$ air quality limits.
- Assisting in air quality reporting to Defra
- Informing health impact studies, which can also form part of regional (West Midlands-wide) work on $PM_{2.5}$
- Provision of air quality data for correlation with Walsall Health statistics
- Extend in-house abilities and scope to robustly appraise local and strategic developments, including infrastructure schemes
- Future-proofing of air quality assessments and monitoring for Walsall
- Aid provision of baseline positions and validation for strategic air quality modelling and health impact studies.

- To inform the suitability (or otherwise) of proposed planning developments subject to the Town and Country Planning regime, and the need for mitigation measures, where acceptable

Monitoring data acquired is presented in Section 3 below.

Since the $PM_{2.5}$ project commenced, the council has systematically upgraded its gravimetric monitors (2020 onwards) with FIDAS optical fine dust measurement systems to provide for 'real-time' simultaneous monitoring, with multi-size particle fraction capability. Replacement monitoring systems took place as follows:

Rough Hay, WS10 8NQ	April 2020 on
Bescot Drive, WS2 9DF	January 2021 on
Bloxwich Lane, WS2 7JT	April 2020 on
Wolverhampton Road, WS2 8RL	March 2021 on
A454 Black Country Route (now Arnwood Close)WS2 0DZ	December 2021 on

[A new continuous monitoring station will be commissioned in 2025 to examine a potential $PM_{2.5}$ 'hot-spot' in the Aldridge area as part of an joint initiative with the West Midlands Combined Authority.]

Walsall Council pursues the following activities to assess and reduce $PM_{2.5}$:

- Prioritising active and sustainable travel, by highlighting alternatives to car use to reduce personal $PM_{2.5}$ emissions.
- Measures to reduce traffic congestion are continually being reviewed and updated to minimise traffic idling.
- Walsall's Highways Team consistently reviews traffic flows and ways to keep vehicles moving. Examples include optimising traffic and pedestrian signals, enforcing speed restrictions, and maintaining strict parking regulations.
- Air quality is incorporated into planning considerations for new developments and refurbishments having regard to government planning guidance, internal guidance, and regional policies.
- The Environmental Protection team undertakes routine inspections of installations subject to A2 and Part B requirements in accordance with the Pollution Prevention and Control Act 1999 and having regard to installation-specific risk assessments.

- The council's borough-wide air quality model is subject to on-going review and refinement in regard to providing spatial details of pollutant concentrations.

Air quality monitoring for 2023 has not demonstrated a breach of the annual mean concentration target for $PM_{2.5}$ of 10 µg/m^3 to be met by the end of 31st December 2040 or the interim target of 12 µg/m^3 applicable after the end of January 2028.

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

This section sets out the monitoring undertaken within 2023 by Walsall Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2019 and 2023 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Walsall Council undertook automatic (continuous) monitoring at 6 sites during 2023. Table A.1 in Appendix A shows the details of the automatic monitoring sites. This included the installation of an indicative monitoring site for NO_2, PM_{10} and $PM_{2.5}$ at Leighswood School, Aldridge during May 2023.

National monitoring results are available at https://uk-air.defra.gov.uk/

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

Walsall Council undertook no non- automatic (i.e. passive) monitoring of NO_2 during 2023

Individual Pollutants

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

3.1.3 Nitrogen Dioxide (NO_2)

No exceedances of the NO_2 National Air Quality Objective have been determined at relevant receptors.

