Tamworth Borough Council

2025 Air Quality Annual Status Report (ASR)

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

Date: 30th June 2025

Endorsement from the Director of Health & Care Staffordshire County Council of Tamworth Borough Council`s Annual Status Report(ASR) 2025

Staffordshire County Council (SCC) is committed to working with partners to ensure that Tamworth will be a place where improved health and wellbeing is experienced by all. Poor air quality has a negative impact on public health, with potentially serious consequences for individuals, families, and communities. Identifying problem areas and ensuring that actions are taken to improve air quality forms an important element in protecting the health and wellbeing of Tamworth residents. Improving air quality is often a complex issue, presenting a multi-agency challenge – so it is essential that all agencies work together effectively to deliver improvements where they are needed.

As Director of Health and Care across Staffordshire I endorse this Annual Status Report which sets out Tamworth's actions in conjunction with SCC and other partners approach to reducing human made pollution especially particulate matter.

Since the update of the Environment Act 2021 there is now a statutory duty imposed on Local Authorities in England to reduce $PM_{2.5}$, a number of the measures are complementary with those being undertaken to improve Air Quality. Many of Tamworth`s activities to reduce NO_2 also can reduce particulates. To this end Tamworth has worked with a number of SCC projects/departments , such as the following.

The Air Aware project (phase 2) ran until March 2023 with Defra funding, however The Air Aware project continues with joint funding from SCC Public Health and Connectivity Teams on a recurring basis. The project delivers behaviour change to increase active travel, decrease car use, and raise awareness of air quality issues through five elements. These are business and school engagement, communications and campaigns, electric vehicles, and air quality monitoring in targeted locations. Campaigns include Anti-Idling, walking and cycle activities and Clean Air Day. These have been countywide engaging a large number of businesses and schools.

Electric Vehicle project who are working in a consortium to install EV charging hubs for people without easy access to EV charging where they live via LEVI funding.

In addition, Levelling up Fund 2 Schemes will improve a number of major roads around the county, reduce journey times, put greener, cleaner buses on main roads, improve walking and cycling routes and reduce the impact of housing and commercial developments.

Finally, it's worth mentioning both Climate Change and The Local Transport Plan 4 (LTP4). SCC have signed up to the Climate Emergency and since signing up have reduced its Carbon footprint by 50%. We are now also now working towards LTP4, with our Local Authority partners. LTP4 will come into effect later this year (2025) and will have a positive effect on Air Quality over the coming years

Dr Richard Harling MBE, FFPH, MBBS, MSc

Director of Health and Care
Staffordshire County Council [May 2025]

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Report Reference Number	TBC/ASR/25
Date	30th June 2025

Local Responsibilities and Commitment

This ASR was prepared by the Environmental Health Department of Tamworth Borough Council with the support and agreement of the following officers and departments:

Richard Powell	Planning Department
Tom Hobbs	Regeneration Department
Charlotte Cheeseman	Climate Change Officer
William Spencer	Transport Strategy Staffordshire County Council
Ryan Proctor	Dept of Health & Care Staffordshire County Council
Marc Stanway	Electric Vehicle Infrastructure Delivery SCC

This ASR has been approved by:

David Foster Environment Portfolio holder
Anna Millar Assistant Director for Growth & Regeneration

Tamworth Borough Council does not have a director of Public Health however Richard Harling Director of Health & Care, Staffordshire County Council has signed off section 2.3 ($PM_{2.5}$) of this ASR

If you have any comments on this ASR please send them to Mrs Susan Timmis at:

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Executive Summary: Air Quality in Our Area

Air Quality in Tamworth Borough Council

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.

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.

In the Tamworth Borough Council area, the main pollutant of concern is nitrogen dioxide which is emitted as a product of combustion from heating sources and especially road vehicles. It follows that the areas of greatest interest in terms of air quality are dwellings close to busy roads or busy junctions, particularly where these are prone to congestion or where the streets are narrow and the houses are close to the carriageway and residential areas close to point sources of combustion such as chimneys serving large boiler plant.
Since 2006 monitoring undertaken by the Council had identified one particular busy junction (the Two Gates crossroads, Dosthill) was showing concentrations of nitrogen dioxide that were very close to the Air Quality Objective for nitrogen dioxide, the monitoring intensified and in 2011 it was concluded that certain properties located close to this crossroads were at risk of exceeding the annual mean air quality objective for nitrogen dioxide. In 2012 consultants(Ricardo-AEA) undertook a detailed assessment that involved modelling the pollution concentrations. As a result, the council declared an Air Quality

