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2024 Air Quality Annual Status Report (ASR)

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

Date: 20th June, 2024

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Executive Summary: Air Quality in Our Area

Air Quality in Erewash

Breathing in polluted air affects our health and costs the NHS and our society billions of pounds each year. Air pollution is recognised as a contributing factor in the onset of heart disease and cancer and can cause a range of health impacts, including effects on lung function, exacerbation of asthma, increases in hospital admissions and mortality. In the UK, it is estimated that the reduction in healthy life expectancy caused by air pollution is equivalent to 29,000 to 43,000 deaths a year[1].

Air pollution particularly affects the most vulnerable in society, children, the elderly, and those with existing heart and lung conditions. Additionally, people living in less affluent areas are most exposed to dangerous levels of air pollution[2].

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

Table ES 1 - Description of Key Pollutants

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

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

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

Some of the major factors that impact on air quality within the Borough are subject to control by other organisations such as National Highways and Derbyshire County Council. This illustrates the importance of being able to work in collaboration with relevant organisations to address local air quality within Erewash.

Derbyshire County Council also has the responsibility for the public health function throughout the county. To tackle air quality on a county wide basis a Derbyshire County and Derby City Air Quality Working Group has been established. The group comprises of officers from relevant disciplines at Derbyshire County Council, Derby City Council, the Derbyshire Borough/District Councils, and the voluntary sector. The group is led by the Public Health Directorate of Derbyshire County Council and has links with the Derbyshire Chief Regulators Group, the East Midlands Air Quality Group and UK Health Security Agency.

This Annual Status Report (ASR) details the results of the air pollution monitoring undertaken by Erewash Borough Council for 2023.

Characteristics of Erewash

The Borough of Erewash is in Derbyshire between Nottingham and Derby.

It is of mixed urban and rural character with urbanisation concentrated on the eastern side. The two main towns are Ilkeston in the north and Long Eaton to the south with the town of Sandiacre lying between the two. Erewash had a population of 112,900 living in 50,300 households at the 2021 Census.

There are two major roads, the M1 motorway and the A52 trunk road running through the Borough which intersect at Junction 25 of the M1 in Sandiacre. There are no major industries in the Borough which are of significant relevance to air quality.

Long term monitoring of local air quality has been by means of passive Nitrogen Dioxide Diffusion Tubes. There are currently twenty-four monitoring sites operated within the Borough. Five are at roadside locations close to busy A roads, nine are at suburban locations in Long Eaton and three are at suburban locations in Long Eaton and one kerbside location in Sandiacre and six kerbside locations in Ilkeston.

The long-term trend of NO_2 concentrations within the Borough indicates there has been a decline in concentration levels over the last decade.

Kerbside (Sandiacre) monitoring location is in the former AQMA 1 on a bridge directly over the M1 motorway. Over the past five years the measured level of NO_2 has consistently declined and is below the annual average National Air Quality Objective of 40µg/m^3.

The nearest residential property to EBC/1 is approximately 35m from the motorway. Based on drop off with distance calculations this residential receptor has been below the National Air Quality objective for NO_2 since 2016. In April 2023 a new site was chosen to better represent the closest receptor partially due to safety issues when collecting EBC/1. EBC/1a is now located next to a residential property just off Derby Road in Sandiacre. The data obtained for the change of location also produced results below the annual average National Air Quality objective for NO_2.

Roadside monitoring locations have all produced results below the annual average National Air Quality Objective of 40µg/m^3 for the last five years. All locations have shown consistently reducing measured concentrations since 2016.

Suburban monitoring sites in Long Eaton have all shown significant reductions in measured NO_2 over the last five years and all have consistently been below the annual average National Air Quality Objective.

Suburban monitoring sites in Sandiacre have all shown significant reductions in measured NO_2 over the last five years, and all have consistently been below the annual average National Air Quality Objective.

Kerbside monitoring sites in Ilkeston six new sites have been added into the monitoring network in 2023, all of which have returned results below the annual average National Air Quality Objective.

Actions to Improve Air Quality

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

The Environmental Improvement Plan[3] sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term targets for fine particulate matter ($PM_{2.5}$), the pollutant most harmful to human health. The Air Quality

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

Strategy[4] provides more information on local authorities' responsibilities to work towards these new targets and reduce fine particulate matter in their areas.

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

Currently the main interventions to improve air quality within Erewash Borough Council's area are as follows:

Erewash Borough Council has incorporated climate change as one of their priority objectives. This will hopefully have a positive influence on air quality in the area as actions are implemented. A pledge to be carbon neutral by 2050 has been agreed.

Erewash Borough Councils Environmental Protection Officers participate in the Derbyshire County and Derby City Air Quality Working group. The group charts the activities being undertaken across the County in relation to air quality. It also encourages cross discipline and partnership working to help improve air quality across Derbyshire.

The Council's Environmental Protection Team continues to maintain inspection targets in respect of the Local Authority Pollution Prevention and Control (LAPPC) and Local Authority Integrated Pollution Prevention and Control (LA-IPPC) regimes. The LAPPC regime regulates emissions to air, land and water from certain industrial processes through environmental permitting. Inspections under the regimes are carried out on a regular basis to ensure compliance with permit conditions. Officers also work closely with other agencies such as the Environment Agency, Derbyshire County Council, Derbyshire Fire and Rescue Service and neighbouring local authorities in relation to processes permitted by the Environment Agency.

The team also actively investigates complaints of non-compliance within the Borough's Smoke Control Areas and nuisance complaints relating to dust and smoke under the

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

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

Environmental Protection Act 1990 and actively engages with local planning authorities in respect of making relevant comments on planning consultations.

The Council through the Home Upgrade Grant (HUG) are improving eligible homes by providing energy efficiency upgrades and low carbon heating to enable residents to move away from fossil fuels.

Information in respect of improving air quality within Derbyshire and actions members of the public can take to help reduce air pollution have been published on the Councils website to encourage residents to engage in activities that would reduce their impact on local air quality.

Conclusions and Priorities

The long-term trend of NO_2 concentration levels within the Borough over the last 5 years indicates there has been a consistent and sustained reduction in NO_2 throughout the monitoring network. No exceedance of the annual mean was recorded at any site in the borough.

To continue to improve the air quality in Erewash the priorities for Erewash Borough Council for the coming year are to:

- Review the NO_2 diffusion tube network, discontinue monitoring at any sites where the annual air quality levels are comfortably below the objective and relocate them to new sites in the borough.
- Continue to be a member of the Derbyshire County and Derby City Air Quality Working Group.
- Engage with the public about air quality and raise awareness of the health effects of air quality.

In relation to new developments since the beginning of 2022 the redevelopment of former Stanton Ironworks site in Ilkeston (planning reference ERE/1221/0002) has commenced with the clearance of the site, construction of roadways within the development and the erection of the first unit taking place in 2023. There is the potential for this development to impact on the local air quality through additional road users on the existing road network and through the addition of new industrial processes into the area.

Local Engagement and How to get Involved

The main contributions that the community can make to improving air quality are around taking personal and community action around minimising emissions from traffic and other sources and limiting exposure at times of poor air quality.

Information in respect of improving air quality within Erewash including actions that members of the public can take to help reduce air pollution is available on the Council's website at:

Erewash Borough Council Pollution and Air Quality

And also on the Derbyshire County Councils website at:

Derbyshire County Council Air Quality

One of the main changes that can be made is to use sustainable travel more and reduce our dependency of the car where possible. Information on walking and cycling including led walks and cycle maps can be accessed at:

community health and wellbeing development - walking

In addition to the above a car sharing scheme operates in Derbyshire and is available to anyone, details can be found at: EA Derbyshire, Nottinghamshire and Leicestershire community - part of the Liftshare network

Large portions of Erewash are smoke control areas; therefore, residents cannot emit smoke from a chimney unless they are burning an authorised fuel or using an exempt appliance. The smoke control section of the Councils website provides an interactive mapping system to allow residents to determine whether they are located within a smoke control area. Information on the smoke control areas within Erewash can be found at Smoke Control Areas (erewash.gov.uk)

Further information on suitable fuels and exempt appliances can be found at UK smoke control: the rules. All appliances must be kept in good working order to ensure that they are working efficiently.

Local Responsibilities and Commitment

This ASR was prepared by the Environmental Protection Team at Erewash Borough Council with the support and agreement of the following officers and departments:

Senior Environmental Protection Officer – Environmental Protection Team, Erewash Borough Council

Environmental Health Manager – Erewash Borough Council

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

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

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Table of Contents

Figures

1 Local Air Quality Management

This report provides an overview of air quality in Erewash Borough Council during 2023. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), and the relevant Policy and Technical Guidance documents.

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

Erewash Borough Council currently does not have any declared AQMAs. A local Air Quality Strategy is under development to prevent and reduce polluting activities.

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

Defra's appraisal of last year's ASR concluded:

The report is well structured, detailed, and provides the information specified in the Guidance. The following comments are designed to help inform future reports:

1. Continue with Reference to the Public Health Outcomes Framework, following the positive work made in this submission.
2. Continue analysis of trends in the air quality data in comparison to the Air Quality Objectives.
3. Continue maintaining high standards of QA/QC procedures with sufficient supporting evidence provided., with robust analysis shown in this submission.

To address the above points information relating to the Public Health Outcomes Framework has been included in this year's ASR as well as providing analysis of air quality trends and data relating to QA/QC procedures.

Erewash Borough Council has taken forward several direct measures during the current reporting year of 2023 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.1.

22 measures are included within Table 2.1, with the type of measure and the progress Erewash Borough Council have made during the reporting year of 2023 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.1.

Key completed measures are:

- Investigation of complaints and ensuring compliance within the Boroughs Smoke Control Areas.
- Purchase of an electric shuttle bus and the installation of an electric charging point at the Merlin House depot.
- Investigation of complaints relating to dust and smoke nuisance under the Environmental Protection Act 1990.
- Maintenance of the inspection programme for all relevant industrial premises in respect of the LAPPC and LA-IPPC regimes.
- Officer participation on the Derbyshire and Derby City Air Quality Working Group and the Derbyshire Environmental Protection Group.
- Effective fleet operation, including driver training and take up of cleaner vehicle technology wherever possible.
- Encouraging the take up of measures to improve air quality through the planning and development process.
- A total of 202 planning applications have been assessed for their impact on air quality in 2023. Where appropriate, mitigation has been implemented through the imposition of planning conditions.
- Implementation of a hybrid working policy for council staff, the benefits of which include a reduction in car use. Since the introduction of the hybrid working policy there has been a reduction in business mileage costs of 51%, this can be attributed to staff attending meetings/training remotely and a reduced workforce presence in the office as well as staff making effective use of their on-borough time.

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

- Review the current Nitrogen Dioxide diffusion tube monitoring network within the Borough to determine whether there are any areas of concern.

- Maintenance of the inspection programme for all relevant industrial premises in respect of the LAPPC and LA-IPPC regimes.
- Continued investigation and where necessary enforcement in relation to Smoke Control Areas.
- Continued investigation and where necessary enforcement in relation to nuisance complaints.
- Proactive participation in the planning and development process with a view to promoting clean air technologies and better air quality.
- Continued officer participation in the Derbyshire and Derby City Air Quality Working Group and the Derbyshire Environmental Protection Group.
- Through the delivery of the Homes Upgrade Grant we will continue to decarbonise eligible homes in the borough
- To assist in the implementation of the Derbyshire Air Quality Strategy (2020-2030)
- Engagement in relevant liaison with other agencies in relation to matters that influence air quality but are not under direct enforcement by Erewash Borough Council, for example, Derbyshire County Council, National Highways and the Environment Agency.
- The Council's long term carbon reduction strategy is currently being reviewed and updated with a view to developing a new carbon management/climate action plan that will set out how the council's commitment to carbon neutrality will be achieved by 2050.