Figure 3.1 Annual Mean Nitrogen Dioxide Concentrations – J.9 M6 Motorway

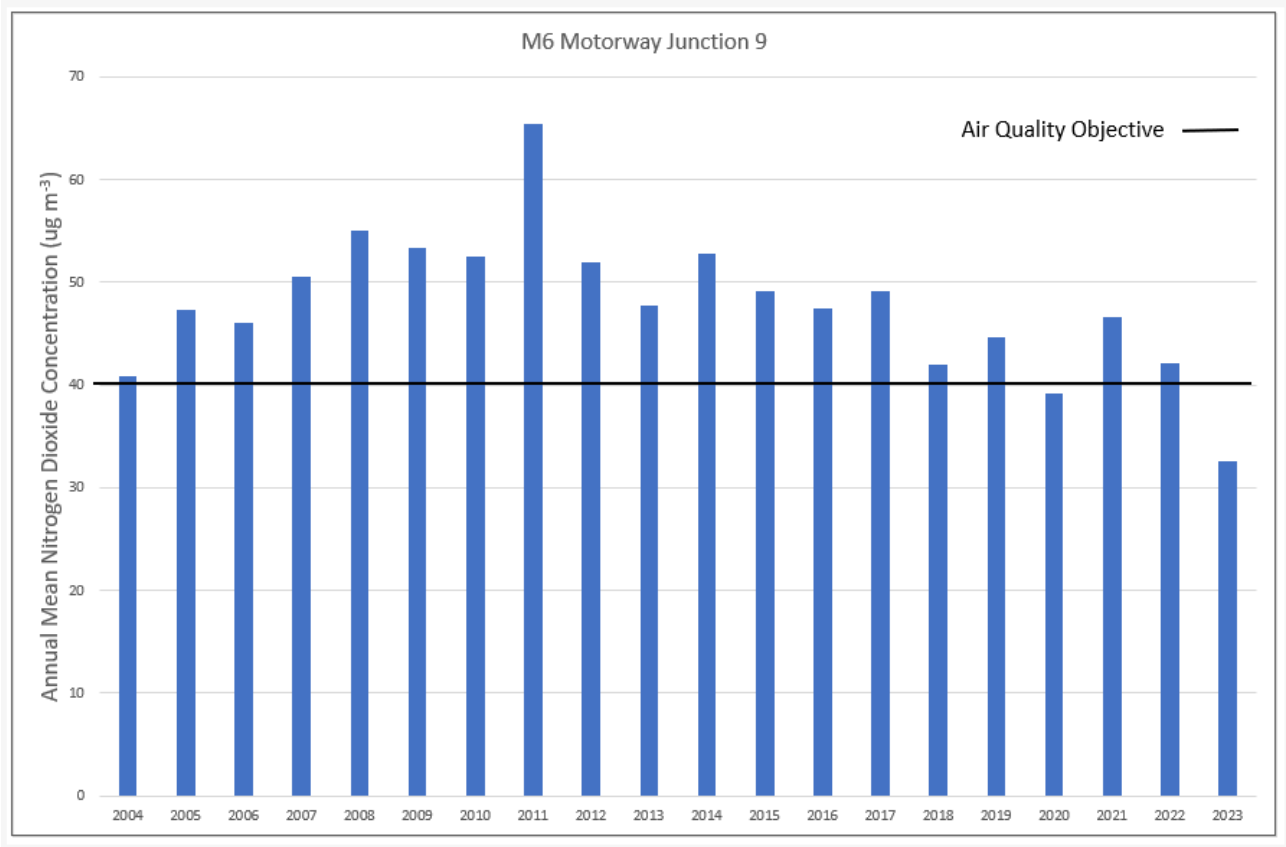


Figure 3.2 Annual mean Nitrogen Dioxide Concentrations – Wolverhampton Road

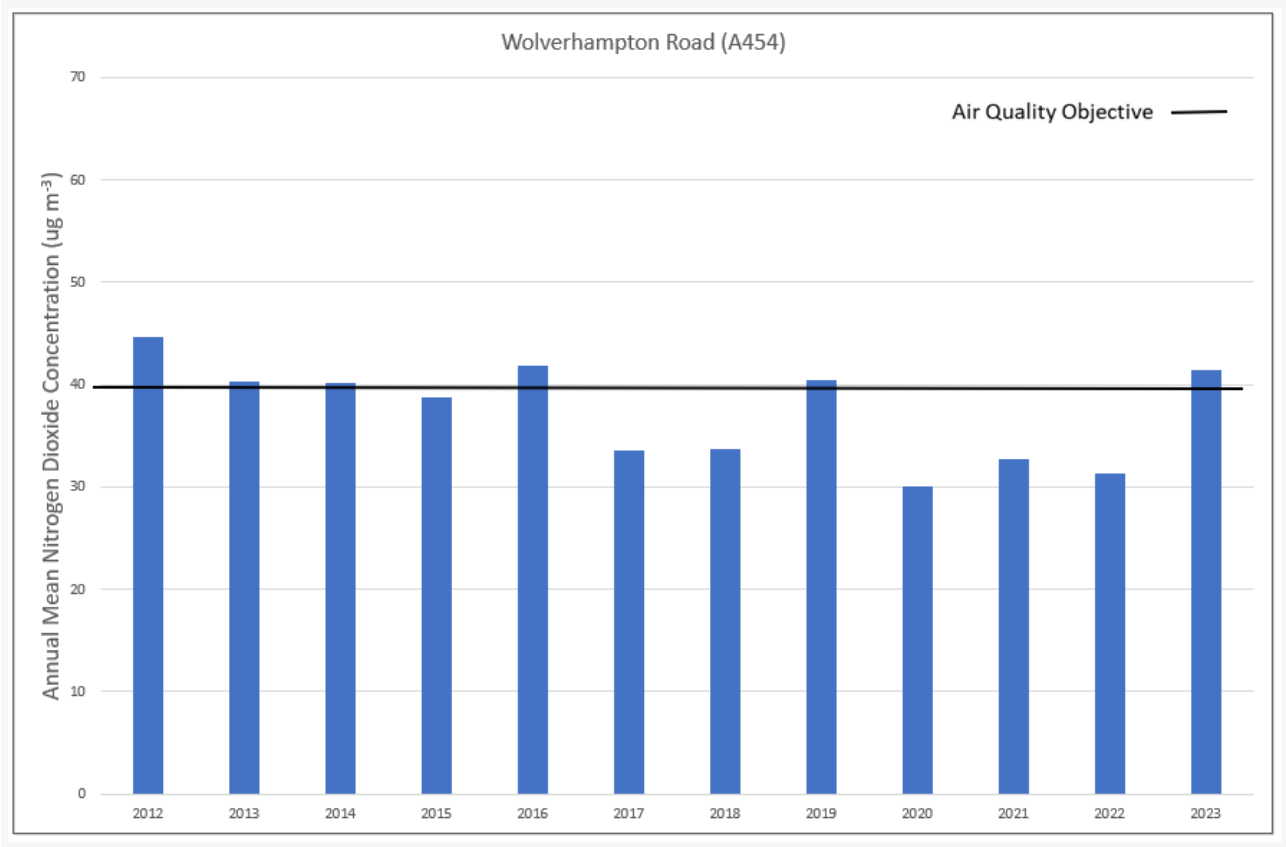


Figure 3.3 Annual mean Nitrogen Dioxide Concentrations – Bloxwich Lane

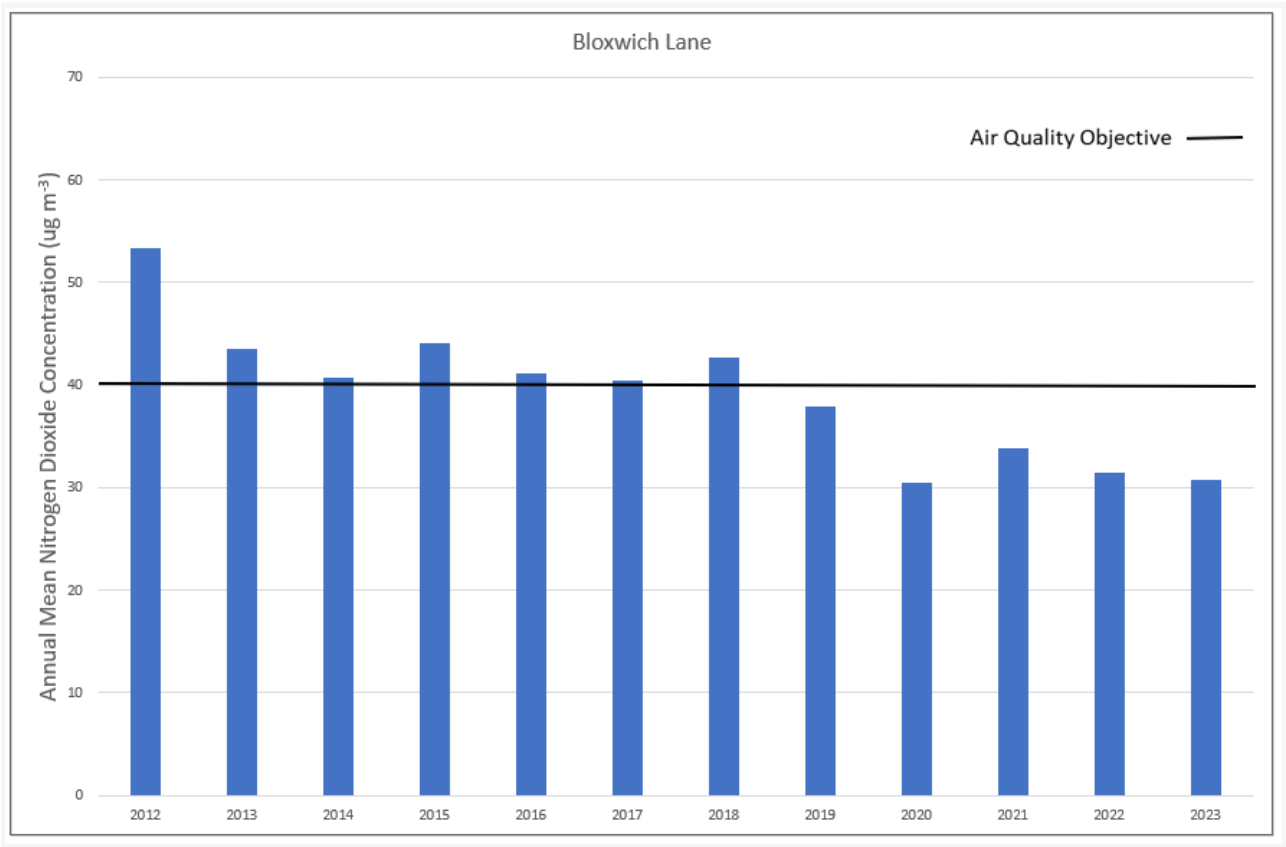


Figure 3.4 Annual mean Nitrogen Dioxide Concentrations – Woodlands School

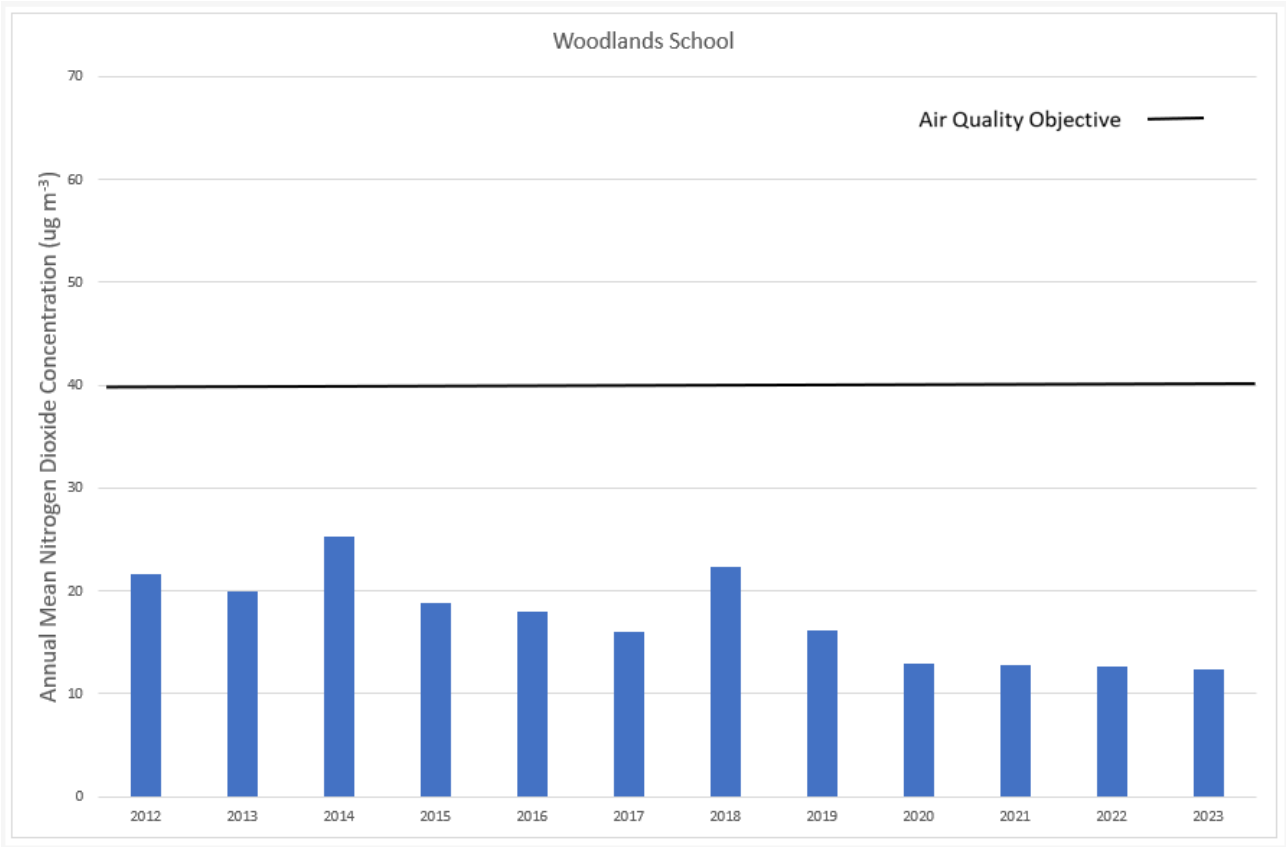


Figure 3.5 Annual mean Nitrogen Dioxide Concentrations – Arnwood Close

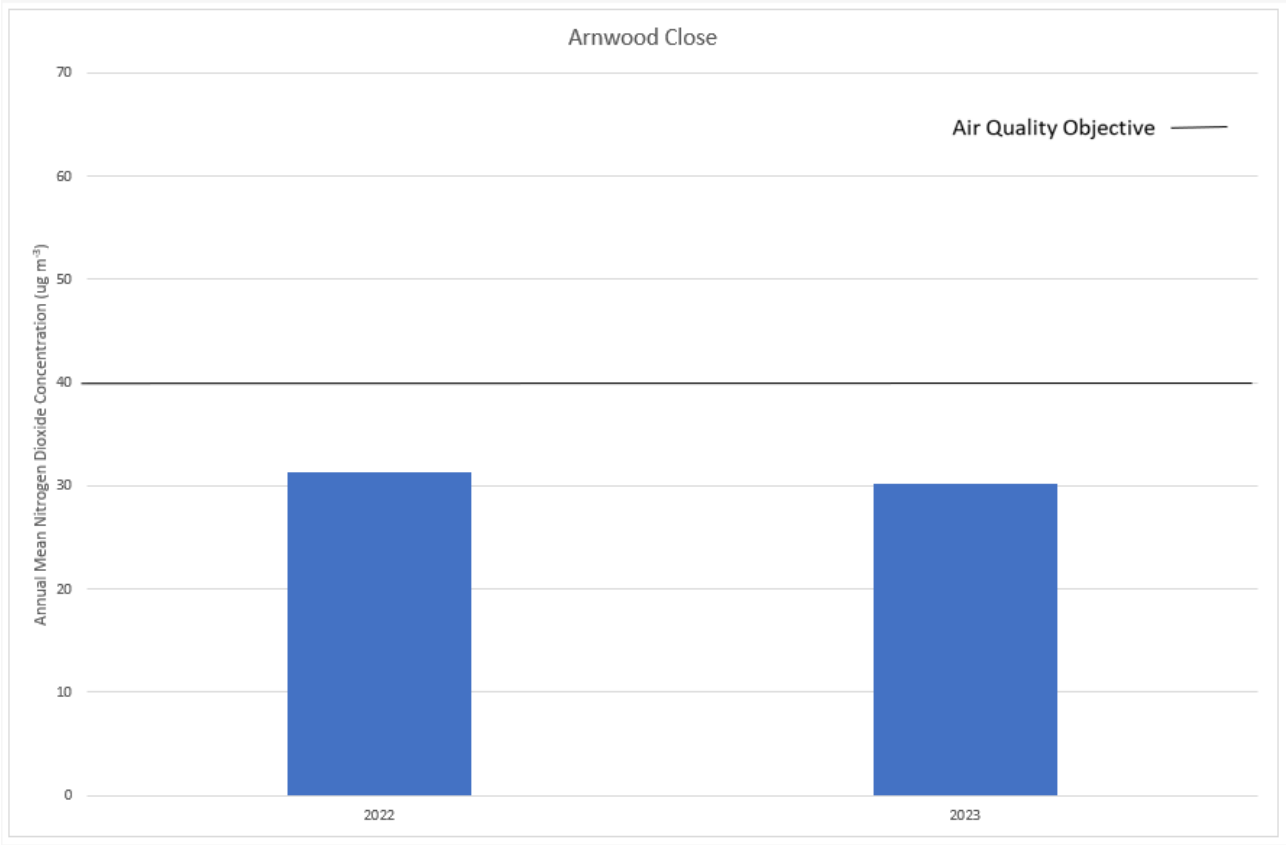


Figure 3.6 Annual mean Nitrogen Dioxide Concentrations – Rough Hay School

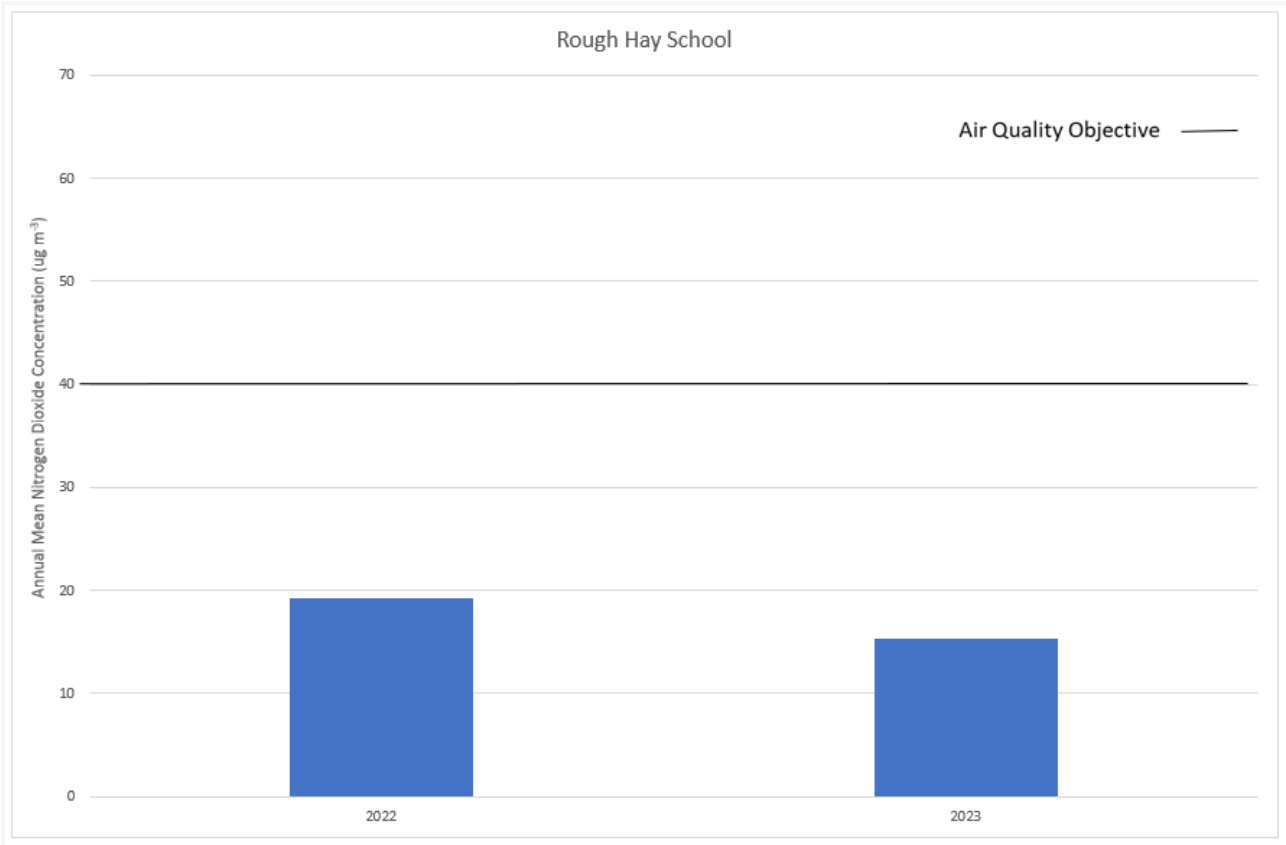


Table A.3 in Appendix A compares the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40µg/m^3. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application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

