2025 Air Quality Annual Status Report (ASR) for Broxtowe Borough Council

In fulfilment of Part IV of the Environment Act 1995 Local Air Quality Management

June 2025

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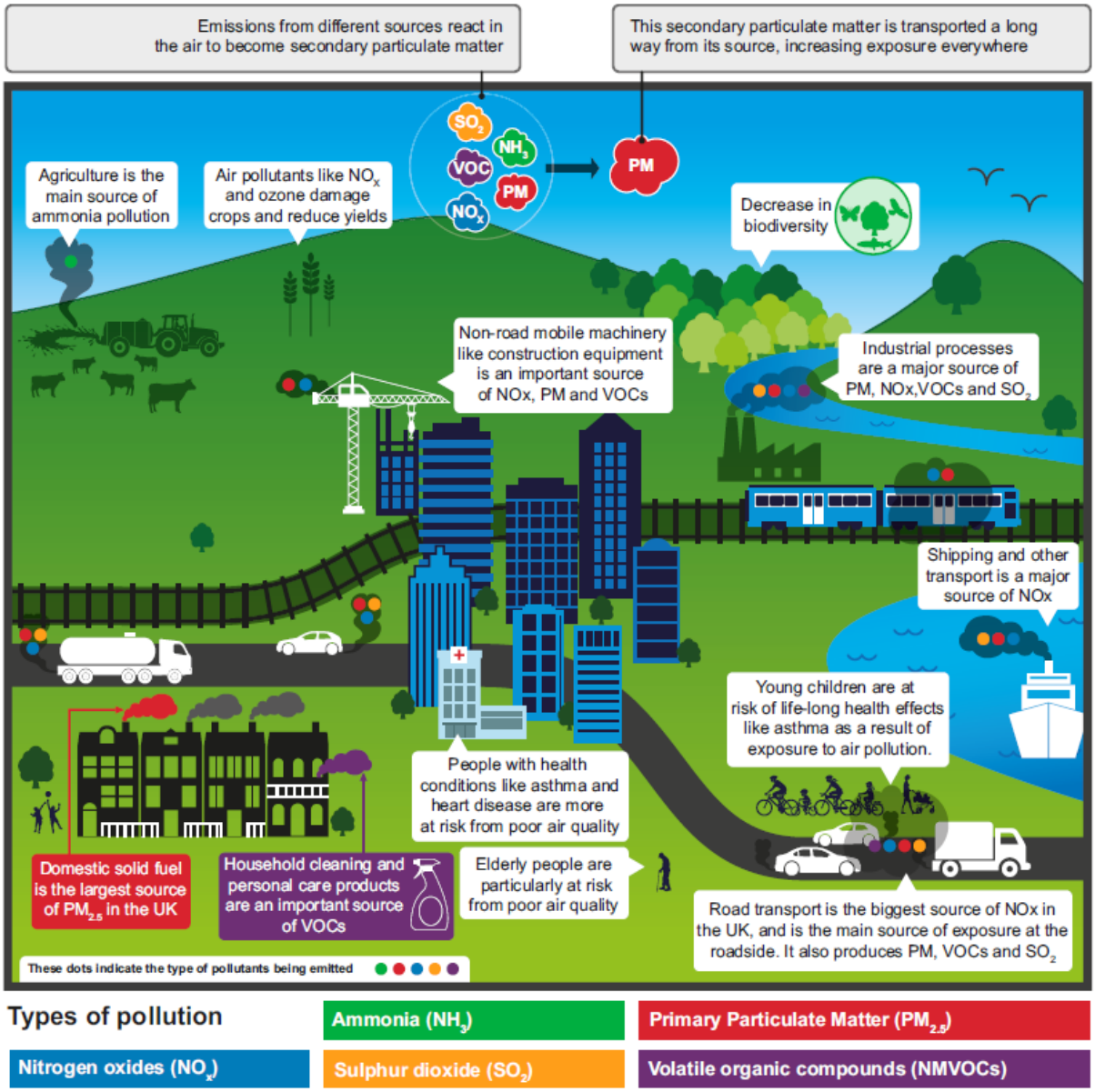
Executive Summary: Air Quality in Our Area

What is Air Pollution and where does it come from?

Air pollution is generally defined as any type of particulate (dust) or gaseous substance (e.g. Oxides of Nitrogen) that is emitted into the atmosphere due to the combustion of fuels such as coal, oil, gas, petrol, diesel and the burning of wood or natural gas from domestic central heating boilers or power stations. When these fuels are combusted, they are emitted into the atmosphere, and they affect the air quality within the United Kingdom (UK).



Source – Clean Air Strategy 2019, DEFRA Clean Air 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.

Poor air quality can affect people's health on a daily basis and can result in premature death. Therefore, it is imperative that poor air quality is recognised as a public health issue and that continual measures are taken to improve the air quality even if the air quality objectives in the UK are being met.

The two main types of air pollution within the United Kingdom are Nitrogen Dioxide (NO_2) and Particulate Matter (PM_{10} and $PM_{2.5}$). Therefore, this report will explain the effects of these pollutants on health, the concentration levels within the Borough of Broxtowe and measures that have been, are being and will be taken to improve the air quality within the Borough.

What is Nitrogen Dioxide?

Nitrogen Dioxide is a reddish-brown gas with the chemical formula NO_2. Nitrogen Monoxide is a colourless gas with the chemical formula NO. Collectively NO_2 and NO are known as Oxides of Nitrogen and the chemical formula is NOx.

As mentioned previously NOx is emitted into the atmosphere due to the combustion of fuels such as coal, oil, gas, petrol, diesel and the burning of wood or as natural gas from domestic central heating boilers or power stations.

Some sources of NOx release NOx in the form of NO_2 into the atmosphere, these are known as primary sources of NO_2, which are mainly emitted from vehicle exhausts. It was previously believed that it was petrol vehicles that were the main source of NO_2 however the use of diesel particulate filters within the exhaust systems of diesel vehicles have resulted in high concentrations of NO_2 being emitted into the atmosphere.

Another source of NO_2 in the atmosphere is due to a chemical reaction in the atmosphere between NO and Ozone (O_3). This is classed as a secondary source of NO_2. However, if concentrations of O_3 are low near to the source of NO then NO_2 will not be formed.

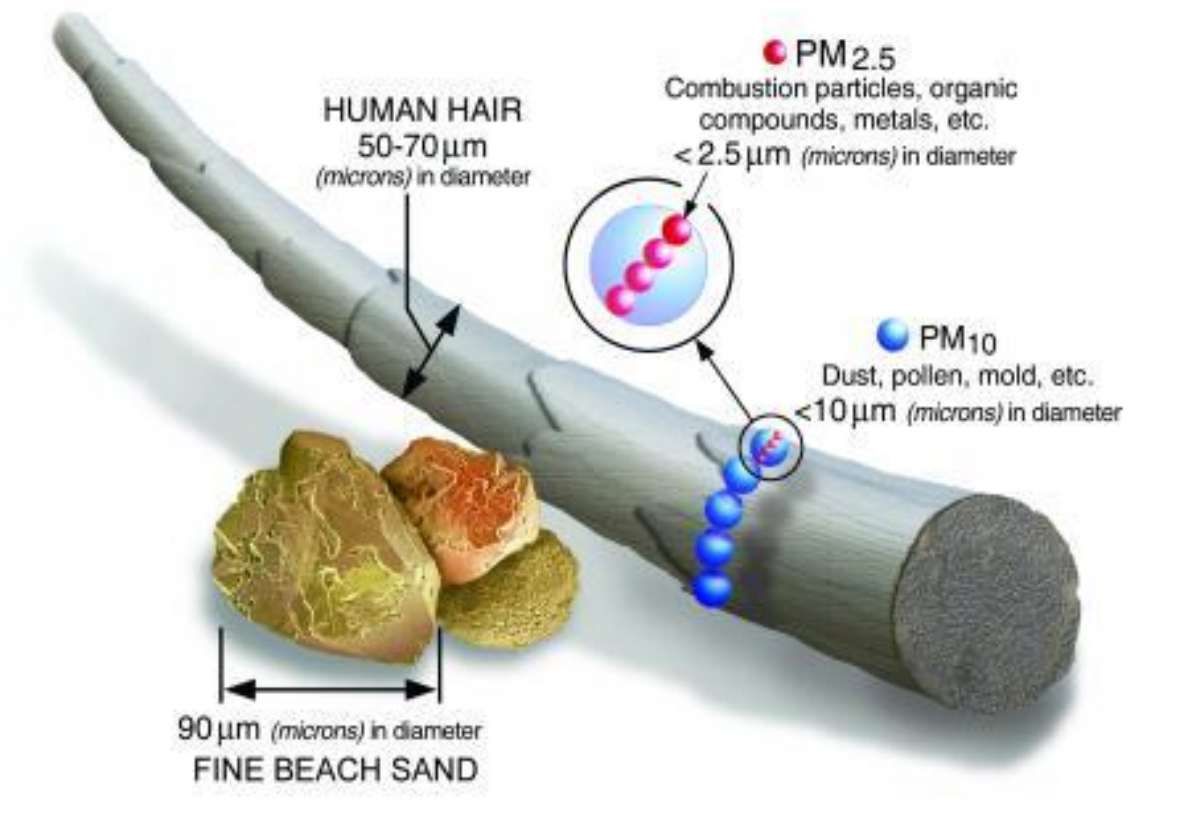
What is Particulate Matter?

Particulate matter is the term used for a mixture of solid particles and/or liquid droplets within the air. Particulate matter varies in size with some particles being easily visible to humans e.g. dust, soot, smoke and vapour from domestic boiler flues. However, some particles are so small that they cannot be seen with the naked eye, and it is these particles that are easily absorbed deep into the lungs and cannot be expelled when they are breathed in.

There are many sources of particulate matter in the United Kingdom, examples of these are: Vehicle exhausts, the wearing of brake pads, tyres and asphalt, Rust from vehicles, poor fuel combustion, dust from demolition and building sites, bonfires and inefficient burning of solid fuel e.g. wood.

Within the United Kingdom the main particulate matter that causes concern is particulates that are classed as ‘fine particles’ ($PM_{2.5}$) or ‘inhalable coarse particles’ (PM_{10}). The particles are measured in size and referred to as microns (µm). PM_{10} are particles that are 10 microns to 2.5 microns in size, and $PM_{2.5}$ are particles that are 2.5 microns or less.

Size of Particulate Matter



Source: United States Environmental Protection Agency (US EPA), 2020 - Size of Particulate Matter

Research has shown that there is significant harm to health at concentrations of Particulate Matter well below the current EU and UK limit values. (See Appendix H for the Air Quality Objectives for the UK).

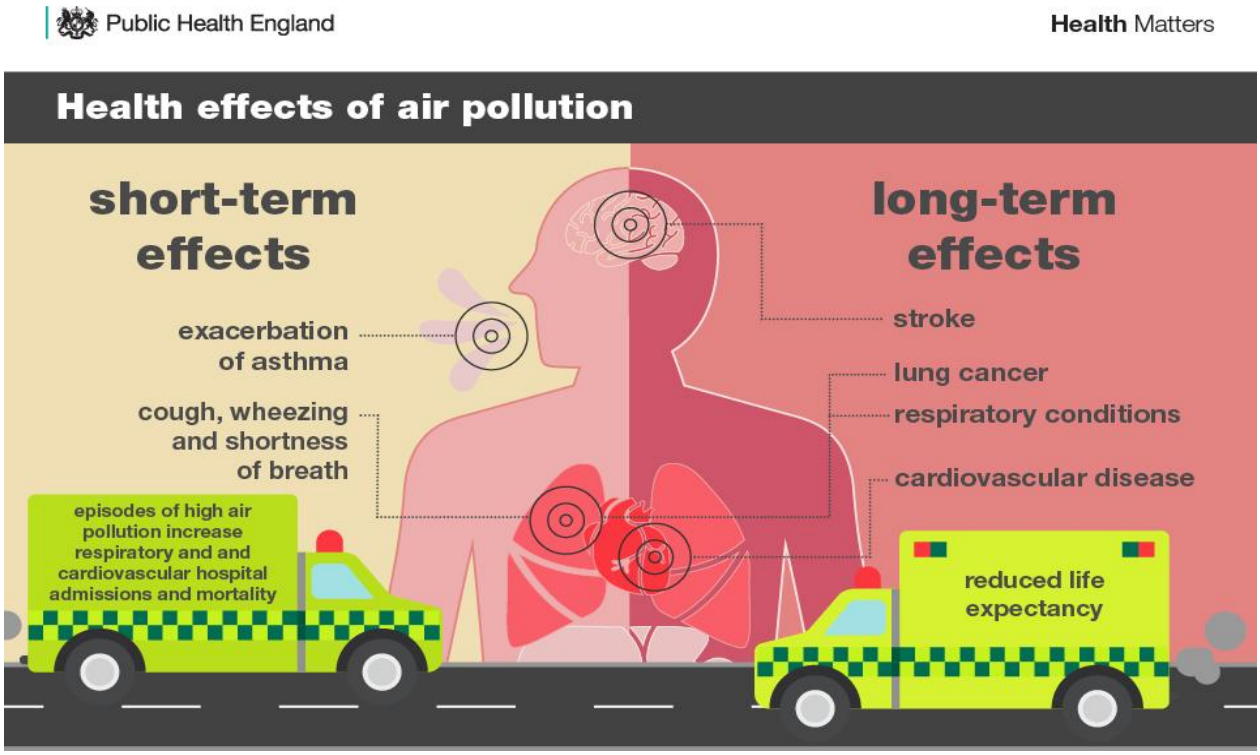
What are the Health Effects of Poor Air Quality?

Air pollution is associated with several adverse health impacts both short term and long term. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions.

When people are within an area of poor air quality the length of time, they are there is called the ‘exposure time’. There are two types of exposure, short-term and long term. Short-term is when the person is subjected to poor air quality for a short time e.g. a couple of hours and the effects are called ‘Short-term effects’. Long term exposure is when

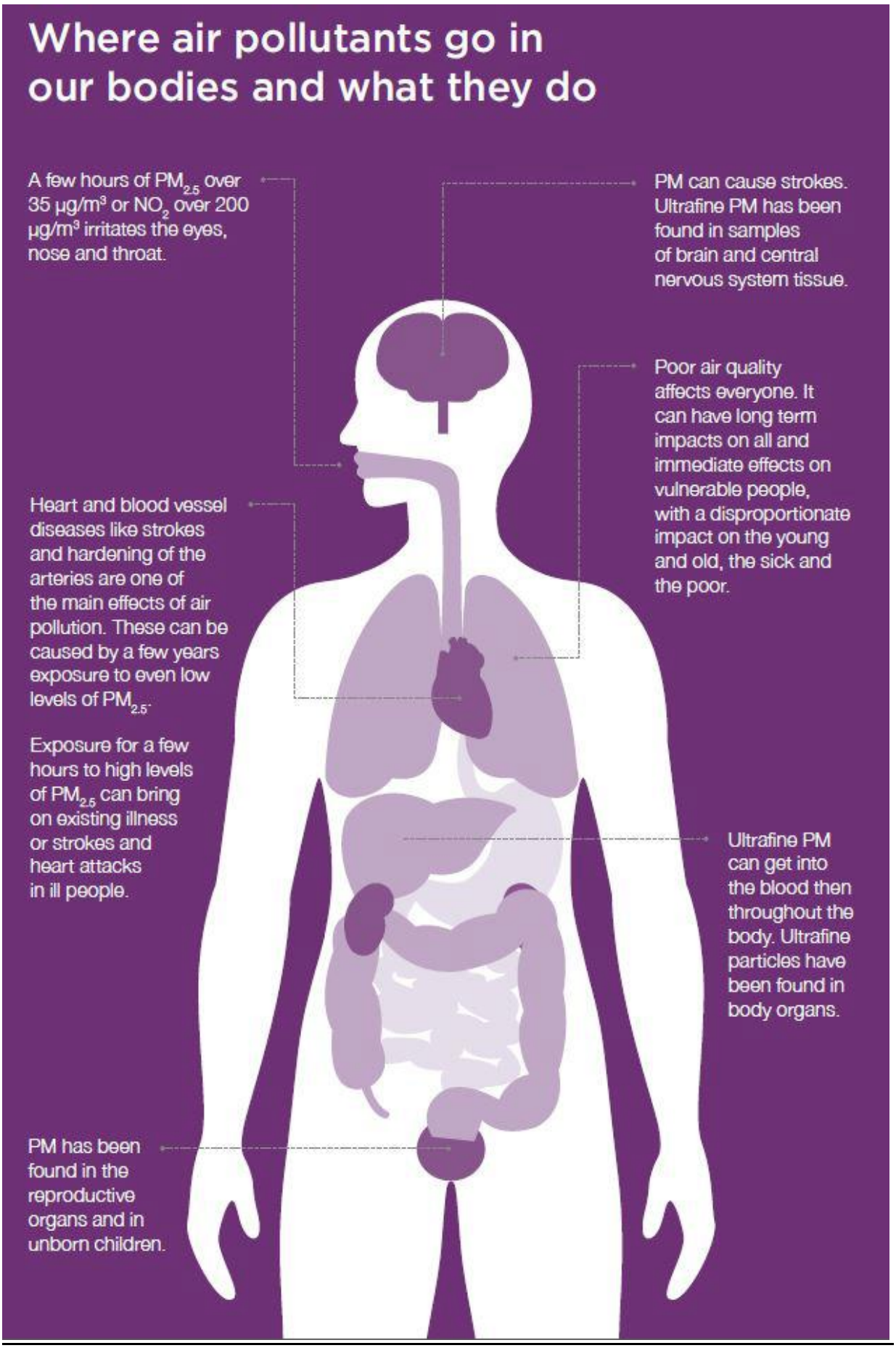
people are consistently living or working with in an area where there is poor air quality. The short- term and long-term effects on the body are shown in the diagram below.

The short and long-term effects of air pollution



Source – Health Matters 2018, Office for Health Improvement & Disparities

To be able to understand the full effects of poor air quality on humans an understanding of how the pollutants enter the body, where they go once, they are within the body and the effects that they have are shown in the diagram below.



Source - Air Quality: A Briefing for Directors of Public Health, March 2017 Air Quality: A Briefing for Directors for Public Health

Health Effects of Nitrogen Dioxide

The main health effect of breathing in raised levels of Nitrogen Dioxide is the increased likelihood of respiratory problems, as Nitrogen Dioxide inflames the lining of the lungs, and it can reduce immunity to lung infections. This can cause problems such as wheezing, coughing, colds, flu and bronchitis and can exasperate pre-existing conditions like asthma and Chronic Obstructive Pulmonary Disease.

The Committee on the Medical Effects of Air Pollution (COMEAP) has produced estimates of the attributable deaths of people aged 25+ due to NO_2 and Particulate Matter based on 36,000 for all local authorities in the United Kingdom. The estimates are based on the researched evidence of mortality risk combined with modelled levels of background air pollution to which populations are exposed to at each local authority. Table i provides the results for the East Midlands, Nottingham City and all the District and Borough Councils within Nottinghamshire.

Table i – Estimated Attributable Deaths in 2023 due to NO_2 and Particulate Matter based on 36,000.

Area	Attributable deaths Age 25+ due to NO_2 and PM based on 36,000	Associated Life-years Lost based on 36,000 (COMEAP Aug 18)
East Midlands	3,590	30,878
Nottingham City	196	2,004
Broxtowe Borough Council	90	787

Source: COMEAP, Associations of long-term average concentrations of Nitrogen Dioxide with mortality, 2018.

Table i shows that in the Borough of Broxtowe out of 787 life years lost, 90 of these are attributable to NO_2 and Particulate Matter.

Health Effects of Particulate Matter

The health effects associated with short term and long-term exposure to particulate matter are exacerbation of asthma, effects on lung function, increases in hospital admissions for respiratory and cardiovascular conditions, and also increases in mortality[1]. Office for Health Improvement & Disparities has produced estimates of the risk of mortality from particulates for all local authorities in the United Kingdom. The estimates are based on the researched evidence of mortality risk combined with modelled levels of background air pollution to which populations are exposed to at each local authority. See Section 2.3 of this report for further information on the estimated effects of annual mortality in 2023 of human made $PM_{2.5}$ air pollution.

Air Quality in the Borough of Broxtowe

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

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

The main air quality issue within the Borough is due to the M1 and the A52. The A52 is the main road that connects Nottingham to Derby and is used heavily by commuters. Residential properties are situated alongside the M1 and the A52.

The main pollutants of concern within the Borough are Nitrogen Dioxide and Particulate Matter, which is emitted from vehicles exhausts and is prevalent in areas where there are

[1]Gowers, A.M. et al Estimating Local Mortality burdens associated with Particulate Air Pollution, Public Health England, 2017.

congested roads e.g. the M1 and the A52. However, it must also be noted that ambient background levels are affected by emissions from domestic heating e.g. Oxides of nitrogen from boilers and particulate matter from solid fuel burners.

Broxtowe Borough Council participates in the United Kingdom Nitrogen Dioxide diffusion tube network and has 41 diffusion tubes sites throughout the Borough. The sites are primarily monitoring the M1 corridor and the A52. Monitoring is still being undertaken in the four revoked Air Quality Management Areas (AQMAs), to ensure that the concentrations remain below the air quality objective.

The 2024 nitrogen dioxide results show that the air quality levels are below the objective of 40µg/m^3 for all the monitoring locations throughout the Borough. The results and trends are discussed in greater detail in Section 3.2.1 of this report.

In respect of particulates, the modelled background level provided by Defra for the Borough of Broxtowe indicated levels between 7.2µg/m^3 and 9.2µg/m^3 for 2024, with the annual mean for 2024 being 8.1µg/m^3. The World Health Organisation (WHO) guideline level for $PM_{2.5}$ is 10µg/m^3.

Broxtowe Borough Council has a close working relationship with National Highways and Nottinghamshire County Council's Place Department who have responsibility for highways. National Highways manages the M1 Motorway and the A52, which run through the Borough. Nottinghamshire County Council Place Department manage the remaining roads that run through the Borough; this includes the A610/B600 Nuthall Roundabout.

The Council works with National Highways and Nottinghamshire County Council by continuing to monitor air quality levels throughout the Borough, to inform them of any changes to the air quality levels, to provide maps of the air quality management areas and to provide yearly air quality reports. By working together actions are implemented where possible to ease congestion by maintaining a steady flow of traffic throughout the Borough and to also promote sustainable travel.

The Environmental Health team at Broxtowe Borough Council also works closely with the Environment Agency who attend the Nottinghamshire Environmental Protection Working Group meetings along with some of the local authority planners. This ensures that air quality issues are raised and considered throughout the planning process.

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.

Below is a summary of the core actions to target sources of pollution in the Borough of Broxtowe over the past year.