Erewash Borough Council worked to implement these measures in partnership with the following stakeholders during 2023:

- Neighbouring local authorities through the Derbyshire and Derby City Air Quality Working Group and the Derbyshire Environmental Protection Group.
- Derbyshire County Council
- Environment Agency

The principal challenges and barriers to implementation that Erewash Borough Council anticipates facing are trying to balance the delivery of the various measures in Table 2.1 with other priorities.

To continue to improve the air quality in Erewash the priorities for Erewash Borough Council for the coming year are to:

- Review the NO_2 diffusion tube network, discontinue monitoring at any sites where the annual air quality levels are comfortably below the objective and relocate them to new sites in the borough.
- Continue to be a member of the Derbyshire County and Derby City Air Quality Working Group.
- Engage with the public about air quality and raise awareness of the health effects of air quality through the purchase and installation of 2 low-cost sensors within the Borough and the provision of an air quality portal which will be accessed via the Councils website.

Table 2.1 – Progress on Measures to Improve Air Quality

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
1	Promoting on the Council Webpage the Council's Electric Vehicle Charging Points Network within the Borough and other publicly available charging points	Public Information	Other	2020	2030	EBC	EBC	NO	Not Funded	< £10k	Implementation	Reduction in N02 and PM due to raising awareness of where people can use the charge points for their electric vehicles	3 Council owned charge points are promoted on EBCs website	The council currently has 3 electric vehicle charge point advertised on the website with street name and location. Erewash was allocated £107,000 to install the charge points – funding that came from Nottingham City Council, following its successful bid for £6.12m of government money to become one of four Go Ultra Low Cities. The City Council is managing the project with BP Chargemaster as the delivery partner. The Council also provides a link to other publicly available charging points on the website.	
2	Fleet Review	Vehicle Fleet Efficiency	Other	2023	2025	EBC, Nottingham County Council		NO	Not Funded		Implementation	Reduction in NOx and Particulates	5 x replacement recycling vehicles (Euro 6) are being procured	EBC are undertaking a review of their current fleet to determine the feasibility of introducing electric vehicles within the existing fleet and to replace existing older vehicles'	
3	Promote green waste services and discourage the use of bonfires	Public Information	Via the Internet	2020	2024	Local Authority Waste Dept. and Environmental Health Department	N/A	NO	Funded	< £10k	Implementation	Reduced emissions from outdoor burning	Sign up rate, tonnage green waste collected and formal actions on waste related burning	Implementation on-going, 54% of eligible properties have signed up for garden waste collection, regular publicity continues	As of the 1st of April 2024 green waste will be a chargeable collection

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
4	Cycle purchase scheme	Alternatives to private vehicle use	Other	2012	2025	Erewash Borough Council	Erewash Borough Council	NO	Funded	< £10k	Implementation	reduced vehicle emissions	Number of users	Ongoing	2 loans ended in 2023, 2 new loans started, and one is being processed
5	Raise awareness of sustainable waste management practices for use by residents and businesses throughout the Borough	Public Information	Other	2012	2025	Erewash Borough Council	Erewash Borough Council	NO	Funded	< £10k	Implementation	No direct reductions	waste recycling rates	Ongoing	Unknown
6	Green Homes Grant LAD phrase 3 and HUG2 to reduce domestic fossil fuel use	Public Information	Via the Internet	2020	2024	Erewash Borough Council	Erewash Borough Council	NO	Partially Funded	£100k - £500k	Implementation	small reduction in background NOx	EPC rating improvement and carbon reduction	Number of properties improved	55 homes received measures under LAD 3 and 2 under HUG2
7	Use of existing mechanisms including supplementary planning guidance to manage air quality by assessing the impact of new development and best practice material techniques and mitigation into the design	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2012	2025	Erewash Borough Council	Erewash Borough Council	NO	Funded	< £10k	Implementation	Reduction in source emissions	Number of air quality interventions in planning applications	Ongoing	Unknown
8	Agile working	Promoting Travel Alternatives	Encourage / Facilitate home-working	2020	2025	Erewash Borough Council	Erewash Borough Council	NO	Funded	< £10k	Implementation	Reduction in NOx and particulate	n/a	Ongoing	Unknown

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
9	Council Priority Area - Climate Change	Other	Other	2019	2025	Erewash Borough Council	Erewash Borough Council	NO	Funded	< £10k	Implementation	Carbon	n/a	Agreement to pursue carbon neutral status by 2050 was agreed in 2019. The council's long term carbon reduction strategy is currently being reviewed and updated with a view to developing a new carbon management/climate action plan that will set out how the council's commitment to carbon neutrality will be achieved by 2050.	Unknown
10	Taxi Low emission incentives	Promoting Low Emission Transport	Taxi emission incentives	2012	2025	Erewash Borough Council	Erewash Borough Council	NO	Funded	< £10k	Implementation	NOx and Particulates	n/a	20% reduction on vehicle renewal fees for those vehicles classed as low emissions.	Unknown
11	Derbyshire County and Derby City Air Quality Strategy	Other	Other	2020	2030	DCC	DCC	NO	Funded		Implementation	Reduced NOx and PM	Various key indicators within the document	Adopted in 2020, review in draft 2023	
12	Long Eaton Town Deal - walking and cycling network improvements	Promoting Travel Alternatives	Other	2020	2025	EBC, Long Eaton Town Deal Board	Town deal fund	NO	Funded	£1 million - £10 million	Planning			Projects planned but not yet commenced	Unknown
13	Reduce emissions from industrial sources by EPR inspections	Environmental Permits	Other measure through permit systems and economic instruments	2016	2040	EBC	EBC	NO	Funded	£10k - 50k	Implementation	Particulates	All permits rated low/medium	Ongoing enforcement of current regulations	All inspections required were undertaken
14	Little Eaton Greenway	Promoting Travel Alternatives	Promotion of cycling	2023	2025	DCC	DCC	NO			Planning	NOx and Particulates		To transform the former railway into a multipurpose, multi-user Greenway, for walkers, cyclists, horse riders, and those with mobility scooters. This route is embedded in the Derbyshire Key Cycle Network proposals and would extend the National Cycle Network Route 54. A	

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
														planning application received, and appropriate comments made by the EP team.	
15	Annual report on AQ to Derbyshire Health Protection Board	Public Information	Via other mechanisms	2018	2030	EBC and other district LA's	District LA's	NO	Not Funded	< £10k	Implementation	No direct impact	Report to health protection board	2022 report presented to the health and wellbeing board; data being provided to enable 2023 report to be generated	
16	Promotion of Clean Air Day	Public Information	Via the Internet	2022	2030	DCC and EBC	DCC	NO	Funded	< £10k	Implementation	No direct impact			
17	Healthy Homes project	Other	Other	2020	2024	DCC	Better care fund	NO	Funded	£100k - £500k	Implementation	Reduced PM and carbon	No of properties improved	16 properties improved 23/24	Main issues are finding eligible people and getting them to engage
18	Installation of two continuous PM monitors in Erewash and the production of a public portal	Public Information	Via the Internet	2023	2026	EBC	EBC	NO	Funded	£10k - 50k	Planning	No direct reductions	Capture of NOx and PM data	Quotes obtained; supplier chosen	
19	Electric charging points - Public	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging		2020	EBC	Nottingham city Council	NO	Funded	£100k - £500k	Completed	Reduction in NOx and Particulates	3 charge points installed	3 charge points installed in Council car parks. Erewash was allocated £107,000 to install the charge points – funding that came from Nottingham City Council, following its successful bid for £6.12m of government money to become one of four Go Ultra Low Cities. The City Council is managing the project with BP Chargemaster as the delivery partner.	
20	Electric charging points - Merlin Way Depot	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2023	2024	EBC	EBC	NO	Funded	£10k - 50k	Completed	Reduction in NOx and Particulates	1 dual point installed	A 22kWh dual charge point installed at the Merlin Way depot	

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
21	Electric Charging Points - Merlin Way Depot	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2023	2026	EBC	Nottingham City Council	NO	Funded	£50k - £100k	Planning	Reduction in NOx and Particulates	3 Charge points to be installed	As part of the shared public sector charging network the council will be installing a 40kW rapid charge point and two 7.2 kW charge points at Merlin Way Depot fully funded by Nottingham City Council	
22	Purchase of Electric shuttle bus	Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	2023	2023	EBC	Shared prosperity fund	NO	Funded	£50k - £100k	Completed	Reduction in NOx and PM due to residents using the service	Purchase of electric shuttle bus	The council has purchased an electric shuttle bus to provide local passenger services around Ilkeston town centre	

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

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

The Public Health Outcomes Framework (PHOF) is a Department of Health tool for England which is intended to focus public health action on increasing healthy life expectancy and reducing differences in life expectancy between communities. In recognition of the significant impact that poor air quality can have on health the PHOF includes an indicator relating to fine particulate matter (PM2.5). The current position of Erewash compared to the rest of the country can be taken from the most recently published Public Health Outcomes Framework

Public Health Indicator	Air Pollution – Fine particulate matter (µg/m^3) (2022)	Fraction of mortality attributable to particulate air pollution (2022)
England average	7.8	5.8
East Midlands average	8.2	6.1
Derbyshire	7.7	5.8
Erewash	8.9	6.6

https://uk-air.defra.gov.uk/data/pcm-data

Erewash Borough Council is taking the following measures to address $PM_{2.5}$:

- It is taking the measures detailed in Table 2.1 above which will contribute to reducing levels of particulate matter.

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

- The inspection programme of permitted industrial processes under the LAPPC and LA-IPPC regimes will be maintained.
- Complaints regarding non-compliance with permit conditions by premises operating under the LAPPC and LA-IPPC regimes will be investigated and where appropriate enforcement action will be taken.
- Complaints within the Borough's Smoke Control Areas will be investigated and information in respect of the correct use of fuel and maintenance of appliances will be given to residents. Where appropriate enforcement action will be taken.
- Complaints regarding dust and smoke nuisances will be investigated and appropriate action taken.
- Through Healthy Homes and HUG2 provide energy efficiency upgrades and low carbon heating via local authority funding
- Environmental Protection Officers will continue to play an active part in the Derbyshire and Derby City Air Quality Working Group and the Derbyshire Environmental Protection Group.
- Environmental Protection Officers will continue to engage with relevant local planning authorities in respect of making appropriate comments on consultations for development.
- Environmental Protection Officers will continue to engage with the Environment Agency in relation to permitted processes under their jurisdiction when complaints are received from the public.
- Information on air quality and actions members of the public can take to help improve local air quality will be published on the Councils website together with details of any proposed local initiatives the public can engage with.

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

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

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Erewash Borough Council have no automatic monitoring sites.

3.1.2 Non-Automatic Monitoring Sites

Erewash Borough Council undertook non- automatic (i.e. passive) monitoring of NO_2 at 24 sites during 2023 (20 for a full year and 4 for 3 months). Table A.1 in Appendix A presents the details of the non-automatic sites. Since the 2022 ASR the monitoring locations have been reviewed, following the review five sites were removed from the programme where levels have consistently been below the national air quality objective (EBC/7, EBC/10, EBC/11, EBC/13 and EBC/23) and six sites being added to the programme in Ilkeston in response to concerns over increased HGV's and to provide additional town centre coverage (EBC/24 – EBC29 inclusive).