Table A.4 in Appendix A compares the ratified continuous monitored NO_2 hourly mean concentrations for the past five years with the air quality objective of 200 µg/m^3, not to be exceeded more than 18 times per year.

3.1.4 Particulate Matter (PM_{10})

There are no measured exceedances of the PM_{10} national air quality objective.

Table A.5 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.6 in Appendix A compares the ratified continuous monitored PM_{10} daily mean concentrations for the past five years with the air quality objective of 50µg/m^3, not to be exceeded more than 35 times per year.

Figure 3.7 Annual Mean PM_{10} Concentrations – All Sites Comparison

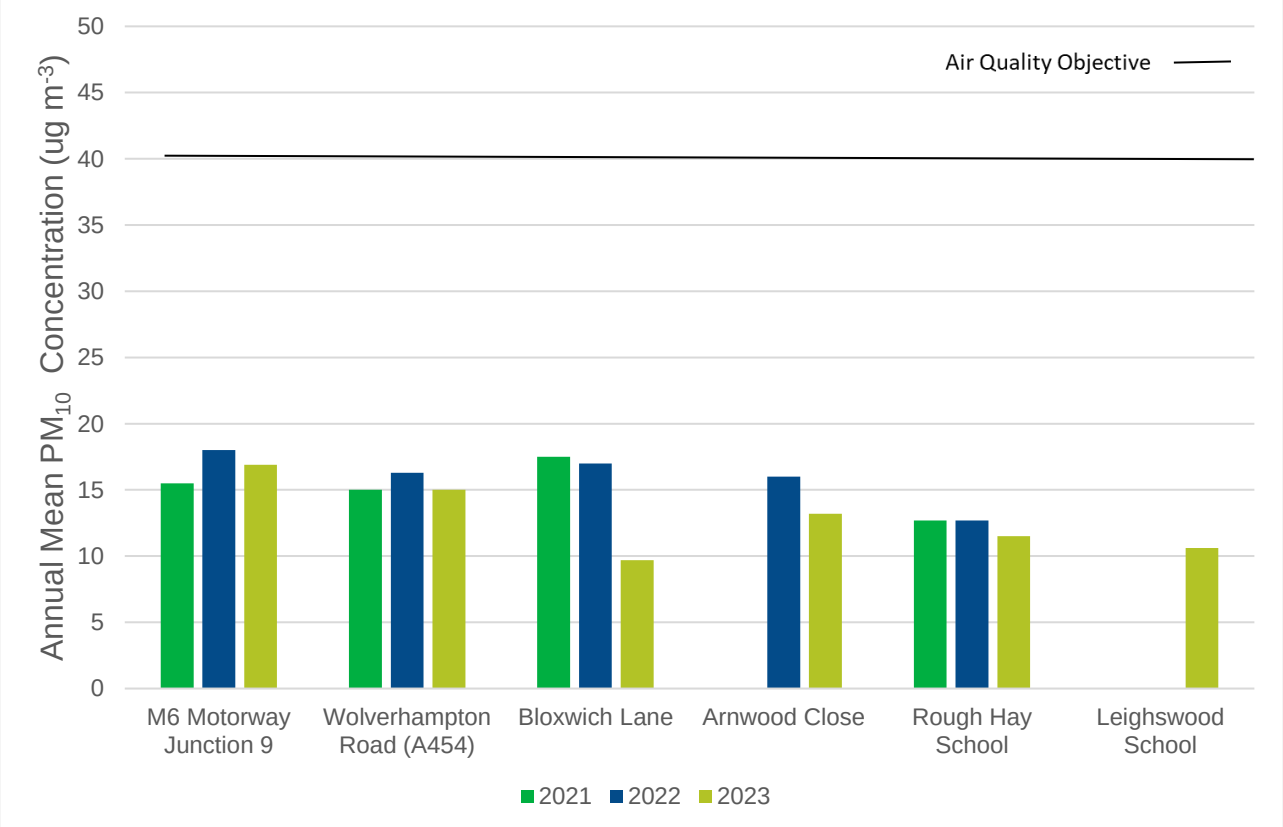
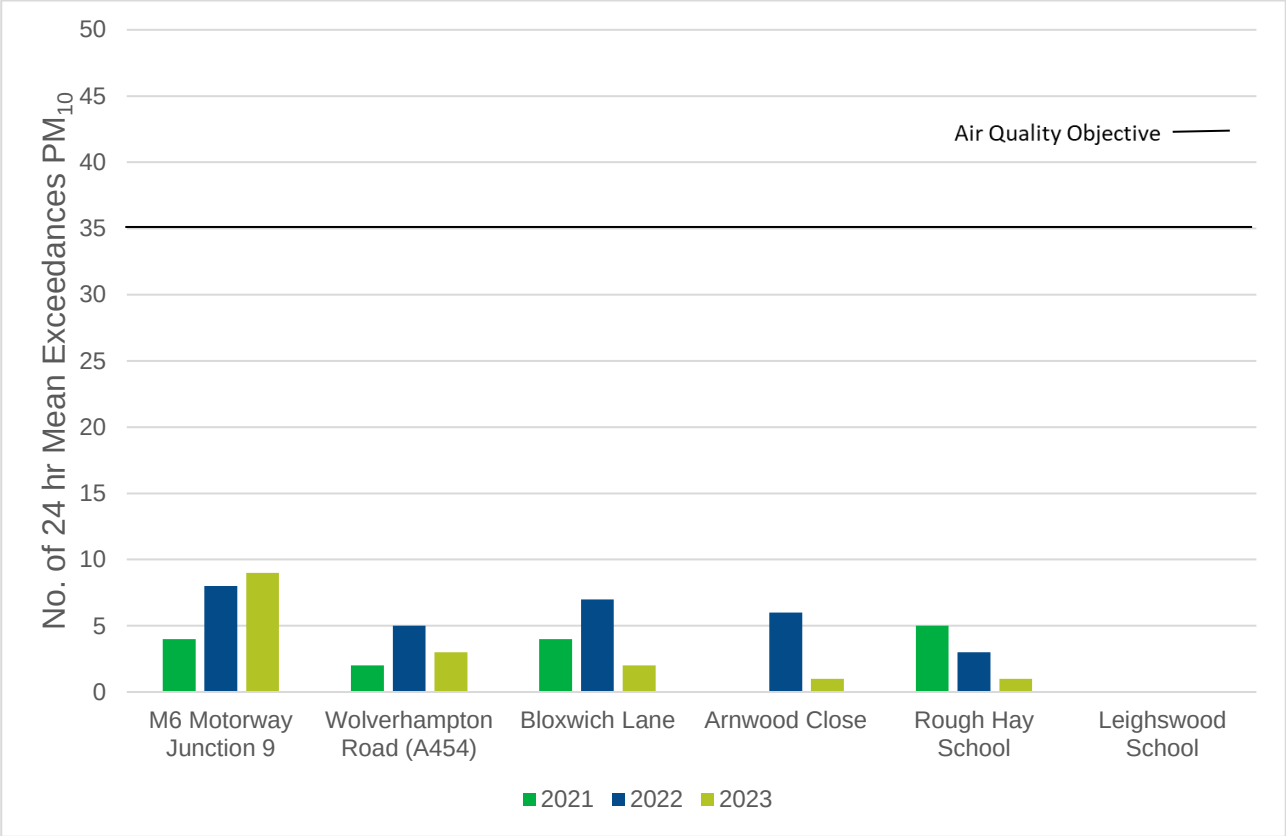