- Phase Two of public consultations on Smoke Control Areas was undertaken in 2024.
- The current Smoke Control Orders were revoked, and a new single Smoke Control Order was introduced which supports the Smoke Control Order Enforcement Policy **-** The Order was sealed by BBC and approved by Defra in late 2024. The Smoke Control Order will come into force in June 2025.
- To write an Electric Vehicle Infrastructure (EVI) Strategy for the Borough of Broxtowe - The Strategy is to facilitate access to a reliable Electric Vehicle Infrastructure (EVI) for residents, businesses and visitors, which will help to support the decarbonisation of transport and travel within the Borough. The Management Strategy for the expansion of EVI across Broxtowe Borough went to Cabinet in July 2024, and was adopted in July 2024
- An Investigation was undertaken to determine ways to decarbonise BBC's fleet through alternative fuels - A report was submitted to Cabinet in July 2023, which approved the transition to HVO. The transition took place in April 2024. all refuse vehicles and fleet vehicles (where appropriate) are HVO. This has resulted in a 95% reduction in fleet emissions and a 31% reduction in the Council's own operation carbon footprint.
- Electric Vehicle Infrastructure (EVI) Strategy - The Strategy is to facilitate access to a reliable Electric Vehicle Infrastructure (EVI) for residents, businesses and visitors, which will help to support the decarbonisation of transport and travel within the

Borough. The Management Strategy for the expansion of EVI across Broxtowe Borough was approved by Cabinet and adopted in July 2024.

- Low Emission Vehicle Procurement - BBC has purchased two new Euro 6 Refuse Collection vehicle in the financial year 24/25 replacing two older vehicles.
- Broxtowe Borough Council Cycle to Work Scheme – Five employees purchased bikes through this scheme in 2024. Since the scheme started, 194 employees have purchased bikes through the scheme.
- Increased provision for cycle parking in the Borough - A new cycle hub was installed in Toll bar square, Kimberley in 2024.

Further information on these core actions and progress on grant funded projects are discussed in greater detail in Table 2.1 of this document.

Conclusions and Priorities

The 2024 Nitrogen Dioxide results show that the air quality levels are below the objective of 40µg/m^3 for all the monitoring locations throughout the Borough including the AQMA. Although the objectives are being met it is very important to continue to improve air quality within the UK as poor air quality is a public health concern.

Therefore, to continue to improve the air quality in the Borough the priorities for Broxtowe Borough Council in addressing air quality for the coming year are to:

- Review the NO_2 diffusion tubes network annually, discontinue sites where the annual air quality levels are comfortably below the objective, and relocate them to new sites within the Borough if needed. Extensive monitoring will allow Broxtowe Borough Council to identify and focus on ‘problem’ areas.
- Continue to reduce the levels of NO_2 in the Borough by working with National Highways and Nottinghamshire County Council.
- Continue to promote the final version of the “EMAQN Air Quality and Emissions Mitigation: guidance for developers” document.
- Continue to be a member of the Nottinghamshire Environmental Protection Working Group, and to liaise with colleagues in Public Health and the Health and Wellbeing Boards (Nottingham City and Nottinghamshire County) to ensure that Air

Quality continues to be included in the Joint Health and Wellbeing strategy 2022-2026 and any future work. Engage with the public about air quality and raise awareness of the health effects of air quality.

- Continue to provide the public, companies and businesses within the Borough with methods that they can use to improve air quality for themselves and the health of their employees.
- Continue to provide information on green travel e.g. walking, cycling by providing leaflets.
- Continue to support bus companies and taxis that operate within the Borough to reduce emissions.
- Continue to review suitable research methods for reducing air quality levels for both NO_2 and particulate matter.

One of the challenges associated with addressing the air quality in the Borough is that the main source of the air quality problem is the M1 Motorway, which is managed by National Highways and is not under the control of Broxtowe Borough Council. Although Broxtowe Borough Council have a close working relationship with National Highways it is unable to impose or make any changes to the M1 to improve the air quality within the neighbouring residential areas. However, National Highways has undertaken projects at great expense in the past to improve the air quality within the Borough e.g. widening scheme and Smart Motorway scheme.

Apart from the M1 and the A52 all the roads within the Borough are managed by Nottinghamshire County Council who manage the traffic flows, repairs, diversions etc. There are several challenges associated with this. The first challenge is that Broxtowe Borough Council is unable to impose or make any changes to the structure or flow of the roads. The second challenge is the limited funding currently available to County Councils for significant integrated transport improvements (£3.9m per year for all safety, capacity, active travel, parking, bus and traffic management infrastructure improvements). This limits the funding available for transport schemes that will deliver air quality improvements.

Local Engagement

Broxtowe Borough Council was selected in 2018 to be in the Air Quality Task and Finish Group, which was set up to update the Nottinghamshire Air Quality Strategy (NAQS). The draft NAQS was approved at the Nottinghamshire County and City Health & Wellbeing Boards in 2019 and the finished format of the NAQS has been endorsed by the portfolio holders and is now published online. Improving Air Quality is now a priority of the Nottinghamshire Joint Health and Wellbeing Strategy 2022-2026 as part of the Ambition to develop Healthy and Sustainable Places.

Air Quality also forms part of the Spatial planning & Health Framework and Health Impact Checklist produced and used for Local Development Plans.

How to get Involved

Residents and businesses living or working in Nottinghamshire can improve the air quality in the area by taking simple measures. One of the main changes that can be made is to use sustainable travel more and reduce dependency on the car when possible. Below are some of the actions that people can take, and particularly for short journeys.

- Travel Choice – Nottinghamshire County Council's Travel Choice webpages provide information and advice on the different ways to travel around Nottinghamshire, whether that's walking, cycling, public transport or car sharing. Residents, jobseekers, businesses and employees can find travel information and advice for the county (including bus and cycle maps, leisure 'Routes and Rides' and a journey planner) at Travel Choice
- School Travel Toolkit – Aimed at school leaders, teachers, parents/carers, children, and those living near to our schools, the Nottinghamshire School Travel Planning Toolkit provides information and advice on improving travel to and from Nottinghamshire's schools, including the sustainable and active travel modes available. The toolkit can be found at School Travel Toolkit
- Public transport – To use all means of public transport whenever possible e.g. trams, buses and trains. In addition to printed materials, an integrated public transport planning tool detailing local bus, rail and tram networks, as well as for trips further afield can be found at Travel Choice Journey Planner and Traveline

Details on travelling on school buses to Nottinghamshire schools and assistance available to do so, can be found at Travel to Schools. The tram timetable is available at Tram Timetable.

- Car share – The Nottinghamshire car share scheme, *'nottinghamshare'*, is available to anyone Car Share Scheme but all businesses can produce their own.
- Park and Ride – There are a variety of Park and Ride sites within Nottinghamshire, which serve the Nottingham Tram and buses. Information for these Park and Ride sites which includes maps of their locations are found at Park and Ride
- Walking and Cycling – The health benefits of physical activity e.g. walking or cycling outweigh the risks from air pollution. You can easily avoid the worst pollution by travelling along quieter streets. Even walking on the side of the pavement furthest from the road can help.

  Walking.

  - Walk short distances rather than drive; this also has the benefit of improving your health as well.
  - Information on walking networks in Nottinghamshire can be found at Walking Networks and Rights of way when walking in Nottinghamshire and a planning tool for deciding your route when walking can be found on the Travel Choice website
  - Walking and cycling to school – School travel plans promote group cycling and walking for pupils to safely get to school. Information on the travel to school options can be found at Travel to Schools Options.

  Cycling.

  - Use the extensive cycle routes that are available throughout Nottinghamshire. Maps and cycling journey planners that cover Nottinghamshire, including Broxtowe are available on the Travel Choice website and at Cycling Rights of Way in Nottinghamshire. Maps of just the city cycle routes for Nottingham are available at Cycle Maps for Nottingham. Sustrans is a charity that promotes sustainable travel and further information can be found at Sustrans

RideWise, a local cycling charity, also provide advice, training, bike rides, free bike loans and information about routes and journey planning. Further information about RideWise can be found at RideWise

- Driving- When you have to drive you can still help to improve air quality by;
    - Make sure that your car is at its most efficient and think about how you drive, this will also save you money. Tips on how to save money on fuel and reduce your emissions are available at Driving Advice from Energy Saving Trust.
    - If you are thinking about changing your car consider buying a low-emission vehicle, you can get more information on these vehicles and the support available at Electric vehicle charging in and around Nottinghamshire
- Bonfires – To not have bonfires at all and to compost all garden waste and recycle rubbish rather than burn it.
- Heating your home –
    - Smoke Control Area – Large parts of Nottinghamshire are smoke control areas; therefore, you cannot emit smoke from a chimney unless you are burning an authorised fuel or using an exempt appliance e.g. some burners or stoves. Further information on suitable fuels and exempt appliances can be found at Smoke Control Information from Defra All appliances must be kept in good working order to ensure that they are working efficiently and it is advised that you contact your Local Council to determine whether you are in a smoke control area or not.
    - House Boilers – Ensure that boilers are serviced regularly and kept in good working order. If a boiler needs replacing, then purchase one that has a low NOx emission rating

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Figures

Tables

1 Local Air Quality Management

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

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

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

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

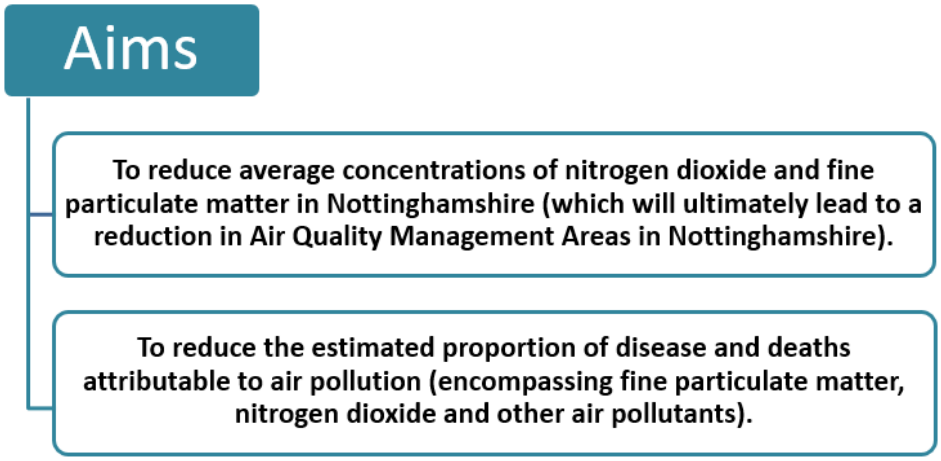
Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 18 months. The AQAP should specify how air quality targets will be achieved and maintained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

Broxtowe Borough Council currently does not have any declared AQMAs. A joint Nottinghamshire Air Quality Strategy is in place to prevent and reduce polluting activities.

Local Air Quality Strategy

Although Broxtowe Borough Council does not have an air quality strategy solely for this Borough, however this ASR is written in alignment with the aims and objectives of the Air Quality Strategy for Nottingham and Nottinghamshire 2020-2030. Air Quality Strategy for Nottingham and Nottinghamshire 2020-2030.

This Joint Air Quality Strategy has been developed collaboratively across Nottinghamshire authorities (taking into account the DEFRA Air Quality Strategy factsheet in relation to joint Air Quality Strategies, which is available from the DEFRA Air Quality Hub, https://www.airqualityhub.co.uk/) and sets out the steps the local authorities will take to improve local air quality. This joint approach ensures that local authorities including Broxtowe Borough Council are collectively addressing air quality concerns while still considering local-level priorities. Its aims are to encourage prevention and reduction of polluting activities across a range of diverse sectors.



The Strategy establishes the regional steps authorities will take to improve air quality while maintaining flexibility for local implementation. It is reviewed regularly by the Nottingham and Nottinghamshire Air Quality Oversight Group (NNAQOG) to remain up to date and to provide progress updates to the County and City Health and Well-Being Boards.

The NNAQOG includes colleagues from City and County Local Authorities and consists of Public Health, Environmental Health, Transport Planning and the local NHS; with input also from National Highways, Environment Agency, UKHSA, among others. Additionally, engagement with the mayor's office for the East Midlands Combined County Authority (EMCCA) will be sought at the earliest opportunity.

Other Local Strategies

The Nottinghamshire Joint Health and Wellbeing Strategy 2022 – 2026 has four ambitions one of which is to Create Healthy and Sustainable Places:

- We'll ensure that the environment we grow, live, work and age in promotes good health and wellbeing.
- We'll use the planning and transport system, along with economic planning, licensing and policy decisions, to create places that do this.

This will also help to reduce health inequalities and also benefit the environment, for a better quality of life. There are nine areas of focus and one of them is Air quality, which states that:

“Clean air is essential for good health and for the environment and climate. We will work to make positive changes which can also have positive Air Quality - Ensure that outdoor air quality supports healthier lives in all communities’ effects in terms of travel to school and work, being active and safety.”

The Nottingham and Nottinghamshire ICS Green Plan 2022 to 2025 recognises the importance of the NHS taking action to reduce air pollution and work with partners to improve air quality. The Plan includes the following ambitions:

- Promoting sustainable transport and reducing overall transport
- Increasing the use of ULEV and ZEV vehicles
- Developing the infrastructure to support lower carbon transport options
- Enhancing understanding and communication via Green Travel Plans

The Nottingham and Nottinghamshire ICS Health Inequalities Strategy 2020-2024 has a strategic objective for system partners to work together to support action to improve air quality.

Air Quality and Climate Change

Many sources of air pollution are also sources of greenhouse gas emissions e.g. combustion creates CO_2, NOx and PM. Emissions from road transport, energy and heat generation and domestic solid fuel burning are some of the most common sources that contribute to both climate change and air pollution.

Broxtowe Borough Councils Climate Change and Green Futures Strategy 2023-2027 has ten strategic themes to identify, manage and mitigate the worst impacts of Climate Change.

Climate Strategy	Transport and Travel
Energy and Water	Built Environment
Core Strategy and Planning	Recycling and Resources
Natural Environment	Communities
Business and Supply Chain	Communications

Air Quality Monitoring is included in the Natural Environment theme and as climate change mitigation measures reduce emissions of greenhouse gases it will also help reduce air pollutants and lead to improvements in health outcomes as evidenced in Health Effects of Climate Change (HECC) in the UK: 2023 report.

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

Defra's appraisal of last year's ASR concluded that.

- The BBC justification to use the national bias factor instead of the local bias factor shows a high level of technical understanding, and the reference to Section 7.221 TG22 further amplifies this understanding. BBC is encouraged to continue with this level of consideration and scrutiny in determining the application of bias – **BBC will continue to do this.**
- The executive summary provides additional information about NO2 and particulate matter, as well as the health impacts of both. This is a welcome addition and should be continued in future ASRs – **BBC will continue to do this.**
- The report is descriptive and informative throughout with each section providing a significant amount of detail, this is appreciated and encouraged to continue in future ASRs. Overall, this report can be considered an example of good practice due to provision of the required information and significant further detail provided throughout **– BBC will continue to do this.**
- The colour coded system describing why there were missing results in the monthly results table, is a creative and clever way of providing an extra detail about the monitoring results. This is a welcome addition and should be continued in future ASRs **– BBC will continue to do this.**
- The engagement with the public in a consultation on revoking the twenty-one Smoke Controls Areas with a single Borough Wide Smoke Control Order, is a great example of involving the public in the development of borough-wide air quality measures.

Broxtowe Borough Council has taken forward a number of direct measures during the current reporting year of 2024 in pursuit of improving local air quality. Details of all measures that are completed, in progress, or planned are set out in Table 2.1. One hundred and fourteen measures are included within Table 2.1, with the type of measure, and the progress Broxtowe Borough Council have made during the reporting year of 2025 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.1.

Table 2.2 is colour coded with the Three Key measures for Broxtowe Borough Council in yellow, the measures that were completed in 2024 are in blue and the measures that were completed between 2017 – 2023 are in green. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.1.

More detail on these measures can be found in their respective Action Plans The Air Quality Strategy for Nottingham and Nottinghamshire 2020-2030, BBC Local Plan 2018 – 2028, BBC Climate Change and Green Futures Strategy 2023-2027, The Nottinghamshire Local Transport Plan 2011-2026 (and its Implementation Plans), D2N2 Local Cycling and Walking Infrastructure Plan (LCWIP), NCC Electric vehicle charging frameworks and strategies and National Highways Reports (post opening project evaluation reports for the M1 Junction 25 to 28 widening and the A52 West of Nottingham Corridor Improvements).

Key completed and on-going measures are:

- Phase Two of public consultations on Smoke Control Areas was undertaken in 2024.
- The current Smoke Control Orders were revoked, and a new single Smoke Control Order was introduced which supports the Smoke Control Order Enforcement Policy **-** The Order was sealed by BBC and approved by Defra in late 2024. The Smoke Control Order will come into force in June 2025.
- To write an Electric Vehicle Infrastructure (EVI) Strategy for the Borough of Broxtowe - The Strategy is to facilitate access to a reliable Electric Vehicle Infrastructure (EVI) for residents, businesses and visitors, which will help to support the decarbonisation of transport and travel within the Borough. The Management Strategy for the expansion of EVI across Broxtowe Borough went to Cabinet in July 2024, and was adopted in July 2024
- An Investigation was undertaken to determine ways to decarbonise BBC's fleet through alternative fuels - A report was submitted to Cabinet in July 2023, which approved the transition to HVO. The transition took place in April 2024. All refuse vehicles and fleet vehicles (where appropriate) are HVO. This has resulted in a 95% reduction in fleet emissions and a 31% reduction in the Council's own operation carbon footprint.

- Electric Vehicle Infrastructure (EVI) Strategy - The Strategy is to facilitate access to a reliable Electric Vehicle Infrastructure (EVI) for residents, businesses and visitors, which will help to support the decarbonisation of transport and travel within the Borough. The Management Strategy for the expansion of EVI across Broxtowe Borough was approved by Cabinet and adopted in July 2024.
- Low Emission Vehicle Procurement - BBC has purchased two new Euro 6 Refuse Collection vehicle in the financial year 24/25 replacing two older vehicles.
- Increased provision for cycle parking in the Borough - A new cycle hub was installed in Toll bar square, Kimberley in 2024.
- To undertake a data quality review of boiler information held for Council Properties to determine whether they have been included in the replacement programme
- To investigate and consider new heating technologies that are more efficient, effective and produce lower emissions **-** A trial was undertaken for fitting air source heat pumps in 7 new builds in 2021 and in 5 new builds in 2022. The trail was completed and included in future specifications to install air source heat pumps instead of gas boilers if possible. Air source heat pumps are now installed in the Councils new build properties (except Section 106).
- To undertake a data quality review of boiler information held for Council Properties to determine whether they have been included in the replacement programme - BBC will be undertaking a data quality review on boiler information held for the properties in question as we believe these may have already been incorporated in replacement programmes - this was completed in 2024.
- To continue to replace Broxtowe Borough Council older combination boilers and system boilers to Seasonal Efficiency of a Domestic Boiler in the UK (SEDBUK) A rated condensing boilers.
- To investigate and consider suitable alternative replacements for the remaining electrically heated Council properties - High heat retention units were being fitted as replacements in 2022 and this will be continuing in future years. Air source heat pumps will also be considered at suitable properties where a retro fit solution is possible.
- Broxtowe Borough Council Cycle to Work Scheme – Five employees purchased bikes through this scheme in 2024. Since the scheme started, 194 employees have purchased bikes through the scheme.

- ❖ Installation of 7kW electric vehicle (EV) charge points at BBC Kimberley Depot for Public Sector Fleet Vehicles - Four new 7kW electric vehicle (EV) charge points were installed at Kimberley Depot (increasing the number to six) in 2024. The charge points form part of a network of public sector organisations who have agreed to share the EV charge points which will enable the delivery of collective efficiencies in EV operations across the region. These charge points are for the use of any Council operated fleet across the region.
- ❖ Development of Local Cycling and Walking Infrastructure Plan (LCWIP) - A D2N2 Local Cycling and Walking Infrastructure Plan (LCWIP) has been developed. - The D2N2 LCWIP will become the responsibility of the East Midlands Combined County Authority (EMCCA) and will be reviewed and continue to evolve and develop over time.
- ❖ Marketing and promotion of sustainable transport alternatives – both the County Council and Broxtowe Borough Council continue to develop and deliver programmes to encourage more sustainable travel. These include infrastructure improvements such as the County Council's integrated transport programme delivering improvements for pedestrians, cyclists and bus users; cycle training, as well as marketing materials and campaigns developed in partnership with stakeholders such as passenger transport operators.
- ❖ Nottinghamshire on-street EV charging pilot scheme - electric vehicle cable channels (EVCC) – NCC successfully secured (and received in January 2023) £774k from the Government's Local Electric Vehicle Infrastructure (LEVI) Pilot Funding enabling the delivery of up to 300 EV cable channels. Delivery started in February 2023, with a total of 81 cable channels installed in the county up to the end of the 2024/25 financial year.

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

- ★ To develop an implementation plan for the Nottingham and Nottinghamshire Air Quality Strategy 2020-2030 to ensure it is implemented locally by the Nottingham and Nottinghamshire Air Quality Oversight Group (NNAQOG), Broxtowe Borough Council is a member of the NNAQOG.

- ★ To replace cremators and associated plant including abatement system at Bramcote Crematorium - The new cremators are now installed, building works and installation of the new abatement plant is ongoing and will be completed summer 2025.
- ★ Promoting on the Council Webpage the Council's Electric Vehicle Charging Points Network within the Borough - Four new charging points to be added in Stapleford in 2025.
- ★ To review the Climate Change and Green Futures Strategy 2023-2027 – To review the Climate Change and Green Futures Strategy that was approved in 2022. To ensure it is up to date and relevant.
- ★ To investigate the feasibility of increased provision for cycle parking in the Borough - Three Sites and routes being investigated in 2025.
- ★ To investigate the provision of an E bike Scheme within the borough - On-going discussion with Lime bikes. Implementation expected early 2025.
- ★ To reschedule the dry recycling waste rounds to reduce fuel consumption and improve efficiency - The round reschedule is currently in progress. Completion is anticipated in September 2025.

Broxtowe Borough Council's priorities for the coming year are predominantly through measures to make the best use of the transport networks and through smarter travel measures that will encourage people to travel more sustainably.

Measures will include:

- On-going effective land use planning and securing of appropriate levels of developer contributions for mitigation (including travel planning) and sustainable transport improvements.
- Traffic control and information provision to minimise disruption and delay on County Council managed roads (including the A610) such as contingency planning, the effective co-ordination of works and the provision of real-time travel information.
- Measures to reduce the need to travel at peak times such as the provision and encouragement of flexible working arrangements.
- The facilitation of smarter travel behaviour such as the provision of a car sharing scheme and integrated and concessionary ticketing schemes.

- The encouragement of smarter travel behaviour such as the marketing and promotion of passenger transport, walking and cycling, provision of cycling and walking route maps, cycle training programmes, and web-based journey planners.
- The encouragement of the uptake of low-emission vehicles, including the continued identification and implementation of the Nottinghamshire public electric vehicle charging network as well as grants for businesses to install on-site charging infrastructure.
- Enhancements to the local cycling and walking networks.
- Travel planning such as the development of new travel plans at businesses across the county through planning conditions.