EBC/1 has been moved to a location more representative of relevant exposure due to concerns relating to the health and safety of staff when collecting tubes that were previously located on the motorway bridge above the M1.

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

For diffusion tubes, the full 2023 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. None of the locations monitored exceeded the annual mean objectives.

Figures A.1 to A.5 show that there has been a consistent downward trend in the overall measured average across Erewash Borough Council between 2019 -2023.

The lowest averaged measurements obtained were in 2020 during the Covid-19 pandemic when traffic movement on the local road network was significantly reduced.

It is understood that traffic volumes have largely returned to pre-Coronavirus pandemic levels, it is noted that there does not appear to have been a significant increase in measured NO2 during 2023 when comparing against 2020 and 2021.

3.2.2 Particulate Matter (PM_{10})

Erewash Borough Council does not undertake any monitoring for PM10.

3.2.3 Particulate Matter ($PM_{2.5}$)

Erewash Borough Council does not undertake any monitoring for $PM_{2.5}$.

3.2.4 Sulphur Dioxide (SO_2)

Erewash Borough Council does not undertake any monitoring for SO2.

Appendix A: Monitoring Results

Table A.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)
EBC/1	Derby Road	Kerbside	447172	336102	NO_2	No	35.0	1.0	No	3.0
EBC/1a	Derby Road	Kerbside	447087	336111	NO_2	No	2.0	1.0	No	2.0
EBC/2	Cairnsmore Close	Suburban	447296	334193	NO_2	No	5.0	40.0	No	2.0
EBC/4	Copseside Close	Suburban	447333	333588	NO_2	No	5.0	35.0	No	2.0
EBC/5	Brendon Way	Suburban	447211	334543	NO_2	No	5.0	40.0	No	2.0
EBC/6	Guinea Close	Suburban	447356	333422	NO_2	No	5.0	75.0	No	1.5
EBC/7	Heath Gardens	Suburban	447016	333792	NO_2	No	5.0	100.0	No	1.5
EBC/8	Bracken Road	Roadside	447544	334195	NO_2	No	20.0	2.0	No	2.0
EBC/9	Hadstock Close	Suburban	447586	335881	NO_2	No	5.0	50.0	No	2.0
EBC/10	Bostocks Lane	Suburban	446946	335728	NO_2	No	5.0	20.0	No	2.0
EBC/11	Bronte Close	Suburban	447280	333161	NO_2	No	5.0	60.0	No	2.5
EBC/12	128 Derby Road	Roadside	448306	334054	NO_2	No	5.0	3.0	No	2.0
EBC/13	215 Derby Road	Roadside	448056	333933	NO_2	No	5.0	3.0	No	2.5
EBC/14	Nottingham Road	Roadside	447291	340647	NO_2	No	5.0	2.0	No	2.0
EBC/18	Richmond Avenue	Suburban	447301	335804	NO_2	No	5.0	50.0	No	2.0
EBC/20	Chalons Way	Roadside	446635	341435	NO_2	No	5.0	2.0	No	2.0
EBC/21	Russell Court	Suburban	448564	334021	NO_2	No	0.0	10.0	No	1.5
EBC/22	Borrowdale Drive	Suburban	447192	332847	NO_2	No	2.0	100.0	No	2.0
EBC/23	Langdale Drive	Suburban	447189	332830	NO_2	No	5.0	100.0	No	2.5
EBC/24	Sowbrook Lane	Kerbside	446449	339103	NO_2	No	5.0	1.0	No	2.0
EBC/25	Heanor Road	Kerbside	447417	342599	NO_2	No	20.0	1.0	No	2.0
EBC/26	Rutland Street	Kerbside	446588	342516	NO_2	No	2.0	1.0	No	2.0
EBC/27	Stanton Road	Kerbside	446612	341231	NO_2	No	2.0	1.0	No	2.0
EBC/28	Little Hallam Hill	Kerbside	446658	340544	NO_2	No	16.0	1.0	No	2.0
EBC/29	Hallam Fields Road	Kerbside	447585	339729	NO_2	No	3.0	1.0	No	2.0

Notes:

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

(2) N/A if not applicable.

Table A.2 – Annual Mean NO_2 Monitoring Results: Non-Automatic Monitoring (µg/m^3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
EBC/1	447172	336102	Kerbside	100	15.4	36.9	31.5	34.5	34.0	33.1
EBC/1a	447087	336111	Kerbside	100	75.0	-	-	-	-	16.3
EBC/2	447296	334193	Suburban	100	100.0	24.3	14.7	20.3	20.6	19.0
EBC/4	447333	333588	Suburban	100	100.0	24.1	18.9	19.2	20.1	17.6
EBC/5	447211	334543	Suburban	100	90.4	21.8	18.9	21.5	21.3	17.8
EBC/6	447356	333422	Suburban	100	100	19.5	15.6	16.1	16.2	15.4
EBC/7	447016	333792	Suburban	100	25.0	14.7	11.9	12.5	12.1	11.2
EBC/8	447544	334195	Roadside	100	100	22.5	18.3	19.3	19.5	18.2
EBC/9	447586	335881	Suburban	100	100	22.8	18.2	18.6	19.3	17.7
EBC/10	446946	335728	Suburban	100	100	18.4	13.0	13.7	13.6	11.9
EBC/11	447280	333161	Suburban	100	25.0	21.7	17.8	18.0	18.1	16.5
EBC/12	448306	334054	Roadside	100	100	26.9	18.2	21.7	22.4	21.5
EBC/13	448056	333933	Roadside	100	25.0	23.8	20.1	21.4	22.0	20.3
EBC/14	447291	340647	Roadside	100	100	21.5	19.1	22.8	22.2	21.1
EBC/18	447301	335804	Suburban	100	100	27.7	17.0	17.4	18.3	17.1
EBC/20	446635	341435	Roadside	100	84.6	21.8	22.1	24.0	24.1	22.6
EBC/21	448564	334021	Suburban	100	100	20.0	15.6	17.2	16.7	15.6
EBC/22	447192	332847	Suburban	100	92.3	22.8	17.3	17.6	18.2	16.1
EBC/23	447186	332832	Suburban	100	24.9	20.4	16.3	17.6	16.7	16.1
EBC/24	446449	339103	Kerbside	100	100	-	-	-	-	16.0
EBC/25	446417	342599	Kerbside	100	75	-	-	-	-	20.9
EBC/26	446588	342516	Kerbside	100	75	-	-	-	-	21.6
EBC/27	446612	341231	Kerbside	100	75	-	-	-	-	26.3
EBC/28	446658	340544	Kerbside	100	75	-	-	-	-	30.4
EBC/29	447585	339729	Kerbside	100	75	-	-	-	-	15.9