Figure 3.8 Number of 24-hour Mean PM_{10} Exceedances – All Sites Comparison



3.1.5 Particulate Matter ($PM_{2.5}$)

Figure 3.9 Annual Mean $PM_{2.5}$ Concentrations – J.9 M6 Motorway

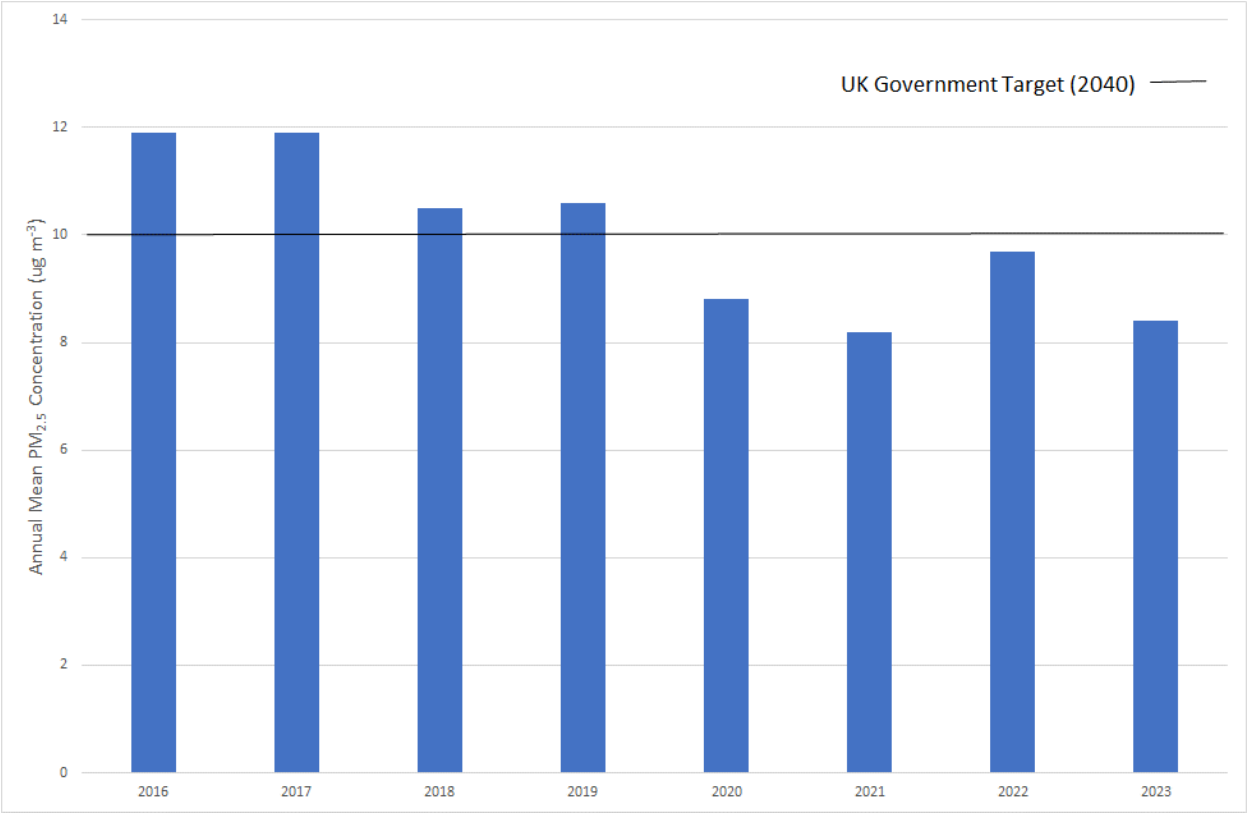


Figure 3.10 Annual Mean $PM_{2.5}$ Concentrations – Wolverhampton Road

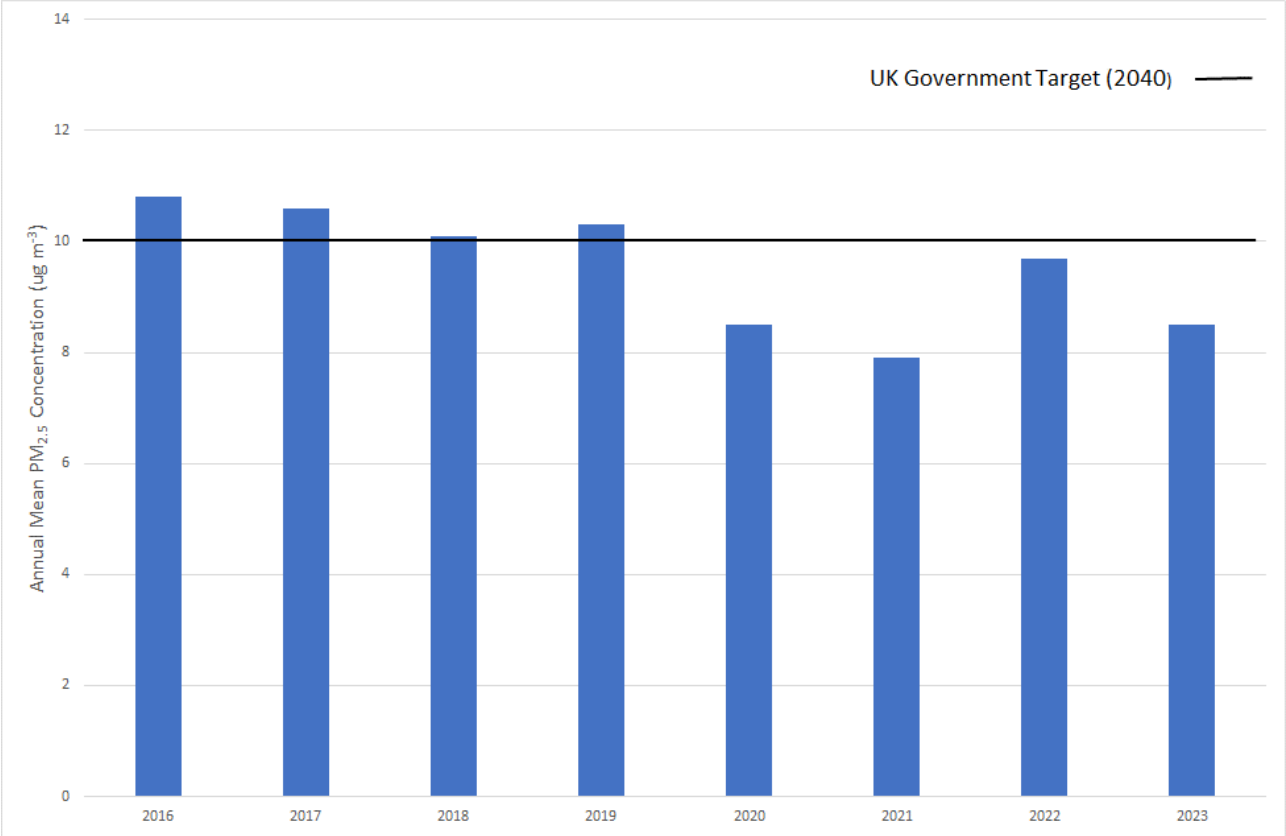


Figure 3.11 Annual Mean $PM_{2.5}$ Concentrations – Bloxwich Lane

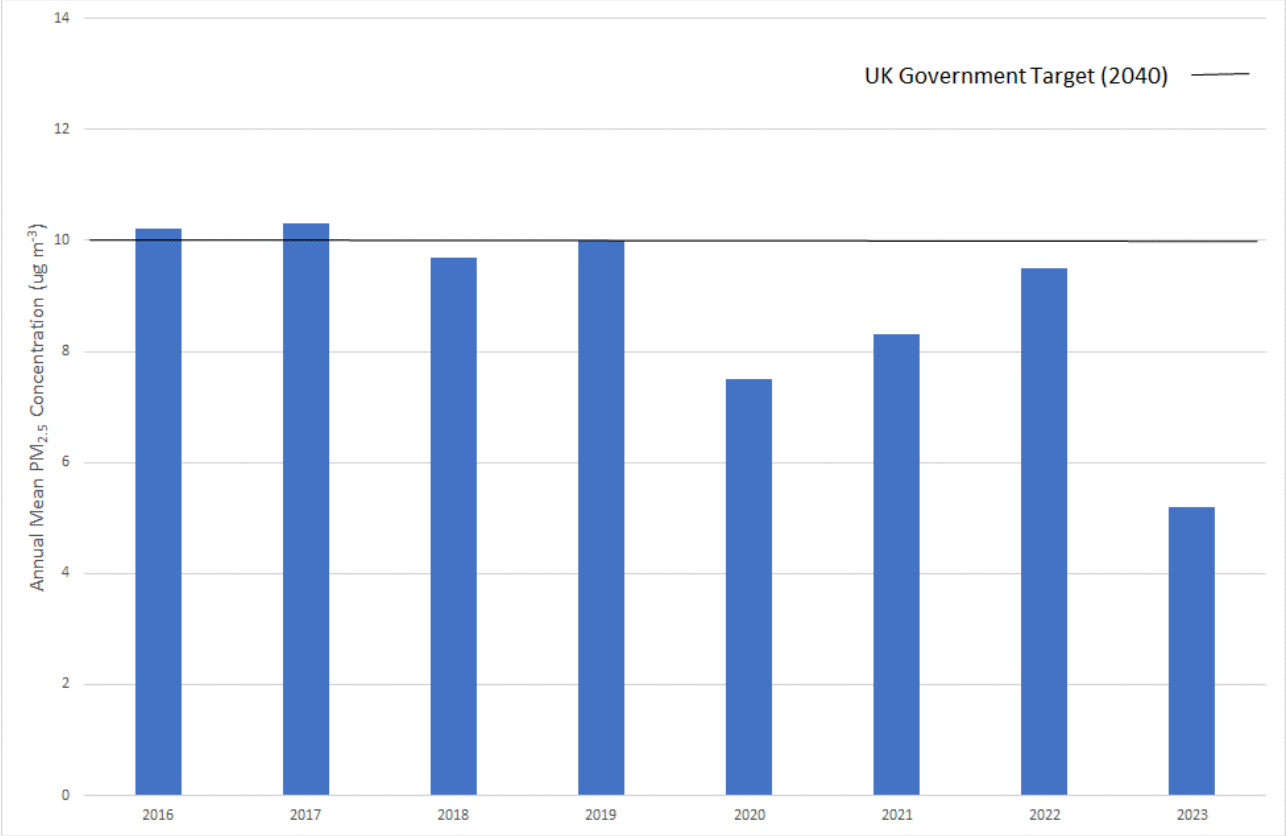


Figure 3.12 Annual Mean $PM_{2.5}$ Concentrations – Black Country Route (Arnwood Close)