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

- All Nottinghamshire Local Authorities including Nottinghamshire County Council – Environmental Health, Public Health and Transport Plans & Programme Development Team.

The principal challenges and barriers to implementation that Broxtowe Borough Council and Nottinghamshire County Council anticipates facing are:

- Availability of funding for the above measures to continue their delivery
- Ensuring sufficient mitigation is secured through the development control process to address the potential impacts on the highway network of not only individual developments but also the cumulative impacts of development.

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

- Promoting travel choices - Consideration of car club into the County - Dependent on the determination of business case and commercial operator coming forward.

Barriers include financial risk, organisational culture (i.e. using personal cars less) and specific service needs.

Whilst the measures stated above and in Table 2.1 will help to contribute towards improving the air quality, Broxtowe Borough Council anticipates that further additional measures not yet prescribed will be required in subsequent years to improve the air quality in the borough.

Table 2.1 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
1	**Install energy efficiency measures to Council housing properties to improve ECP ratings to C.**	Other	Other	2024	2028	BBC Capital Works - Capital Works Manager	Partially funded by the Council (housing revenue account and borrowing) and part funded through grant funding from DESNZ.	Funded	£1m-£10m	Implementation	Reduced Emissions	Reduced carbon emissions due to lower heating demand of properties	• Wave 3 energy efficiency measures to be on site in September 2025 until 2028. • 55 properties completed in 2024/25. On completion of the project in 2028, it is planned over 400 properties will have received	An update on this new measure will be in the 2026 ASR.
2	**Implementation of the Electric Vehicle Infrastructure (EVI) Strategy**	Policy Guidance and Developmental Control	Low Emission Strategy	2025	2027	BBC – Climate Change Manager	LA-BBC and NCC	Funded	-	Implementation	Reduction in NO2 and PM due to increased use of Electric Vehicles	% Usage of EVCP	• Feasibility of electric vehicle charging points underway in the borough where deemed appropriate. • NCC out to tender for LEVI (local Electric Vehicle Infrastructure for EVCP	EVI Strategy publicly available at Electric Vehicle Charging Infrastructure Strategy Update will be provided in the 2026 ASR
3	**Implementation of the Smoke Control Order**	Policy Guidance and Developmental Control	Other Policy	2024	2030	BBC – Public Protection – Senior Environmental Health Officer	LA-BBC	Funded	£1k -£10k	Implementation	Reduction in particulates	Completion of implementation plan	• The Order was sealed by BBC and approved by Defra in late 2024. The Smoke Control Order will come into force in June 2025.	Update will be provided in the 2026 ASR
4	**Light rail tram infra-structure**	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	2015	On-going	NCiC and NCC	DfT/WPL funding	Funded	>£10 Million	Completed	Reduction in NO_2 and PM	Increased passenger transport patronage	• The light rail/tram system, Nottingham Express Transit (NET), provides services between the city centre and local centres, such as Hucknall and Beeston. There are two park and ride sites located within the county, at Hucknall and Toton Lane, which serve the NET network, allowing commuters and visitors a safe place to park their vehicle and catch the tram into the to the city centre. • NET Phase 2 (with route through	On-going

Measure No.	Measure	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
													Broxtowe) opened 2015. • In 2022-23, there were 2.5 million passengers using the tram, which showed a growth of 50% in comparison to the previous year, but still below pre-pandemic levels.	
5	**Promoting travel choices - Consideration of car club into the county**	Alternatives to private vehicle use	Car Clubs	TBD	Ongoing	NCC/NCiC	NCC	TBD	-	Ongoing	Reduction in NO_2 and PM	Restrain average journey times in the morning peak to a 1% increase per year A reduction in staff business emissions and cost, through both a car club and a wider review of staff travel habits.	• NCiC scheme introduced in 2014, with the provider reviewed in 2018. Expansion of scheme into county dependent on its success, which is still unclear. • Work has been undertaken to look at the feasibility of a partnership with a Car Club operator in the county, for both residents and internal use (i.e. staff travel). The work will feed in to a wider fleet review and review of staff business travel, with a few more aspects to be expanded upon. • Funding for implementation to be determined.	Dependent on the determination of business case and commercial operator coming forward. Barriers include financial risk, organisational culture (i.e. using personal cars less) and specific service needs.
6	**Nottinghamshire on-street EV charging pilot scheme - electric vehicle cable channels (EVCC)**	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022		NCC / Via EM Ltd	Privately funded by resident and OZEV LEVI Pilot Funding	Privately funded by resident and OZEV LEVI Pilot Funding	Costs to be determined	Implementation	Reduction in pollutants and emissions due to increased use of low emission vehicles.	Number of EVCC installed and back-office data from EV charge point	• NCC approved the trialling of on-street EV charging cable channels at Transport & Environment Committee in February 2022. • NCC successfully secured (and received in January 2023) £774k from the Government's Local Electric Vehicle Infrastructure (LEVI) Pilot	NCC's EV cable channel pilot programme is currently in progress. The pilot is privately funded by resident (EV chargepoint) and OZEV LEVI Pilot Funding

Measure No.	Measure	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
													Funding enabling the delivery of up to 300 EV cable channels. • Delivery started in February 2023, with a total of 81 cable channels installed in the county up to the end of the 2024/25 financial year.	
7	**Nottinghamshire EV charging infrastructure (potentially on and off street)**	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2023/2024	2025/26	NCC / Borough and District Councils	OZEV funding (LEVI)	Funded	£1 million to £10 million	Implementation	Reduction in pollutants and emissions due to increased use of low emission vehicles.	Number of EV charging installed and back-office data from EV charge point	• NCC have developed an Electric Vehicle Charepoint Framework for the county. • NCC secured funding from DfT for EV infrastructure. The procurement process is ongoing, with contract award expected by autumn 2025.	Measure is reliant on a successful LEVI bid £5.522m of external LEVI revenue and capital funding secured for EV infrastructure programme development.
8	**To develop an implementation plan for the Nottingham and Nottinghamshire Air Quality Strategy 2020-2030**	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2024	2030	NCC/NCiC/ Borough and District councils	N/A	Not Funded	N/A	Planning	Reduced Emissions from raising awareness	Improving Air Quality, reduced Emissions and Raising awareness	To develop an implementation plan for the Nottingham and Nottinghamshire Air Quality Strategy 2020-2030 to ensure it is implemented locally by the Nottingham and Nottinghamshire Air Quality Oversight Group (NNAQOG), Broxtowe Borough Council is a member of the NNAQOG.	2025
9	**To continue to promote the Nottingham and Nottinghamshire Air Quality Strategy 2020-2030**	Public Information	Via the Internet	2020	On-going	BBC Public Protection – Environmental Health Officer	N/A	Not Funded	N/A	On-going	Reduced Emissions from raising awareness	Improving Air Quality, reduced Emissions and Raising awareness	•The NAQS was endorsed by portfolio holders in 2020, and it is promoted on BBCs website.	On-going
10	**To investigate providing Supplementary Planning Guidance or a Supplementary Planning Document relating to 'Air Quality and Emissions Mitigation**	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2021	To be decided	BBC Planning Policy Department – Planning Policy Team Leader	LA-BBC	Not Funded	N/A	Planning	Reduced Emissions of N02 and PM	Reduced emissions	Possible measures could involve: • Supplementing Part 1 of Policy 20 of the Local Plan to provide further guidance on what reasonable steps are required in order to encourage the use of public transport.	Planning policy work is currently prioritising the preparation of the Greater Nottingham Strategic Plan (GNSP), which is likely to be published in Spring 2025 and examined later in 2025 and adopted in 2026. The GNSP will incorporate policies relating to air quality and emissions mitigation.

Measure No.	Measure	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
	Guidance for Developers'												• Supplementing Part 2 of Policy 20 of the Local Plan to say what would constitute a "significant deterioration" in air quality. • Supplementing Part 3 Policy 20 of the Local Plan to set a ratio of Electric Vehicle Charging Points to new dwellings. • Promoting Travel Choices – Encouraging developers to provide occupants with 'travel packs' regarding public transport, walking and cycling to all new built homes.	
11	**To replace cremators and associated plant including abatement system at Bramcote Crematorium**	Environmental Permits	Other	2023	2025	BBC Project Manager, Capital Works	General fund, borrowing 50-50 split with Erewash Borough Council	Funded	£1m-£10m	Implementation	Reduced Emissions	Reduced emissions due to more efficient cremators and plant	Measures to reduce pollution through replacing the current cremators to ones that using the Best Available Techniques (BAT) which are the best for preventing or minimising emissions and impacts on the environment. The new cremators are now installed, building works and installation of the new abatement plant is ongoing and will be completed summer 2025.	An update on this new measure will be in the 2026 ASR.
12	**Inspection of Permitted Processes**	Environmental Permits	Other Measures through permit systems and economic instruments	2012	On-going	BBC Public Protection – Environmental Health Technical Officer	N/A	Not Funded	N/A	On-going	Reduced Emissions	Reduction in airborne pollutants from the various processes throughout the Borough.	All scheduled inspections completed on time.	On-going
13	**To ensure that all Permitted Processes (where feasible) continue to be rated as 'low**	Environmental Permits	Measures to reduce pollution through IPPC Permits going beyond BAT	On-going	On-going	BBC Public Protection – Environmental Health Technical Officer	N/A	Not Funded	N/A	On-going	Reduced Emissions	Reduction in airborne pollutants from the various processes throughout the Borough.	The risk rating did not change in 2024, and all permitted processes were fully compliant.	On-going

Measure No.	Measure	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
	environmental risk'													
14	**To Inspect Crushers that are used within the Borough on demolition sites when notifications are received to ensure compliance with the process permit and ensure good housekeeping is being maintained**	Environmental Permits	Other measure through permit systems and economic instruments	On-going	On-going	BBC Public Protection – Environmental Health Technical Officer	N/A	Not Funded	N/A	On-going	Reduction in airborne particulates from the crushers used throughout the Borough.	Reduction in airborne particulates from the crushers used throughout the Borough	Reduction in airborne particulates from the crushers used throughout the Borough	On-going
15	**To ensure that all Dust Management Plans are reviewed and approved during the planning application stage**	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	On-going	On-going	BBC Public Protection – Environmental Health Officers	N/A	Not Funded	N/A	On-going	Reduction in airborne particulates from new developments throughout the Borough.	% of dust management plans that are reviewed and approved during the planning stage	All dust management plans were reviewed and approved during the planning stage in 2024.	On-going
16	**Co-ordination of street works**	Traffic Management	UTC, Congestion management, traffic reduction	On-going	On-going	NCC/Via EM/NCiC	NCC and NCiC revenue funding	Funded	Funded within existing resources	On-going	Reduced emissions by reducing congestion on the roads	Restrain average journey times in the morning peak to a 1% increase per year	• NCC introduced a street works permit scheme on 1 April 2020 to help plan/coordinate roadworks on its managed highway network. Street works management is undertaken by Via EM on behalf of NCC. The fundamental aim of the coordination/inspection regime is to facilitate necessary works, whilst minimising disruption by reducing duration etc. • Regular coordination meetings held between all works promoters and regional partners in additional to regular meetings between	Costs are dependent on number street works undertaken

Measure No.	Measure	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
													NH and regional partners to create a framework programme of planned works affecting strategic and local routes. Detailed journey time monitoring undertaken annually since 2005/06.	
17	**Traffic control and management contingency planning, and effective event and incident management**	Traffic Management	UTC, congestion management, traffic reduction	Ongoing	Ongoing	NCiC / NCC / Via EM / National Highways (NH)	NCiC / NCC / NH revenue funding	Funded	£100k - £500k	Implemented and ongoing	Reduced emissions of N02 and PM by reducing congestion on the roads	Restrain average journey times in the morning peak to a 1% increase per year	• The local operating agreement between NCC and NH has been comprehensively reviewed to identify the relevant parts of the network which have interaction on each authority and to put in place appropriate communication channels for management of incidents and dissemination of information. • Key locations on the local network have been identified and associated diversion routes investigated in line with the developing network hierarchy. • Incidents dealt with through agreed procedures and regular partnership meetings held. Working in close collaboration with the NCiC and NH, tactical diversion routes have been developed for the emergency diversion of traffic from any part of the strategic road network, to reduce the delay in rerouting traffic to ease congestion at the time of incidents. • Detailed journey time monitoring undertaken annually since 2005/06.	A potential barrier to this work is a lack of future revenue funding. The UTCC is a shared facility between NCC and NCiC. Estimated cost shown is NCC's annual contribution. Cost dependent on the number of incidents.

Measure No.	Measure	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
													• A traffic control centre monitors traffic movement on the local highway network (not the trunk road/motorways) and provides real time traffic control over many traffic signal installations, including on A610 at Nuthall	
18	**Traffic management control patrols on arterial route through the Borough at peak period travel times to identify hot spots where parking affects the traffic flow**	Traffic Management	UTC, Congestion management, traffic reduction	2019	On-going	NCC	NCC	Funded	Not known	On-going	Reduced emissions by reducing congestion on the roads.	Number of visits to the locations and number of observations during the visits.	•All main routes into, out of and through the Borough are patrolled regularly and enforcement action where necessary is taken. If areas suffer as a result of road works patrols are increased to ensure the smooth flow of traffic.	On-street parking patrol activities now comes directly under Nottinghamshire County Council
19	**Moving Traffic Enforcement**	Traffic Management	UTC, Congestion management, traffic reduction	2023		NCC	NCC	Funded		Planning	Reduced emissions of N02 and PM by reducing congestion on the roads	Restrain average journey times in the morning peak to a 1% increase per year	•Since June 2022, local authorities have been able to apply to the DfT for the powers to enforce moving traffic offences. Such offences include banned turns, driving in pedestrian areas, environmental weight limits, box junctions etc. • NCC was granted powers to enforce moving traffic offences in December 2024 and the first pilot sites will be the box junction at Lady Bay Bridge, West Bridgford, and the banned right turn into the ASDA off B6166, Newark. Further pilot sites are planned in 2025.	
20	**Optimisation of traffic signals**	Traffic Management	UTC, Congestion management, traffic reduction		On-going	NCC / Via EM	NCC	Funded	£1m - £10m	Implemented	Reduced vehicle emissions	Restrain average journey times in the morning peak to a 1% increase per year	SCOOT and MOVA equipped signals are relayed back to the Traffic Control Centre so that they can be altered in real time as required.	Implementation ongoing

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21	**Lane Rental Scheme**	Traffic Management	UTC, congestion management, traffic reduction	2023	2025	NCC	NCC	Not funded		Planning	Reduced emissions of N02 and PM by reducing congestion on the roads	Restrain average journey times in the morning peak to a 1% increase per year	•NCC are looking at potentially introducing a Lane Rental scheme within the county. • This would involve determining the top most congested roads in the county and then, following consultation, making an Order which will allow NCC (as the Highway Authority) to apply a levy/charge to anyone undertaking either street works (utilities) or roadworks (Council) during the peak times on these roads. • The intention of the scheme is to minimise works from taking place during the peak times, which would lead to excessive congestion (which impacts on air quality). Any income raised through the scheme can be reinvested in projects to reduce congestion/improve highways, and subsequently air quality. • The anticipated start date for a Lane Rental scheme in the county, if approved, is April 2026.	2026
22	**Promoting on the Council Webpage the Council's Electric Vehicle Charging Points Network within the Borough**	Public Information	Via the Internet	2020	On-going	BBC Parking services – Parking Manager	LA - BBC	Not Funded	Within existing resources	On-going	Reduction in $N0_2$ and PM due to raising awareness of where people can use the charge points for their electric vehicles	32 EVCP are currently promoted on BBC's website.	•The Council currently has 32 electric vehicle charging points in Beeston, Stapleford, Kimberley and Eastwood these are displayed with the postcodes for easy identification on the Council website and this is updated when necessary.	On-going 2025

Measure No.	Measure	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
													• Four new charging points to be added in Stapleford in 2025.	
23	**To continue investigating the installation of Electric Vehicle Charging Points for staff and visitors to the Council to use**	Promoting Low Emission Transport	Other	2020	On-going	BBC Parking services – Parking Manager	Provider Funded	-	-	On-going	Reduction in NO_2 and PM by encouraging Electric Vehicle use	Number of EVCP installed for visitors to the Council to use.	• Investigation into this has been undertaken and the infrastructure and power supply has already been installed within Devonshire Avenue car park. • Provider funded opportunities are available and currently two EV providers are being reviewed via procurement framework	**Infrastructure and power supply complete** On-going
24	**Review of off-street car parking charging**	Traffic Management	Emission based parking or permit charges	2020	2023	BBC Parking services – Parking Manager	LA - BBC	Funded	<10K	Completed	Reduction in NO_2 and PM	Reduced Emissions	• On-going annually. The policy document is updated only when there is significant legislation or council policy changes •Charges will also be reviewed on an ad hoc basis. • There are no plans to introduce emissions-based charging in car parks. Since January 2024, additional charges have been introduced around the borough, to those car parks that were previously free.	On-going
25	**To review and update the Electric Vehicle Infrastructure (EVI) Strategy for the Borough of Broxtowe**	Promoting Low Emission Transport	Procuring alternative refuelling infrastructure to promote low emission vehicles, EV charging, gas fuel charging	2026	On-going	BBC Climate Change Manager	LA-BBC	Not Funded	Within existing resources	Planning	Reduced Emissions	Improving Air Quality, reduced Emissions by promoting EV charging locations	• To review the Electric Vehicle Infrastructure Strategy for the Borough of Broxtowe that was approved in 2024. This Strategy will be reviewed every two years	2026
26	**To review the Climate Change and Green Futures**	Policy Guidance and Development Control	Low Emissions Strategy	2022	2027	BBC Climate Change Manager	LA-BBC	Not Funded	Within existing resources	Implementation	Reduced Emissions	Improving Air Quality	• To review the Climate Change and Green Futures Strategy for the Borough of	2025

Measure No.	Measure	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
	Strategy 2023-2027												Broxtowe that was approved in 2022. This Strategy is reviewed bi-annually	
27	**Real time travel information**	Public Information	Other	-	Ongoing	NCC/Via EM Ltd	NCC revenue funding	Funded	-	Implemented and on-going	Reduced Emissions	Restrain average journey times in the morning peak to a 1% increase per year	• Information conveyed by all forms of media (press, radio, website, social media etc.). • The Travelwise centre remains in operation 24hrs a day, every day.	Nottingham Travelwise website: https://www.itsnottingham.info/
28	**Bus service improvements**	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	2019	2025	NCC / NCiC / PT operators	DfT	Funded	>£10 million	On-going	Reduced emissions of N02 and PM due to increased passenger transport patronage.	Increased bus patronage	• Delivery of the two Bus Service Improvement Plans within Nottinghamshire has progressed well, with Nottinghamshire BSIP spending £6.3 revenue and £2.9m capital to date on various measures including enhanced bus services, ticketing improvements and infrastructure improvements. 2025/26 will focus on maintaining current service levels and delivery of major bus priority schemes.	Bus service provision is provided on a commercial basis with support from NCC where justified; and reviewed periodically. Estimated cost of measure £25m
29	**Encouraging the use of emissions standards when procuring school bus contracts and supported bus services**	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles		On-going	NCC / PT operators	PT operators	Funded		Ongoing	Reduced emissions of N02 and PM	Reduced emissions and ongoing take-up of cleaner vehicles	On-going take-up of LEVs	Funding details not known as its funded commercial private operators
30	**Bus stop clearways**	Traffic Management	UTC, congestion management, traffic reduction		Ongoing	NCC / Via EM	NCC	Funded	£50k - £100k	Implemented and ongoing	Reduced vehicle emissions	Manage parking to improve journey time reliability	Bus stop clearways are introduced at bus stops within the county, where parked vehicles are identified as impeding traffic flows. CCTV enforcement car introduced in 2016, second vehicle	The estimated cost provided is the annual cost of this measure.