Management Area (AQMA) at Two Gates in May 2014. An Air Quality Management Area gives the area special status where relevant professionals are required to consider a range of actions to improve air quality in the affected area (an Air Quality Action Plan). To some extent air quality issues arising from vehicle exhausts has been reducing (and throughout the borough) due to improved engine efficiency and other technical advances such as the requirement for catalytic converters. In addition, the Staffordshire County Council Highways Department, which is responsible for traffic management at this junction, made alterations to the sequence of the traffic lights at the junction. As a result there was a reduction in the nitrogen dioxide concentration which led the Council to revoke the Air Quality Management Area in March 2018, after another detailed assessment by consultants.

Although the busy A5 trunk road runs through the Borough and the M42 Motorway runs close to the Borough boundary, there are no sensitive receptors (dwellings) sufficiently close to these roads, so that air quality is not considered to be an issue.

Although there have been no specific problem areas identified locally, nationally there is currently great interest in the extent that very small particles called $PM_{2.5}$ impact on public health. In line with national guidance the Council is giving consideration to this pollutant and actions that can be taken to minimise its impact.

Tamworth Borough Council continues to work with other partners to tackle Air Quality such as other Borough & District Councils, Staffordshire County Council, the Highways Authority, Director of Public Health and Public Health England and where appropriate will participate in projects to improve Air Quality.

The Council is also responsible for the regulation of a number of Part A2 and Part B industrial installations that are of significance in terms of air quality. Each process / installation is regulated under the Environmental Permitting (England and Wales) Regulations 2016 and are regularly inspected by the Council`s Environmental Health Officers to ensure they are controlling their emissions to atmosphere in accordance with national guidance. A list of processes that currently hold an Environmental Permit issued by Tamworth Borough Council (as of August 2024) is shown at Appendix F

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.

As stated above, Tamworth Borough Council has been working with partner organisations to tackle air quality, particularly in and around our former Air Quality Management Area. We revoked our Air Quality Management Area in 2018 as the concentrations of nitrogen dioxide had fallen below the Air Quality Objective.

We work with and via the Staffordshire County Council to discuss and participate in county wide initiatives. However we have noted that since revoking our AQMA it is only the authorities that have retained an AQMA who primarily receive the benefits of schemes and grants.

Not withstanding this, we have been able to acquire access to the Active Travel project to engage with children and their parents in their schools on ways to reduce our individual contributions to air pollution and are in line to receive Local EV Infrastructure(LEVI) funding to provide EV charging facilities for residents who do not have easy access to EV charging where they live.

Conclusions and Priorities

The level of Nitrogen Dioxide over the last five years is demonstrated in fig A1 has been decreasing, though some of this can be attributed to the post pandemic effect of more people working from home, levels fell slightly in 2024.
The key priorities for air quality in Tamworth include the continuation of the long-term air quality monitoring program which is kept under constant review to ensure that monitoring takes place in the most relevant locations and to tackle air quality issues at source wherever possible through regulatory controls of emissions to air from certain potentially polluting industries.
Though, the Two Gates Crossroads AQMA has been revoked, officers of the Environmental Health team will continue to consider the impact of new development on existing dwellings and ensuring that no new dwellings or other sensitive developments are constructed in areas of unacceptable air quality through the Planning system.
We moved two diffusion tubes in 2020 which had had continually low readings to new locations that we identified, which could possibly benefit from monitoring due to an increase in traffic, the two new sites are 60 High St, Dosthill(Q4) and 114 Overwoods Rd(Q1).
The tubes that are no longer being monitored due to consistently low readings are 2 Wessenden and 12 Brookside Way. The results for the new tubes Q1 & Q4 were reported for the first time in the 2020 ASR this will be their fifth year of readings.
As the results from these 2 locations are not significantly high we will investigate if there are any other areas within Tamworth that would benefit from monitoring in their place.

Local Engagement and How to get involved

During 2024 we participated in the National Clean Air Night in January 2024 via Social Media.

However going forward Tamworth wants to work with more organisations than we already do such as the West Midlands Combined Authority, we are working via the County Council with West Midlands Connect to explore electric vehicle charging points throughout the borough

We also seek to integrate some of the activities employed to tackle Climate Change with improving local air quality to this ends we have appointed a Climate Change Officer. With Air Quality and Climate Change in mind, Tamworth Borough Council is exploring a number of options.