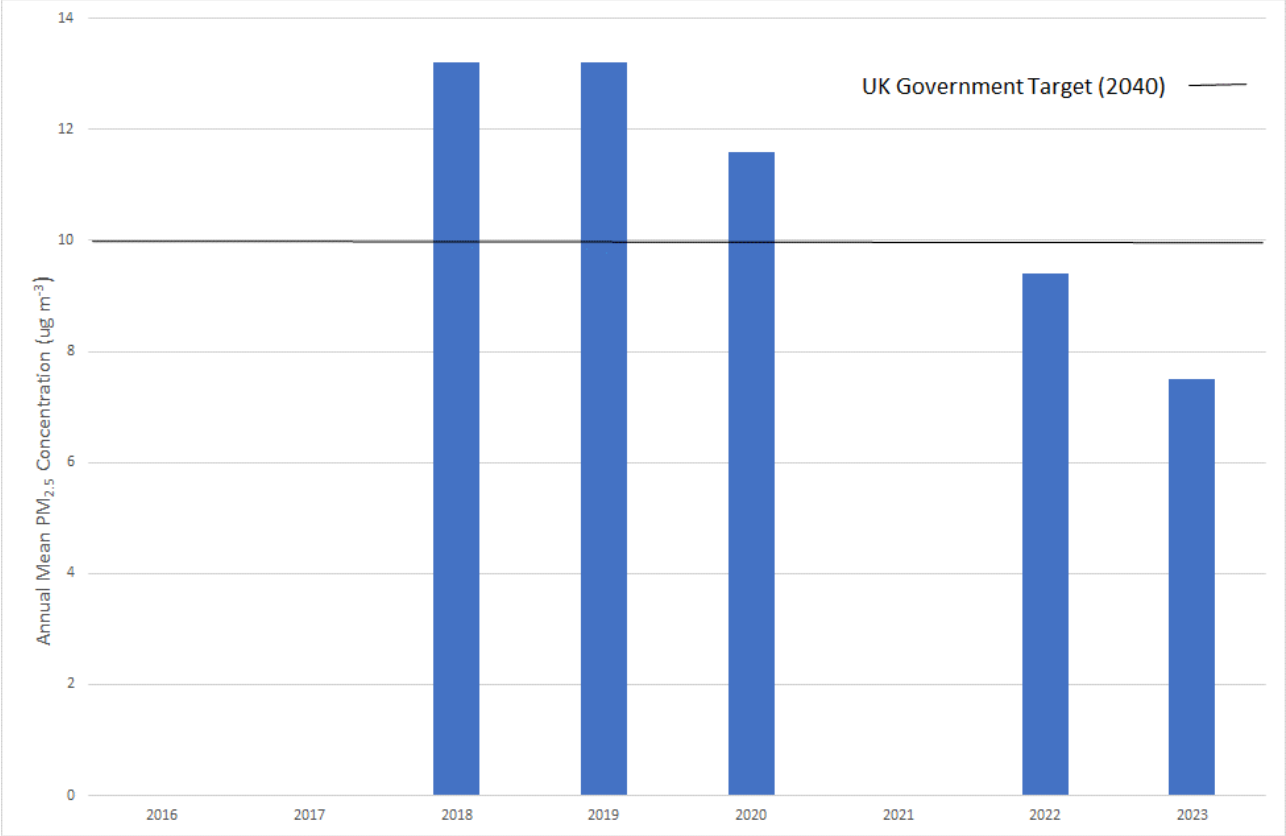


Figure 3.13 Annual Mean $PM_{2.5}$ Concentrations – Rough Hay School

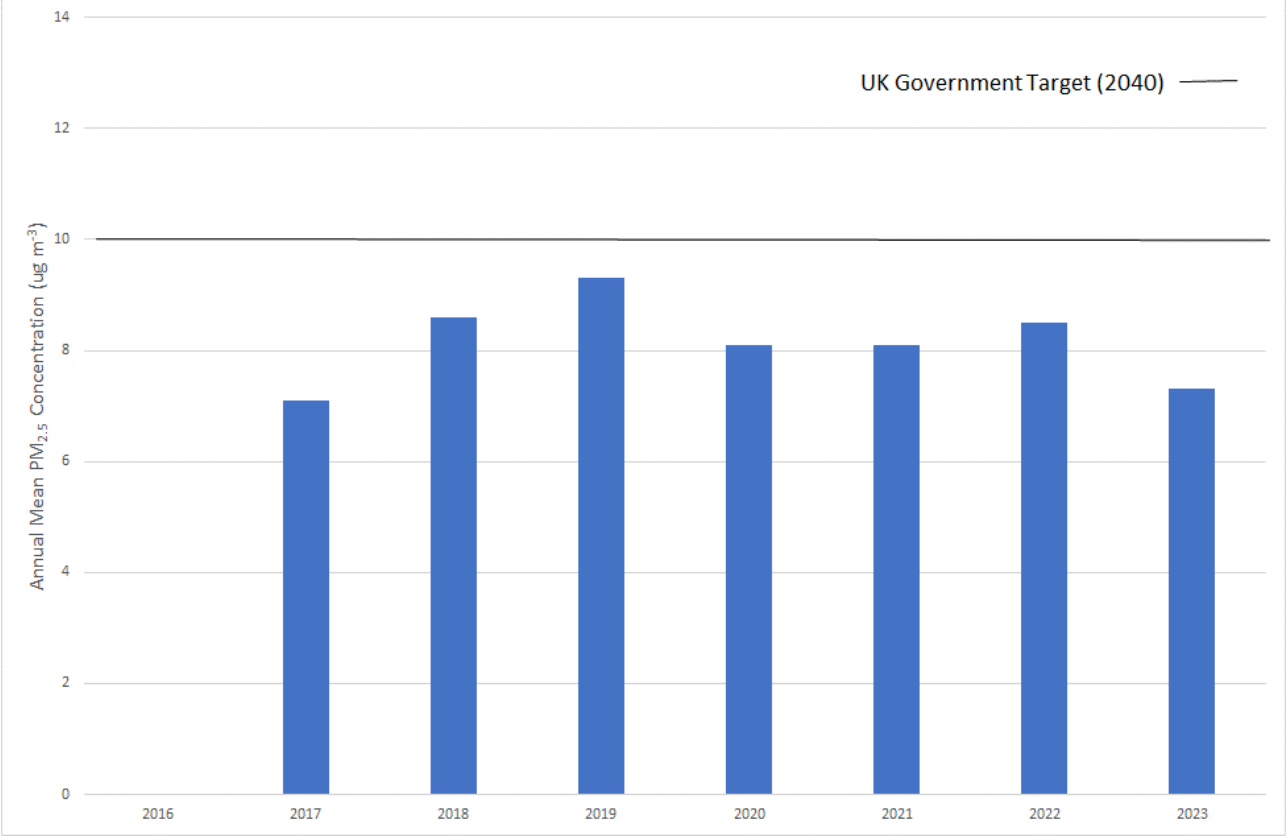


Table A.7 in Appendix A presents the ratified and adjusted monitored $PM_{2.5}$ annual mean concentrations for the past five years.

In 2023 there were no measured exceedances of the $PM_{2.5}$ Annual Mean Concentration Target for 2040.

3.1.6 Sulphur Dioxide (SO_2)

Walsall Council does not monitor SO_2.

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?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
	M6 Motorway Junction 9	Roadside	399932	296644	NO_2; $PM_{2.5}$;PM_{10}	YES	Chemiluminescent; Partisol 2025; FIDAS	21	4	3
	Wolverhampton Road (A454)	Roadside	400429	298701	NO_2; $PM_{2.5}$;PM_{10}	YES	Chemiluminescent; Partisol 2025; FIDAS	14	5	3
	Bloxwich Lane	Roadside	399329	298801	NO_2; $PM_{2.5}$;PM_{10}	YES	Chemiluminescent; Partisol 2025; FIDAS	20	3	3
	Woodlands School	Urban Background	398036	300872	NO_2; O_3	YES	Chemiluminescent; UV Absorption	0	N/A	2
	Black Country Route (A454)/ Arnwood Close	Roadside	398899	298532	NO_2; $PM_{2.5}$;PM_{10}	YES	Chemiluminescent; FIDAS	11	8	2
	Rough Hay School	Urban Background	397189	297093	NO_2; O_3; $PM_{2.5}$;PM_{10}	YES	Chemiluminescent; UV Absorption; Partisol 2025; FIDAS	0	N/A	2
	Leighswood School	Urban Background	405675	301503	NO_2; $PM_{2.5}$;PM_{10}	YES	Zephyr MCERTS Indicative	0	N/A	3

Notes:

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

(2) N/A if not applicable

Table A.2 – Details of Non-Automatic Monitoring Sites

No non-automatic monitoring undertaken.

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 2023 (%) (2)	2019	2020	2021	2022	2023
M6 Motorway Junction 9	399932	296644	Roadside	88	88	**44.7**	39.2	**46.6**	**42.1**	32.6
Wolverhampton Road (A454)	400429	298701	Roadside	85	85	**40.5**	30	32.7	31.3	**41.4** (35.2)
Bloxwich Lane	399329	298801	Roadside	75	75	37.9	30.5	33.8	31.5	30.8
Woodlands School	398036	300872	Urban Background	98	98	16.1	13	12.8	12.7	12.4
Black Country Route (A454)/ Arnwood Close	398899	298532	Roadside	76	76	**61.3**	**48.6**	-	31.3	30.2
Rough Hay School	397189	297093	Urban Background	97	97				19.2	15.3
Leighswood School	405675	301503	Urban Background	66	66					10.9

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

☒ **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 2023.**

Notes:

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

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

Figure A.1 – Trends in Annual Mean NO_2 Concentrations

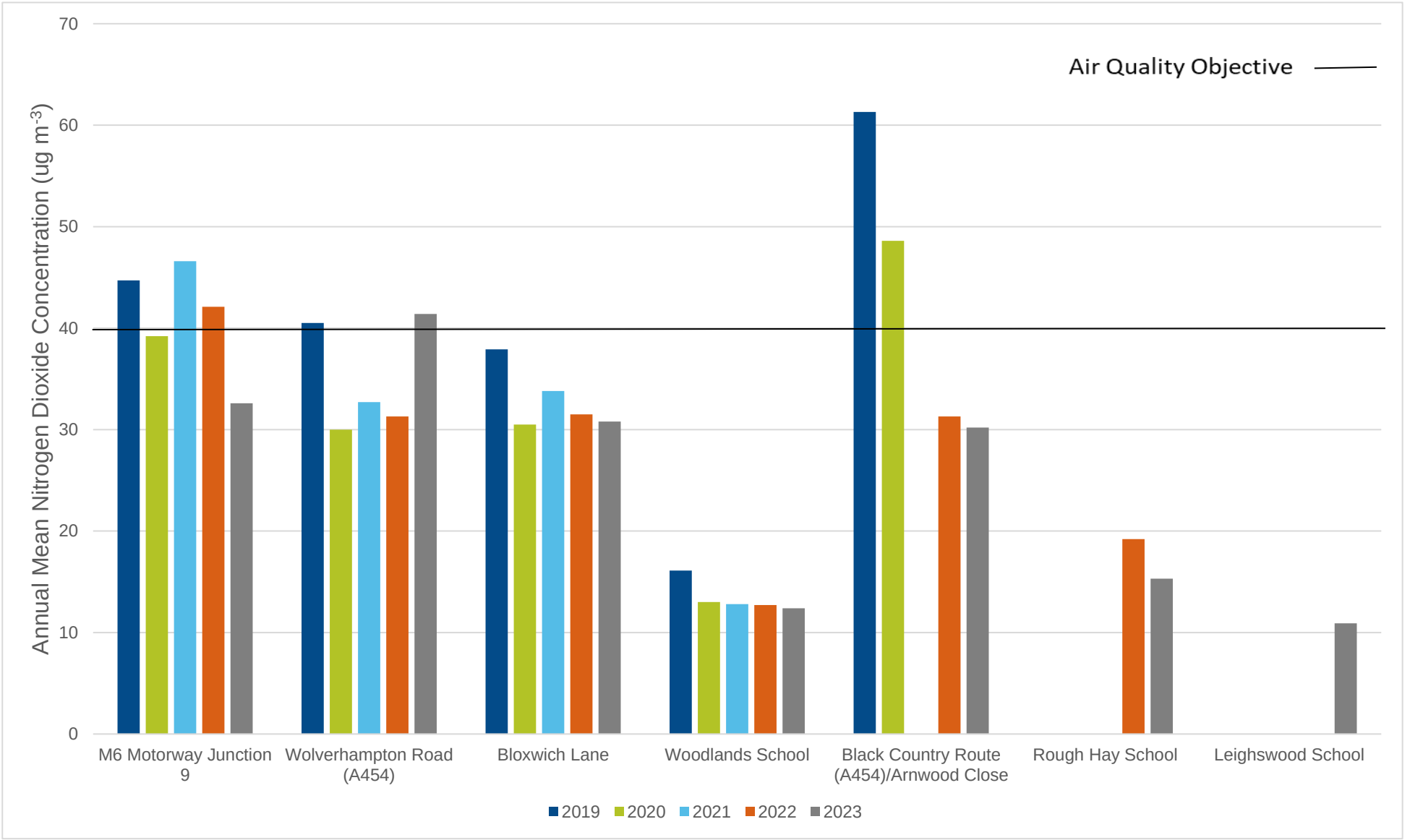


Table A.4 – 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200 µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
M6 Motorway Junction 9	399932	296644	Roadside	88	88	0	0	0	0	0
Wolverhampton Road (A454)	400429	298701	Roadside	85	85	0	1	0	0 (132.7)	0
Bloxwich Lane	399329	298801	Roadside	75	75	0	0	0	0 (121.2)	0 (120.4)
Woodlands School	398036	300872	Urban Background	98	98	0	0	0	0	0
Black Country Route (A454) Arnwood Close	398899	298532	Roadside	76	76	**31**	**31**	-	-	0 (97.2)
Rough Hay School	397189	297093	Urban Background	97	97	-	-	-	0 (143.4)	0
Leighswood School	405675	301503	Urban Background	67	67	-	-	-	0	0 (37.4)

Notes:

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

Exceedances of the NO_2 1-hour mean objective (200 µg/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.5 – Annual Mean PM_{10} Monitoring Results ($\mu g/m^3$)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2021	2022	2023
M6 Motorway Junction 9	399932	296644	Roadside	98	98	15.5	18.0	16.9
Wolverhampton Road (A454)	400429	298701	Roadside	99	99	15.0	16.3	15
Bloxwich Lane	399329	298801	Roadside	87	87	17.5	17.0	9.7#
Black Country Route (A454) Arnwood Close	398899	298532	Roadside	87	87		16.0	13.2
Rough Hay School	397189	297093	Urban Background	100	100	12.7	12.7	11.5
Leighswood School	405675	301503	Urban Background	67	67			10.6

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

Notes:

The annual mean concentrations are presented as $\mu g/m^3$.

Exceedances of the PM_{10} annual mean objective of 40 $\mu g/m^3$ 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%).

Data to be treated with caution on account of instrumentation performance

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

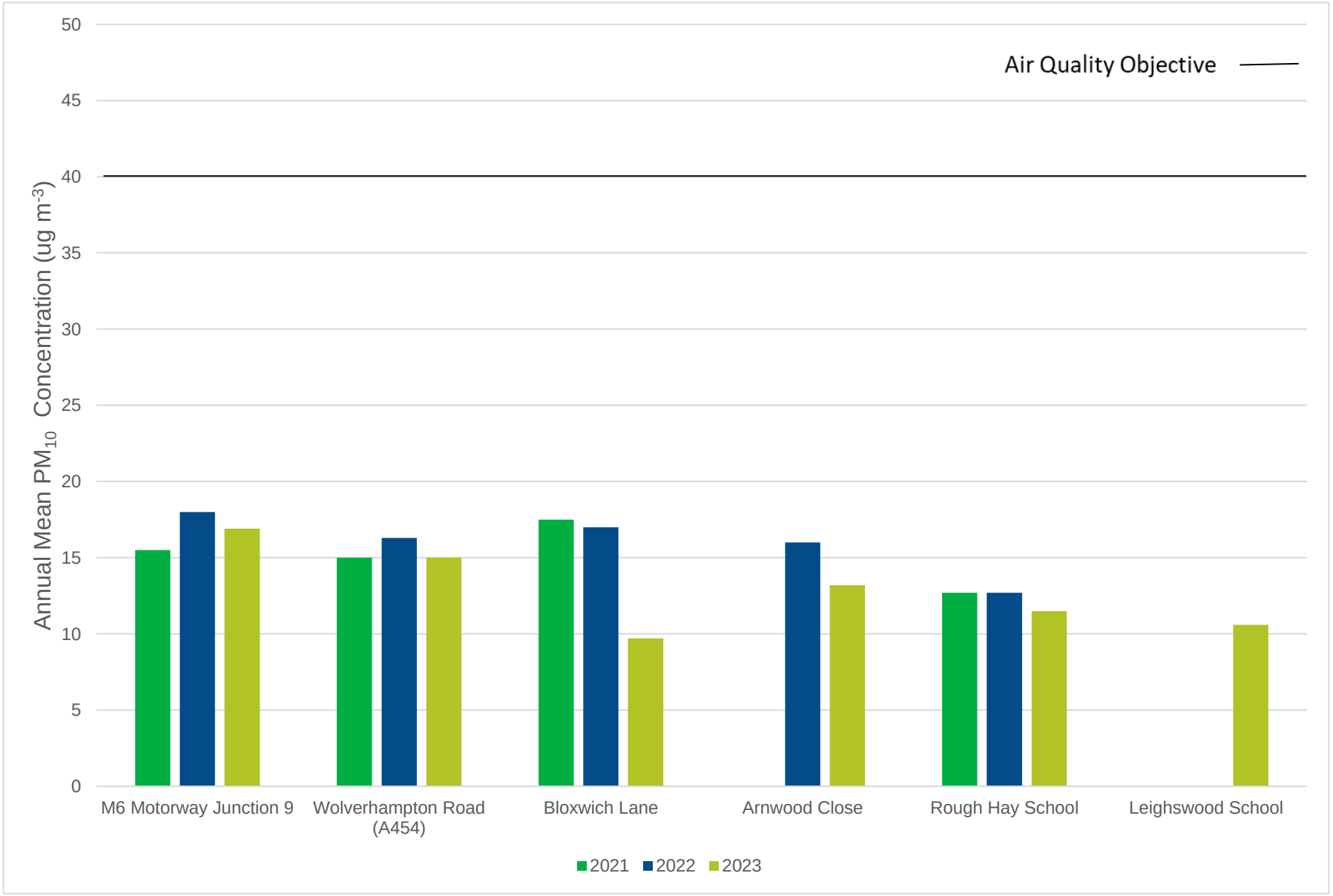


Table A.6 – 24-Hour Mean PM_{10} Monitoring Results, Number of PM_{10} 24-Hour Means > 50 µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2021	2022	2023
M6 Motorway Junction 9	399932	296644	Roadside	98	98	4	8	9
Wolverhampton Road (A454)	400429	298701	Roadside	99	99	2	5	3
Bloxwich Lane	399329	298801	Roadside	87	87	4	7	2
Black Country Route (A454) Arnwood Close	398899	298532	Roadside	87	87		6	1
Rough Hay School	397189	297093	Urban Background	100	100	5	3	1
Leighswood School	405675	301503	Urban Background	67	67			0 (18.8)

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 (50 µg/m^3 not to be exceeded more than 35 times/year) are shown in **bold**.

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

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

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

Figure A.3 – Trends in Number of 24-Hour Mean PM_{10} Results > 50 µg/m³

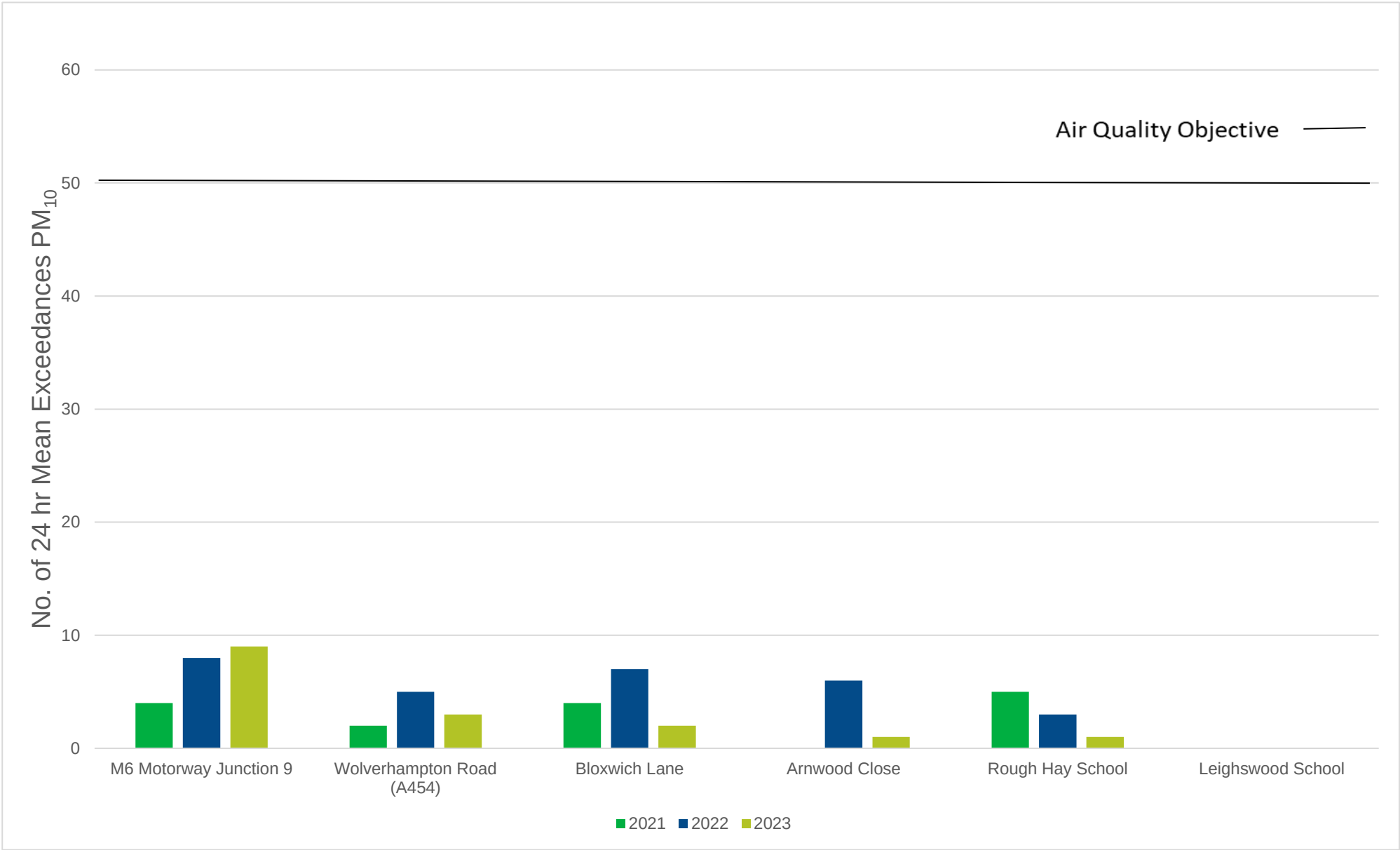


Table A.7 – Annual Mean $PM_{2.5}$ Monitoring Results ($\mu g/m^3$)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
M6 Motorway Junction 9	399932	296644	Roadside	98	98	10.6	8.8	8.2	9.7	8.9
Wolverhampton Road (A454)	400429	298701	Roadside	99	99	10.3	8.5	7.9	9.7	9.0
Bloxwich Lane	399329	298801	Roadside	87	87	10	7.5	8.3	9.5	5.5#
Black Country Route (A454) Arnwood Close	398899	298532	Roadside	87	87	13.2	11.6	-	9.4	8.0
Rough Hay School	397189	297093	Urban Background	100	100	8.6	9.3	8.1	8.1	7.7
Leighswood School	405675	301503	Urban Background	67	67					6.7

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

Notes:

The annual mean concentrations are presented as $\mu g/m^3$.