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

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

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

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 EBC/1 and EBC1a

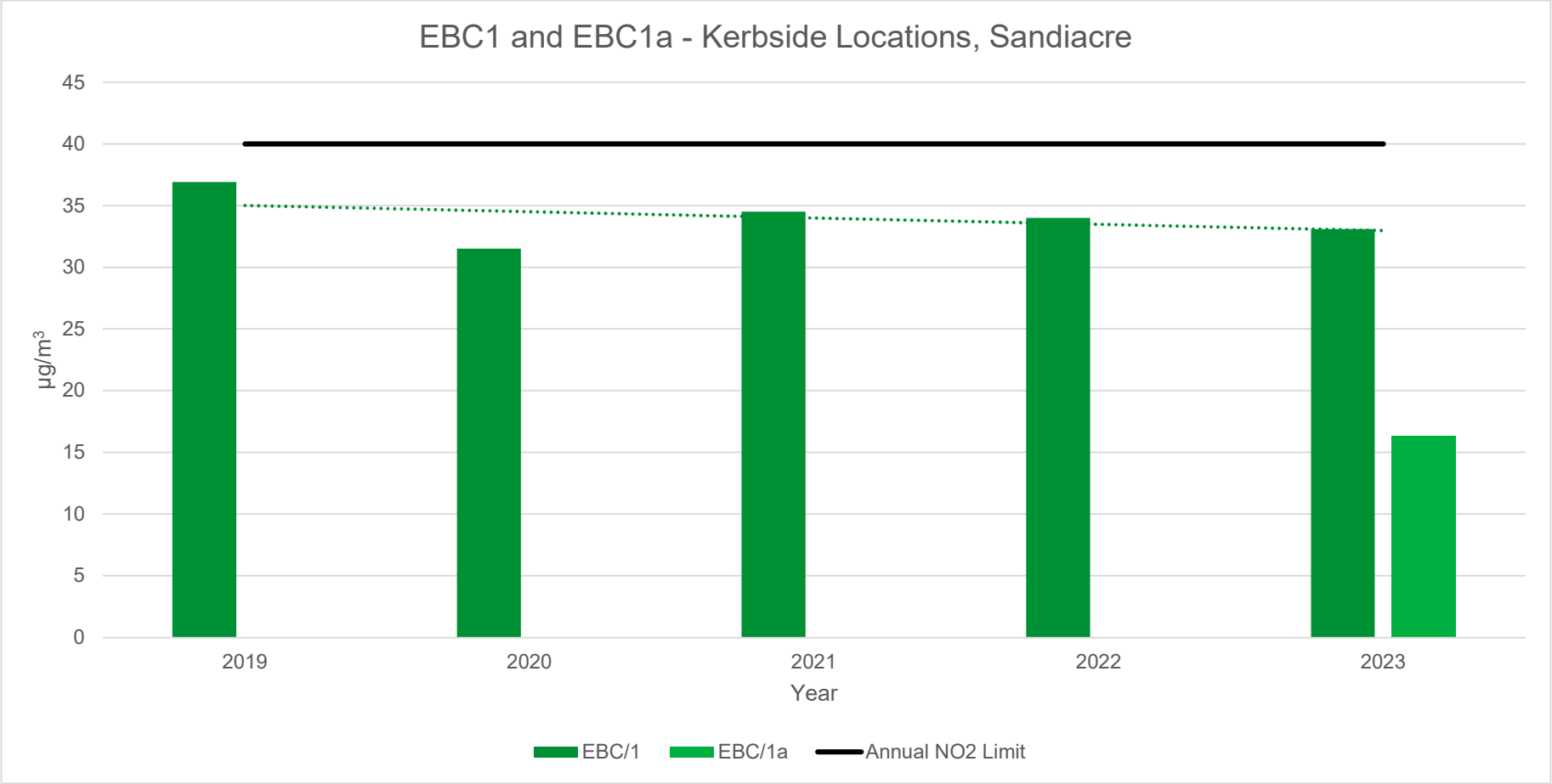


Figure A.2 – Trends in Annual Mean NO_2 Concentrations Roadside locations

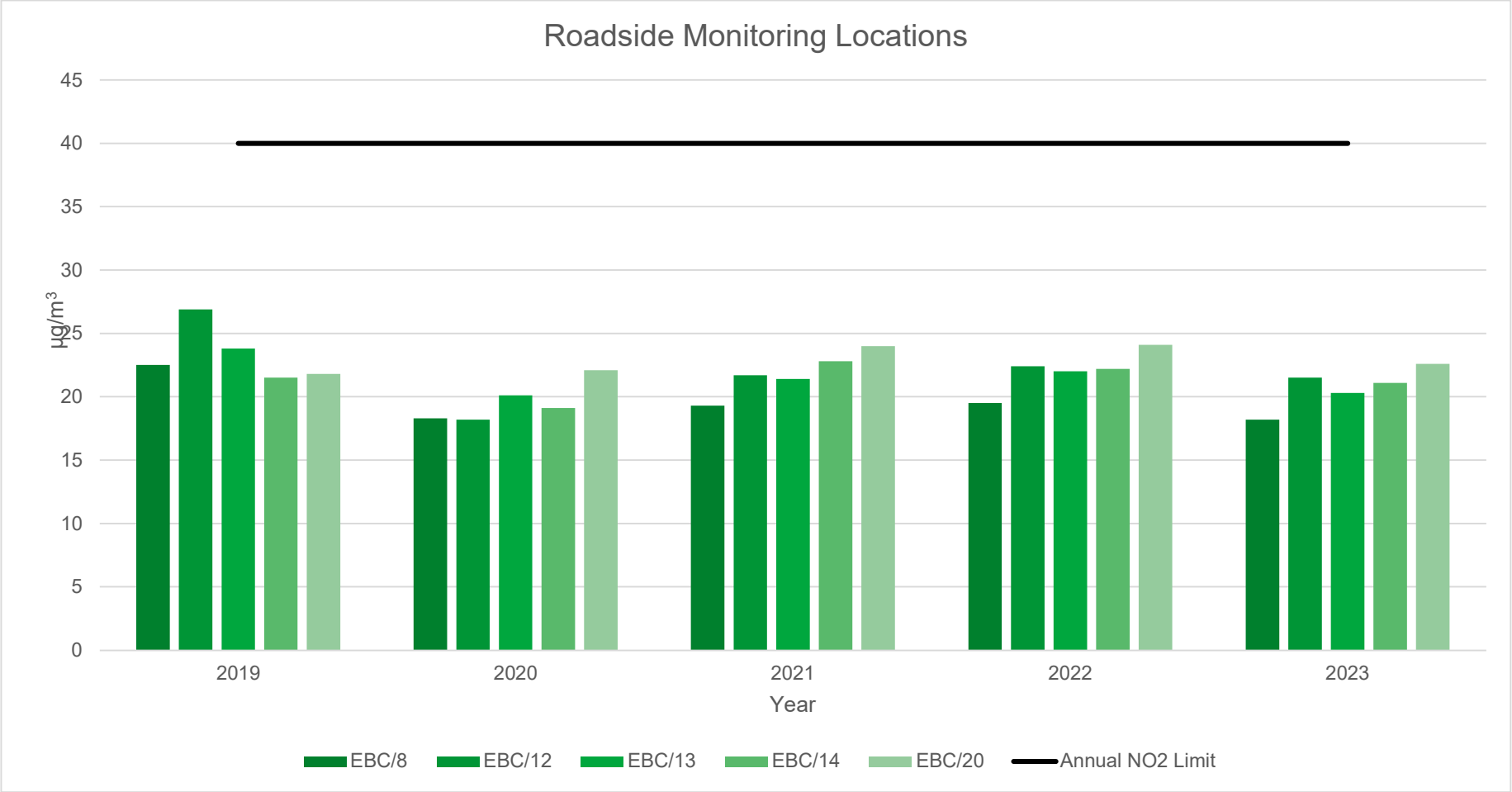


Figure A.3 – Trends in Annual Mean NO_2 Concentrations Long Eaton suburban locations

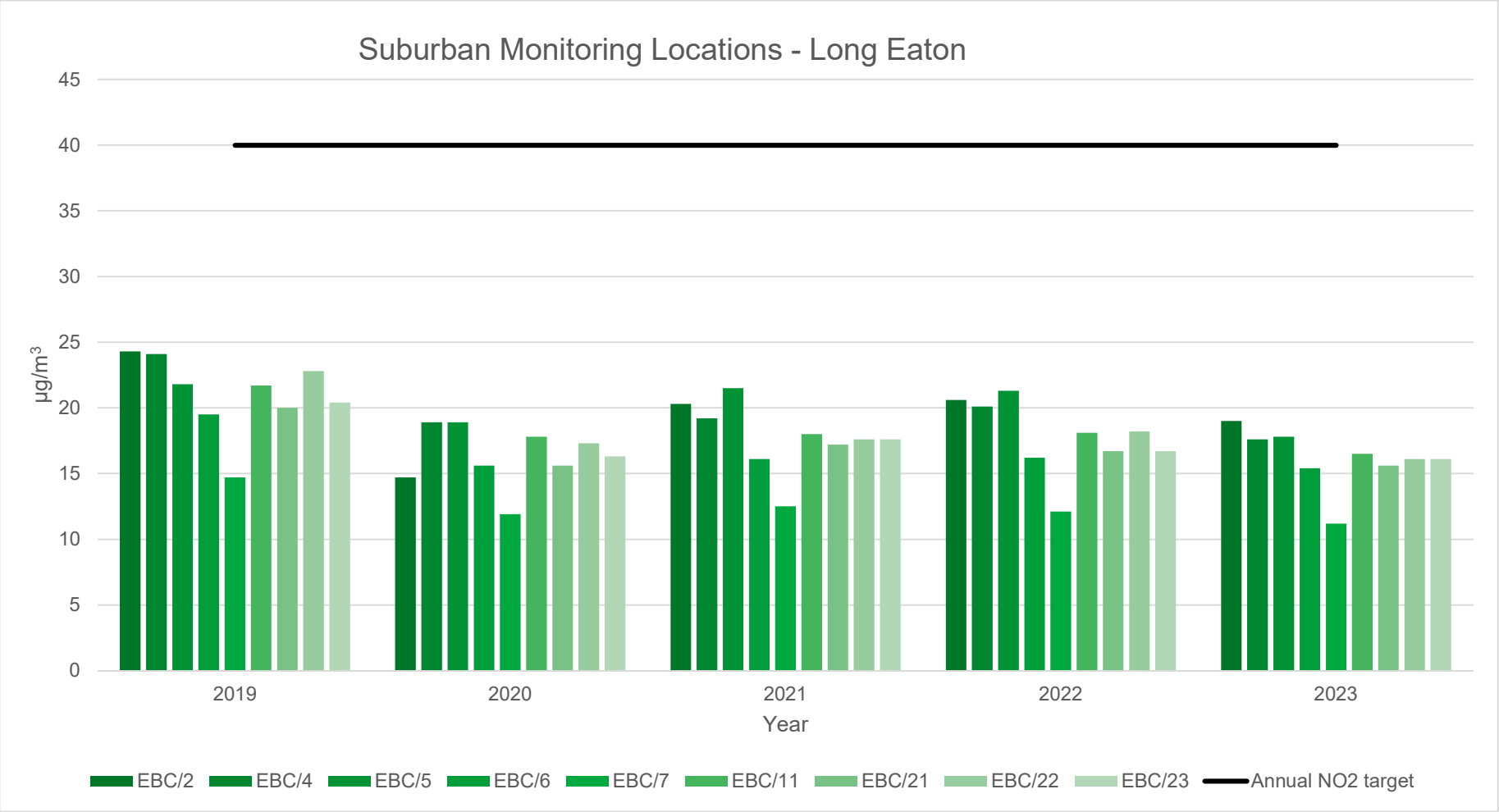


Figure A.4 – Trends in Annual Mean NO_2 Concentrations Suburban Locations in Sandiacre

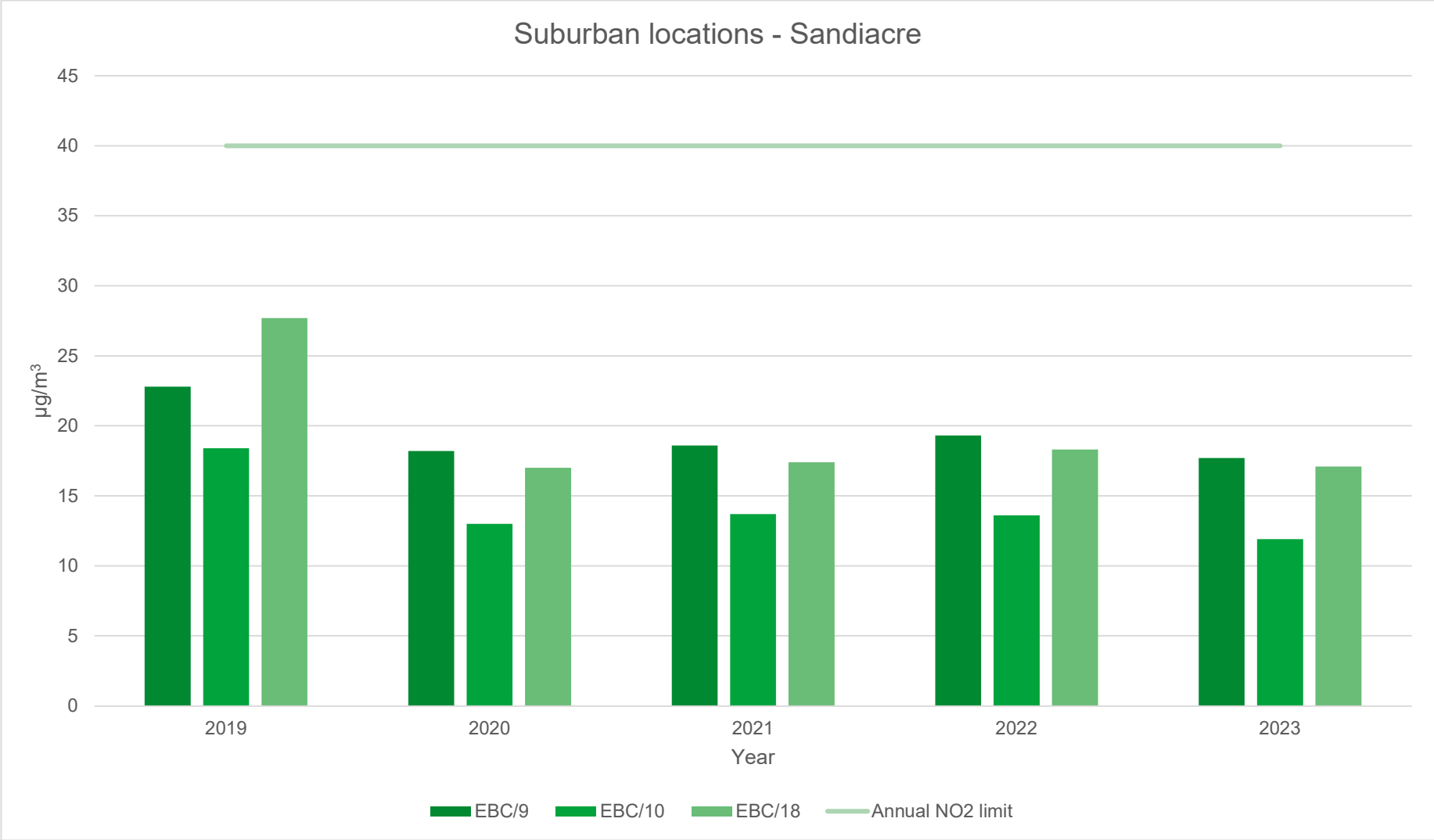
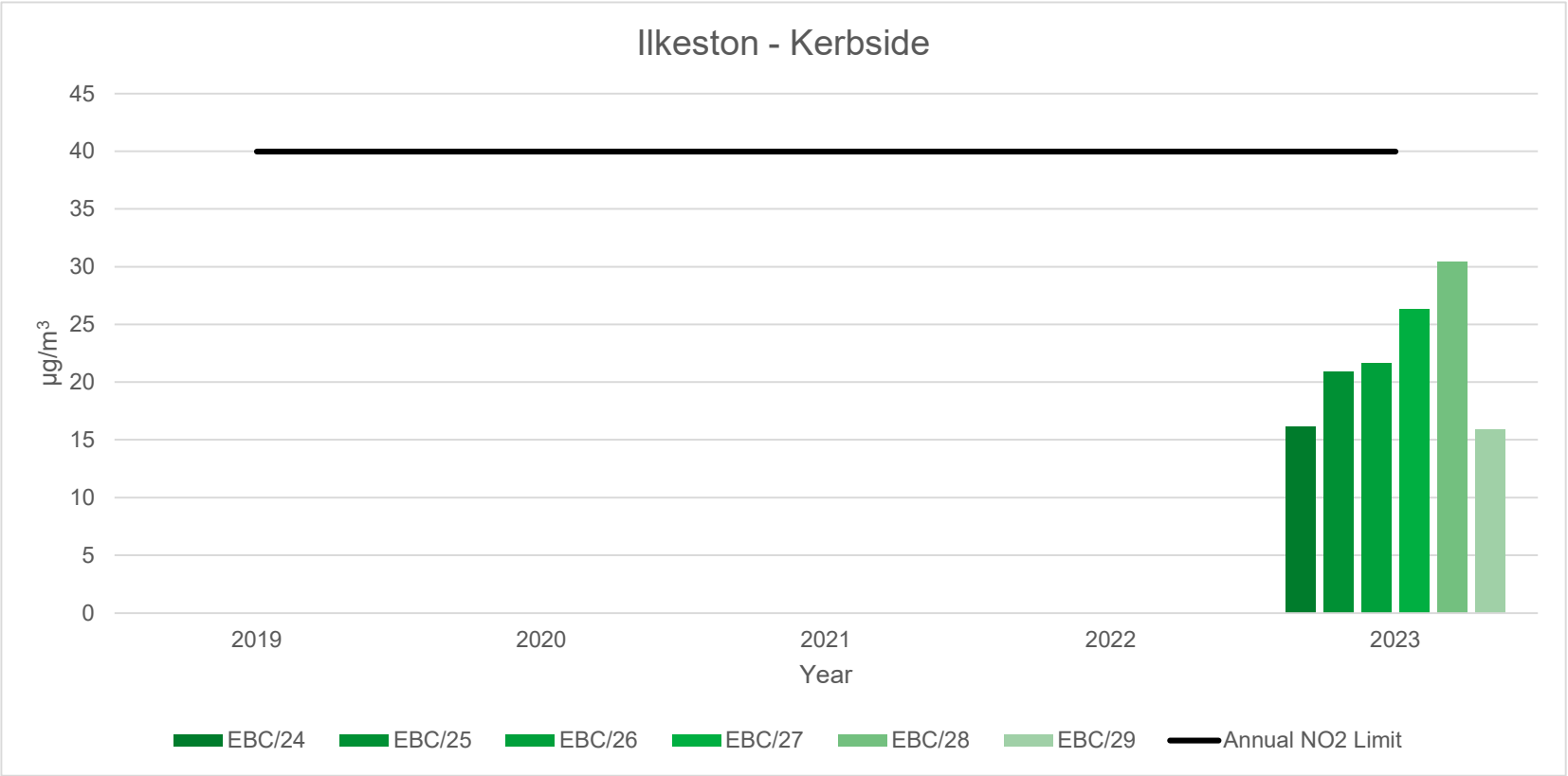