- Installing electric vehicle charging hubs for Tamworth residents.
- Switching Street-scene equipment to electric when they require renewing.
- Review of Taxi Licensing Policy to only allow Euro 6 or equivalent vehicles.

Air Quality is not “someone else’s problem”. All members of the community can play a part in improving air quality. Simple steps that we can all take include making short journeys on foot or by bicycle rather than by car or using public transport. As it is often traffic congestion that exacerbates poor air quality, avoiding using vehicles at busy times

can be beneficial. Car sharing for journeys to work or for the school run can reduce the number of vehicles using busy roads and junctions.
Other simple measures that can be taken include:

• Purchasing low emission vehicles and or hybrid vehicles as individuals.

• Fleet vehicles and transport companies could play a major role in the use of low emission vehicles.

• Upgrading boilers to the newest and most efficient gas condensing boilers with the lowest nitrogen dioxide and carbon dioxide emissions

• Installing renewable options such as solar panels or wind turbines (in appropriate locations).

Members of the public can play their part in improving air quality in the area by obtaining further information from Tamworth Borough Council website http://www.tamworth.gov.uk/air-quality.

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1 Local Air Quality Management

This report provides an overview of air quality in Tamworth 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 Tamworth 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.
Tamworth Borough Council declared an AQMA at Two Gates in May 2014, which was revoked on 23rd March 2018 after monitoring results for the area were consistently under the air quality objective standard.
Information on Tamworth`s former AQMA can be found at: https://uk- air.defra.gov.uk/aqma/local-authorities?la_id=271.

Tamworth Borough Council currently does not have any declared AQMAs.

A local Air Quality Strategy is in place to prevent and reduce polluting activities. The Local Air Quality Strategy is available at Air quality | Tamworth Borough Council

Table 2.1 – Former Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	City / Town	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Level of Exceedance (maximum monitored/modelled concentration at a location of relevant exposure)	
						At Declaration	Now 2024
AQMA Declared 1/2014	1st May 2014, **Revoked 23rd March 2018**	NO_2 annual mean	Tamworth	Two Gates, Dosthill, Tamworth.	YES	41.6 µg/m3	17.2 µg/m3 2024 fig

2.2 Progress & Impact of Measures to address Air Quality in Tamworth Borough Council

Defra's appraisal of last year's ASR concluded

1. The Annual Status Report sets out new information on air quality obtained by Tamworth Borough Council as part of the Review & Assessment process required under the Environment Act 1995 (as amended by the Environment Act 2021) and subsequent Regulations.

2. Tamworth Borough Council does not currently have any active AQMAs within their jurisdiction. Despite this, the Council has developed a local Air Quality Strategy. This includes the implementation of electric vehicle charging points.

3. The Council undertook no automatic monitoring during 2023 and undertook non-automatic (passive) monitoring at 14 sites during 2023.

4. In 2023, no exceedances of the AQO were recorded. The highest concentration was recorded at site Tamworth Road Two Gates (Q6N), which recorded a concentration of 26.5 µg/m^3. This is a decrease from 2022 which recorded a concentration of 28.8 µg/m^3.

5. QA/QC procedures have been applied, with the national bias adjustment factor being used. The national bias adjustment factor was used as no automatic monitoring was undertaken by the Council in 2023. All diffusion tube monitoring locations recorded data captures in excess of 75% in 2023, as such no annualisation was required. In addition, no diffusion tube NO_2 monitoring locations required distance correction during 2023.

6. Defra recommends that Directors of Public Health approve draft ASRs. Sign off is not a requirement, however collaboration and consultation with those who have responsibility for Public Health is expected to increase support for measures to improve air quality, with co-benefits for all. Please bear this in mind for the next annual reporting process. **Response: The Director of Health & Care of the Staffordshire County Council has provided an endorsement for the $PM_{2.5}$ section which was after the cover page of the 2024 ASR**

On the basis of the evidence provided by the local authority the conclusions reached in the report are **accepted** for all sources and pollutants. Following the completion of this report, Tamworth Borough Council should submit an Annual Status Report in 2025.