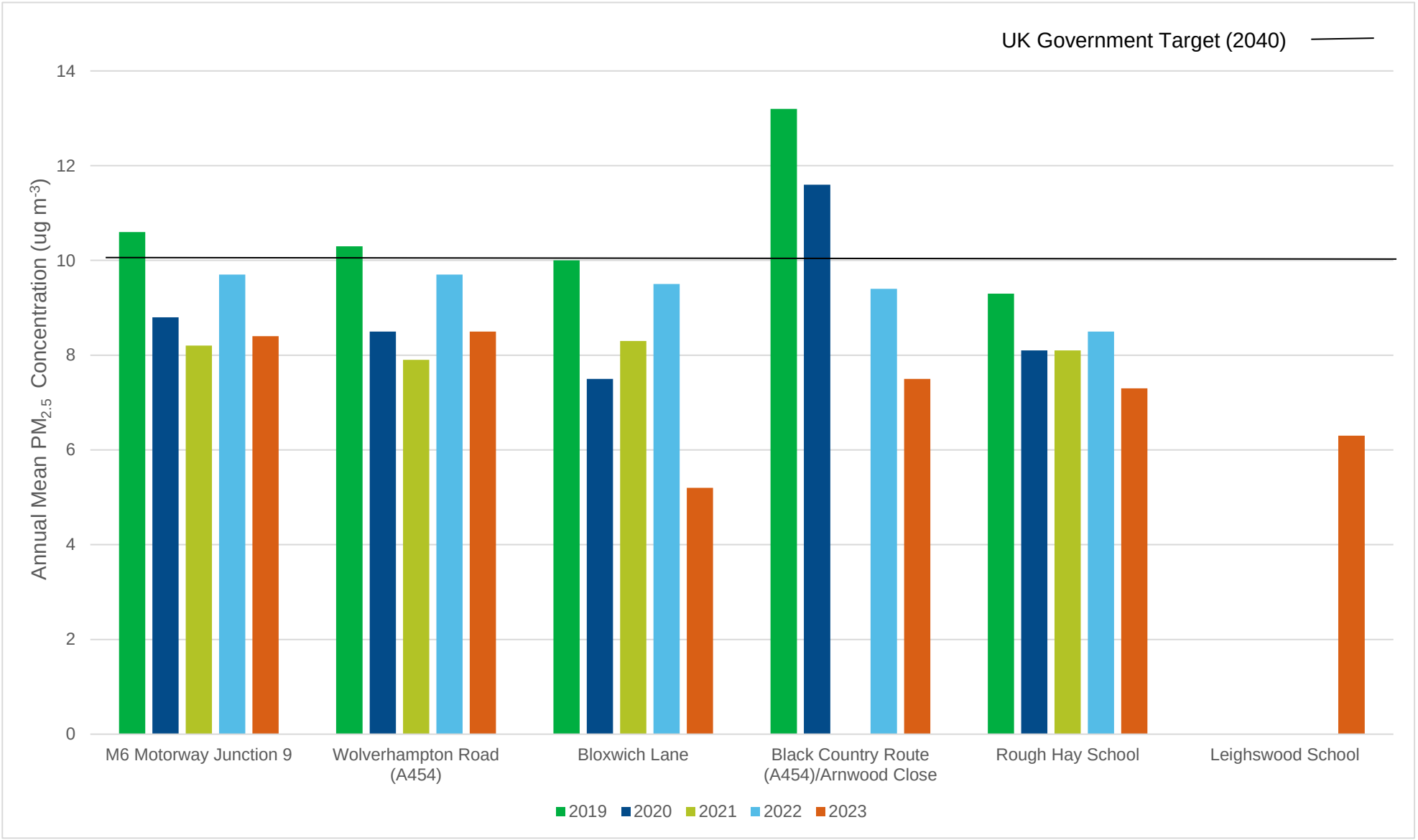
All means have been “annualised” as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

(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%).

Data to be treated with caution on account of instrumentation performance.

Figure A.4 – Trends in Annual Mean $PM_{2.5}$ Concentrations.



Appendix B: Full Monthly Diffusion Tube Results for 2023

Table B.1 – NO_2 2023 Diffusion Tube Results ($\mu g/m^3$)

No non-automatic monitoring undertaken.

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

New or Changed Sources Identified Within Walsall During 2023

Walsall Council has identified new potential or actual significant sources and receptors relating to air quality leading up to and including the reporting year of 2023.

Commercial / industrial development under construction, granted planning permission or completed

- Land to the rear of The Globe Public House, off Darlaston Road Between Canal and, Bentley Mill Way, Bentley, WS2 9SG. Construction of commercial building (use classes B2 and B8 with ancillary offices), associated highways works to Darlaston Road, provision of parking, access and circulation areas within site, provision of flood compensation area and all other associated works.
- Site of former James Bridge Copper Works, Reservoir Place, Walsall. Erection of B2 and B8 (Use Classes) employment buildings, including landscaping and open space; internal roads and footways, parking and service areas; balancing ponds; and associated utilities and infrastructure.
- Land Off Fryers Road, Bloxwich, Walsall. Resource Recovery and Renewable Energy Production Facility with a maximum generating capacity of less the 50 MWe, together with associated access, infrastructure and landscaping.
- Ecobat Solutions UK Ltd, Crescent Works Industrial Park, Willenhall Road, Darlaston. Battery recycling facility comprising external plant equipment including nitrogen tank, effluent treatment plant, bag filtration plant and air scrubber.
- Sandown Quarry, Stubbers Green Road, Aldridge, Walsall. Restoration of Sandown Quarry through the importation of 3,100,000m^3 of inert/non-hazardous material over a 20 year period.
- Brownhills Skip Hire, Collier Close, Brownhills, Walsall, WS8 7EU. Installation of a thermal treatment plant to process non-hazardous waste to energy.
- Former McKechnie Brass Ltd, Middlemore Lane, Aldridge, Walsall, WS9 8SP. Construction of a new Household Waste Recycling Centre, Waste Transfer Station.
- Beatwaste Site, Bentley Lane, Willenhall. Employment floorspace (Use Classes E(g)(ii), E(g)(iii), B2, and B8) comprising 3 no. units with ancillary (integral) office

floorspace (Use Class E(g)i), associated parking, internal access roads, landscaping, and reprofiling of site.

- Former Holiday Inn, 20, Wolverhampton Road West, Bentley, Walsall, WS2 0BS. Construction of a commercial unit for B8 (storage and distribution), B2 (general industry) and E (G) (III) (light industrial).
- Horse And Jockey, 146, Walsall Road, Walsall Wood, Walsall, WS9 9AJ. Erection of a new discount food store (Use Class E) with access, car parking, landscaping, biodiversity improvements and other associated works.
- Brownhills Business Park, Lindon Road, Brownhills. Erection of 8 units on vacant land at Brownhills Business Park of class E, B2 and B8 uses.

Sensitive development under construction, granted planning permission or completed

- Land At Former Caparo Works, Between The Wyrley And Essington Canal, Miner Street, Green Street And Old Birchills, Walsall. Residential development of up to 252 dwellings.
- Land Adjacent 346 South Of, Harden Road, Bloxwich. Approval of reserved matters - (pursuant to application ref: 21/0236 comprising 150 dwellings, associated car parking and areas of public open space.

All new formal planning development proposals are considered in terms of air quality impacts and where appropriate air quality assessments and mitigation measures are required having regard to national policies and strategies along with local guidance.

Additional Air Quality Works Undertaken by Walsall Council During 2023

Walsall Council has not completed any additional works within the reporting year of 2023.

QA/QC of Diffusion Tube Monitoring

Not applicable – Walsall Council does not undertake any diffusion tube monitoring.

QA/QC of Automatic Monitoring

Introduction

The purpose of quality assurance is to ensure that data obtained is representative of actual pollutant concentrations in the atmosphere. Data must be consistent over time and sufficiently accurate and precise to enable a comparison with air quality objectives.

In some cases meaningful QA/QC is difficult, for example in the case of certain pollutants (e.g. sulphur dioxide, PM10) and the council recognises that consistency can be compromised by enforced (albeit perhaps relatively minor) changes to monitoring station locations. Nonetheless, there exists a general aim in the council's monitoring work to achieve 90% data capture.

The council accepts that a documented quality assurance and quality control programme should be followed in order that reliable and credible measurements are obtained. In summary the council has therefore adopted a rigorous QA/QC programme that includes an established schedule of regular site calibrations, validation of data, and documentation of all procedures.

QA/QC of Automatic Data

In order to minimise measurement uncertainty it is important to apply stringent QA/QC procedures to monitoring programmes, such as those laid down for the UK automatic monitoring networks.

Chemiluminescence analysers are calibrated by council personnel on a 4-weekly basis. This relies on using a single cylinder of nitrogen oxide (NO) containing a known concentration of NO that is transported around all sites, and a zero air purifier containing charcoal and Purafil to remove any trace of oxides of nitrogen from the sample stream i.e. zero air. This process has been applied for the past 8+ years

All calibration gases and analytical techniques applied to monitoring methods are accredited to a recognised standard by BOC.

All monitoring sites are covered by a service contract provided by Matts Monitors Limited, and Acoem UK. The sites are serviced every six months by a qualified service engineer in accordance with the manufacturer's instructions and warranty conditions. Provision is made for a 48-hour call out response to cover breakdowns.

Data Management

All of the data collected by the council's air quality monitoring network undergoes data processing, data validation and/or ratification. These methods of data management are

outlined in more detail within the DEFRA publication Local Air Quality Management Technical Guidance LAQM (TG22).

Raw data is collected remotely on a daily basis and is examined to screen out any spurious and/or unusual measurements having regard to the recommendations in LAQM(TG22).

Data is then subject to a correction factor being applied based on the results from each monthly calibration visit.