Figure A.5 – Trends in Annual Mean NO_2 Concentrations Ilkeston kerbside locations



Appendix B: Full Monthly Diffusion Tube Results for 2023

Table B.1 – NO_2 2023 Diffusion Tube Results (µg/m^3)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted 0.74	Annual Mean: Distance Corrected to Nearest Exposure	Comment
EBC/1/1	447172	336102	44.1	48.1											-	-		Location moved to EBC1a due to safety when changing tubes. Insufficient data capture Triplicate site with EBC/1/1, EBC/1/2 and EBC/1/3. Annual data provided for EBC/1/3 only
EBC/1/2	447172	336102	42.6	44.8											-	-		Location moved to EBC1a due to safety when changing tubes. Insufficient data capture Triplicate site with EBC/1/1, EBC/1/2 and EBC/1/3. Annual data provided for EBC/1/3 only
EBC/1/3	447172	336102	43.5	45.3											44.7	33.1		Location moved to EBC1a due to safety when changing tubes. Insufficient data capture Triplicate site with EBC/1/1, EBC/1/2 and EBC/1/3. Annual data provided for EBC/1/3 only
EBC/1a/1	447087	336111				21.8	18.7	22.0	15.9	18.4	24.8	25.1	29.3	21.8	-	-	-	Triplicate site with EBC/1a/1, EBC/1a/2 and EBC/1a/3. Annual data provided for EBC/1a/3 only
EBC/1a/2	447087	336111				19.7	20.0	22.6	16.1	19.2	25.8	24.7	27.8	21.9	-	-	-	Triplicate site with EBC/1a/1, EBC/1a/2 and EBC/1a/3. Annual data provided for EBC/1a/3 only
EBC/1a/3	447087	336111				22.6	18.6	22.6	16.2	18.9	25.9	26.7	27.4	20.8	22.0	16.3	-	Triplicate site with EBC/1a/1, EBC/1a/2 and EBC/1a/3. Annual data provided for EBC/1a/3 only
EBC/2/1	447296	334193	34.5	31.4	25.7	20.4	19.6	17.0	22.9	25.3	28.2	28.1	32.6	24.3	-	-	-	Triplicate site with EBC/2/1, EBC/2/2 and EBC/2/3. Annual data provided for EBC/2/3 only
EBC/2/2	447296	334193	32.2	31.0	23.5										-	-	-	Triplicate site with EBC/2/1, EBC/2/2 and EBC/2/3. Annual data provided for EBC/2/3 only
EBC/2/3	447296	334193	32.2	33.1	24.6										25.7	19.0	-	Triplicate site with EBC/2/1, EBC/2/2 and EBC/2/3. Annual data provided for EBC/2/3 only
EBC/4/1	447333	333588	32.1	30.9	24.4	20.6	18.6	15.6	21.5	23.2	25.3	26.5	24.3	24.4	-	-	-	Triplicate site with EBC/4/1, EBC/4/2 and EBC/4/3. Annual data provided for EBC/4/3 only
EBC/4/2	447333	333588	30.1	32.5	22.5										-	-	-	Triplicate site with EBC/4/1, EBC/4/2 and EBC/4/3. Annual data provided for EBC/4/3 only

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted 0.74	Annual Mean: Distance Corrected to Nearest Exposure	Comment
EBC/4/3	447333	333588	31.6	26.9	25.8										23.8	17.6	-	Triplicate site with EBC/4/1, EBC/4/2 and EBC/4/3. Annual data provided for EBC/4/3 only
EBC/5/1	447211	334543	34.2	31.2		21.6	18.3	15.7	19.8	23.0	24.0	i/s	31.6	25.6	-	-		Triplicate site with EBC/5/1, EBC/5/2 and EBC/5/3. Annual data provided for EBC/5/3 only
EBC/5/2	447211	334543	26.5	33.4		21.1	16.5			22.5	26.1	25.3	30.0	23.2	-	-		Triplicate site with EBC/5/1, EBC/5/2 and EBC/5/3. Annual data provided for EBC/5/3 only
EBC/5/3	447211	334543	27.7	33.3		20.2	17.4	17.0		22.4	26.0	25.4	26.6	23.9	24.1	17.8		Triplicate site with EBC/5/1, EBC/5/2 and EBC/5/3. Annual data provided for EBC/5/3 only
EBC/6/1	447356	333422	25.8	26.7	21.6	17.1	14.8	13.8	15.8	18.9	21.3	22.7	28.5	21.6	-	-		Triplicate site with EBC/6/1, EBC/6/2 and EBC/6/3. Annual data provided for EBC/6/3 only
EBC/6/2	447356	333422	26.1	27.5	19.2										-	-		Triplicate site with EBC/6/1, EBC/6/2 and EBC/6/3. Annual data provided for EBC/6/3 only
EBC/6/3	447356	333422	26.6	28.4	21.6										20.8	15.4		Triplicate site with EBC/6/1, EBC/6/2 and EBC/6/3. Annual data provided for EBC/6/3 only
EBC/7/1	447016	333792	19.4	20.2	16.4										-	-		Triplicate site with EBC/7/1, EBC/7/2 and EBC/7/3. Annual date provided for EBC/7/3 only.
EBC/7/2	447016	333792	19.3	19.2	16.1										-	-		Triplicate site with EBC/7/1, EBC/7/2 and EBC/7/3. Annual date provided for EBC/7/3 only.
EBC/7/3	447016	333792	20.4	19.4	16.3										18.5	11.2		Triplicate site with EBC/7/1, EBC/7/2 and EBC/7/3. Annual date provided for EBC/7/3 only.
EBC/8/1	447544	334195	33.5	34.0	24.9	18.8	17.7	15.9	19.2	20.2	25.7	25.7	35.7	24.7	-	-		Triplicate site with EBC/8/1, EBC/8/2 and EBC/8/3. Annual date provided for EBC/8/3 only.
EBC/8/2	447544	334195	32.7	33.7	24.8										-	-		Triplicate site with EBC/8/1, EBC/8/2 and EBC/8/3. Annual date provided for EBC/8/3 only.
EBC/8/3	447544	334195	33.7	32.0	27.1										24.6	18.2		Triplicate site with EBC/8/1, EBC/8/2 and EBC/8/3. Annual date provided for EBC/8/3 only.
EBC/9/1	447586	335881	30.5	29.9	21.4	19.4	14.8	16.4	19.4	20.5	27.0	30.2	29.9	25.8	-	-		Triplicate site with EBC/9/1, EBC/9/2 and EBC/9/3. Annual date provided for EBC/9/3 only.
EBC/9/2	447586	335881	26.7	30.2	22.7										-	-		Triplicate site with EBC/9/1, EBC/9/2 and EBC/9/3. Annual date provided for EBC/9/3 only.
EBC/9/3	447586	335881	30.9	33.8	24.6										23.9	17.7		Triplicate site with EBC/9/1, EBC/9/2 and EBC/9/3. Annual date provided for EBC/9/3 only.
EBC/10/1	446946	335728	19.9	21.3	19.7	17.4	14.1	9.5	11.0	13.7	18.2	8.9	23.2	16.0	-	-		Triplicate site with EBC/10/1, EBC/10/2 and EBC/10/3. Annual date provided for EBC/10/3 only.
EBC/10/2	446946	335728	21.6	21.3	19.3										-	-		Triplicate site with EBC/10/1, EBC/10/2 and EBC/10/3. Annual date provided for EBC/10/3 only.