Tamworth 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 completed, in progress or planned are set out in Table 2.2. 10 measures are included within Table 2.2, with the type of measure and progress Tamworth Borough Council have made during the reporting year of 2024 presented. Where there have been, or continue to be, barriers restricting the implementation of the measures, these are also presented within Table 2.2.
Some of these measures on outlined in the Air Quality Strategy, some are additional. More detail on these measures can be found in The Air Quality Strategy 2022 - 2027, and in the respective Action Plans of : TMBC Local Plan 2006 – 2031, Local Cycling & Walking Infrastructure Plan 2020 – 2030

Key completed measures are:

Completion of the South Staffordshire College which opened April 2025

This development has replaced the college in Croft St. It has been designed to promote sustainable transport as well as giving priority to pedestrian & cycle movement and
facilitate and maximise the use of local transport. It also provides facilities for the charging of plug in and other ultra low emission vehicles.

Installation of EV charging hubs in Tamworth. In December 2024 8 BP charging hubs were installed in the Castle Grounds car park.

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

Private Enterprise (BP)
Staffordshire County Council Public Health Staffordshire Travel Strategy group

Tamworth Borough Council expects the following measures to be investigated/introduced over the course of the next reporting year:

Investigation of location and number of EV charging hubs for Tamworth Borough Residents through out Tamworth in partnership with Staffordshire County council working in a consortium with Midland connect to roll out charging points across Staffordshire using LEVI funding is investigating looking into placing EV charging hubs in possibly 4 different locations in Tamworth.

Introduction of electric/rechargeable Street Scene Equipment.

23 items were replaced that were either electric/rechargeable in 2024.

Review of the Tamworth Borough Council Taxi Policy, to only allow Euro6 or equivalent cars.

The principal challenges and barriers to implementation that Tamworth Borough Council anticipates is facing is that without an AQMA there is less government funding available for air quality projects, also Defra stopped its Air Quality Grants(by Bid) April 2024.

priorities for the coming year are:

1. **Investigation of suitable Electric Vehicle charging points in four locations in Tamworth Borough public car parks.**
2. **Investigation of the procurement of equipment for 20% of portable street-scene equipment to be electric.**
3. **Review of Taxi Licensing Policy to only allow Euro 6 (An emission standard to reduce harmful emissions) or equivalent vehicles.**

All of these priorities should reduce both nitrogen dioxide and particulates pollution, especially the EV charging hubs by enabling the residents of Tamworth, particularly those without off street parking to access electric vehicle charging points near to their homes.

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Table 2.2 – Progress on Measures to Improve Air Quality