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													purchased in 2018; and third vehicle introduced in 2019.	
31	**Bus infrastructure**	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services		Ongoing	NCCV	Integrated transport block funding	Funded	£100k - £500k	Implemented and ongoing	Reduced emissions of N02 and PM due to increased passenger transport patronage	Increased passenger transport patronage	An annual programme of bus infrastructure improvements is delivered as part of the integrated transport block programme, including the installation of new bus shelters and real time bus information, and the update/maintenance of all stops e.g. updating network maps to ensure all information is current and accurate.	The estimated cost provided is the annual cost of this measure.
32	**Bus fleet low emission vehicles**	Vehicle Fleet Efficiency	Promoting Low Emission Public Transport		On-going	NCC / NCiC / PT operators; NCT (operator)	DfT	Funded	£1m - £10m	Implemented	Reduced emissions of N02 and PM due to increased use of low emission vehicles	Reduced emissions and ongoing take-up of cleaner vehicles	• £5.3m of funding secured to support delivery of electric buses in Mansfield in 2026, with further investment planned for 2027. • £4.4m of BSIP funding secured to enable further investment in zero emission buses. • Bus operators continue to invest in zero emission buses.	
33	**Under 22s Young Persons' Ticket**	Transport Planning and Infrastructure	Other	2022/ 2023	2025	NCC/NCiC/PT operators	PT operators	Funded	-	Implemented	Reduction in N02 and PM due to increased passenger transport patronage	Increased passenger transport patronage	BSIP funding secured to launch an Under 22 young persons' ticket for use in Greater Nottingham and Nottinghamshire providing an extension of under 19s discounted travel to under 22s. **Update**: it was launched in September 2023	The Under 22s scheme was launched in September 2023 and is due to run until March 2025, at which point the scheme will be reviewed. Under 22 Scheme | Nottinghamshire County Council
34	**Marketing and promotion of passenger transport**	Promoting Travel Alternatives	Other	-	On-going	NCC/NCiC/PT operators	LA-NCC LA-NCiC	Funded	Within existing Resources	On-going	Reduction in NO_2 and PM as increased bus patronage	Increased passenger transport patronage	• NCC undertakes various marketing campaigns in partnership with operators and NCiC – coordinated through the Greater Enhanced Partnership.	On-going

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													• Sales & Marketing Plan continues to be delivered to help promote public transport. • Network maps produced to coincide with route/timetable changes	
35	**Sustainable Travel information for the Public**	Public Information	Via the internet	2010	On-going	BBC Climate Change Manager	LA-BBC	Not Funded	Within existing resources	On-going	Reduced Emissions of NO_2 and PM	Increased use of public transport	•The Travel Choice website provides information and advice to residents, jobseekers and businesses, on sustainable travel options within the county • School travel Toolkit (see measure **No.65**) •BBC have leaflets on safe cycling on the tram lines, bus routes, Broxtowe cycling map, Broxtowe Country and Erewash Valley routes and walking leaflets. These are all available in the Council reception. • Sustainable Travel methods are also available on the main council website.	On-going
36	**Concessionary fare schemes**	Transport Planning and Infrastructure	Other	On-going	On-going	NCC/PT operators	LA-NCC	Funded	> £10 million	On-going	Reduced emissions due to increased bus patronage.	Increased passenger transport patronage	Countywide off-peak concessionary public transport fare scheme available for the over 60s and disabled.	The estimated cost provided is the annual cost of this measure.
37	**Taxi Licensing Conditions**	Promoting Low Emission Transport	Taxi Licensing conditions	2018	On-going	BBC Licensing Team - Licensing Manager	N/A	Not Funded	N/A	On-going	Reduction in NO_2 and PM as cleaner vehicles	Recued Emissions	No vehicle older than 8 years will be licensed on first application. Petrol fuelled vehicles must be Euro 5 or above Diesel fuelled vehicles must be Euro 6	On-going
38	**To Increase the number of low emission and electric vehicles licensed as Taxis by Broxtowe**	Promoting Low Emission Transport	Taxi Licensing conditions	2020	On-going	BBC Licensing Team - Licensing Manager	N/A	Not Funded	N/A	On-going	Reduction in NO_2 and PM as cleaner vehicles	Number of LEV and Electric Vehicles licensed within the borough as Taxis	Broxtowe Borough Council currently licence 5 Electric vehicles, 44 Hybrid vehicles and 51 Euro 6 Vehicles out of the 100 Vehicles that are licensed to operate as Taxis.	On-going

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	Borough Council.												This is an increase from last year.	
39	**To Investigate the feasibility of incentives for Taxi Drivers to purchase low emission or electric vehicles**	Promoting Low Emission Transport	Taxi emission incentives	2020	2024	BBC Licensing Team - Licensing Manager	N/A	Not Funded	N/A	Planning	Reduction in NO_2 and PM as cleaner vehicles	% uptake of the incentive if implemented.	The Implementation of National Standards in November 2022 were not in relation to LEV or electric vehicles. Therefore, a project of looking at incentives for drivers of low emission vehicles needs to be looked at.	On-going
40	**To consult with Taxi Trade about Increasing the number of Low Emission and Electric vehicles licensed**	Promoting Low Emission Transport	Other	2020	2025	BBC Licensing Team - Licensing Manager	N/A	Not Funded	N/A	Planning	Reduction in NO_2 and PM as cleaner vehicles	Increase in the number of LEV and Electric Vehicles licensed within the borough as Taxis	This needs to be looked at when the results of measure 39 are known. In order to increase numbers, we need an incentive to purchase LEV and Electric vehicles .	On-going
41	**To amend the Taxi Policy as required following consultation on Increasing the number of low emission and electric vehicles licensed**	Policy Guidance and Development Control	Other policy	2020	2025	BBC Licensing Team - Licensing Manager	N/A	Not Funded	N/A	Planning	Reduction in NO_2 and PM as cleaner vehicles	Number of LEV and Electric Vehicles licensed within the borough as Taxis	The Taxi Policy will need amending once Measures 39 and 40 have been concluded	Ongoing
42	**To Replace older combination boilers and system boilers to Seasonal Efficiency of a Domestic Boiler in the UK (SEDBUK) A rated condensing boilers**	Other	Other	2020	On-going	BBC Capital Works - Capital Works Manager	LA-BBC	Funded	£10k - £50k	On-going	Reduced emissions due to more efficient boilers	Number of boilers replaced	•The replacement of the remaining less efficient units (less than 1%) is planned. The typical life cycle of a unit is 15 years. Therefore, the current stock needs to be replaced as it becomes beyond its serviceable life. This is a 15 year Rolling program	On -going
43	**To Install Air Source Heat pumps on all new builds owned by the Council (Except Section 106)**	Other	Other	2021	2024 and On-going	BBC Capital Works - Capital Works Manager	LA-BBC and Homes England	Funded	£1m/£10m	Implementation and on-going	Reduced emissions due to more efficient boilers	Increase in new builds having air Source heat pumps as a form of heating	Air source heat pumps are now installed in the Councils new build properties	On-going
44	**To investigate and consider suitable**	Other	Other	2020	2025 On-going	BBC Capital Works - Capital Works Manager	LA-BBC	In existing funds	£100k/£500k	Success of the trials for cleaner	Reduced emissions due to more	Efficiency rating of new heating	• High heat retention units were being fitted as	On-going

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	alternative replacements for the remaining electrically heated Council properties									heating technology	efficient and cleaner technologies to heat the council properties	replacements.	replacements in 2022 and this will be continuing in future years •Air source heat pumps will also be considered at suitable properties where a retro fit solution is possible.	Approx 60 properties left to replace
45	**Low Emission Vehicle Procurement**	Promoting Low emission transport	Company vehicle Procurement - prioritising uptake of low emission vehicles	2017, 2019 and 2020	2024	BBC Transport and Stores Manager	LA-BBC	Funded	£10k - £50k	On-going	Reduced Emissions of N02 and PM	Reduction in $N0_2$ and PM due to cleaner vehicle technology	• All new fleet vehicles at BBC are Euro6 emissions complaint. There are 95 fleet vehicles, and they are on a 12-year replacing rolling programme. • BBC has purchased two new Euro 6 Refuse Collection vehicle in the financial year 24/25 replacing two older vehicles. • BBC currently operate a fleet of 9 electric vans	On- going
46	**To develop a plan for future infrastructures to support growth in BBC's Electric Fleet and the domestic use of Electric Vehicles**	Vehicle Fleet Efficiency	Other	2020	2025-2026	BBC Transport and Stores Manager	LA-BBC and External grant – Grant provider not currently known	-	>£10 million	Planning	Reduction in $N0_2$ and PM due to increased use of low emission vehicles.	Reduction in $N0_2$ and PM due to cleaner vehicle technology	A review is currently being undertaken to determine the necessary infrastructure to accommodate the move to an electric fleet. This is being undertaken in partnership with Midlands Zet Zero Hub.	Prohibitive cost 2025/2026
47	**To investigate the viability of obtaining equipment and software that will record BBC Fleet Vehicle driver's behaviour, and enable a training programme to be established to**	Vehicle Fleet Efficiency	Driver training and ECO driving aids	2020	2025-2026	BBC Transport and Stores Manager	LA-BBC	Funded	Within existing resources	Planning	Reduction in $N0_2$ and PM due to improved driving efficiency.	Number of employees that have undergone driver training.	An investigation into the viability of obtaining equipment and software that will record driver behavior and enable a training programme to be established. **Update** – a Business Case for the purchase and subscription of Tachograph analysis software has been submitted for ICT review.	2025/26

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	improve efficiency												**Update –** The above business case is having to be redrafted with a new software supplier and the identified provider did not meet the security requirements demanded by the Head of ITC.	
48	**Capital Fleet Vehicle Replacement for HGV's**	Vehicle Fleet Efficiency	Other	2020	2021-2024	BBC Transport and Stores Manager	LA-BBC	Funded	£500k - £1 Million	On-going	Reduction in NO_2 and PM due to replacement of older HGV's.	Number of replacement HGV's	• The Capital Vehicle Fleet replacement programme for HGV's (Refuse Freighters 26 Tonnes) identified for replacement will be replaced with Euro standard engines (Euro 6 onwards). • £750k per annum • Before purchasing, consideration will be given based on practicality and economics of the adoption of new technologies that have come to market. This includes Electric and Hydrogen Propulsion methods.	On-going
49	**Vehicle Emissions Testing**	Vehicle Fleet Efficiency	Testing Vehicle Emissions	On-going	On-going	BBC Transport and Stores Manager	LA - BBC	Not Funded	Within existing resources	On-going	Reduction in NO_2 and PM as regular serviced and maintained vehicles to ensure they are operating efficiently.	Reduced emissions	•All BBC Fleet vehicles are annually emission tested in house prior to MOT Emission testing. • BBC also undertakes additional emissions tests on all fleet vehicles if any new fuel or engine components have been changed. This is to ensure vehicle emission compliance. • **Update:** All BBCs commercial fleet of vehicles (95) are now being fuelled with HVO instead of Diesel.	On-going On-going
50	**To provide all new allotment tenants within the borough, a Tenancy agreement**	Public Information	Other	2012	On-going	BBC Parks and Open Spaces – Environmental Development Officer	LA-BBC	Not Funded	N/A	On-going	Reduction in Particulates due to reduction of bonfires on site	Reduction in bonfires from allotments within the borough.	All new allotment tenants within the borough are provided with a tenancy agreement which includes the following	On-going

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	regarding bonfires.												information: bonfires should only be used on very rare occasions, and due consideration for other allotment holders and neighbouring properties must be used at all times. They must only be in the period 1st October to 31st March and only used to burn non compostable garden waste that is produced on the allotment.	
51	**To regularly communicate with all allotment providers in the borough to discourage the use of bonfires to dispose of garden waste**	Public Information	Other	2023	2024	BBC Parks and Open Spaces – Environmental Development Officer	LA-BBC	Not Funded	N/A	Planning	Reduction in Particulates due to reduction of bonfires on site	Reduction in bonfires from allotments within the borough.	In January 2026 the allotment newsletter will include a section about bonfires and discouraging them, and using alternative methods to dispose of garden waste	2026
52	**To investigate the feasibility of increased provision for cycle parking in the Borough**	Alternatives to private vehicle use	Other	2022	2025	BBC Head of Economic Development and Regeneration.	LA - BBC	Not yet identified	Not yet calculated	Planning	Reduced Emissions of NO_2 and PM	No of cycle parking spaces in the borough	A feasibility study has not been undertaken yet. However, several projects were undertaken in 2023 to increase cycling provision in the Borough. These projects are discussed in this Table as separate measures **Update:** A new cycle hub was installed in Toll bar square, Kimberley in 2024.	Three Sites and routes being investigated in 2025
53	**To investigate the provision of an E bike Scheme within the borough**	Alternatives to private vehicle use	Other	2024	2026	BBC Head of Economic Development and Regeneration.	LA-BBC, UKSPF and private sector	Funded	<£10k	Planning	Reduced Emissions of NO_2 and PM	Number of Kilometres cycled	To investigate the provision of an E bike Scheme within the borough. On-going discussion with Lime bikes. Implementation expected early 2025	Update will be provided in the 2026 ASR
54	**Improving the cycle network in Stapleford**	Transport Planning and Infrastructure	Cycle Network	2022	2026	BBC Economic Development - Regeneration Projects Manager	Stapleford Towns Deal	Funded	£1m-£10m	Planning	Reduced Emissions of NO_2 and PM	Reduced emissions due to increase in cycling	Funds have been sourced through the Stapleford Towns Deal to improve and encourage cycling within Stapleford by improving the cycling infrastructure. Project	Delays in approval and External stakeholder engagement may cause issues (Highway Authority), Rising costs for required LTN/120 Standards, changes and adaptations to cycle path routes have delayed projects.

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													Adjustment request was approved by DLUHC approval for amended scheme to progress, further work continues to meet the grant fund timeline for the amended	
55	**To develop and Improve the Cycle Network from Newdigate Street, Kimberley to Low Wood Road, Nuthall**	Transport Planning and Infrastructure	Cycle Network	2025	2026	BBC Kimberley Means Business Manager	Kimberley Means Business project	Funded	£500k - £1m	Planning	Reduced Emissions of NO_2 and PM	Reduced emissions due to increase in cycling	• To develop and improve cycle routes between Kimberley School on Newdigate Street and Low Wood Road.as part of the Kimberley Means Business project. • To Improve the route, the lighting and surfaces of other paths used by walkers and cyclists.	Late 2025 to 2026 An update will be provided in the 2026 ASR
56	**Cycle Repair Workshops**	Alternatives to Private Vehicle use	Other	2022	2023	BBC Economic Development - Regeneration Projects Manager/ RideWise	Stapleford Towns Deal/ RideWise	Funded	£10-£50k	Implemented	Reduced Emissions of NO_2 and PM	Reduced emissions due to increase in cycling	RideWise continue to support the Cycle Hub, which has been extended for another year to Mar 26. They have supported 1366 people to date with bike repairs.	Future grant funds to continue to the service past the Stapleford Town Deal funding allocation.
57	**Cycling network and Infrastructure**	Transport Planning and Infrastructure	Cycle network	2018/19	On-going	NCC / Via EM	LGF/ DfT / developer contributions	Not Funded	Various	Planning	Reduced Emissions of N02 and PM	Increased cycling trips	• Cycling infrastructure improvements are delivered as part of NCC's annual integrated transport programme. However, costs are extremely high, so NCC requires external funding to deliver them. NCC submits bids to Active Travel England for funding and districts secure developer contributions for improvements as part of new developments. The D2N2 Local Cycling and Walking Infrastructure Plan (LCWIP) will be used to help identify and prioritise future	• The D2N2 LCWIP will be used to help identify potential future cycle improvement schemes. • Any future cycle improvement schemes will be subject to funding availability, feasibility consultation, and approvals. • A potential barrier to such projects is the availability of funding, feasibility and public acceptable of proposals.

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													improvements should DfT funding be made available for their delivery. Other small-scale cycling improvements are developed and delivered as part of the annual integrated transport programme and through developer funded improvements	
58	**Cycling networks as part of Active Travel Funding (ATF) Tranche 4**	Transport Planning and Infrastructure	Cycle network	2023	On-going	NCC	Active Travel Fund (ATF)	Funded	£1 million - £10 million	On-going	Reduced Emissions of N02 and PM	Increased cycling trips	• In May 2023, the government announced that NCC were successful in securing £1.1m from Tranche 4 of the Active Travel Fund (ATF), for the development of a new walking and cycling facility along Baulk Lane, Stapleford. The scheme is subject to feasibility, consultation, and County Council Cabinet Member approval.	
59	**Cycling network and infrastructure as part of Towns Fund**	Transport Planning and Infrastructure	Cycle network	2015	On-going	BBC/NCC / Via EM	Towns Fund	Funded	£1 million - £10 million	On-going	Reduced Emissions of N02 and PM	Increased cycling trips	• Cycle hub installed at Beeston Train Station in 2015 to integrate with bus/rail services. • BBC's Town Fund includes potential cycle infrastructure (funding amount to be determined by Board and scheme proposals subject to feasibility, consultation, and County Council Cabinet Member approval).	A potential barrier to such projects is lack of future revenue funding. The Towns Fund funded proposals are still subject to feasibility, consultation, and County Council Cabinet approval.
60	**Cycle training**	Promoting Travel Alternatives	Promotion of cycling	Circa 1970s	Ongoing	NCC	DfT funding/PH funding	Funded	Various	Implemented and On-going	Reduced Emissions of N02 and PM	Increased cycling trips	• Across the county, 12,618 people received cycle training during 2024/25 and in Broxtowe specifically, training was delivered to 2,188 people.	Implementation is ongoing.

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61	**Marketing of cycling**	Promoting Travel Alternatives	Promotion of cycling	2010 and 2017	On-going	NCC	NCC	Not Funded	within existing resources	Implemented and on-going	Reduced Emissions of N02 and PM due to increased cycling uptake	Increased cycling trips	• Marketing of cycling is undertaken in a variety of formats for both commute and leisure trips. Various NCC campaigns have been undertaken including 'cycling week', 'Notts Routes & Rides' and cycle maps. • NCC's website and Travel Choice webpages provide information on cycling across the county (for residents and businesses	Travel Choice website: Nottinghamshire County Council Cycle
62	**Marketing of walking**	Promoting Travel Alternatives	Promotion of walking	-	On-going	NCC	NCC	Funded	Within existing resources	Implemented and on-going	Reduced Emissions of N02 and PM due to more people walking	Increased walking trips	• General promotion (e.g. website and literature) ongoing. • NCC's website and Travel Choice webpages provide information on alternatives to using private vehicles, including cycle maps, leisure 'Routes and Rides' and the Rights of Way network	Travel Choice website: Nottinghamshire County Council Walk
63	**Pedestrian infrastructure improvements**	Transport Planning and Infrastructure	Other	2020	On-going	NCC / Borough and District Councils	NCC and various other sources of funding e.g. S38, S278 and S106	Funded	£100k to £500k	On-going	Reduction in NO_2 and PM emissions as more people are walking	Increased walking trips	• Pedestrian improvements (e.g. pedestrian crossing, dropped kerbs, footways) are developed and delivered as part of NCC's annual integrated transport programme. • In addition to the integrated transport block funding, improvements are also delivered using funding secured through the planning process (e.g. S38, S106, S278).	• NCC's annual integrated transport programme is published on the Council's website Decision Details: Highways Capital and Revenue Programmes Update • Schemes identified are subject to feasibility and availability of funding. • A potential barrier to such schemes is the lack of future funding.
64	**Encouraging the use of emissions**	Promoting Low	Company Vehicle Procurement - Prioritising	-	Ongoing	NCC/PT operators	PT operators	Funded	-	On-going	Reduced Emissions	Reduced Emissions and on-going	• On-going take-up of LEV	Funding details not known as its funded commercial private operators

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	standards when procuring school bus contracts and supported bus services	Emission Transport	uptake of low emission vehicles								of N02 and PM	take-up of cleaner vehicles		
65	**School travel plans**	Promoting Travel Alternatives	School Travel	2000	On-going	NCC	NCC	Not Funded	£10k - £50k	Completed	Reduced Emissions of N02 and PM if alternative methods of sustainable travel are used	Restrain average journey times in the morning peak to a 1% increase per year	• Following a trial with four pilot schools in 2019/20, the online school travel toolkit was rolled out to all County schools during the 2020/21 academic year. • The Nottinghamshire School Travel Toolkit provides school children, parents and staff with information and advice on improving travel to and from Nottinghamshire's schools.	Costs detailed are for the School Travel Toolkit only. There currently is not any funding available for delivering travel planning to individual schools. Link to School travel toolkit: https://www.nottinghamshire.gov.uk/education/travel-to-schools/school-travel-toolkit
66	**Web based journey planners**	Public Information	other	2019	On-going	NCC	NCC	Funded	within existing resources	Implemented	Reduction in NO_2 and PM due to increase in sustainable travel	Increased walking/cycling/ passenger transport trips	• Nottinghamshire is part of the national, multi-modal Traveline journey planner. • Web links to the Traveline site are publicised and available from NCC's website. • New Live Travel Suite to be launched in May 2025 to replace Traveline offering enhanced features for journey planning.	Journey planner on NCC's website: Plan a journey using public transport | Nottinghamshire County Council Web based tools are also included on NCC's Travel Choice website: Nottinghamshire County Council Journey planner
67	**Personalised travel planning**	Promoting Travel Alternatives	Personalised Travel Planning	2010	On-going	NCC / AECOM	DfT Access Fund	Funded	£50k - £100k	Completed	Reduction in NO_2 and PM due to increase in sustainable travel	Restrain average journey times in the morning peak to a 1% increase per year	• NCC have delivered Personalised Travel Planning (PTP) to residents, jobseekers, workplaces and schools across various parts of the county, over a number of years: including Beeston, West Bridgford, Newark, Ashfield, Mansfield and Worksop • The 2019 DfT Access Fund funded PTP project targeted 4,976 households	

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													in Daybrook: with 1,188 households opting to take part in the project and receiving travel advice. • The Capability Fund funded PTP project has delivered to over 550 households and 400 employees in Bassetlaw and Ashfield to date • Most recently: - The 2022/23 Capbility Fund funded PTP project targeted 1,706 households in Sutton-in-Ashfield & West Bridgford; with 343 households engaged, 7 community engagement events, Dr Bike maintance sessions, adult cycle training taken up by 81 residents & 4 business grants (3 NHS Hospitals/surgeries and a private company). • - The 2023/24 Capability Extension Fund funded PTP project targeted 4,680 households in West Bridgford, with 1,029 households engaged. • - The 2024 Capabiltiy Fund funded PTP project is to be delivered in Stapleford, during Summer 2025, aiming to target 3,500 households.	Future PTP will be delivered should revenue funding sources be identified and secured for its delivery. Future capbility funding will go directly to EMCCA to distribute to LAs
68	**Car Lease Scheme for BBC employees**	Promoting low emission transport	other	2021	On-going	BBC Human Resources - Human Resources Manager	LA-BBC	Not Funded	-	Implementation	Reduction in $N0_2$ and PM	Number of employees leasing ULEV	• BBC has introduced a Car Lease Scheme in 2021 for employees, to encourage and	Increase car costs also may limit affordability.

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													uptake in ULEV to reduce emissions. This also includes electric vehicles. • 5 employees have made use of the scheme, utilising EV/ULEV cars. 2 employees have returned vehicles, and 3 vehicles are currently being leased. One of those employees is on their second vehicle.	
69	**Encouraging the use of Hybrid or Electric vehicles for BBC employees**	Promoting Low Emission Transport	Other	2020	On-going	BBC Payroll and Job Evaluation Manager	LA-BBC	Funded	Within existing resources	Implementation	Reduction in $N0_2$ and PM	Number of employees using hybrid or electric vehicles	•To encourage employees of BBC to purchase hybrid vehicles and electric vehicles for their personal and business use. •Twelve employees used a personal Electric vehicle and five used a ULEV in 2024.	On –going
70	**Investigate the feasibility of a Council staff car sharing**	Alternatives to Private Vehicle Use	Car Clubs	2020	On-going	BBC Human Resources - Human Resources Manager	N/A	Not Funded	N/A	Planning	Reduction in $N0_2$ and PM	No of staff car sharing	Due to Covid-19 being prevalent and it is transmissible in confined spaces, this measure has been put on hold temporarily. However, staff in the future will be encouraged to travel together. An update will be provided in the next ASR. Car clubs are going be explored in 2025/26 An understanding of the infrastructure and availability/feasibility will be key to determining success.	No progress
71	**Promoting travel choices - Consideration of car club into the county**	Alternatives to private vehicle use	Car Clubs	2023		NCC	NCC	Not Funded		On-going	Reduced emissions of N02 and PM	Restrain average journey times in the morning peak to a 1% increase per year. A reduction in staff business emissions	• NCiC scheme introduced in 2014, with the provider reviewed in 2018. Expansion of scheme into county dependent on its success, which is still unclear. • Work has been undertaken to look	Dependent on the determination of business case and commercial operator coming forward. Barriers include financial risk, organisational culture (i.e. using personal cars less) and specific service needs.