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

$PM_{2.5}$ FIDAS monitoring data is corrected in accordance with LAQM(TG22) Method 11. In consequence, all valid data is divided by a factor of 1.06. PM_{10} data does not require a correction factor.

Automatic Monitoring Annualisation

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

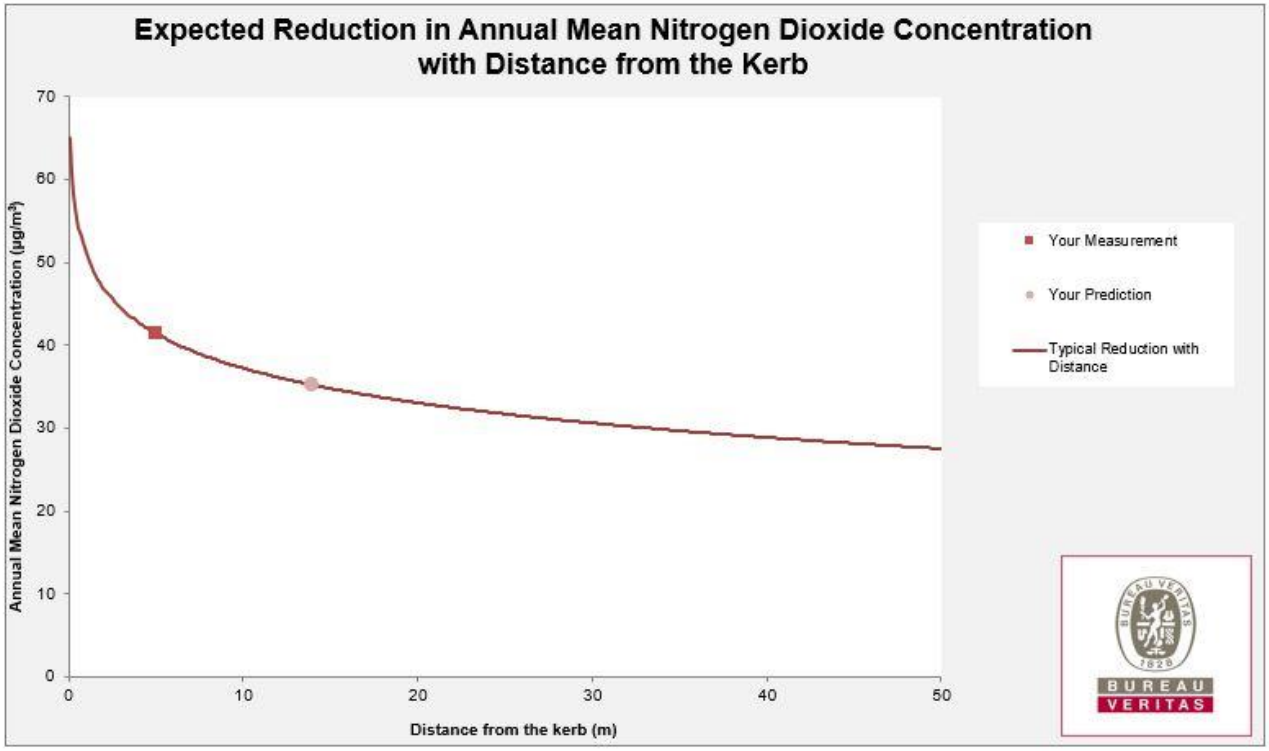
Site ID	Annualisation Factor Woodlands School	Annualisation Factor Rough Hay School	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
Leighswood School	1.134	1.083	1.109	9.8	10.9

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 NO_2 fall-off with distance calculator available on the LAQM Support website. Where appropriate, automatic annual mean NO_2 concentrations corrected for distance are presented in Table A.3.

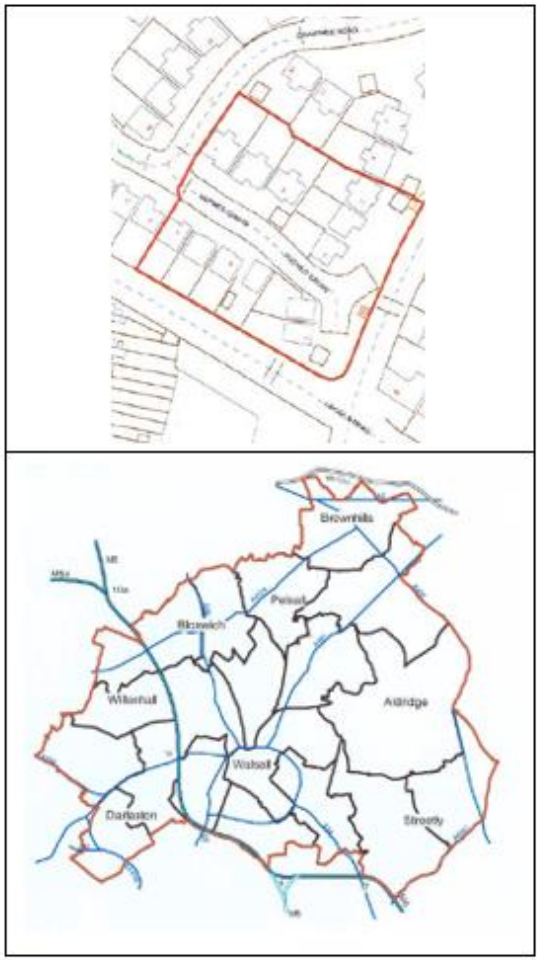
Table C.2 – Automatic NO_2 Fall off With Distance Calculations (concentrations presented in µg/m^3)

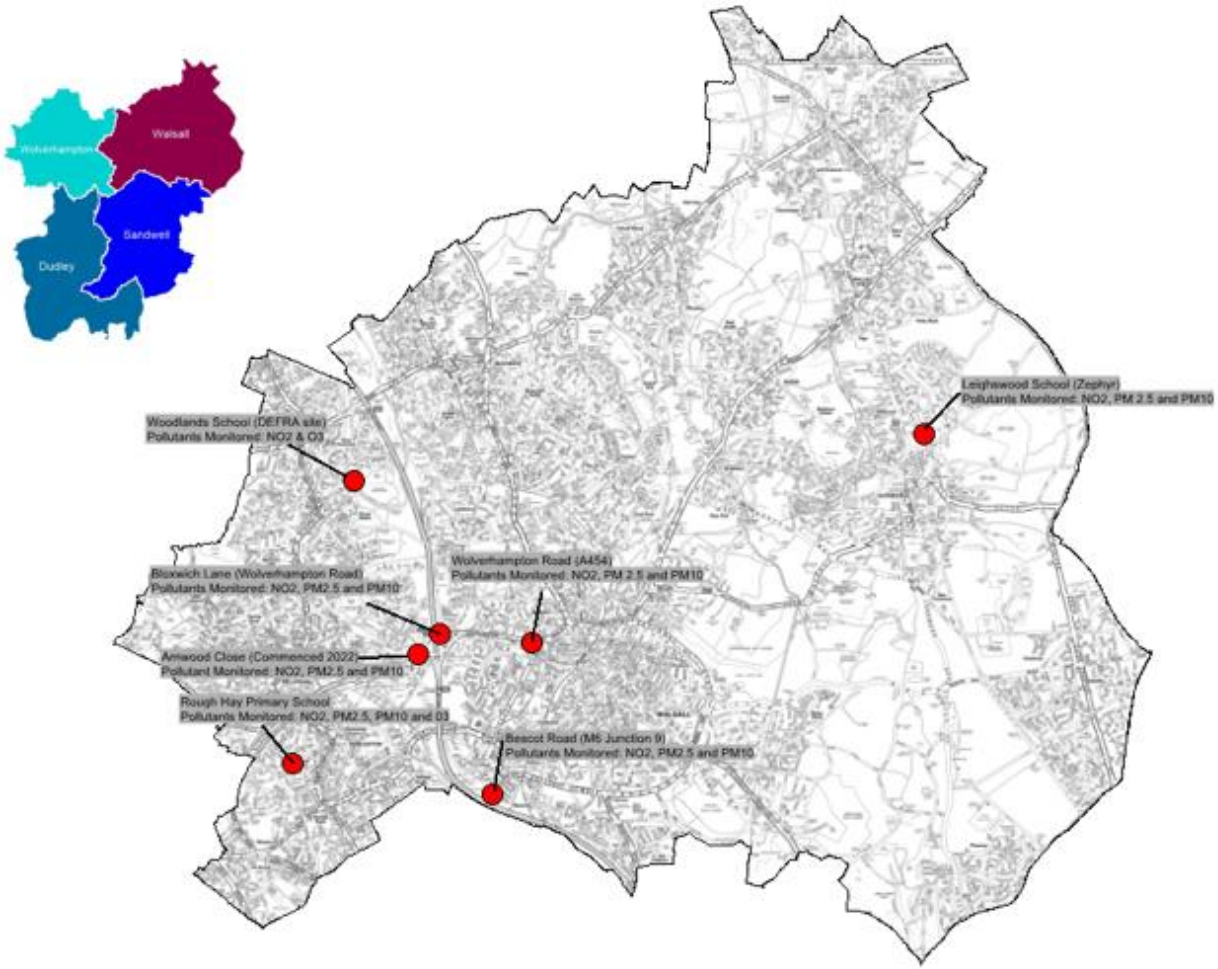
Site ID	Distance (m): Monitoring Site to Kerb	Distance (m): Receptor to Kerb	Monitored Concentration (Annualised and Bias Adjusted	Background Concentration	Concentration Predicted at Receptor	Comments
Wolverhampton Road	5	14	41.4	21.2	35.2	Predicted concentration at receptor below AQS objective.


Expected Reduction in Annual Mean Nitrogen Dioxide Concentration with Distance from the Kerb
Annual Mean Nitrogen Dioxide Concentration (µg/m³)
70
60
50
40
30
20
10
0
0
10
20
30
40
50
Distance from the kerb (m)
Your Measurement
Your Prediction
Typical Reduction with Distance
BUREAU VERITAS

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

Figure D.1 – Map of Automatic Monitoring Site and AQMAs





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)	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean
Nitrogen Dioxide (NO_2)	40 µg/m^3	Annual mean
Particulate Matter (PM_{10})	50 µg/m^3, not to be exceeded more than 35 times a year	24-hour mean
Particulate Matter (PM_{10})	40 µg/m^3	Annual mean
Sulphur Dioxide (SO_2)	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean
Sulphur Dioxide (SO_2)	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean
Sulphur Dioxide (SO_2)	266 µg/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
EU	European Union
FDMS	Filter Dynamics Measurement System
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

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- Details on Workplace Electric Vehicle Charging Scheme. Published by the Office for Zero Emission Vehicles. https://www.find-government-grants.service.gov.uk/grants/workplace-charging-scheme-2
- Go Jaunty Website: https://walks.gojauntly.com/walking/gb/england/west-midlands/walsall
- Travel and Transport Walsall https://go.walsall.gov.uk/roads-parking-and-travel/parking-and-travel/travel-and-transport
- Government Boiler Upgrade Scheme. Published by Gov.UK. https://www.gov.uk/apply-boiler-upgrade-scheme