No	Measure Title	Category	Classification	Year Measure Introduced	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	Investigation of suitable EV charging points in 4 locations in Tamworth in public car parks	Promoting low emission transport	Procuring alternative refueling infrastructure to promote EV recharging.	2024	2030	TBC & SCC via LEVI funding	LEVI funding.	Funded	£4.88M LEVI funding awarded to SCC	Planning	Reduction in particulates	Reduced emissions	Investigation of final sites underway, to be agreed at Committee in June 2025. LEVI working group set up to steer project and monitor progress.	Sites must meet the LEVI criteria, further considerations include CCTV to monitor vandalism. Dependent on LEVI funding timeline provided by SCC.
2	Investigation of goal of 20% of street-scene equipment to be electric	Promoting low emission	Other	2024	2028	Tamworth Borough Council	Tamworth Borough Council	Funded	Part of replacement budget.	Planning	Reduction in particulates & NO_x	Reduced emissions	Nearly 10% of equipment is currently electric	This is partially reliant on the improvement of battery capacity of equipment.
3	Review of Taxi Licensing Policy to only allow Euro 6 or equivalent vehicles.	Promoting Low Emission Transport	Taxi Licensing conditions	2025	2027	Taxi Drivers	Tamworth Borough Council	Funded	Internal officer resource.	Being undertaken	Reduction in particulates & NO_x	Reduced emissions	Ongoing	Ongoing
4	Domestic smoke control	Public Information	Via the internet/Social Media	2019	Ongoing	Tamworth Borough Council	Tamworth Borough Council	Funded	Internal officer resource	Planning	Reduction in particulates	Reduction in breaches	Ongoing	No completion year given as ongoing initiative.
5	Promotion of walking to school	Alternatives to private vehicle use	Other	2022	Ongoing	Tamworth Borough Council & Air Aware (SCC)	Staffordshire County Council	Funded	Resource shared by other 2 tier councils.	Implementation	Reduction in particulates & NO_x	Reduced emissions	Engagement with Anker Valley Florendine	No completion year given as ongoing initiative.
6	Promotion of walking & reduction in vehicle use in Tamworth	Alternatives to private vehicle use	Other	2019	Ongoing	Tamworth Borough Council & SCC	Staffordshire County Council	Funded	Resource shared by other 2 tier councils.	Planning	Reduction in particulates & NO_x	Length of new foot paths	Planning phase	LAs with AQMAs are prioritised for SCC funded projects that assist schools with alternative modes of travel. We have no AQMA
7	Promotion of Cycling	Alternatives to private vehicle use	Other	2019	Ongoing	Tamworth Borough Council & SCC	Staffordshire County Council	Funded	Resource shared by other 2 tier councils.	Implementation	Reduction in particulates & NO_x	Length of new cycle paths	Implementation ongoing	https://www.staffordshire.gov.uk/Transport/transportplanning/Walking-and-cycling.aspx No completion year given as ongoing initiative
8	Continued Integration with planning system eg incorporation of features to reduce short car journeys EV Chargers at road services etc.	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2019	Ongoing	Tamworth Borough Council	Tamworth Borough Council	Funded	Internal officer resource.	Implementation	Reduction in particulates & NO_x	Reduced emissions	Ongoing	No completion year given as ongoing initiative.
9	Regulation of industrial processes	Environmental Permits	Other measure through permit systems and economic instruments	2010	Ongoing	Tamworth Borough Council	Tamworth Borough Council	Funded	Internal officer resource.	Implementation	Reduction in particulates & NO_x	Reduced emissions	Ongoing	Tamworth only has 14 Permitted processes of which 7 are petrol stations. No completion year given as ongoing initiative.
10	Continuing of Home & Hybrid working contracts for Tamworth Borough Council employees.	Alternatives to private vehicle use	Other	2022	Ongoing	Tamworth Borough Council	Tamworth Borough Council	Funded	No cost	Home – 44.2% Hybrid - 21.5% Site – 34.3%	Reduction in particulates & NO_x	Reduced emissions	Ongoing	Ongoing
11	EV charging points in public car parks	Promoting Low Emission Transport	Procuring alternative refueling infrastructure to promote EV recharging.	2021	2026	TBC & BP	BP	Funded	Most of funding from BP	**Completed**	Reduction in particulates & NO_x	Reduced emissions	**Completed Dec 2024**	Completed

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[1],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 than 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

There are now two targets to work towards:
The annual mean concentration target, which requires that by the end of 31st December 2040, the annual mean level of $PM_{2.5}$ in ambient air must be equal to or less than 10 µg/m³, with an interim target of 12 μgm^3 to be achieved by the end of January 2028 as set out in the Environmental Improvement Plan 2022.
The other major target is, the population exposure reduction target, this requires that there is at least a 35% reduction in population exposure by the end of 31st December 2040 (“the target date”), as compared with the average population exposure in the three-year period from 1st January 2016 to 31st December 2018 (“the baseline period”), determined in accordance with regulation 8.

Particulate matter, or PM, is the term used to describe particles found in the air, including dust, dirt and liquid droplets. PM comes from both natural and man-made sources, including traffic emissions and Saharan-Sahel dust. These particles can be suspended in the air for long periods of time, and can travel across large distances.

PM less than 10 micrometres in diameter (PM_{10}) pose a health concern because they can be inhaled into and accumulate in the respiratory system. PM less than 2.5 micrometres in diameter ($PM_{2.5}$) are referred to as "fine" particles and are believed to pose the greatest health risks, as they can lodge deeply into the lungs and also pass into the bloodstream.