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												and cost, through both a car club and a wider review of staff travel habits.	at the feasibility of a partnership with a Car Club operator in the county, for both residents and internal use (i.e. staff travel). The work will feed into a wider fleet review and review of staff business travel, with a few more aspects to be expanded upon. Funding for implementation to be determined.	
72	**Cycle to work Scheme**	Promoting Travel Alternatives	Promotion of cycling	2009	On-going	BBC Payroll and Job Evaluation Manager	N/A	Not Funded	Within existing resources	On-going	Reduction in NO_2 and PM	No of bikes purchased through scheme	•Cycle to work Scheme – to assist and give tax relief on bike purchases for employees of BBC. •Five employees purchased a bike through this scheme in 2024. Since the scheme started 194 employees have purchased bikes through the scheme. Mileage when using a bicycle is now paid at a higher rate of 45p per mile.	On-going
73	**Flexible working arrangements**	Promoting Travel Alternatives	Encourage/Facilitate Home Working	2012	On-going	NCC and BBC Human Resources - Human Resources Manager	N/A	Not Funded	N/A	On-going	Reduction in NO_2 and PM due to employees not commuting	Restrain average journey times in the morning peak to a 1% increase per year	•NCC operates flexible working arrangements for all its staff. •BBC New Ways of Working was introduced in 2019, which allows and encourages employees to work from home when practical to do so.	On-going Agile working at BBC continues to benefit the organisation and give employees flexibility to effectively discharge their duties and minimize unnecessary travel.
74	**To reschedule the dry recycling waste rounds to reduce fuel consumption and improve efficiency**	Vehicle Fleet Efficiency	Other	2020	2025	BBC Environment – Head of Environment	N/A	Not Funded	N/A	Planning	Reduction in NO_2 and PM due to efficient routes.	Reduced emissions	The round reschedule is currently in progress. Completion is anticipated in September 2025.	Once the main review has been undertaken, the route optimisation software that has been purchased will help to ensure that the on-going refuse rounds are working as efficiently as possible.
75	**To reschedule the green waste rounds to reduce fuel consumption**	Vehicle Fleet Efficiency	Other	2020	On-going	BBC Environment – Head of Environment	N/A	Not Funded	N/A	Planning	Reduction in NO_2 and PM due to efficient routes	Reduced emissions	The garden waste rounds are dictated by the number of subscribers to the service, and this is reviewed on an annual basis.	Once the main review has been undertaken, the route optimisation software that has been purchased will help to ensure that the on-going refuse rounds are working as efficiently as possible.

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	and improve efficiency												However, the round reschedules, which is currently in progress will help support this.	
76	**Development of ITSO public transport smartcard ticketing**	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	2014	2024	NCC/NCiC/PT operators	DfT	Funded	-	Completed	Reduction in NO_2 and PM due to increased passenger transport patronage	Increased passenger transport patronage	• Integrated ticketing strategy developed in 2014/15. A new smartcard platform was introduced in 2014 and the Robin Hood card scheme was introduced in 2015. All the major bus operators have now introduced contactless payments for their own ticketing products alongside the Robin hood card and this was completed in around March 2020. • The first multi-operator contactless ticketing system in the UK outside London was launched in the Nottingham area in May 2022. Public transport users can now pay a single daily capped fare across the majority of the city's buses and trams using their chosen contactless payment method.	The Nottinghamshire Enhanced Partnership has now delivered and launched a Multi Operator ticketing (MOT) in Newark and looking to launch a Mansfield MOT in September 2025.
77	**To undertake a data quality review of boiler information held for Council Properties to determine whether they have been included in the replacement programme.**	Other	Other	2020	2024	BBC Capital Works - Capital Works Manager	LA-BBC	Funded	£10k - £50k	Complete	Reduced emissions due to more efficient boilers	Identifying the number of boilers that need replacing	• BBC will be undertaking a data quality review on boiler information held for the properties in question as we believe these may have already been incorporated in replacement programmes - this was completed in 2024.	**Complete**
78	**To investigate and consider new heating technologies that are more efficient, effective and**	Other	Other	2020	2021 and ongoing	BBC Capital Works - Capital Works Manager	Better Care fund	Funded	£50k - £100k	Complete	Reduced emissions due to more efficient boilers	Success of the trials for cleaner heating technology	•Currently reviewing the development of hydrogen technology for boilers. Studies show that the emissions are reduced greatly.	**Complete** - The trail was completed and included in future specifications to install air source heat pumps instead of gas boilers if possible

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	produce lower emissions				2023								Subject to existing networks and Government. •A trial was undertaken for fitting air source heat pumps in 7 new builds in 2021 and in 5 new builds in 2022.	Air source heat pumps are now installed in the Councils new build properties (except Section 106)
79	**Investigate ways to decarbonise BBC's fleet through alternative fuels**	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	2021	2024	BBC Environment - Head of Environment	LA-BBC	Not Funded	£100k - £500k	Complete	Reduction in $N0_2$ and PM	Reduced emissions	• A report was submitted to Cabinet in July 2023, which approved the transition to HVO. The transition took place in April 2024.	**Complete** – all refuse vehicles and fleet vehicles (where appropriate) are HVO. This has resulted in a 95% reduction in fleet emissions and a 31% reduction in the Council's own operation carbon footprint.
80	**Installation of 7kW electric vehicle (EV) chargepoints at BBC Kimberley Depot for Public Sector Fleet Vehicles**	Vehicle Fleet Efficiency	Other	2023	2025	BBC Transport and Stores Manager	Future Transport Zones (FTZ) funding	Funded	£10k - 50k	Completed	Reduced Emissions of N02 and PM	Reduction in N02 and PM due to cleaner vehicle technology	• Four new 7kW electric vehicle (EV) charge points were installed at Kimberley Depot (increasing the number to six.) in 2024 • Nottingham City Council was awarded a grant as part of the Future Transport Zones (FTZ) funding, to develop and operate an EV charging network across the Nottingham, Nottinghamshire, Derby and Derbyshire (D2N2) region. The charge points when installed will form part of a network of public sector organisations who have agreed to share the EV chargepoints which will enable the delivery of collective efficiencies in EV operations across the region. • These chargepoints are for the use of any Council operated fleet across the region. **BBC's financial contribution for these was: £15,796**	**Complete**
81	**To write an Electric Vehicle Infrastructure**	Promoting Low Emission Transport	Procuring alternative refuelling infrastructure to	2023	2024	BBC Climate Change Manager	LA-BBC	Not Funded	Within existing resources	Completed	Reduced Emissions	Improving Air Quality, reduced Emissions by	The Strategy is to facilitate access to a reliable Electric Vehicle Infrastructure	**Complete - -** Adopted in July 2024.

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	(EVI) Strategy for the Borough of Broxtowe		promote low emission vehicles, EV charging, gas fuel charging									promoting EV charging locations	(EVI) for residents, businesses and visitors, which will help to support the decarbonisation of transport and travel within the Borough. • The Management Strategy for the expansion of EVI across Broxtowe Borough is going to Cabinet in July 2024. • **UPDATE** – This was approved in July 2024	
82	**To revoke the current Smoke Control Orders and introduce a new single Smoke Control Order which will be supported the Smoke Control Order Enforcement Policy**	Policy Guidance and Development Control	Other Policy	2023	2024	BBC Public Protection - Senior Environmental Health Officer	Defra	Funded	£10k - £50k	Completed	Reduction in Particulates	% of people not complying with the Enforcement Policy	Broxtowe Borough Council has also formally adopted a Smoke Control Order Enforcement Policy in October 2023 to support enforcement of its Order and enable improved future regulation of the issue. Public consultation will be undertaken in 2024 about Revoking the Previous smoke control Orders and to introducing a new Smoke Control order (Minus the moored vessels) The Council have therefore made a Smoke Control Orders Revocation Order, and this will be consulted on and subject to Secretary of State approval, be brought into effect replacing all current smoke control orders.	**Complete -** The Order was sealed by BBC and approved by Defra in late 2024.
83	**To Undertake phase two of the public consultation on Smoke Control Areas to Revoke the Previous Smoke Control Orders and to introduce the new Smoke**	Public Information	Other	2022	2024	BBC Public Protection - Senior Environmental Health Officer	Defra	Funded	<£10k	Completed	Reduction in Particulates	% of people that responded to the public Consultation	To undertake public consultation on Smoke Control Areas. Revoking the Previous smoke control Orders and to introducing the new Smoke Control order (Minus the moored vessels) This was undertaken in 2024.	**Complete**

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	Control order (minus the moored Vessels)													
84	**Undertaken Phase 1 public consultation on Smoke Control Areas introducing the new Smoke Control order including Moored Vessels**	Public Information	Other	2022	2023	BBC Public Protection - Senior Environmental Health Officer	Defra	Funded	<£10k	Completed	Reduction in Particulates	% of people that responded to the public Consultation	To undertake public consultation on Smoke Control Areas introducing the new Smoke Control order. This was undertaken in 2023	**Complete**
85	**To write a Smoke Control Order Enforcement Policy and to get BBC to formally adopt it.**	Policy guidance and Development Control	Other Policy	2022	2023	BBC Public Protection - Senior Environmental Health Officer	LA-BBC	Funded	Within existing resources	Completed	Reduction in Particulates	Improving Air Quality by taking action to reduce Emissions	• To write a Smoke Control Order Enforcement Policy and to get BBC to formally adopt it**.** • Broxtowe Borough Council has also formally adopted a Smoke Control Order Enforcement Policy in October 2023 to support enforcement of its Order and enable improved future regulation of the issue.	**Complete**
86	**Investigation into whether it is feasible for free parking in the borough car parks for Electric and Hybrid vehicles**	Traffic Management	Emission based parking or permit charges	2020	2021 2023	BBC Parking services – Parking Manager	LA - BBC	Funded	Currently unknown	Completed	Reduction in NO_2 and PM by encouraging ULEV to utilise free parking	% Usage of spaces for Electric and Hybrid vehicles if this measure is introduced	•There are currently 28 x 7KW Electric Vehicle spaces, an x 2 rapid Electric Vehicle charging spaces, totalling 30 spaces. • To be explored as part of the new Electric Vehicle strategy. It is currently not free to park and this would need consideration by members Any free provision would have to be managed by limiting time, otherwise it would reduce the availability of spaces for Electric Vehicles **UPDATE:** BBC's Committee reviewed the report in October 2023 and voted	**Complete.**

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													against free parking in the borough for Electric and hybrid vehicles.	
87	**To take on the provision of the cycle store at Beeston's Railway Station**	Alternatives to private vehicle use	Other	2022	2024	BBC Head of Asset Management	LA-BBC	Funded	<£10k	Completed	Reduced Emissions of NO_2 and PM	Number of bikes using the cycle store	Due to the risk of closure, BBC have taken over the provision of the cycle store at Beeston Railway station, to ensure that it is still available for the public to use.	**Complete**
88	**To install a cycle track on the Ilkeston Road Recreational Ground in Stapleford**	Promoting travel Alternatives	Promotion of Cycling	2022	2023	BBC Project Manager, Capital Works	Stapleford Towns Deal	Funded	£100k-£500k	Completed	Reduced Emissions of NO_2 and PM	Reduced emissions due to increase in cycling	Funds have been sourced through the Stapleford Towns Deal to improve and encourage cycling within Stapleford. A new cycle track was installed on the Ilkeston Road Recreational Ground in Stapleford in Works completed in March 2023	**Complete**
89	**To install a Cycling proficiency track to assist children/adults when learning to ride bikes**	Promoting travel Alternatives	Promotion of Cycling	2022	2023	BBC Project Manager, Capital Works	Stapleford Towns Deal	Funded	£100k-£500k	Completed	Reduced Emissions of NO_2 and PM	Reduced emissions due to increase in cycling	Funds have been sourced through the Stapleford Towns Deal to encourage cycling within Stapleford. A new cycle proficiency track was installed on the Ilkeston Road Recreational Ground in Stapleford in Works completed in March 2023	**Complete**
90	**To install bicycle parking stands at the Ilkeston Road Recreational Ground in Stapleford**	Promoting travel Alternatives	Promotion of Cycling	2022	2023	BBC Project Manager, Capital Works	Stapleford Towns Deal	Funded	£10k-£50k	Completed	Reduced Emissions of NO_2 and PM	Reduced emissions due to increase in cycling	Funds have been sourced through the Stapleford Towns Deal to encourage cycling within Stapleford. Nine new bicycle parking stands was installed on the Ilkeston Road Recreational Ground in Stapleford in Works completed in March 2023	**Complete**
91	**To investigate the feasibility of BBC employees having staff discounts with NET when using their trams**	Alternatives to private Vehicles use	Other	2022	2023	BBC Human Resources - Human Resources Manager	LA-BBC	Not Funded	-	Completed	Reduction in NO_2 and PM due to increase in sustainable travel	Restrain average journey times in the morning peak to a 1% increase per year	To investigate the feasibility of BBC employees having staff discounts with NET when using their trams. Employees were surveyed to express an interest to determine feasibility of progressing discussions.	

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													UPDATE: Following discussions with NET in 2022, the employer must buy the tickets in advance – which makes feasibility difficult. Employees were asked to express an interest in potential tram discounts, but the interest was minimal.	**Complete**
92	**Car sharing scheme**	Alternatives to private vehicle use	Car & lift sharing schemes	Early 2000s	2023	NCC	Local Authority	Funded	<£10k annually	Completed	Reduction in NO_2 and PM	Restrain average journey times in the morning peak to a 1% increase per year	• Covid-19 pandemic has impacted on people's travel to work patterns/behaviours, which has impacted significantly on car sharing demand. • A review of the car sharing scheme found 3,250 members were registered, but not active. Activity and use of the scheme has been minimal for a number of years and consequently funding could not be justified and hence the licence has not been renewed.	**Complete** Funding could not be justified and hence licence has not been renewed.
93	**Development of Local Cycling and Walking Infrastructure Plan (LCWIP)**	Transport Planning and Infrastructure	Cycle network	2019	2023	NCC/NCiC/DCC/DCiC/borough and district councils/Sustrans/other stakeholders	DfT funding	Funded	Within existing resources	Completed	Reduced Emissions of N02 and PM	Increased levels of cycling	• A D2N2 Local Cycling and Walking Infrastructure Plan (LCWIP) has been developed. • Data collected; three stakeholder events held to date, and further public engagement on the D2N2 LCWIP took place between December 2022 and March 2023. • The D2N2 LCWIP will become the responsibility of the East Midlands Combine County Authority	Future countywide cycling infrastructure priorities will be identified through technical analysis undertaken as part of the LCWIP development (which along with other priorities, takes into consideration air quality) and will be subject to feasibility, consultation, and County Council Cabinet Member approval. The D2N2 LCWIP public engagement focused on cycle corridors only, and not specific schemes. Any future cycle improvement schemes will be subject to funding availability, feasibility consultation, and approvals.

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													(EMCCA) and will be reviewed and continue to evolve and develop over time.	
94	**Electric Vehicle Fleet Procurement for small vans below 2 tonnes**	Vehicle Fleet Efficiency	Other	2019	2023	BBC Transport and Stores Manager	LA-BBC	Funded	£100k-£500k	Completed	Reduced Emissions of N02 and PM	Reduction in $N0_2$ and PM due to cleaner vehicle technology and the procurement of two electric fleet vehicles.	•The Council currently has a fleet of 9 small vans (below 2 Tonnes). Two of these vehicles have been replaced with electric vehicles at a cost of £45k. •From 2021 to 2023 all 9 vehicles (small vans) have now been replaced with Electric Vehicles.	**Complete**
95	**Encouragement of low-emission public transport fleets**	Vehicle Fleet Efficiency	Vehicle Retrofitting programmes	2018	2022	NCC/Operators	NCC/OLEV - Clean Bus Technology Fund	Partially Funded	£500k-£1Million	Completed	Reduction in $N0_2$ and PM due to increased use of low emission vehicles.	Reduced Emissions and On-going take-up of cleaner vehicles	• NCC has invested £0.94m from the Clean Bus Technology Fund in Feb 2018 to retrofit older buses. This is in addition to operator investment in new Euro VI standard buses on some routes • Trentbarton invested in Euro VI vehicles for indigo and Rainbow 1 in 2020	**Complete**
96	**Review of on-streetcar parking in and around the AQMA**	Traffic Management	Workplace Parking Levy, Parking Enforcement on highway	-	2022	NCC	LA-NCC	Funded	-	Completed	Restrain average journey times in the morning peak to a 1% increase per year	Reduced emissions by reducing congestion on the roads in and around the AQMA	• Introduction of junction protection and targeted roadside parking restrictions (including bus stop clearways) along feeder corridors into the AQMA to help traffic flows/journey times. • Parking restrictions already in place, no additional side-road/off-line locations currently identified as requiring restrictions to aid traffic flow; but annual programmes of such schemes are developed should	**Complete** **Complete**

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													any be required in the future	
97	**To raise awareness of anti-idling legislation with local bus companies and Taxi's that operate within the borough**	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	2020	2021 2022	BBC Public Protection – Environmental Health Officer	N/A	Not Funded	N/A	Completed	Reduced Emissions from raising awareness	Improving Air Quality, reduced Emissions and Raising awareness	All local bus companies that operate within the borough were notified of anti-idling legislation and the associated health affects in 2021. All taxis that operate within the borough were notified of anti-idling legislation and the associated health affects via a leaflet in 2022	**Complete** **Complete**
98	**Increase the number of Electric Vehicle Charging Points in the Borough Car Parks.**	Transport Planning and Infrastructure	Other	2020	2021	BBC Parking services – Parking Manager	BP charge master	Funded	70K for 14 x 7kw units and £90K for 2 x 50kw units	Completed	Reduction in NO_2 and PM due to increased use of electric vehicles.	% Usage of EVCP	•This is undertaken in association with BP chargemaster, who fund the capital and revenue for number of years BBC lose income by dedicating spaces solely for Electric Vehicle use. . 2 x rapid fast charges were installed at Victoria Streetcar park Stapleford in 2021, BBC has dedicated 4 spaces for Electric Vehicle use.	**Complete**
99	**To Investigate providing all allotments within the borough with green waste recycling collections**	Other	Other	2020	2021	BBC Environment - Head of Environment	LA-BBC	Not Funded	Within existing resources	Completed	Reduction in Particulates due to reduction of bonfires on site	Reduction in bonfires from allotments within the borough.	• Multi team meeting taken place to discuss the feasibility of this. Several factors need resolving to determine whether this is a viable option. • One allotment holders' group has been written too, in order to ascertain the extent of the waste produced. • Update: The investigation determined that providing all allotments with a garden waste collection was not feasible.	**Complete**

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100	**To consult all tenants on one allotment site in the borough about a total ban on bonfires on allotment sites as a means of disposing of green waste**	Public Information	Other	2020	2021	BBC Parks and Open Spaces – Environmental Development Officer	LA-BBC	Not Funded	N/A	Complete	Reduction in Particulates due to reduction of bonfires on site	Reduction in bonfires from allotments within the borough.	A questionnaire was sent to all allotment holders at one allotment site re waste. 118 questionnaires were sent, 57 were returned. 14 supported a ban, 41 said No, 2 didn't answer. 54 of the responses said that they do compost their green waste.	**Complete**
101	**Installation of new cycle stands in the Borough**	Alternatives to private vehicle use	Other	2020	2021	BBC Head of Asset Management	LA - BBC	Not Funded	Within existing resources	Completed	Reduced Emissions of N02 and PM	No of cycle parking spaces in the borough	• New cycle stands were installed at Beeston Train station and in Eastwood and Beeston Town Centres. Improved stands Kimberley Leisure Centre and Council Offices.	**Complete**
102	**To have Air Quality as a priority in the Nottinghamshire Joint Health and Wellbeing Strategy and the Nottinghamshire ICS Green Plan [led by the NHS].**	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2021	2021	NCC and NHS	N/A	Funded	N/A	Completed	Reduced Emissions from raising awareness	Raising awareness and reduced emissions	Air Quality is now a priority in the 2022 - 2026 Nottinghamshire Joint Health and Wellbeing Strategy and the Nottinghamshire ICS Green Plan [led by the NHS].	**Complete**
103	**To get the Nottinghamshire Air Quality Strategy endorsed by portfolio holders**	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2020	2020	BBC Public Protection – Environmental Health Officer	N/A	Not Funded	N/A	Completed	Reduced Emissions from raising awareness	Improving Air Quality, reduced Emissions and Raising awareness	•The NAQS was endorsed by portfolio holders in 2020.	**Complete**
104	**Joint Strategic Needs Assessment**	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2017	2020	NCC/NCiC/Borough and District councils	LA	Funded	N/A	Completed	Reduced Emissions from raising awareness	Raising awareness and reduced emissions	• Air Quality is now a chapter in the Joint Strategic Needs Assessment and part of the health and wellbeing Board considerations. • Reviewed and updated in 2020.	**Complete**
105	**To contribute to Nottinghamshire Air Quality Strategy (NAQS)**	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2018	2020	NCC/NCiC/ Borough and District councils	N/A	Not Funded	N/A	Completed	Reduced Emissions from raising awareness	Improving Air Quality, reduced Emissions and Raising awareness	•Strategy reviewed and rewritten; and the draft was approved at the Nottinghamshire County and City Health & Wellbeing Board in 2019. • The NAQS has been endorsed by	**Complete**

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													portfolio holders and its published online	**Complete**
106	**Nottingham Go-Ultra Low programme - promoting uptake of LEVs**	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2016	2020	NCiC and NCC	OLEV funding	Funded	£1 Million-£10 Million	Completed	Reduction in NO_2 and PM due to increased use of low emission vehicles.	On-going take-up of cleaner vehicles	• £6.1m of funding was secured for 2016-2020 through the Go Ultra Low (GUL) programme. • 123 locations in the county have been investigated for the potential provision of EV charge points as part of GUL project, with total of 68 chargers installed across 22 sites in Nottinghamshire between 2019-20. • In Broxtowe, 24 sites were investigated; of which 5 were feasible; providing 1 rapid, 19 fast and 1 slow charge points within car parks in four towns within the borough (Beeston, Eastwood, Kimberley and Stapleford). • Promotion events were held for public, businesses and fleet operators including loans of LEVs for trial use in 2018 and 2019.	**Complete**
107	**Nottingham Go-Ultra Low programme - promoting uptake of LEVs**	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2016	2020	NCiC/NCC	OLEV funding	Funded	£1 Million-£10 Million	Completed	Reduction in pollutants and emissions due to increased use of low emission vehicles.	On-going take-up of cleaner vehicles	• £6.1m funding secured for 2016-2020 through the Go Ultra Low programme. • Promotion events held for public, businesses and fleet operators including loans of LEVs for trial use in 2018 and 2019 • Funding ended in 2021	**Complete**
108	**Developer requirements to provide of EV charging points at new development**	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2019	2020	BBC Planning Policy Department – Planning Policy Team Leader	N/A	Not Funded	N/A	Completed	Reduction in NO_2 and PM	Reduced Emissions	Review of the Broxtowe Local plan includes Policy 26 that would require a Travel Plan to be submitted with any planning application for 10 or more dwellings or 1,000 square metres or more floor space. This policy was	**Complete**

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													adopted in September 2019.	
109	**Workplace travel plans**	Promoting Travel Alternatives	Workplace Travel Planning	2018	2020	BBC Planning Policy Department – Planning Policy Team Leader and NCC	LA – BBC and NCC	Not Funded	N/A	Completed	0.2µg/m^3	Restrain average journey times in the morning peak to a 1% increase per year	•Broxtowe Part 2 of the Local Plan (2018-2028), which includes Policy 26 on Travel Plans, was adopted in 2019. It is expected in this policy that all planning applications for large development sites (10 or more dwellings or 1,000 squares metres or more gross floor space) must include a travel plan. •BBC and NCC have a travel plan •BBC has undertaken a review of the Council travel plan and a feasibility study of having bus card/ Tickets for employee use.	**Complete** **Complete** **Complete**
110	**Planning and Policy Guidance**	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2019	2019	BBC Planning Policy Department – Planning Policy Team Leader	N/A	Not Funded	N/A	Completed	Reduction in NO_2 and PM	Reduced Emissions	Broxtowe Part 2 of the Local Plan (2018-2028), which includes Policy 20 on Air Quality, was adopted in 2019.	**Complete**
111	**Eco-driver training sessions**	Vehicle Fleet Efficiency	Driver training and ECO driving aids	2012	2018	NCC	LA –NCC	Not Funded	Within existing resources	Completed	Reduction in NO_2 and PM due to improved driving efficiency.	Reduced emissions	Eco-driving training sessions held for NCC staff	**Complete**
112	**Encouragement of low-emission public transport fleets**	Vehicle Fleet Efficiency	Promoting low emission public transport	2017	2017	NCC	NCC/OLEV - Low Emission Bus Scheme	Funded	£100k-£500k	completed	Reduction in NO_2 and PM due to increased use of low emission vehicles.	Reduced Emissions and On-going take-up of cleaner vehicles	• NCC secured £527,000 OLEV funding and match funded the scheme with £410,000 from its transport budget. • Introduction of two electric buses serving communities in Beeston and Stapleford.	**Complete**
113	**Fleet vehicle tracking system**	Vehicle Fleet Efficiency	Driver Training and ECO driving aids	2015	2017	BBC Transport and Stores Manager and NCC	LA – BBC and NCC	Not Funded	Within existing resources	Completed	Reduction in NO_2 and PM due to improved driving efficiency and efficient routes.	Reduced emissions	•All BBC & NCC fleet vehicles are fitted with a vehicle tracking system, which records vehicle speed and idling time. •measures can be implemented e.g. staff training, to	**Complete** **Complete**

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													improve fleet efficiency.	
114	**Zoning of refuse collections**	Vehicle Fleet Efficiency	Other	2016	2017	BBC Transport and Stores Manager	LA - BBC	Not Funded	Within existing resources	Completed	Reduction in NO_2 and Particulate Matter as there is one less fleet vehicle used.	Reduced emissions	•A review of the refuse collection areas	**Complete** The Refuse round restructure is now complete, and we have reduced the fleet size by one vehicle.