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted 0.74	Annual Mean: Distance Corrected to Nearest Exposure	Comment
EBC/10/3	446946	335728	21.1	21.6	19.4										16.1	11.9		Triplicate site with EBC/10/1, EBC/10/2 and EBC/10/3. Annual date provided for EBC/10/3 only.
EBC/11/1	447280	333161	26.1	32.5	25.1										-	-		Triplicate site with EBC/11/1, EBC/11/2 and EBC/11/3. Annual date provided for EBC/11/3 only.
EBC/11/2	447280	333161	23.4	32.7	22.8										-	-		Triplicate site with EBC/11/1, EBC/11/2 and EBC/11/3. Annual date provided for EBC/11/3 only.
EBC/11/3	447280	333161	28.5	29.5	24.5										27.2	16.5		Triplicate site with EBC/11/1, EBC/11/2 and EBC/11/3. Annual date provided for EBC/11/3 only.
EBC/12/1	448306	334054	34.8	36.4	28.1	26.9	23.6	20.4	24.9	25.6	33.4	32.5	34.7	28.5	-	-		Triplicate site with EBC/12/1, EBC/12/2 and EBC/12/3. Annual date provided for EBC/12/3 only.
EBC/12/2	448306	334054	34.7	35.7	24.9										-			Triplicate site with EBC/12/1, EBC/12/2 and EBC/12/3. Annual date provided for EBC/12/3 only.
EBC/12/3	448306	334054	36.0	35.5	26.5										29.0	21.5		Triplicate site with EBC/12/1, EBC/12/2 and EBC/12/3. Annual date provided for EBC/12/3 only.
EBC/13/1	448056	333933	34.9	37.6	27.7										-	-		Triplicate site with EBC/13/1, EBC/13/2 and EBC/13/3. Annual date provided for EBC/13/3 only.
EBC/13/2	448056	333933	34.9	39.8	28.1										-	-		Triplicate site with EBC/13/1, EBC/13/2 and EBC/13/3. Annual date provided for EBC/13/3 only.
EBC/13/3	448056	333933	32.7	38.2	26.4										33.4	20.3		Triplicate site with EBC/13/1, EBC/13/2 and EBC/13/3. Annual date provided for EBC/13/3 only.
EBC/14/1	447291	340647	30.1	34.7	28.7	30.2	28.5	28.7	19.4	25.3	31.2	32.5	29.8	23.7	-	-		Triplicate site with EBC/14/1, EBC/14/2 and EBC/14/3. Annual date provided for EBC/14/3 only.
EBC/14/2	447291	340647	34.0	32.2	31.5										-	-		Triplicate site with EBC/14/1, EBC/14/2 and EBC/14/3. Annual date provided for EBC/14/3 only.
EBC/14/3	447291	340647	24.6	31.1	30.9										28.5	21.1		Triplicate site with EBC/14/1, EBC/14/2 and EBC/14/3. Annual date provided for EBC/14/3 only.
EBC/18/1	447301	335804	26.2	31.2	25.1	20.2	15.6	13.7	19.3	21.8	26.5	23.8	29.9	24.7	-	-		Triplicate site with EBC/18/1, EBC/18/2 and EBC/18/3. Annual date provided for EBC/18/3 only.

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted 0.74	Annual Mean: Distance Corrected to Nearest Exposure	Comment
EBC/18/2	447301	335804	28.2	26.6	26.6										-	-		Triplicate site with EBC/18/1, EBC/18/2 and EBC/18/3. Annual date provided for EBC/18/3 only.
EBC/18/3	447301	335804	28.9	29.3	25.4										23.2	17.1		Triplicate site with EBC/18/1, EBC/18/2 and EBC/18/3. Annual date provided for EBC/18/3 only.
EBC/20/1	446635	341435	38.6	39.2	28.6	30.7		23.4	22.4	26.1	33.6		35.5	27.7	-	-		Triplicate site with EBC/20/1, EBC/20/2 and EBC/20/3. Annual date provided for EBC/20/3 only.
EBC/20/2	446635	341435	37.6	37.3	31.6										-	-		Triplicate site with EBC/20/1, EBC/20/2 and EBC/20/3. Annual date provided for EBC/20/3 only.
EBC/20/3	446635	341435	35.8	38.5	31.6										30.6	22.6		Triplicate site with EBC/20/1, EBC/20/2 and EBC/20/3. Annual date provided for EBC/20/3 only.
EBC/21/1	448564	341435	22.2	28.8	22.2	18.8	16.5	14.3	14.7	17.1	21.6	24.8	28.5	23.3	-	-		Triplicate site with EBC/21/1, EBC/21/2 and EBC/21/3. Annual date provided for EBC/21/3 only.
EBC/21/2	448564	341435	23.7	27.2	21.4										-	-		Triplicate site with EBC/21/1, EBC/21/2 and EBC/21/3. Annual date provided for EBC/21/3 only.
EBC/21/3	448564	341435	25.8	29.6	19.5										21.1	15.6		Triplicate site with EBC/21/1, EBC/21/2 and EBC/21/3. Annual date provided for EBC/21/3 only.
EBC/22/1	447192	332847	30.5	33.3	22.8	17.4	14.2	12.9		21.5	23.7	24.4	30.9	21.5	-	-		Triplicate site with EBC/22/1, EBC/22/2 and EBC/22/3. Annual date provided for EBC/22/3 only.
EBC/22/2	447192	332847	28.4	18.6	21.4										-	-		Triplicate site with EBC/22/1, EBC/22/2 and EBC/22/3. Annual date provided for EBC/22/3 only.
EBC/22/3	447192	332847	11.3	29.3	22.2										21.7	16.1		Triplicate site with EBC/22/1, EBC/22/2 and EBC/22/3. Annual date provided for EBC/22/3 only.
EBC/23/1	447186	332832	27.8	32.0	20.3										-	-		Triplicate site with EBC/23/1, EBC/23/2 and EBC/23/3. Annual date provided for EBC/23/3 only.
EBC/23/2	447186	332832	27.8	31.1	20.9										-	-		Triplicate site with EBC/23/1, EBC/23/2 and EBC/23/3. Annual date provided for EBC/23/3 only.
EBC/23/3	447186	332832	28.6	30.1	20.6										26.6	16.1		Triplicate site with EBC/23/1, EBC/23/2 and EBC/23/3. Annual date provided for EBC/23/3 only.

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted 0.74	Annual Mean: Distance Corrected to Nearest Exposure	Comment
EBC/24	446449	339103	23.1	25.0	23.2	22.6	18.0	19.5	15.7	17.4	25.8	20.9	27.7	21.3	21.7	16.1		New site
EBC/25	446417	342599				29.5	30.3	29.1	23.3	26.6	33.8	23.5	35.5	22.9	28.3	20.9		New site
EBC/26	446588	342516				27.7	25.2	25.9	24.1	27.7	33.6	32.2	39.6	26.8	29.2	21.6		New site
EBC/27	446612	341231				37.8	34.5	28.8	31.7	32.5	40.7	39.5	40.3	34.4	35.6	26.3		New site
EBC/28	446658	340544				37.0	37.0	30.0	39.4	41.3	50.4	45.3	46.9	42.3	41.1	30.4		New site
EBC/29	447585	339729				19.9	16.5	18.3	17.3	19.4	25.5	26.8	29.0	21.2	21.5	15.9		New site

☒ **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.**

☒ **Erewash Borough Council confirm that all 2023 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.

Contaminated sample

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

New or Changed Sources Identified Within Erewash Borough Council During 2023

Since the beginning of 2022 the redevelopment of the former Stanton Ironworks site in Ilkeston has commenced (planning reference ERE/1221/0002). Planning permission was granted on the 25th of August 2022 for a maximum 261,471 sqm of employment (a mix of Class E(g) (iii) (Industrial Processes), B2 (General Industrial) and B8 (Storage & Distribution). There is the potential for this development to impact on the local air quality through additional road users on the existing road network and through the addition of new industrial processes into the area. At the time of writing one of the units has been erected but is not yet occupied.

Additional Air Quality Works Undertaken by Erewash Borough Council During 2023

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

QA/QC of Diffusion Tube Monitoring

Diffusion tubes are provided and analysed by Staffordshire Scientific Services and prepared using 20% triethanolamine (TEA) in water. Results for each tube have been corrected for bias using a local bias adjustment factor of 0.74.

Tube precision for Staffordshire Scientific Services is recorded as satisfactory for 2023 in the AIR PT (proficiency testing)/WASP scheme for the analysis of nitrogen dioxide diffusion tubes (AIR NO2 PT rounds AR053-59).

The monitoring undertaken by Erewash Borough Council has been completed in accordance with the 2023 Diffusion Tube Monitoring calendar.

Diffusion Tube Annualisation

As a review of monitoring location and the reduction of triplicate sites was undertaken in April 2023 annulisation was required for 4 triplicate sites (EBC/7, EBC/11, EBC/13 and EBC/23) detailed in Table C.1.

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

Site ID	Annualisation Factor Chesterfield Loundsley Green	Annualisation Factor Sheffield Devonshire Gardens	Annualisation Factor Stoke Centre	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean	Comments
EBC/7/1	0.7381	0.8710	0.8531	0.8207			
EBC/7/2	0.7381	0.8710	0.8531	0.8207			
EBC/7/3	0.7381	0.8710	0.8531	0.8207	18.5	15.2	Triplicate site annual data provided for EBC/7/3 only
EBC/11/1	0.7381	0.8710	0.8531	0.8207			
EBC/11/2	0.7381	0.8710	0.8531	0.8207			
EBC/11/3	0.7381	0.8710	0.8531	0.8207	27.2	22.3	Triplicate site annual data provided for EBC/11/3 only
EBC/13/1	0.7381	0.8710	0.8531	0.8207			
EBC/13/2	0.7381	0.8710	0.8531	0.8207			
EBC/13/3	0.7381	0.8710	0.8531	0.8207	33.4	22.3	Triplicate site annual data provided for EBC/13/3 only
EBC/23/1	0.7381	0.8710	0.8531	0.8207			
EBC/23/2	0.7381	0.8710	0.8531	0.8207			
EBC/23/3	0.7381	0.8710	0.8531	0.8207	26.6	21.8	Triplicate site annual data provided for EBC/23/3 only

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2023 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.

Erewash Borough Council have applied a local bias adjustment factor of 0.74 to the 2023 monitoring data. A summary of bias adjustment factors used by Erewash Borough Council over the past five years is presented in Table C.2.

Table C.2 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	Local	-	0.74
2022	Local	-	0.74
2021	Local	-	0.74
2020	Local	-	0.74
2019	Local	-	0.74

Table C.3 – Local Bias Adjustment Calculation

	Local Bias Adjustment Input 1	Local Bias Adjustment Input 2	Local Bias Adjustment Input 3	Local Bias Adjustment Input 4	Local Bias Adjustment Input 5
Periods used to calculate bias	12				
Bias Factor A	0.7 (0.66-0.75)				
Bias Factor B	43% (34%-52%)				
Diffusion Tube Mean (µg/m^3)	29				
Mean CV (Precision)	4				
Automatic Mean (µg/m^3)	20				
Data Capture	99%				
Adjusted Tube Mean (µg/m^3)	20 (19 – 21)				

Notes:

A single local bias adjustment factor has been used to bias adjust the 2023 diffusion tube results based on a co-location study undertaken at EBC/23 during 2018 and 2019.