KEY: **BBC** =Broxtowe Borough Council, **DCC**= Derbyshire County Council; **DCiC**= Derby City Council; **NCC**= Nottinghamshire County Council, **NH** = National Highways, **NCiC**= Nottingham City Council, **DfT** = Department for Transport.

= Three Key Measures

= Measures that were completed in 2024

= Measures that were completed between 2017 - 2023

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[2], 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.

BBC purchased a Zephyr real time sensor in late 2021, which was installed in 2022 to monitor PM_{10}, $PM_{2.5}$ and NO_2 in the Trowell AQMA. There were a variety of issues with the sensor throughout 2022, and as a result BBC felt that the data was not reliable enough to report on. However, these issues were rectified, and the data is reported on in this ASR.

In 2024 the two methods used to determine the levels of $PM_{2.5}$ in the Borough are the results obtained from the Zephyr real time sensor, and to report on the modelled background levels for the Borough provided by Defra. The modelled background level provided by Defra for the Borough of Broxtowe are modelled to be between 7.2µg/m^3 and 9.2µg/m^3 for 2024, with the annual mean for 2024 being 8.1µg/m^3.

The $PM_{2.5}$ annual mean concentrations obtained from the Zephyr real time sensor for 2024 was 7.8µg/m^3. Therefore, the $PM_{2.5}$ air quality objective of 20µg/m^3 was not exceeded. Further information about $PM_{2.5}$ Zephyr results are discussed in greater details in section 3.2.3 of this report.

The Air Quality Objective (AQO) for $PM_{2.5}$ is an annual mean of 20µg/m^3. However, the World Health Organisation guideline value, which are more stringent for $PM_{2.5,}$ give a guideline of 10µg/m^3 for $PM_{2.5}$. Therefore, the results from the Zephyr and the modelling

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

results provided by Defra, show that the Borough are also meeting the current WHO guidelines.

As well as reviewing the Zephyr data and the modelled background data for $PM_{2.5}$, it is also important to review the Public Health Outcomes Framework (PHOF), which is published by Office for Health Improvement & Disparities and reviewed every three years. PHOF enables local authorities to identify the local indicator for $PM_{2.5}$ in their district, to compare the 'Fraction of mortality attributable to particulate air pollution indicator' value and to compare this to nearby local authorities.

Table 2.3 below provides the estimated effects of annual mortality in 2023 of human-made $PM_{2.5}$ air pollution for Nottingham City, Broxtowe Borough Council and other neighbouring local authorities. The figures show that within the Borough of Broxtowe there are modelled to be 70 deaths attributable to human-made air pollution.

Table 2.3 – Estimated Effects of Annual Mortality in 2023 of human-made $PM_{2.5}$ Air Pollution.

Council/Area	Attributable fraction	Attributable deaths aged 30+* (2023 deaths ONS)	Associated Life-years Lost due to PM based on 29,000 nationally (COMEAP 2010)
East Midlands	5.6	2793	24016
Nottingham City	6.1	152	1559
Broxtowe Borough	5.9	70	612

Source: Estimating Local Mortality Burdens associated with particulate air pollution, Office for Health Improvement & Disparities, 2023.

*Air pollution is likely to contribute a small amount to the deaths of a larger number of exposed individuals rather than being solely responsible for the number of deaths equivalent to the calculated figure of attributable deaths.

Research has shown that there is significant harm to health at concentrations of Particulate Matter well below the current EU and UK limit values. Therefore, BBC is taking the following measures to address $PM_{2.5}$:

- Ensuring that dust management plans are requested during the planning application stage for all sites that involve large scale demolition and building works.
- To ensure that best practicable means of dust control measures are being used regardless of how large the development is. These measures can include the use of bowsers, road sweepers and dust suppression to prevent ‘trackout’. Also minimise dust generating activities on dry windy days, and if there are stockpiles ensure they are covered to prevent wind-whipping.
- Ensuring that developers are carrying out dust suppression monitoring on site at large development sites.
- Ensuring that water suppressants are in use when Nibblers and mobile crushers are on site.
- Educating the public in matters that contribute to air quality e.g. not having bonfires.
- Educate and advise the public about using exempt appliances with the correct fuel for that appliance in BBCs smoke control areas.
- Enforcing the Clean Air Act 1993 and the Environmental Protection Act 1990 where necessary to minimise the risk of particulates becoming air borne.
- To continue to manage, advice and enforce the Pollution Prevention and Control Regulations 1999 and the Environmental Permitting (England and Wales) Regulations 2010 (Amended in 2013) on permitted processes when necessary.
- To encourage, support and promote sustainable travel within the Borough by working with a variety of organisations and neighbouring local authorities.
- To continue to promote green travel e.g. walking, cycling, low emissions/ electric vehicles and the tram network.
- To continue to support bus companies and taxis that operate within the Borough to reduce emissions.
- To continue to review suitable research methods for reducing air quality levels for particulate matter e.g. the use of vegetation.

- Promote and encourage the use of the final version of the “EMAQN Air Quality and Emissions Mitigation: guidance for developers” document.
- To inspect Crushers that are used within the Borough on demolition sites when notifications are received, to ensure compliance with the process permit, and good housekeeping so that dust levels are reduced.
- To communicate with all allotment providers in the Borough, to discourage the use of bonfires to dispose of green waste.
- To educate the public that electric motor vehicles whilst being positive for reducing NO_2 and CO_2, will still emit Particulate Matter and therefore active travel is still recommended as an alternative.
- Broxtowe Borough Council also formally adopted a Smoke Control Order Enforcement Policy in October 2023 to enable improved future regulation of the issue.

2.3.1 Smoke Control Areas

In 2023 Broxtowe Borough Council completed a public consultation on revoking its current Twenty-one Smoke Controls Orders which date back to the 1960’s and replacing them with a single Borough Wide Smoke Control Order.

As part of the public consultation BBC were able to obtain the following information on what the public thought to the proposals. Eighty two percent of the public support the Council to control the pollutants in the air. Fifty six percent felt that air quality is very important, sixty seven percent of people would support the introduction of a single smoke control order to prevent smoke being emitted from chimneys unless they are using authorised fuels/log burners.

The new Order to replace all the current smoke control orders was sealed in December 2024, which will come into effect in May 2025. Broxtowe Borough Council has also formally adopted a Smoke Control Order Enforcement Policy in October 2023 to support enforcement of its Order and enable improved future regulation of the issue.

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

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

3.1 Summary of Monitoring Undertaken

3.1.1 Low-Cost Zephyr Monitoring Site

Broxtowe Borough Council undertook monitoring at one site during 2024 by the use of a Zephyr which is a real time sensor. The Zephyr provides useful indicative data, but at present it is not recognised by Defra, and it is not approved for use in statutory LAQM reporting. Table A.2.1 shows the details of the Zephyr monitoring site, and Appendix A.2 includes the monitoring results from the Zephyr.

Maps showing the location of the monitoring site 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

Broxtowe Borough Council undertook non-automatic (i.e. passive) monitoring of NO_2 using 41 diffusion tubes during 2024. Table A.1.1 in Appendix A presents the details of the non-automatic sites.

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

3.2 Individual Pollutants

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

3.2.1 Nitrogen Dioxide (NO_2)

Table A.1.2 in Appendix A.1 compare the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40µg/m^3. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

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

Table A.2.3 in Appendix A.2 shows the ratified Zephyr monitored NO_2 hourly mean concentrations for the past five years with the air quality objective of 200µg/m^3, not to be exceeded more than 18 times a year.

The NO_2 annual mean concentration obtained from the Zephyr for 2024 was 15.5µg/m^3. The data capture was 100.0% which is greater than the 75% requirement. A comparison or trend cannot be identified as there is only two years' worth of data, and it is recommended by Defra that five years of data is usually considered the minimum necessary to identify a significant trend.

As well as discussing the results from the recently revoked AQMA in Trowell, which was revoked in January 2024. The following chapter will discuss the results and trends for all monitoting sites within 2024.

Recently Revoked AQMA in Trowell

There are five diffusion tube sites located within Tiree Close and Iona Close in Trowell that are located within the recently revoked AQMA in Trowell. The results below show that since 2016 the levels of NO_2 are consistently below the objective of 40µg/m^3 for all sites. A co-location study of triplicate tubes (Site ID 61, 62 and 63) were also sited next to the Zephyr the annual data is provided for site 63 only.

Table 3.1 – Results for the Revoked AQMA in Trowell 2015 – 2024.

Site ID	NO_2 Annual Mean Concentration (µg/m^3)									
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
18	-	34.3	32.9	28.2	28.4	17.9	22.3	21.5	19.6	18.9
19	**42.3**	37.6	37.2	31.9	30.9	22.9	23.8	22.3	20.9	20.6
58	-	-	-	-	-	24.8	27.6	20.7	18.4	17.2
59	-	-	-	-	-	20.1	20.8	20.3	18.2	17.4
61, 62 &63	-	-	-	-	-	-	-	21.7	19.4	18.7

The Results and Trends for all Monitoring Sites in 2024.

Defra requested that trend charts were provided for all monitoring sites to identify any trends in the annual mean concentrations. The trend charts are displayed in Figure A.1 in the Appendices for all the sites in use since 2020 to 2024.

Out of the 41 sites that are identified in the trend charts in Figure A.1 in the Appendices, thirty-one are showing a consistent downward trend year on year. Four sites are showing an overall downward trend. Two sites showed an increase in the 2023 data but have both shown a decrease in the 2024 data, and four sites have shown a slight increase in the 2024 data in comparison to the 2023 data.

Thirty-one of the forty-one sites are showing a consistent downward trend year on year, these sites are; Site 2, site 52, site 60, site 8, site 11, site 12, site 45, site 16, site 54, site

17, site 18, site 58, site 59, site 19, site 61/62/63, site 20, site 44, site 30, site 31, site 32, site 33/34, site 35, site 36, site 37, site 38, site 39, site 40, site 41.

Four of the forty-one sites are showing an overall downward trend of the data these sites are, site 22, site 56, site 48 and site 15.

Two of the forty-one sites showed an increase in the 2023 data, but they have both shown a decrease in the 2024 data, these sites are site 7 and site 27, which were discussed in greater detail in the 2024 ASR.

The remaining four of the forty-one sites (site 1, site 4, site 5 and site 43) have showed an increase in the 2024 data in comparison to the 2023 data (2020 excluded as an anomaly). Therefore, these sites will be discussed in greater detail below.

Site 1 - Wollaton Road, Beeston

Table 3.2 below shows the results for Wollaton Road in Beeston for 2020 to 2024, the data shows that the highest concentration was in 2021 at 21.0µg/m^3 and has since shown a downward trend. Although there has been a slight increase of 0.6µg/m^3 between 2023 and 2024. The reason for the slight increase may be due to road works that took several months to complete.

Table 3.2 – Results for Wollaton Road, Beeston 2020 – 2024.

Site ID	NO_2 Annual Mean Concentration (µg/m^3)				
	2020	2021	2022	2023	2024
1	19.0	21.0	20.8	18.7	19.3

It must be noted that this site has never exceeded the Air Quality Objective (AQO) of 40µg/m^3 for NO_2, and the 2024 concentration is 20.7µg/m^3 below the AQO. Although the data is below the air quality objective of 40µg/m^3, this site will continue to be monitored.

Site 4 - Queens Road, Beeston

Table 3.3 below shows the results for Queens Road in Beeston for 2020 to 2024, the data shows that the highest concentration was in 2021 at 20.2µg/m^3 and has since shown a downward trend. Although there has been a slight increase of 0.2µg/m^3 between 2023 and 2024. The reason for the slight increase is unknown.

Table 3.3 – Results for Queens Road, Beeston 2020 – 2024.

Site ID	NO_2 Annual Mean Concentration (µg/m^3)				
	2020	2021	2022	2023	2024
4	19.1	20.2	19.2	17.2	17.4

It must be noted that this site has never exceeded the Air Quality Objective (AQO) of 40µg/m^3 for NO_2, and the 2024 concentration is 22.6µg/m^3 below the AQO. Although the data is below the air quality objective of 40µg/m^3, this site will continue to be monitored.

Site 5 - Chilwell Olympia, Bye Pass Road, Beeston

Table 3.4 below shows the results for Chilwell Olympia, Bye Pass Road in Beeston for 2020 to 2024, the data shows that the highest concentration was in 2021 at 13.5µg/m^3 and has since shown a downward trend. Although there has been a slight increase of 0.5µg/m^3 between 2023 and 2024. The reason for the slight increase is unknown.

Table 3.4 – Results for Chilwell Olympia, Bye Pass Road 2020 – 2024.

Site ID	NO_2 Annual Mean Concentration (µg/m^3)				
	2020	2021	2022	2023	2024
5	13.2	13.5	13.2	11.9	12.4

It must be noted that this site has never exceeded the Air Quality Objective (AQO) of 40µg/m^3 for NO_2, and the 2024 concentration is 27.6µg/m^3 below the AQO. Although the data is below the air quality objective of 40µg/m^3, this site will continue to be monitored.

Site 43 - Broxtowe Council Offices, Foster Avenue, Beeston

Table 3.5 below shows the results for Broxtowe Council Offices, Foster Avenue in Beeston for 2020 to 2024, the data shows that the highest concentration was in 2021 at 14.9µg/m^3 and has since shown a downward trend. Although there has been a slight increase of 0.2µg/m^3 between 2023 and 2024. The reason for the slight increase is unknown and this is urban background site.

Table 3.5 – Results for Broxtowe Council Offices, Foster Avenue Beeston 2020 – 2024.

Site ID	NO_2 Annual Mean Concentration (µg/m^3)				
	2020	2021	2022	2023	2024
43	13.8	14.9	14.2	12.2	12.4

It must be noted that this site has never exceeded the Air Quality Objective (AQO) of 40µg/m^3 for NO_2, and the 2024 concentration is 27.6µg/m^3 below the AQO. Although the data is below the air quality objective of 40µg/m^3, this site will continue to be monitored.

3.2.2 Particulate Matter (PM_{10})

Table A.2.4 in Appendix A.2 compares the ratified and adjusted monitored PM_{10} annual mean concentrations for the past two years with the air quality objective of 40µg/m^3. The data from the Zephyr real time sensor for 2024 is 12.1µg/m^3. The data capture was 100.0% which is greater than the 75% requirement. A comparison or trend cannot be identified as there is only two year's work of data, and it is recommended by Defra that five years of data is usually considered the minimum necessary to identify a significant trend.

Table A.2.5 in Appendix A.2 compares the ratified continuous monitored PM_{10} daily mean concentrations for the past two years with the air quality objective of 50µg/m^3, is not to be exceeded more than 35 times per year. The 2024 data shows that the AQO of 50µg/m^3, was not exceeded. The data capture was 100.0% which is greater than the 75% requirement. A comparison or trend cannot be identified as there is only two years' worth of data, and it is recommended by Defra that five years of data is usually considered the minimum necessary to identify a significant trend.

3.2.3 Particulate Matter ($PM_{2.5}$)

BBC installed a Zephyr real time sensor on Iona Drive, Trowell next to the M1 Motorway. Table A.2.6 in Appendix A.2 presents the ratified and adjusted monitored $PM_{2.5}$ annual mean concentrations for the past two years. The $PM_{2.5}$ air quality objective of 20µg/m^3, were not exceeded and the annual mean was 7.8µg/m^3. Throughout 2024, the $PM_{2.5}$ concentrations were in the 'Low' category for the Daily Air Quality Index (DAQI). The data capture was 100.0% which is greater than the 75% requirement. A comparison or trend cannot be identified as there is only two years' worth of data, and it is recommended by Defra that five years of data is usually considered the minimum necessary to identify a significant trend.

3.2.4 Sulphur Dioxide (SO_2)

Previous air quality reports have shown there are no relevant sources of Sulphur Dioxide within the Borough. Subsequently, the Council does not monitor for this pollutant.

Appendix A: Monitoring Results

A.1 Diffusion Tube Monitoring Results

Table A.1.1 – Details of Non-Automatic Monitoring Sites

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
1	113 Wollaton Rd, Beeston	Roadside	452527	337313	NO_2	No	0	2	N	1.9
2	166 Derby Rd, Beeston	Roadside	452091	338122	NO_2	No	0	9	N	1.8
4	226 Queens Rd, Beeston	Roadside	453361	336627	NO_2	No	0	5	N	1.8
52	228 Station Rd Beeston	Roadside	453287	336349	NO_2	No	0	5	N	1.7

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
60	Dovecote Lane Park, Beeston	Roadside	453075	336311	NO_2	No	0	9	N	1.9
5	Chilwell Olympia School, Beeston	Urban Background	451782	335320	NO_2	No	0	104	N	1.9
7	31 Hickton Drive, Chilwell	Roadside	450756	334328	NO_2	No	0	6	N	1.9
8	The Manor Pub, 350 Nottingham Rd, Toton	Roadside	450422	334243	NO_2	No	0	5	N	1.8
11	269 Stapleford Lane, Toton	Roadside	449694	335501	NO_2	No	0	10	N	1.8

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
12	Lamppost, Stapleford Lane, Toton	Roadside	449615	335664	NO_2	No	0	1	N	1.9
45	209 Toton Lane, Stapleford	Roadside	449467	336220	NO_2	No	0	15	N	1.8
15	George Spencer Academy, Stapleford	Roadside	449406	336135	NO_2	No	0	4	N	1.9
16	24 Brampton Drive, Stapleford	Roadside	449516	336216	NO_2	No	0	7	N	1.7
54	195 Derby Rd, Stapleford	Roadside	448467	336591	NO_2	No	0	4	N	1.8

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
17	Lamppost Church St, Stapleford	Roadside	448890	337190	NO_2	No	0	3	N	1.8
18	20 Tiree Cl, Trowell	Roadside	448560	338889	NO_2	Yes AQMA 1	0	9*	N	1.7
58	10 Tiree Cl, Trowell	Roadside	448588	338940	NO_2	Yes AQMA 1	0	11*	N	1.7
59	4 Tiree Cl, Trowell	Roadside	448602	338965	NO_2	Yes AQMA 1	0	9*	N	1.7
19	15 Iona Drive, Trowell	Roadside	448586	339023	NO_2	Yes AQMA 1	0	18*	N	1.9

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
61, 62 and 63	Street Column Iona Drive, Trowell ^	Roadside	448607	339026	NO_2	Yes AQMA 1	1	2*	Y	2.0
20	30 Derbyshire Ave, Trowell	Roadside	448652	339652	NO_2	No	0	12*	N	1.9
22	81 Nottingham Rd, Trowell	Roadside	448832	340098	NO_2	No	0	18*	N	1.8
44	32 Mansfield Rd, Eastwood	Roadside	446509	347091	NO_2	No	0	2	N	1.8
27	Sun Inn Pub, 6 Derby Rd, Eastwood	Roadside	446465	346985	NO_2	No	0	8	N	1.8
30	560 Nottingham Rd, Giltbrook	Roadside	448544	345241	NO_2	No	0	4	N	1.9

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
31	15 Hayley Cl, Kimberley	Roadside	448826	344883	NO_2	No	0	7	N	1.9
32	59b Main St, Kimberley	Roadside	450122	344658	NO_2	No	0	5	N	1.8
33 and 34	19a Nottingham Rd, Nuthall^	Roadside	451631	344526	NO_2	No	0	11*	N	1.7
35	20 Nottingham Rd, Nuthall	Roadside	451728	344440	NO_2	No	0	20*	N	1.9
36	113 Nottingham Rd, Nuthall	Roadside	452232	344033	NO_2	No	0	20	N	1.7
37	114 Nottingham Rd, Nuthall	Roadside	452331	343910	NO_2	No	0	27	N	1.7

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
38	Opp Sherwin Arms, Derby Rd, Bramcote	Roadside	450389	337866	NO_2	No	2	2	N	1.8
39	9 Bembridge Court, Bramcote	Roadside	450434	337781	NO_2	No	0	14	N	1.6
56	10 Town St, Bramcote	Roadside	450570	337851	NO_2	No	0	9	N	1.9
40	153 Derby Rd, Bramcote	Roadside	450632	337929	NO_2	No	0	13	N	1.7
41	169 Derby Rd, Bramcote	Roadside	450555	337909	NO_2	No	0	10	N	1.8
48	Near 73 Town St, Bramcote	Roadside	450817	337592	NO_2	No	0	2	N	1.8

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
43	Broxtowe Borough Council Offices	Urban Background	452733	336962	NO_2	No	0	8	N	1.8

Notes:

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

(2) N/A if not applicable.

(*) All distance to kerb of nearest road but sites near to the M1 Motorway.

(^) Duplicate/Triplicate Diffusion Tubes.

Table A.1.2 – Annual Mean NO2 Monitoring Results: Non-Automatic Monitoring (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
1	452527	337313	Roadside	100.0	100.0	19.0	21.0	20.8	18.7	19.3
2	452091	338122	Roadside	100.0	100.0	18.9	20.8	20.1	18.5	18.3
4	453361	336627	Roadside	100.0	100.0	19.1	20.2	19.2	17.2	17.4
52	453287	336349	Roadside	100.0	100.0	18.0	19.0	17.5	16.8	15.8
60	453075	336311	Roadside	100.0	100.0	-	-	16.8	15.8	13.9
5	451782	335320	Urban Background	100.0	100.0	13.2	13.5	13.2	11.9	12.4
7	450756	334328	Roadside	100.0	100.0	16.2	18.0	16.5	17.3	16.2
8	450422	334243	Roadside	100.0	100.0	20.8	22.4	21.1	20.1	18.2
11	449694	335501	Roadside	100.0	100.0	20.8	23.0	22.5	21.2	19.5

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
12	449615	335664	Roadside	100.0	100.0	17.3	19.1	18.9	17.3	16.4
45	449467	336220	Roadside	100.0	100.0	20.1	20.8	20.6	19.4	19.4
15	449406	336135	Roadside	100.0	100.0	24.4	25.2	28.3	25.6	23.5
16	449516	336216	Roadside	92.5	92.5	18.4	20.0	19.8	18.1	17.9
54	448467	336591	Roadside	100.0	100.0	21.9	23.6	22.0	20.5	19.6
17	448890	337190	Roadside	100.0	100.0	25.1	26.7	26.3	24.3	21.9
18	448560	338889	Roadside	100.0	100.0	21.5	22.3	21.5	19.6	18.9
58	448588	338940	Roadside	100.0	100.0	19.4	21.8	20.7	18.4	17.2
59	448602	338965	Roadside	100.0	100.0	19.1	21.0	20.3	18.2	17.4
19	448586	339023	Roadside	100.0	100.0	22.9	23.8	22.3	20.9	20.6

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2024 (%) [2]	2020	2021	2022	2023	2024
61, 62 and 63	448607	339026	Roadside	100.0	100.0	-	-	21.7	19.4	18.7
20	448652	339652	Roadside	100.0	100.0	17.3	19.7	18.7	17.4	16.5
22	448832	340098	Roadside	92.5	92.5	18.7	19.7	19.8	17.7	16.2
44	446509	347091	Roadside	92.5	92.5	24.8	27.6	26.9	24.9	23.8
27	446465	346985	Roadside	92.5	92.5	17.8	18.9	18.0	18.2	17.4
30	448544	345241	Roadside	100.0	100.0	18.3	20.3	19.1	18.4	17.9
31	448826	344883	Roadside	100.0	100.0	21.2	22.8	21.7	20.9	20.1
32	450122	344658	Roadside	100.0	100.0	21.3	22.9	20.9	19.6	16.8
33 and 34	451631	344526	Roadside	100.0	100.0	18.7	20.7	19.6	17.9	17.2

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2024 (%) [2]	2020	2021	2022	2023	2024
35	451728	344440	Roadside	100.0	100.0	22.6	23.4	22.9	19.9	19.6
36	452232	344033	Roadside	100.0	100.0	24.9	26.0	25.4	23.4	22.6
37	452331	343910	Roadside	100.0	100.0	19.3	23.5	21.1	19.7	19.7
38	450389	337866	Roadside	90.6	90.6	20.5	24.1	22.0	21.7	19.0
39	450434	337781	Roadside	100.0	100.0	18.6	21.1	20.5	18.6	17.9
56	450570	337851	Roadside	100.0	100.0	18.7	19.6	19.8	18.1	16.9
40	450632	337929	Roadside	100.0	100.0	23.6	27.4	25.8	24.0	21.9
41	450555	337909	Roadside	90.6	90.6	23.5	26.0	25.3	23.5	21.6
48	450817	337592	Roadside	90.6	90.6	25.4	27.8	28.4	26.6	23.7
43	452733	336962	Urban Background	100.0	100.0	13.8	14.9	14.2	12.2	12.4

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

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

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

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

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

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

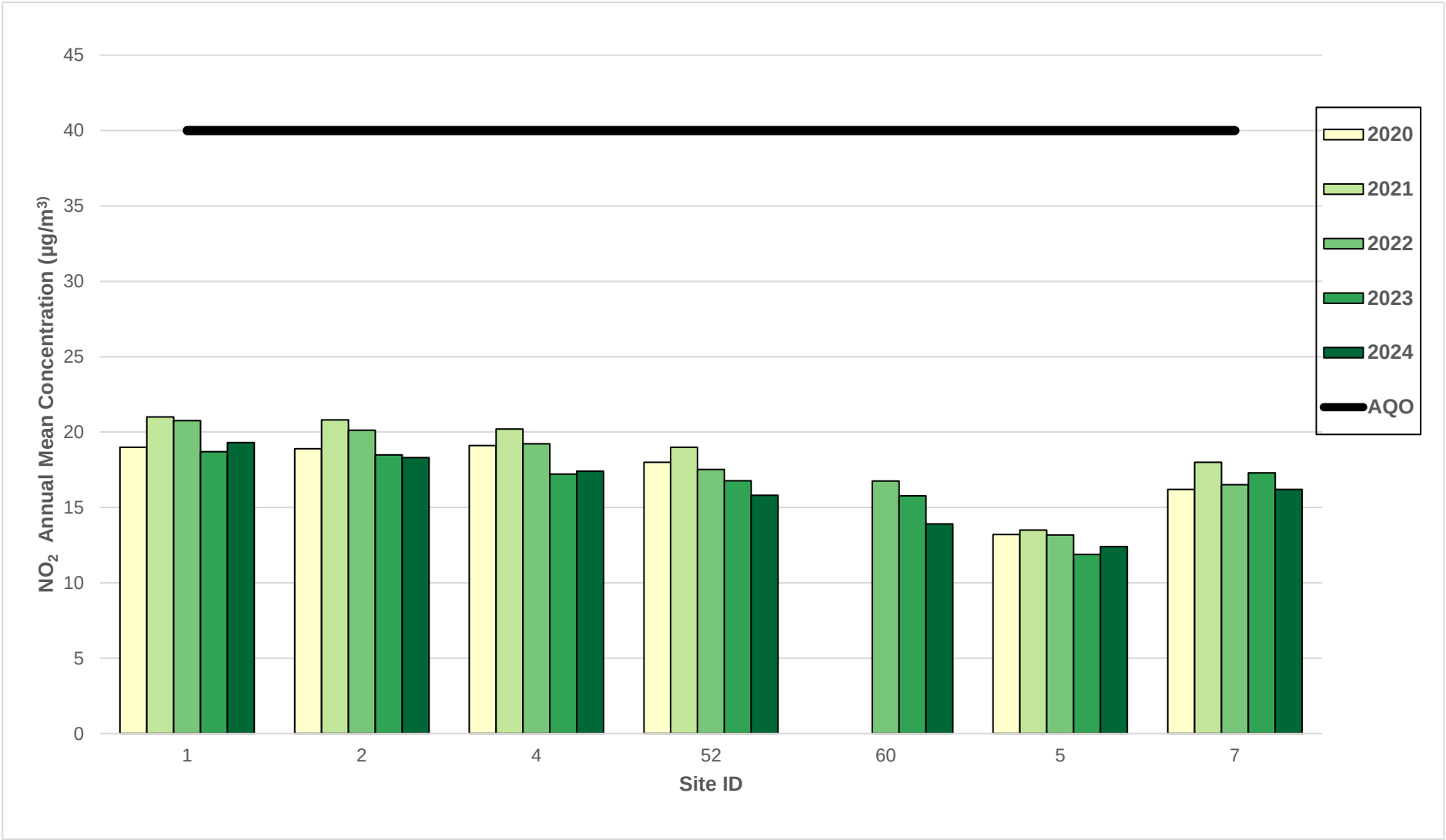
Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

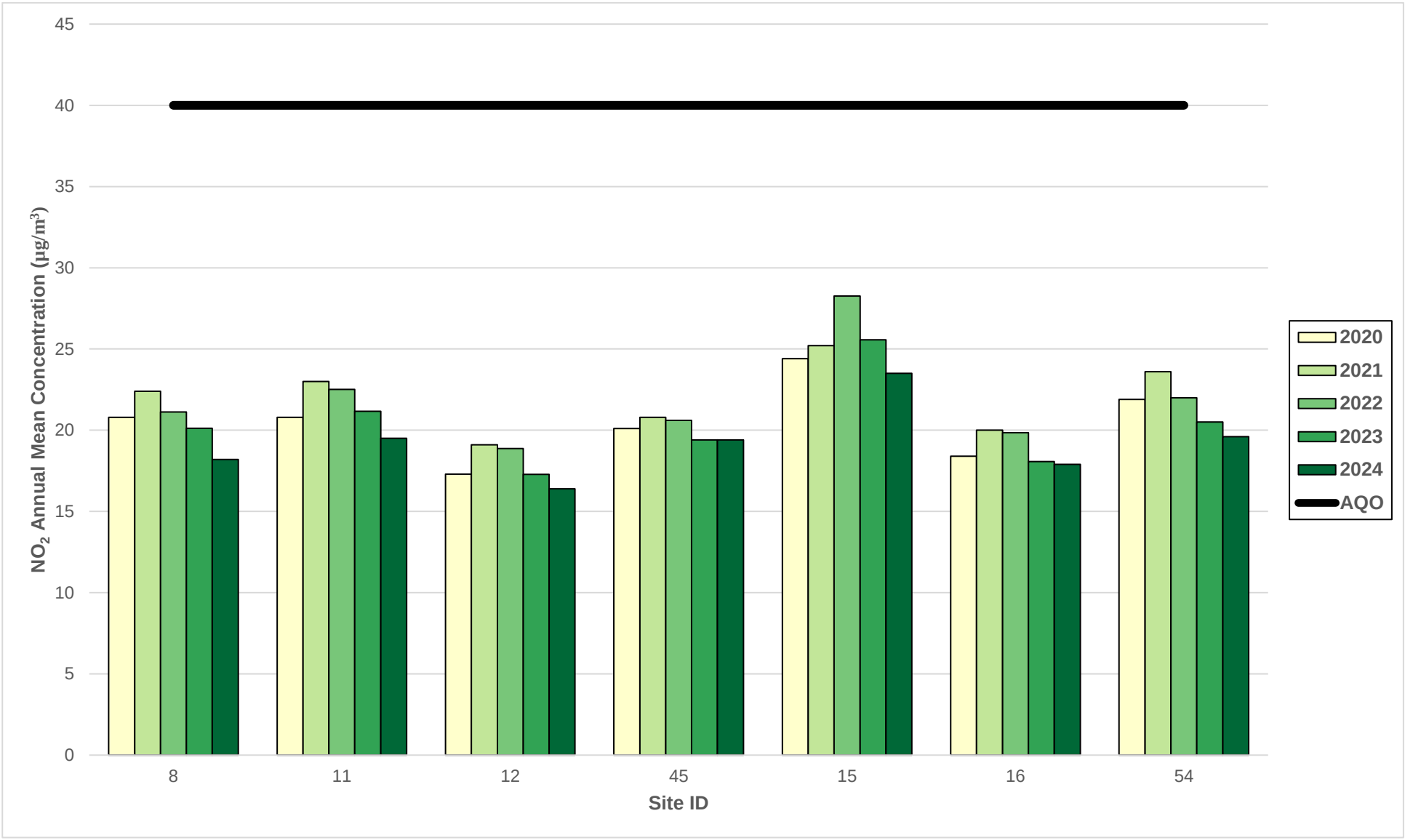
Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

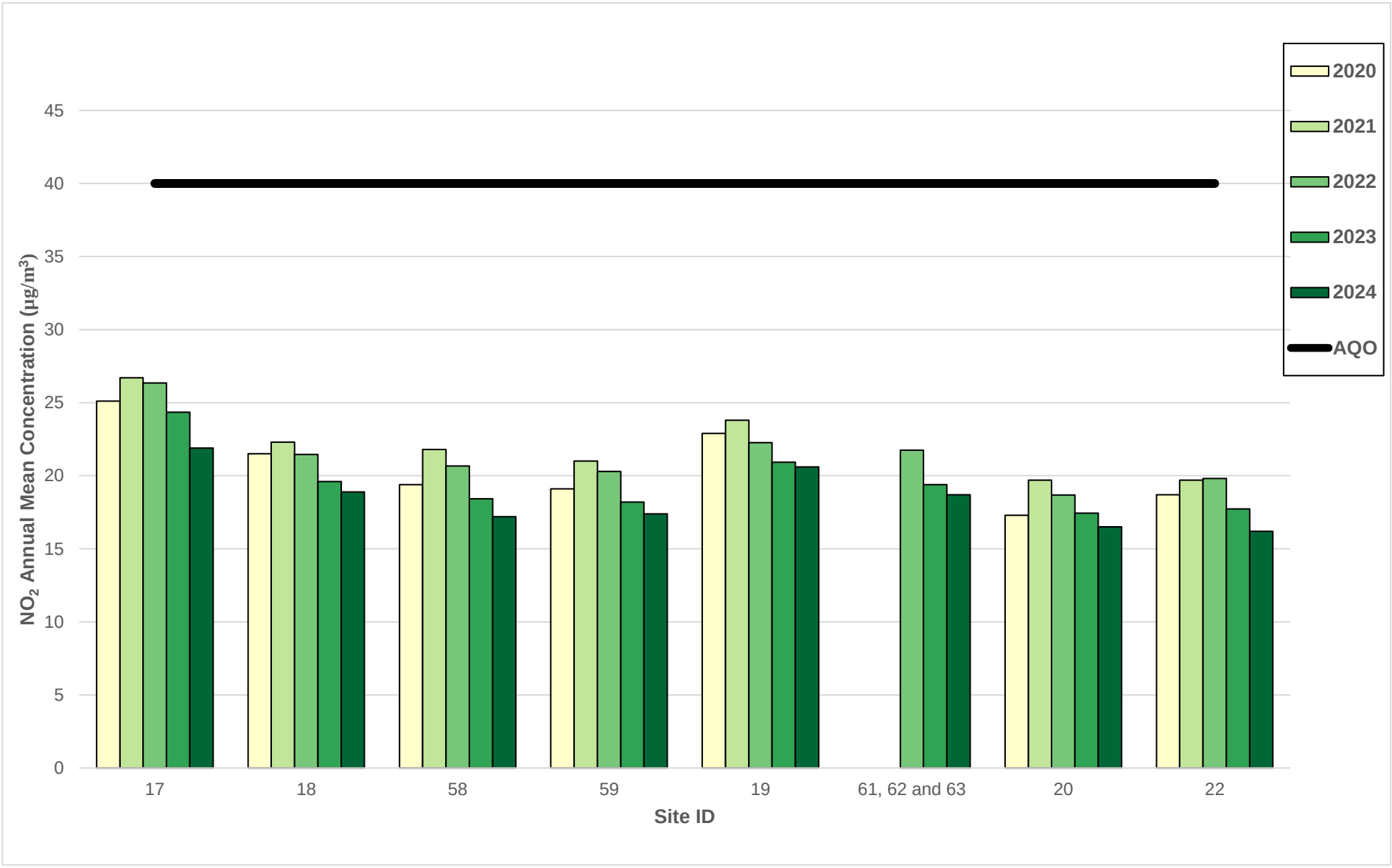
(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

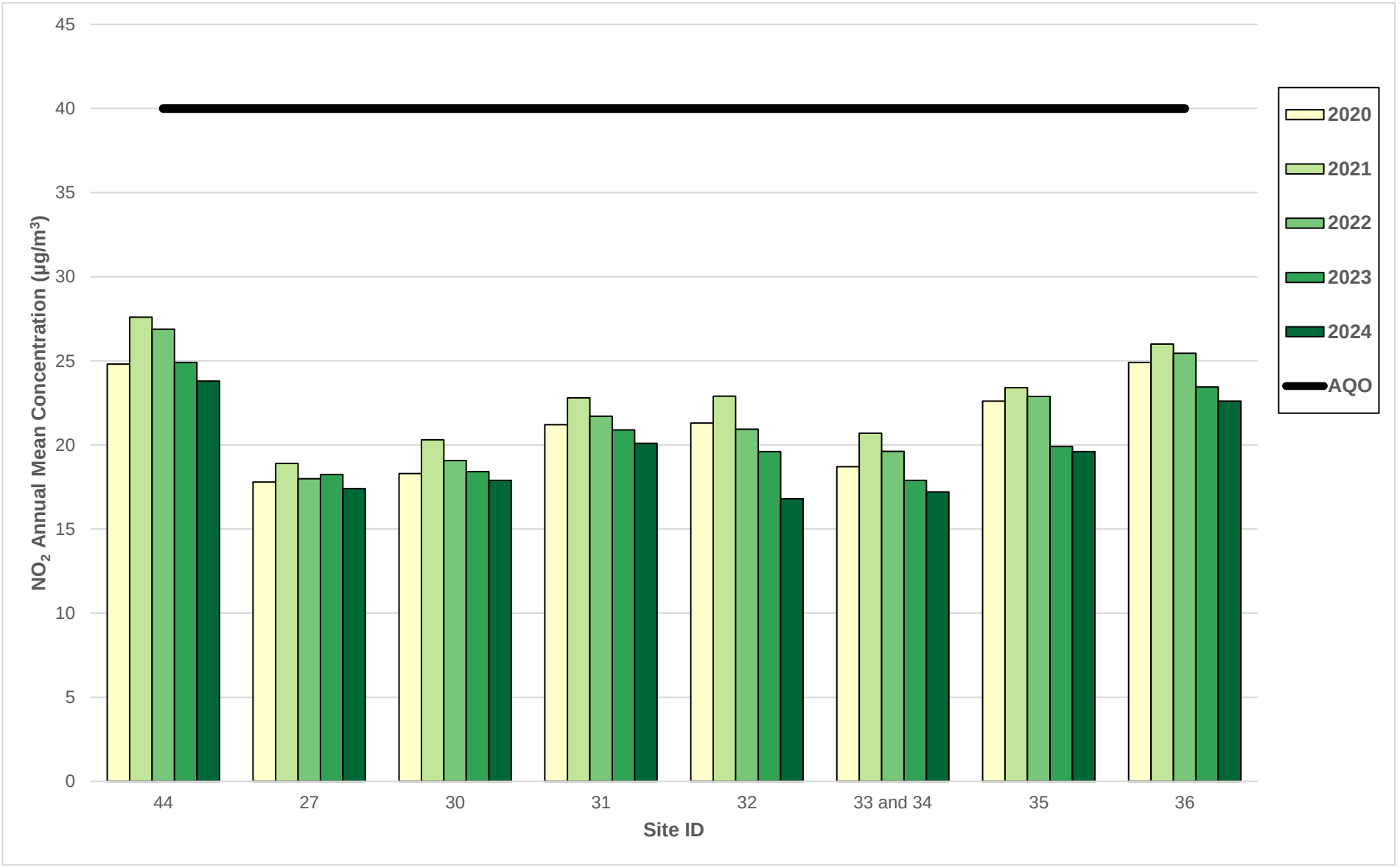
(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

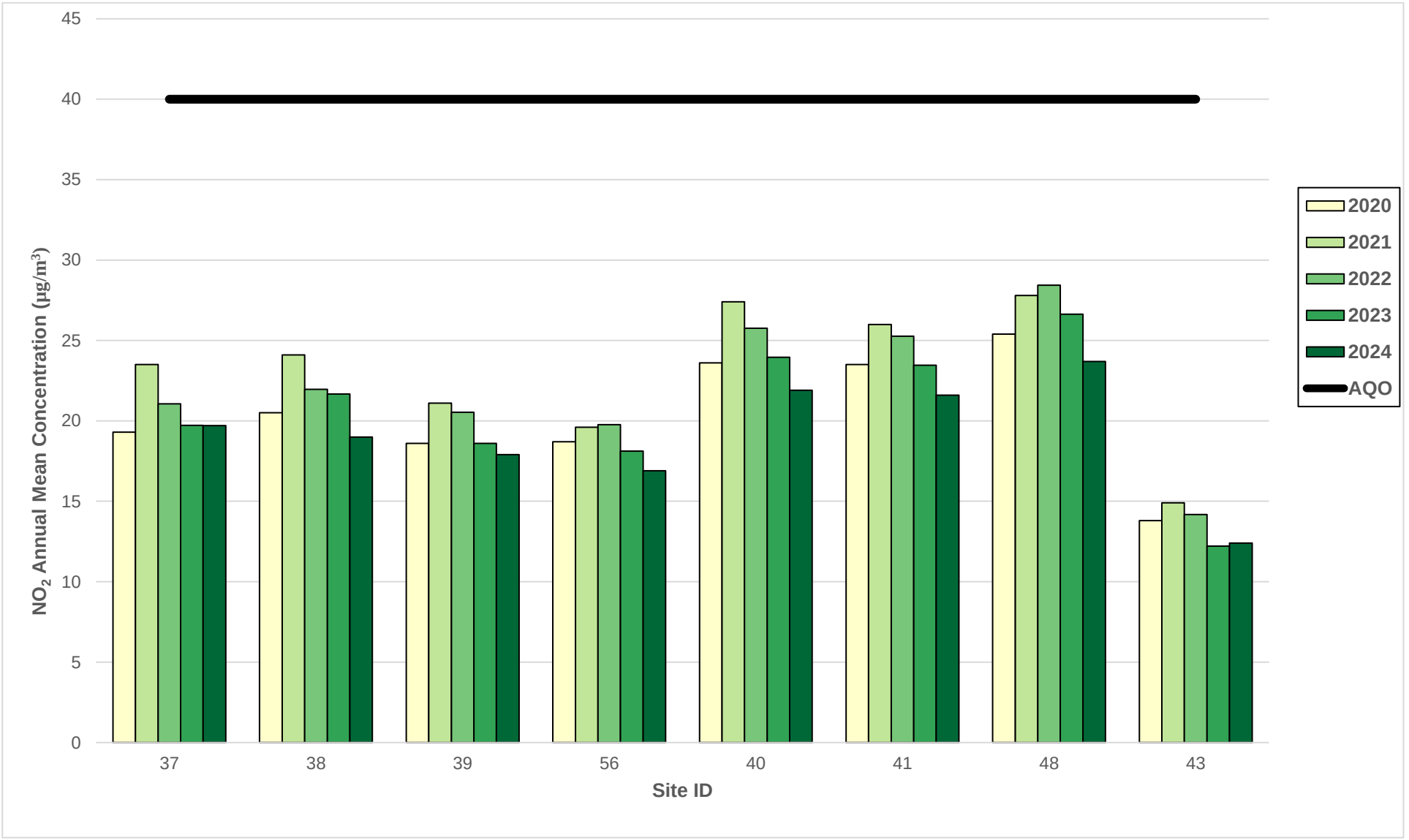
Figure A.1 – Trends in Annual Mean NO_2 Concentrations




45
40
35
30
25
20
15
10
5
0
NO2 Annual Mean Concentration (µg/m3)
8
11
12
45
15
16
54
Site ID
2020
2021
2022
2023
2024
AQO


2020
2021
2022
2023
2024
AQO
45
40
35
30
25
20
15
10
5
0
NO2 Annual Mean Concentration (µg/m3)
17
18
58
59
19
61, 62 and 63
20
22
Site ID


45
40
35
30
25
20
15
10
5
0
NO2 Annual Mean Concentration (µg/m3)
2020
2021
2022
2023
2024
AQO
44
27
30
31
32
33 and 34
35
36
Site ID


45
40
35
30
25
20
15
10
5
0
NO2 Annual Mean Concentration (µg/m3)
37
38
39
56
40
41
48
43
Site ID
2020
2021
2022
2023
2024
AQO

A.2 Low-Cost Zephyr Monitoring Results

Table A.2.1 – Details of Zephyr Monitoring Site

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (2)	Distance to kerb of nearest road (m) (1)	Inlet Height (m)
Trowell Zephyr 932	Street Column 4, Iona Drive, Trowell NG9 3RF	Roadside	448607	339026	NO_2, PM_{10} and $PM_{2.5}$	No	Real Time Sensor	1	2	2

Notes:

(1) N/A if not applicable.