Checking Precision and Accuracy of Triplicate Tubes

AEA Energy & Environment
From the AEA group

Diffusion Tubes Measurements										Automatic Method		Data Quality Check	
Period	Start Date dd/mm/yyyy	End Date dd/mm/yyyy	Tube 1 μgm^{-3}	Tube 2 μgm^{-3}	Tube 3 μgm^{-3}	Triplicate Mean	Standard Deviation	Coefficient of Variation (CV)	95% CI of mean	Period Mean	Data Capture (% DC)	Tubes Precision Check	Automatic Monitor Data
1	01-Jan-18	02-Feb-18	38.2	35.9	36.7	37	1.2	3	2.9	26.18	98.70	Good	Good
2	02-Feb-18	25-Feb-18	36.4	35.0	37.5	36	1.3	3	3.1	27.93	100.00	Good	Good
3	25-Feb-18	31-Mar-18	29.5	30.2	27.6	29	1.3	5	3.3	23.34	99.88	Good	Good
4	31-Mar-18	05-May-18	26.3	27.7	27.2	27	0.7	3	1.8	18.04	99.88	Good	Good
5	05-May-18	09-Jun-18	18.2	18.1	18.7	18	0.3	2	0.8	12.71	99.05	Good	Good
6	09-Jun-18	07-Jul-18	20.4	19.4	19.7	20	0.5	3	1.3	11.37	97.90	Good	Good
7	07-Jul-18	03-Aug-18	22.2	24.2	24.5	24	1.3	5	3.1	15.93	99.69	Good	Good
8	03-Aug-18	08-Sep-18	27.5	25.5	27.8	27	1.3	5	3.1	17.98	99.88	Good	Good
9	08-Sep-18	06-Oct-18	28.3	28.7	31.5	30	1.7	6	4.3	18.75	99.70	Good	Good
10	06-Oct-18	02-Nov-18	30.2	32.6	30.5	31	1.3	4	3.2	22.16	99.54	Good	Good
11	02-Nov-18	05-Dec-18	28.0	30.9	28.9	29	1.5	5	3.7	18.94	99.37	Good	Good
12	05-Dec-18	09-Jan-19	35.8	32.1	34.1	34	1.9	5	4.6	26.08	99.76	Good	Good
13													
										Overall survey -->		Good	Good

It is necessary to have results for at least two tubes in order to calculate the precision of the measurements

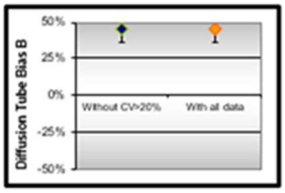
Site Name/ ID: EBC23 2018

Precision: 12 out of 12 periods have a CV smaller than 20%

(Check average CV & DC from Accuracy calculations)

Accuracy (with 95% confidence interval) without periods with CV larger than 20%	
Bias calculated using 12 periods of data	
Bias factor A	0.7 (0.66 - 0.75)
Bias B	43% (34% - 52%)
Diffusion Tubes Mean:	29 μgm^{-3}
Mean CV (Precision):	4
Automatic Mean:	20 μgm^{-3}
Data Capture for periods used:	99%
Adjusted Tubes Mean:	20 (19 - 21) μgm^{-3}

Accuracy (with 95% confidence interval) WITH ALL DATA	
Bias calculated using 12 periods of data	
Bias factor A	0.7 (0.66 - 0.75)
Bias B	43% (34% - 52%)
Diffusion Tubes Mean:	29 μgm^{-3}
Mean CV (Precision):	4
Automatic Mean:	20 μgm^{-3}
Data Capture for periods used:	99%
Adjusted Tubes Mean:	20 (19 - 21) μgm^{-3}



Jaume Targa, for AEA
Version 04 - February 2011

If you have any enquiries about this spreadsheet please contact the LAQM Helpdesk at: LAQMHelpdesk@uk.bureauveritas.com

NO_2 Fall-off with Distance from the Road

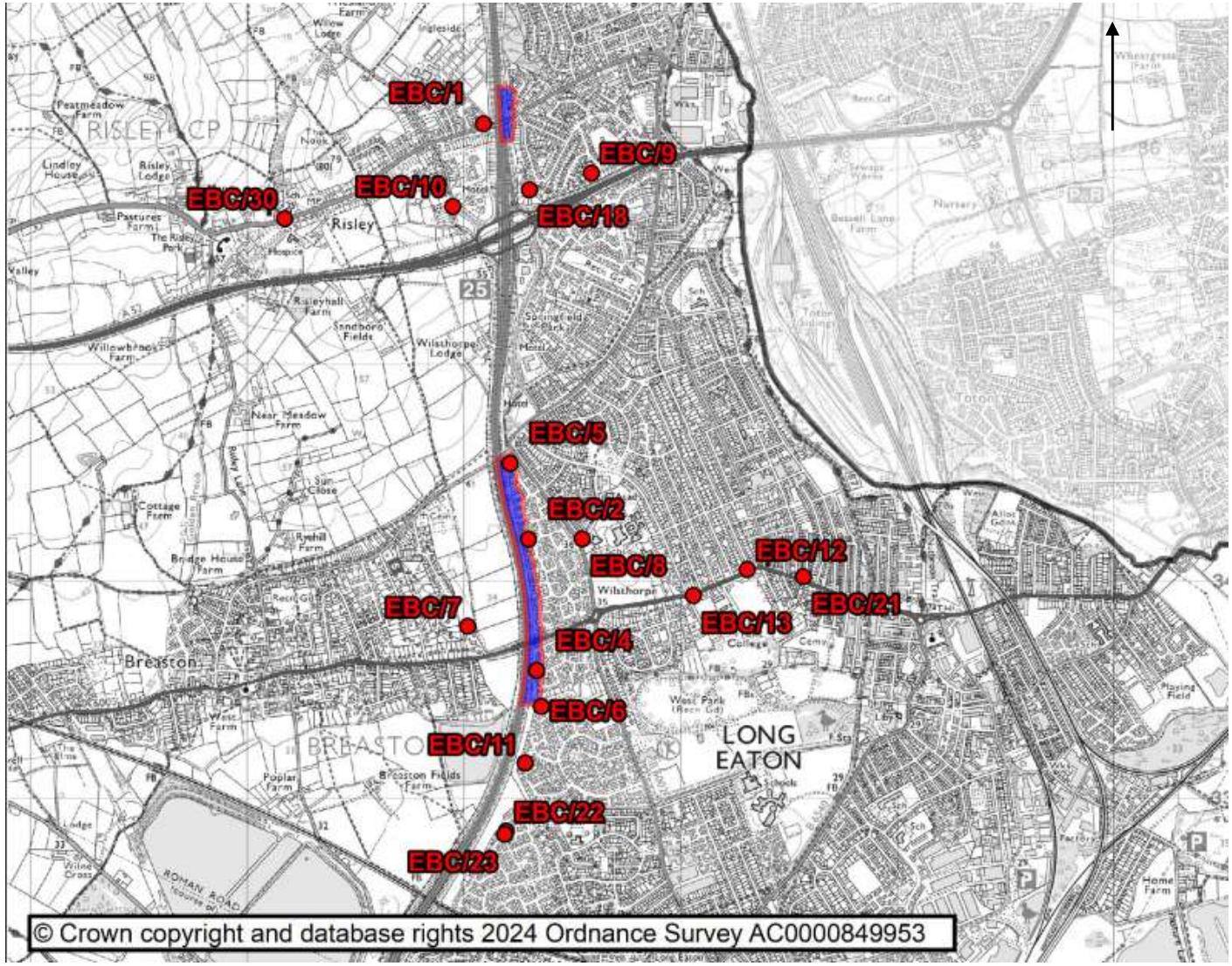
Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO_2 concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO_2 fall-off with distance calculator available on the LAQM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

No diffusion tube NO_2 monitoring locations within Erewash Borough Council required distance correction during 2023.

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

Map D.1 – Map of Non-Automatic Monitoring Sites in Ilkeston

Map D.2 – Map of Non-Automatic Monitoring Sites in Sandiacre and Long Eaton

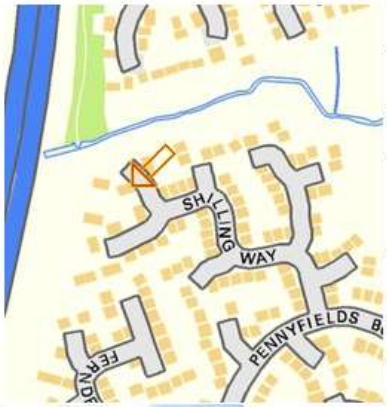


SITE DETAILS		
 	Ref. No.	EBC 1
	Site Name	Derby Road Sandiacre
	Category	Kerbside (1m from a busy road)
	Grid Reference	447172,336102
	Site Description	2nd lamppost on the south facing side of the bridge crossing over the M1.
	Nearest Sensitive Property	Property on Derby Road, adjacent to M1.
	Sampler	NO_2 diffusion tube
	Commissioned	7/9/06
	Decommissioned	Relocated on 5/4/23 due to officer safety
		Ladders required Not at a relevant location as 35m to closest property and unsafe

SITE DETAILS		
 	Ref. No.	EBC 2
	Site Name	Cairnsmore Close, Long Eaton
	Category	Suburban (res area outside of town/city)
	Grid Reference	447296,334180
	Site Description	Cul-de-sac off Cheviot Road, outside house with yellow garage. M1 behind fence.
	Nearest Sensitive Property	Properties at end of cul de-sac on Cairnsmore Close.
	Sampler	NO_2 diffusion tube
	Commissioned	7/9/06
	Decommissioned	
		Location to monitor NO2 from motorway (site in previous AQMA2) Ladders

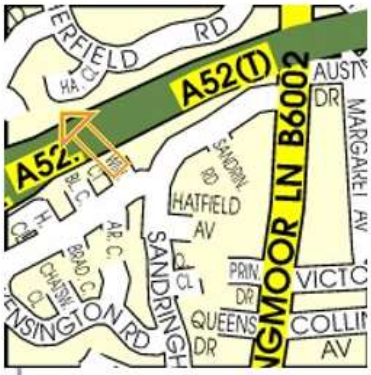
SITE DETAILS		
 	Ref. No.	EBC 4
	Site Name	Copseside Close, Long Eaton
	Category	Suburban though located on a footpath
	Grid Reference	447348,333589
	Site Description	Off Copseside Close, on right of hedge lined path, 10m from road.
	Nearest Sensitive Property	3 Copseside Close
	Sampler	NO_2 diffusion tube
	Commissioned	7/9/06
	Decommissioned	
		In previous AQMA2 On footpath

SITE DETAILS		
 	Ref. No.	EBC 5
	Site Name	Brendon Way Long Eaton
	Category	Suburban
	Grid Reference	447209,334545
	Site Description	Brendon Way cul-de-sac off Quantock Road.
	Nearest Sensitive Property	27 Brendon Way.
	Sampler	NO_2 diffusion tube
	Commissioned	7/9/06
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	In previous AQMA2 Previously recorded as being kerbside but not 1m from busy road To monitor M1 also close to junction of Longmoor lane with Petersham Road Triplicate tube location

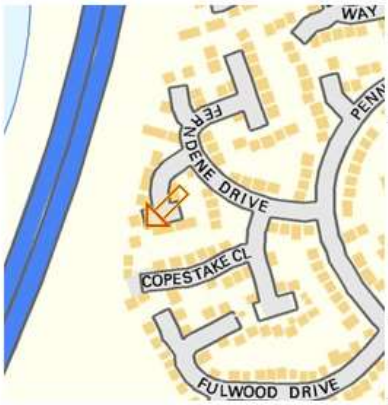
SITE DETAILS		
 	Ref. No.	EBC 6
	Site Name	Guinea Close Long Eaton
	Category	Suburban – res area away from town centre
	Grid Reference	447359,333404
	Site Description	Next to fence by M1 in middle of Guinea Close cul-de-sac.
	Nearest Sensitive Property	6 Guinea Close.
	Sampler	NO_2 diffusion tube
	Commissioned	7/9/06
	Decommissioned	
		Logged as kerbside originally but not 1m from a busy road as located on cul-de-sac.