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

Table A.2.2 – Annual Mean NO_2 Zephyr Monitoring Results (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
Trowell Zephyr 932	448607	339026	Roadside	100	100	-	-	-	15.6	15.5

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

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

☐ **Where exceedances of the NO_2 annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2023**

Notes:

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

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

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

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

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

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

Table A.2.3 – 1-Hour Mean NO_2 Zephyr 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 2024 (%) (2)	2020	2021	2022	2023	2024
Trowell Zephyr 932	448607	339026	Roadside	100	100	-	-	-	0	0

Notes:

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

Exceedances of the NO_2 1-hour mean objective (200µg/m^3 not to be exceeded more than 18 times/year) are shown in **bold**.

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

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

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

Table A.2.4 – Annual Mean PM_{10} Zephyr Monitoring Results (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
Trowell Zephyr 932	448607	339026	Roadside	100	100	-	-	-	12.3	12.1

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

Notes:

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

Exceedances of the PM_{10} annual mean objective of 40µg/m^3 are shown in **bold**.

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

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

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

Table A.2.5 – 24-Hour Mean PM_{10} Zephyr Monitoring Results, Number of PM_{10} 24-Hour Means > 50µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
Trowell Zephyr 932	448607	339026	Roadside	100	100	**-**	-	-	2	0

Notes:

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

Exceedances of the PM_{10} 24-hour mean objective (50µg/m^3 not to be exceeded more than 35 times/year) are shown in **bold**.

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

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

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

Table A.2.6 – Annual Mean $PM_{2.5}$ Zephyr Monitoring Results µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)		Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
Trowell Zephyr 932	448607	339026	Roadside	100		100	-	-	-	8.0	7.8

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

Notes:

The annual mean concentrations are presented as µg/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%).

Appendix B: Full Monthly Diffusion Tube Results for 2024

Table B.1 – NO_2 2024 Diffusion Tube Results (µg/m^3)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Easting)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
1	452527	337313	26.6	31.1	23.4	23.2	21.7	22.2	20.8	13.2	18.0	23.2	27.9	23.9	22.9	19.3		
2	452091	338122	24.7	29.0	22.7	20.8	18.9	16.8	18.8	16.9	18.3	22.6	29.2	23.1	21.8	18.3		
4	453361	336627	26.5	28.0	20.2	18.1	16.4	14.3	15.6	16.2	16.6	23.1	29.8	23.8	20.7	17.4		
52	453287	336349	25.5	22.6	20.2	15.9	15.7	11.1	14.0	13.2	17.7	18.6	27.8	23.5	18.8	15.8		
60	453075	336311	24.3	22.7	17.9	10.7	9.8	9.9	12.3	12.9	17.1	20.0	22.7	18.5	16.6	13.9		
5	451782	335320	21.4	17.4	13.3	15.2	15.4	8.9	10.3	9.5	12.7	14.1	22.0	16.8	14.8	12.4		
7	450756	334328	26.2	31.9	17.2	12.0	11.2	13.8	15.2	15.5	16.4	21.0	27.5	23.6	19.3	16.2		
8	450422	334243	26.4	26.0	21.9	14.4	15.4	19.1	18.1	19.0	21.6	24.8	31.1	23.1	21.7	18.2		
11	449694	335501	28.0	29.9	23.4	17.0	17.7	23.4	21.0	18.5	21.8	22.8	30.2	25.3	23.2	19.5		
12	449615	335664	26.7	24.7	18.2	18.2	17.2	13.7	15.2	11.9	19.8	19.3	30.5	19.3	19.6	16.4		
45	449467	336220	25.5	29.4	23.7	29.7	26.5	16.8	17.8	16.6	17.9	23.1	29.9	19.9	23.1	19.4		
15	449406	336135	29.6	42.4	38.6	19.4	18.9	24.4	27.5	22.8	20.4	28.0	34.6	28.8	27.9	23.5		
16	449516	336216	26.3	27.5	22.0	20.8	21.1	15.5		16.9	16.2	23.5	22.8	21.3	21.3	17.9		
54	448467	336591	27.9	25.8	24.7	25.7	22.8	17.4	19.7	18.2	22.2	24.1	29.8	22.5	23.4	19.6		
17	448890	337190	32.9	33.4	26.5	17.7	18.2	22.7	23.0	22.0	23.7	28.4	35.9	28.1	26.0	21.9		

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Easting)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
18	448560	338889	26.1	27.9	20.0	22.5	18.2	22.8	19.9	20.4	20.2	20.6	26.7	24.5	22.5	18.9		
58	448588	338940	25.2	24.4	19.2	17.3	16.3	18.4	18.0	17.9	18.7	20.1	27.6	22.4	20.5	17.2		
59	448602	338965	25.6	25.7	16.4	17.4	18.5	18.1	17.6	17.0	18.7	20.7	28.3	24.5	20.7	17.4		
19	448586	339023	28.1	28.8	21.1	28.2	27.6	22.3	19.7	19.8	21.3	20.6	30.7	26.1	24.5	20.6		
61	448607	339026	28.3	29.7	20.8	18.0	19.3	18.5	18.5	18.1	15.2	23.2	30.5	25.5	-	-		Triplicate Site with 61, 62 and 63 - Annual data provided for 63 only
62	448607	339026	28.2	27.8	20.2	17.9	16.7	17.4		18.9	21.4	21.7	29.8	22.2	-	-		Triplicate Site with 61, 62 and 63 - Annual data provided for 63 only
63	448607	339026	29.7	29.7	19.4	21.3	19.5	18.5	19.4	19.0	20.3	23.3	29.1	24.3	22.2	18.7		Triplicate Site with 61, 62 and 63 - Annual data provided for 63 only
20	448652	339652	26.2	22.8	22.8	19.1	21.6	13.2	14.4	13.7	19.0	21.8	23.5	18.2	19.7	16.5		
22	448832	340098	23.9	25.4		17.8	17.8	13.7	15.7	17.2	15.4	23.6	22.7	18.8	19.3	16.2		
44	446509	347091	30.2	32.6	32.2	18.0	19.1	25.4	26.8	22.9		34.1	39.2	30.8	28.3	23.8		
27	446465	346985	19.9	25.9		22.3	19.1	14.7	15.9	14.7	19.1	23.7	30.3	22.2	20.7	17.4		
30	448544	345241	24.9	25.9	21.3	21.9	22.1	15.9	14.4	15.8	17.7	24.1	28.6	23.5	21.3	17.9		
31	448826	344883	28.7	23.5	27.3	19.6	21.4	21.4	23.5	22.8	17.6	25.0	30.8	26.1	24.0	20.1		
32	450122	344658	25.6	25.1	22.3	11.3	12.1	17.4	17.3	16.1	15.3	24.3	29.1	24.5	20.0	16.8		
33	451631	344526	24.0	26.0	24.7	22.4	20.7	12.9	15.6	15.2	16.0	22.4	27.5	20.9	-	-		Duplicate Site with 33 and 34 - Annual data provided for 34 only
34	451631	344526	23.1	25.8	24.8	19.7	21.3	13.3	15.2	16.2	15.3	24.1	23.1	21.1	20.5	17.2		Duplicate Site with 33 and 34 - Annual data provided for 34 only
35	451728	344440	27.2	29.4	25.0	17.9	14.3	22.7	22.8	23.6	17.8	25.5	29.4	24.3	23.3	19.6		
36	452232	344033	28.0	33.8	30.3	29.0	25.9	25.4	25.0	24.9	17.8	24.2	32.0	27.1	26.9	22.6		
37	452331	343910	27.4	24.1	20.8	26.1	22.5	20.8	19.9	17.6	26.0	22.1	31.0	23.5	23.5	19.7		

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Easting)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
38	450389	337866	31.0	29.5	27.4	10.4	11.2	17.3	19.7	19.2	23.3		32.3	27.8	22.6	19.0		
39	450434	337781	25.9	25.2	22.5	17.6	17.6	15.2	19.4	17.6	21.9	24.9	27.0	21.4	21.3	17.9		
56	450570	337851	26.4	25.0	19.3	17.0	17.3	15.6	18.4	16.4	20.5	18.7	27.4	20.0	20.1	16.9		
40	450632	337929	31.8	32.6	27.0	14.4	16.5	23.2	25.8	21.0	30.5	29.8	33.8	27.2	26.1	21.9		
41	450555	337909	34.1	31.2	26.8	20.2	18.5	21.7	22.7	24.5	25.3	27.2	30.8		25.7	21.6		
48	450817	337592	37.0	35.0	30.1	20.2	18.7	18.5	27.7	31.8	25.8		35.0	30.5	28.2	23.7		
43	452733	336962	21.0	18.6	12.4	20.8	18.1	7.4	8.7	9.1	11.4	15.2	18.1	17.1	14.8	12.4		

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

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

☐ **Local bias adjustment factor used.**

☒ **National bias adjustment factor used.**

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

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

Notes:

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

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

See Appendix C for details on bias adjustment and Annualisation.

(a) Missing tubes

(b) Result not valid

(C) Found on the Floor

(D) Water Droplets in tube as it had been turned upside down by a member of the public

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

New or Changed Sources Identified Within Broxtowe Borough Council During 2024

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

Additional Air Quality Works Undertaken by Broxtowe Borough Council During 2024

Broxtowe Borough Council has not completed any additional works within the reporting year of 2024.

QA/QC of Diffusion Tube Monitoring

BBC diffusion tubes are supplied and analysed by Gradko Ltd. Since April 2008, BBC has entered into a contract with Gradko along with all Nottinghamshire Local Authorities to ensure that any deviations within different laboratory practices are ruled out. This enables data to be easily compared between the County authorities. The tubes are prepared using a 20% solution of triethanolamine (TEA) in de-ionised water. The tubes are exposed for one month before being returned for laboratory analysis. All of the tubes in 2024 were deployed in line with the Defra Calendar. The latest results for Gradko from the AIR PT/WASP Scheme are 100% of the results submitted were determined to be satisfactory.

Diffusion Tube Annualisation

All diffusion tube monitoring locations within Broxtowe Borough Council recorded data capture of 75% and above. Therefore, it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require Annualisation.

Diffusion Tube Bias Adjustment Factors

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

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

Table C.1 – Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	04/25	0.84
2023	National	03/24	0.81
2022	National	03/23	0.83
2021	National	03/22	0.84
2020	National	03/21	0.81
2019	National	03/20	0.93

Figure C.1 – The National Diffusion Tube Bias Adjustment Factor Spreadsheet showing the calculated bias correction factor used by Broxtowe Borough Council.

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

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

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

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

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

Step 1:	Step 2:	Step 3:	Step 4:								
Select the Laboratory that Analyses Your Tubes from the Drop-Down List	Select a Preparation Method from the Drop-Down List	Select a Year from the Drop-Down List	Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.								
If a laboratory is not shown, we have no data for this laboratory.	If a preparation method is not shown, we have no data for this method at this laboratory.	If a year is not shown, we have no data[2]	If you have your own co-location study then see footnote[3]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953								
Analysed By[1]	Method (To undo your selection, choose (All) from the pop-up list)	Year[2] (To undo your selection, choose (All))	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision[4]	Bias Adjustment Factor (A) (Cm/Dm)
Gradko	20% TEA in water	2024	R	Brighton & Hove City Council	11	34	27	26.3%	G	0.79
Gradko	20% TEA in water	2024	R	Liverpool City Council	12	34	25	35.7%	G	0.74
Gradko	20% TEA in water	2024	KS	Liverpool City Council	10	52	47	10.2%	G	0.91
Gradko	20% TEA in water	2024	R	Nottingham City Council	10	29	26	12.2%	G	0.89
Gradko	20% TEA in water	2024	R	Wychavon District Council	10	29	26	14.7%	G	0.87
Gradko	20% TEA in water	2024	R	Worcestershire	12	12	12	-3.4%	G	1.04
Gradko	20% TEA in water	2024		Overall Factor[3] (27 studies)				Use		0.84

The Local bias adjustment factor for the Zephyr was also calculated as shown in Table C.2 below.

Table C.2 – Local Bias Adjustment Calculation

	Local Bias Adjustment Input 1
Periods used to calculate bias	12
Bias Factor A	0.7 (0.66 - 0.74)
Diffusion Tube Bias B	44% (36% - 52%)
Diffusion Tube Mean (µg/m³)	22.2
Mean CV (Precision)	5.7%
Automatic Mean (µg/m³)	15.5
Data Capture	98%
Adjusted Tube Mean (µg/m³)	16 (15 - 16)

Notes:

Although Broxtowe Borough Council have applied a national bias adjustment factor of 0.84 to the 2024 monitoring data. The Local bias adjustment factor has also been calculated as shown in Table C.2. The decision was made to use the National bias adjustment factor, as opposed to using the local bias adjustment factor, although the local bias adjustment factor had good overall precision and good data capture for several reasons, which are.

- The National bias adjustment factor is higher than the local bias adjustment factor (0.84 as opposed to 0.69). Therefore, using the National bias adjustment factor would be using the 'worst case' bias adjustment factor to correct the data with.

- Section 7.221 in TG22 states that the Local bias adjustment factor should not be calculated using real time sensors, but rather a chemiluminescence analyser. BBC has a Zephyr which is a real time sensor and not a chemiluminescence analyser.

NO_2 Fall-off with Distance from the Road

No diffusion tube NO_2 monitoring locations within Broxtowe Borough Council required distance correction during 2024.

QA/QC of Automatic Monitoring

Although the Zephyr measurements are not normally reported in the ASR as they are real time sensor and not a chemiluminescence analyser Broxtowe Borough Council felt that it was appropriate to include the data within the ASR, but the data should be treated as indicative.

BBC's data from the Zephyr is managed by Geoff Broughton from Air Quality Data Management (AQDM) and any Local Site Operator (LSO) duties for the Zephyr are undertaken by Kate Ratcliffe at BBC.

As the Zephyr is not a chemiluminescence analyser the data are not ratified like the reference instruments because there are no calibrations. Therefore, the PAS 4023, LAQM TG22 and AURN methodologies have been used instead and the obvious anomalies have been removed

The live and historic data for BBC zephyr is available through the website; https://www.ukairquality.net/

There were no significant problems with the data or the real time sensor in 2024.

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

The type of PM_{10}/$PM_{2.5}$ monitor utilised within Broxtowe Borough Council do not require the application of a correction factor.

Automatic Monitoring Annualisation

All automatic monitoring locations within Broxtowe Borough Council recorded data capture of greater than 75% therefore it was not required to annualise any monitoring data.

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

No automatic NO_2 monitoring locations within Broxtowe Borough Council required distance correction during 2024.

Appendix D: Map of all Monitoring Locations within the Borough of Broxtowe.

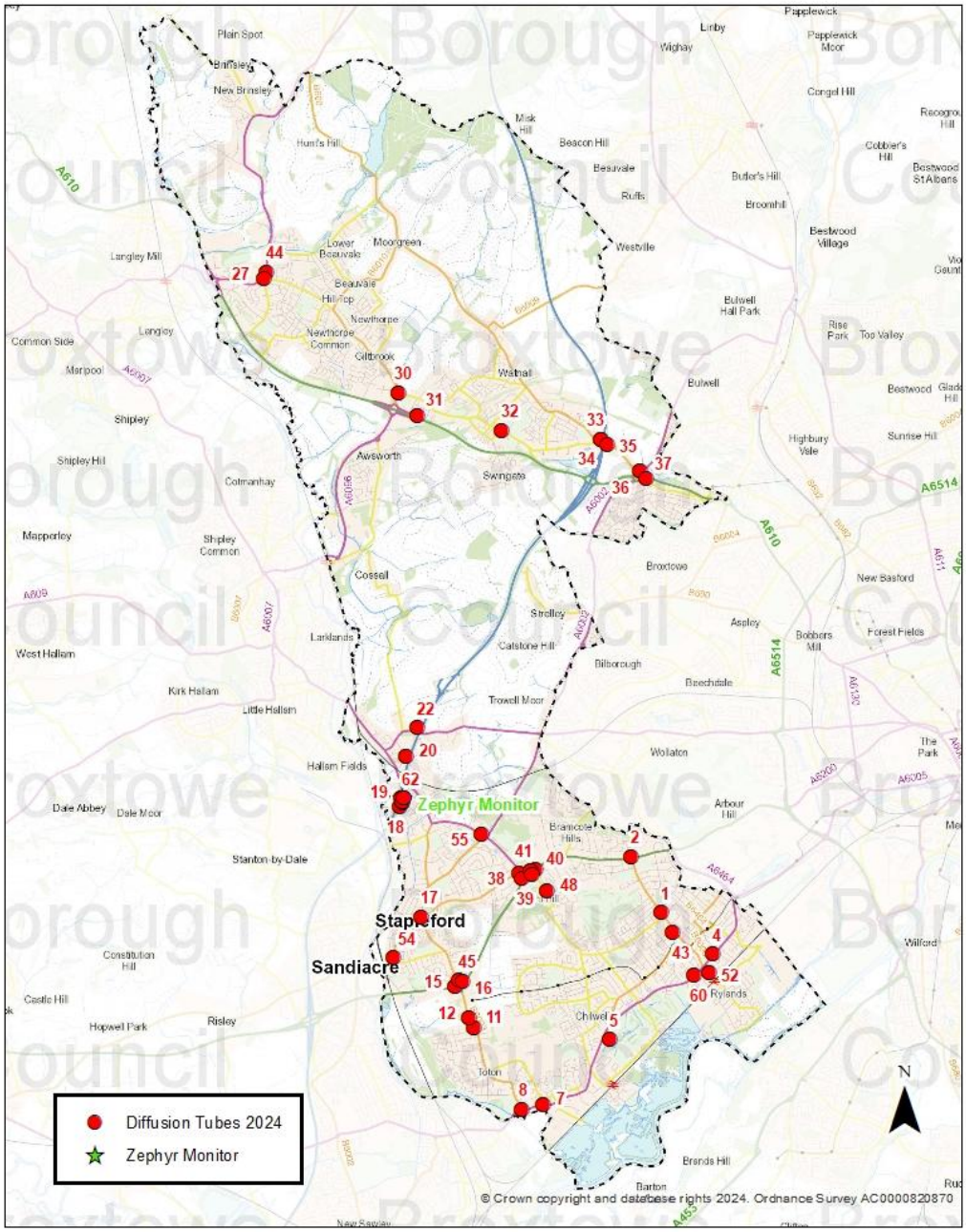


Figure D.1 – 2024 Diffusion Tube Locations and the location of the Zephyr Monitor.

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[3]

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

[3] 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	Air Quality Annual Status Report
ATF	Active Travel Fund
AURN	Automatic Urban and Rural Network
BBC	Broxtowe Borough Council
BSIP	Bus Service Improvement Plan
CAZ	Clean Air Zone
COMEAP	Committee on the Medical Effects of Air Pollution
CV	Coefficient of Variation
Defra	Department for Environment, Food and Rural Affairs
Derv	Diesel Engine Road Vehicle
DCC	Derbyshire County Council
DCiC	Derby City Council
DfT	Department for Transport
D2N2	Local Enterprise Partnership for Derby, Derbyshire, Nottingham and Nottinghamshire
EMAQN	East Midlands Air Quality Network
EMCCA	East Midlands Combine County Authority
EU	European Union
EVCC	Electric Vehicle Cable Channels
EVI	Electric Vehicle Infrastructure

Abbreviation	Description
FDMS	Filter Dynamics Measurement System
FTZ	Future Transport Zones
GNSP	Greater Nottingham Strategic Plan
HGV's	Heavy Goods Vehicles
HS2	High Speed Train 2
HVO	Hydrotreated Vegetable Oil
ITSO	Integrated Transport Smartcard Organisation
LAQM	Local Air Quality Management
LAQM.PG(16)	LAQM Policy Guidance 2016
LAQM.TG(16)	LAQM Technical Guidance 2016
LCWIP	Local Cycling and Walking Infrastructure Plan
LEV	Low Emission Vehicles
LGA	Local Government Association
LSTF	Local Sustainable Transport Fund
µg/m^3	Microgrammes of pollutant per cubic metre of air
MOT	Multi Operator Ticket in relation to travel on buses and trams
NEPWG	Nottinghamshire Environmental Protection Working Group
NET	Nottingham Express Transit
NCT	Nottingham City Transport
NH	National Highways
NHS	National Health Service
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
NCiC	Nottingham City Council
NCC	Nottinghamshire County Council

Abbreviation	Description
O_3	Ozone
OHID	Office for Health Improvement & Disparities used to be Public Health England
OLEV	Office for Low Emission Vehicles
OZEV	Office of Zero Emission Vehicles
PHOF	Public Health Outcomes Framework
PM	Particulate Matter
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
PT	Public Transport
PTP	Personalised Travel Planning
QA/QC	Quality Assurance and Quality Control
R&A	Review and Assessment
SAFED	Safe And Fuel-Efficient Driving
SEDBUK	Seasonal Efficiency of a Domestic Boiler in the UK
SO_2	Sulphur Dioxide
SQPS	Statutory Quality Partnership Schemes
TEA	Triethanolamine
UK	United Kingdom
UKSPF	United Kingdom Shared Prosperity Fund
ULEVs	Ultra Low Emission Vehicles
WASP	Workplace Analysis Scheme for Proficiency
WHO	World Health Organisation
WPL	Workplace Parking Levy

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