SITE DETAILS		
 	Ref. No.	EBC 7
	Site Name	Heath Gardens, Breaston
	Category	Suburban – res away from town centre
	Grid Reference	447014,333794
	Site Description	At the end of Heath Gardens.
	Nearest Sensitive Property	11 Heath Gardens.
	Sampler	NO_2 diffusion tube
	Commissioned	7/9/06
	Decommissioned	5/4/23
	Average NO_2 Concentration to date ($\mu g/m^3$)	Previously logged as kerbside but not within 1m of busy road Close to AQMA2 (nearest res in Breaston)

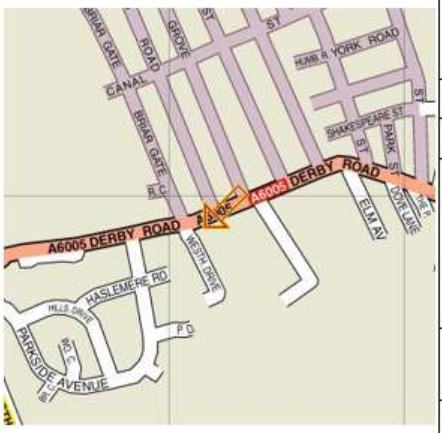
SITE DETAILS		
 	Ref. No.	EBC 8
	Site Name	Bracken Road, Long Eaton
	Category	roadside
	Grid Reference	447583,334215
	Site Description	On lamp post opposite 2 Bracken Road.
	Nearest Sensitive Property	2 Bracken Road
	Sampler	NO_2 diffusion tube
	Commissioned	7/9/06
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	1-5m from busy road To monitor Petersham Road on lead up to roundabout? Sensitive receptors – res and schools

SITE DETAILS		
 	Ref. No.	EBC 9
	Site Name	Hadstock Close, Sandiacre
	Category	Suburban
	Grid Reference	447581,335890
	Site Description	On lamp post outside 11 Hadstock Close.
	Nearest Sensitive Property	11 Hadstock Close.
	Sampler	NO_2 diffusion tube
	Commissioned	7/9/06
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	Suburban site close to A52

SITE DETAILS		
 	Ref. No.	EBC 10
	Site Name	Bostock Lane, Breaston
	Category	Suburban
	Grid Reference	446943,335715
	Site Description	On lamp post outside 50 Bostock Lane.
	Nearest Sensitive Property	50 Bostock Lane.
	Sampler	NO_2 diffusion tube
	Commissioned	7/9/06
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	Suburban – away from town centres This site is on the road leading up to the junction with the A52 and M1 at the closest residential area

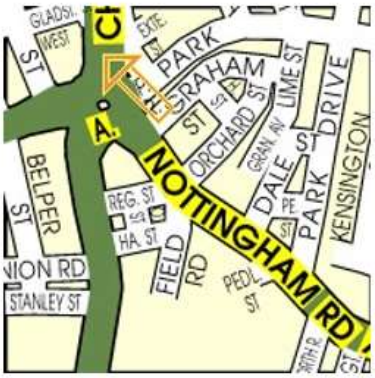
SITE DETAILS		
 	Ref. No.	EBC 11
	Site Name	Bronte Close, Long Eaton
	Category	suburban
	Grid Reference	447281,333156
	Site Description	On lamp post outside 18 Bronte Close.
	Nearest Sensitive Property	18 Bronte Close.
	Sampler	NO_2 diffusion tube
	Commissioned	7/9/06
	Decommissioned	5/4/23
	Average NO_2 Concentration to date ($\mu g/m^3$)	In previous AQMA2 Suburban site and not kerbsite as originally logged

SITE DETAILS		
 	Ref. No.	EBC 12
	Site Name	Derby Road, adjacent to 128 Derby Road, Long Eaton
	Category	Roadside (1-5m of road)
	Grid Reference	448285,334058
	Site Description	On lamp post outside 128 Derby Road.
	Nearest Sensitive Property	128 Derby Road.
	Sampler	NO_2 diffusion tube
	Commissioned	7/9/06
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	Roadside location to monitor traffic on Derby Road

SITE DETAILS		
 	Ref. No.	EBC 13
	Site Name	Derby Road, adjacent to 215 Derby Road, Long Eaton
	Category	Roadside (1-5m of road)
	Grid Reference	448077,333938
	Site Description	On lamp post outside 215 Derby Road.
	Nearest Sensitive Property	215 Derby Road.
	Sampler	NO_2 diffusion tube
	Commissioned	7/9/06
	Decommissioned	5/4/23
	Average NO_2 Concentration to date ($\mu g/m^3$)	To monitor derby road

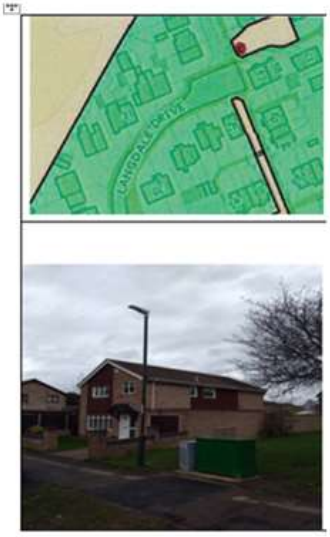
SITE DETAILS		
 	Ref. No.	EBC 14
	Site Name	Nottingham Road / Stanhope Street, Ilkeston
	Category	roadside
	Grid Reference	447338,340739
	Site Description	Outside 286 Nottingham Road, opposite Stanhope Street.
	Nearest Sensitive Property	286 Nottingham Road.
	Sampler	NO_2 diffusion tube
	Commissioned	7/9/06
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	Roadside location A lot of traffic on this road (buses HGVS, standing traffic)

SITE DETAILS		
 	Ref. No.	EBC 18
	Site Name	Richmond Avenue, Sandiacre
	Category	suburban
	Grid Reference	447301,335804
	Site Description	On lamp post outside 4 Richmond Avenue.
	Nearest Sensitive Property	4 Richmond Avenue.
	Sampler	NO_2 diffusion tube
	Commissioned	7/9/06
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	Residential close to both M1 and A52

SITE DETAILS		
	Ref. No.	EBC 20
	Site Name	Chalons Way,
	Category	Kerbside
	Grid Reference	446635,341435
	Site Description	On lamp post outside apartment building, near to the White Lion Square roundabout.
	Nearest Sensitive Property	7-19 Disraeli Crescent
	Sampler	NO_2 diffusion tube
	Commissioned	7/12/2010
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	Residential properties next to busy roundabout, with regular queues

SITE DETAILS		
	Ref. No.	EBC 21
	Site Name	Russell Court, Derby Road
	Category	suburban
	Grid Reference	448564,334021
	Site Description	On the drainpipe of Russell Court.
	Nearest Sensitive Property	Russell Court.
	Sampler	NO_2 diffusion tube
	Commissioned	7/12/2010
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	Close to Derby road (bus route, busy road)

SITE DETAILS		
	Ref. No.	EBC 22
	Site Name	Borrowdale Drive, Long Eaton
	Category	
	Grid Reference	447192, 332847
	Site Description	Footpath between Borrowdale and Langdale Drive
	Nearest Sensitive Property	37 Borrowdale Drive
	Sampler	NO_2 diffusion tube
	Commissioned	2011
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	

SITE DETAILS		
	Ref. No.	EBC/23
	Site Name	Langdale Drive
	Category	suburban
	Grid Reference	447186,332832
	Site Description	Former Co-location site for triplicate tubes on walkway between Borrowdale drive and Langdale
	Nearest Sensitive Property	45 Langdale Drive, Long Eaton
	Sampler	NO2 tube
	Commissioned	2018
	Decommissioned	5/4/23
	Average NO_2 Concentration to date ($\mu g/m^3$)	Chemiluminescent analyser decommissioned in Jan 2020 but tubes have remained.

SITE DETAILS		
 	Ref. No.	EBC 24
	Site Name	Sowbrook lane, Ilkeston
	Category	
	Grid Reference	446449, 339103
	Site Description	Lamppost outside 11 Sowbrook Lane, Ilkeston
	Nearest Sensitive Property	11 Sowbrook Lane, Ilkeston
	Sampler	NO_2 diffusion tube
	Commissioned	January 2023
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	

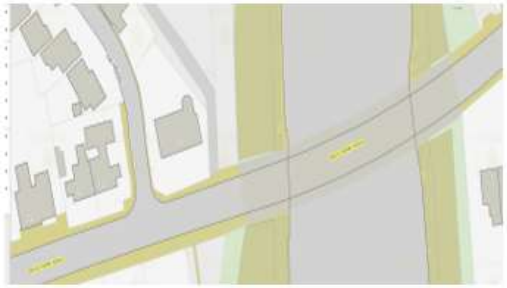
SITE DETAILS		
 	Ref. No.	EBC 25
	Site Name	Heanor Road, Ilkeston
	Category	
	Grid Reference	446417, 342599
	Site Description	Road sign outside 10 Heanor Road, Ilkeston
	Nearest Sensitive Property	First floor flat at 6 Heanor Road, Ilkeston 15 m away
	Sampler	NO_2 diffusion tube
	Commissioned	5/4/2023
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	

SITE DETAILS	Ref. No.	EBC 26
	Site Name	Rutland Street
	Category	
	Grid Reference	446588, 342516
	Site Description	Lamppost outside 19A Rutland Street
	Nearest Sensitive Property	19a Rutland Street, Ilkeston
	Sampler	NO_2 diffusion tube
	Commissioned	5/4/2023
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	

SITE DETAILS	Ref. No.	EBC 27
	Site Name	Ilkeston
	Category	
	Grid Reference	446612, 341231
	Site Description	Stanton Road, Ilkeston
	Nearest Sensitive Property	32 Stanton Road, Ilkeston
	Sampler	NO_2 diffusion tube
	Commissioned	5/4/2023
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	

SITE DETAILS	Ref. No.	EBC 28
 	Site Name	Little Hallam Hill, Ilkeston
	Category	
	Grid Reference	446658, 340544
	Site Description	Telegraph pole outside 191 Little Hallam Lane
	Nearest Sensitive Property	Ilkeston
	Sampler	NO_2 diffusion tube
	Commissioned	5/4/2023
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	

SITE DETAILS	Ref. No.	EBC 29
 	Site Name	Hallam Fields Road, Ilkeston
	Category	
	Grid Reference	447585, 339729
	Site Description	Lamppost 50875 outside 13 Hallam Fields Road
	Nearest Sensitive Property	13 Hallam Fields Road, Ilkeston
	Sampler	NO_2 diffusion tube
	Commissioned	5/4/2023
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	

SITE DETAILS	Ref. No.	EBC 1- relocated sample location
 	Site Name	The Hollies
	Category	
	Grid Reference	447087 336111
	Site Description	Lamppost on the hollies next to 233 Derby Road
	Nearest Sensitive Property	233 Derby Road, Sandiacre
	Sampler	NO_2 diffusion tube
	Commissioned	5/4/2023
	Decommissioned	
	Average NO_2 Concentration to date ($\mu g/m^3$)	

Appendix E: Summary of Air Quality Objectives in England

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

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

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

Glossary of Terms

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

References

- Local Air Quality Management Technical Guidance LAQM.TG22. August 2022. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- Local Air Quality Management Policy Guidance LAQM.PG22. August 2022. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- Chemical hazards and poisons report: Issue 28. June 2022. Published by UK Health Security Agency
- Air Quality Strategy – Framework for Local Authority Delivery. August 2023. Published by Defra.