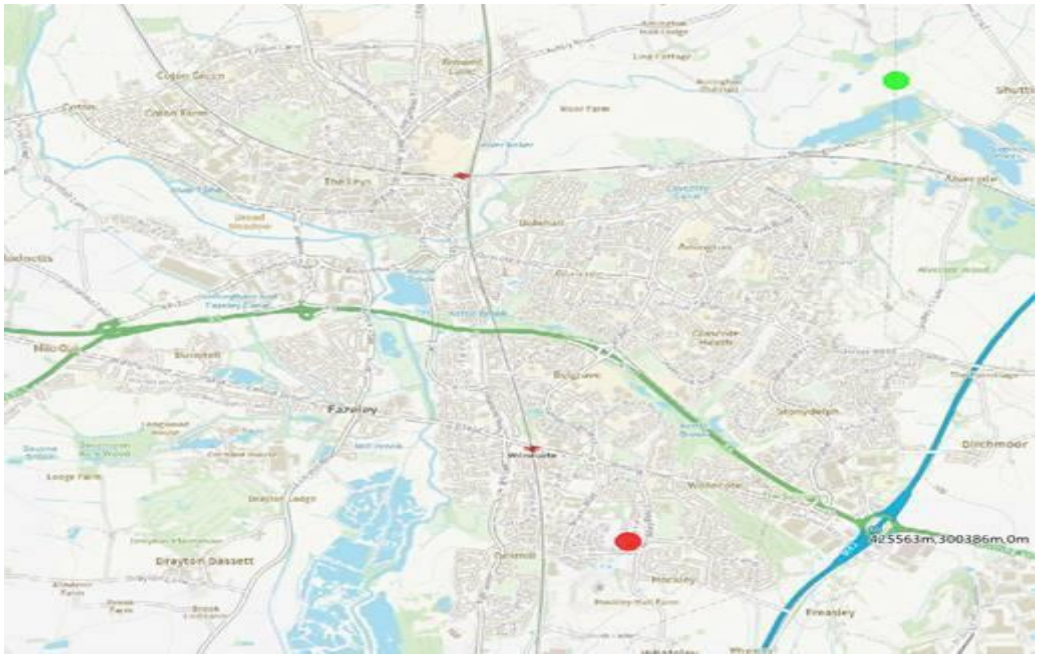
$PM_{2.5}$ is the pollutant which has the biggest impact on public health and on which the Public Health Outcomes Framework (PHOF) D01 Fraction of mortality attributable to particulate air pollution (2021), Public Health Outcomes Framework indicator[2] is based.

1 Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023
2 Public Office for Health Improvement and Disparities. Public health profiles. 2025 https://fingertips.phe.org.uk © Crown copyright 2025

2.3.1 Particulate Matter ($PM_{2.5}$) Levels

The map below indicates the area of maximum background annual mean $PM_{2.5}$ concentration and the area of minimum background annual mean PM2.5 concentrations. As Tamworth Borough Council doesn`t monitor either $PM_{2.5}$ nor PM_{10} the map has been derived from the Defra Background maps. From these maps Tamworth Borough Council has determined that, its highest level is 9.14 µg/m^3 and is located at Peel Drive, Wilnecote, its lowest level is 6.32 µg/m^3 and is land located off Shuttington Road.

Fig 3 Map of highest & lowest concentrations of $PM_{2.5}$ in Tamworth



2.3.2 $PM_{2.5}$ and Mortality in Tamworth and Staffordshire & Stoke-on-Trent

Although the levels of $PM_{2.5}$ within the County and City of Stoke on Trent are below the 2020 EU Limit value, the impact on adult mortality directly attributable to $PM_{2.5}$ is nonetheless still an important public health issue within Staffordshire and Stoke-on-Trent. This is revealed in data obtained from UK Health Security Agency(UKHSA) used to inform Public Health Outcomes Framework indicator D01[2], as shown in Figure 1

The estimated percentage number of deaths attributable to $PM_{2.5}$ in adults over 30 has been translated into the estimated number of attributable deaths for each local authority area within Staffordshire, and are shown in Figure 2. The data presented to 2023 is the latest data available at time of publication of this report. Approximately on average 5.5.0% of deaths between 2019 to 2023 within the County can be attributed to $PM_{2.5}$. As the 2020 data for this indicator includes the period from March 2020 onwards, the mortality data used in its calculation will reflect effects of the COVID-19 pandemic.).

Figure 1 Estimated average number of deaths by local authority area attributable to $PM_{2.5}$ within Staffordshire for adults over 30 2019 to 2023

District/County	Percentage
Newcastle-under-Lyme	5.3%
Stafford	5.2%
East Staffordshire	5.7%
South Staffordshire	5.4%
Lichfield	5.7%
Staffordshire Moorlands	5.1%
Cannock Chase	5.6%
Tamworth	6.0%
Stoke on Trent	5.6%
Staffordshire County	5.5%
England	5.9%

Tamworth Borough Council

Figure 2 Public Health Outcomes Framework Indicator D01- Fraction of annual all cause adult mortality attributable to anthropogenic (human made) particulate air pollution (measured as fine particulate matter, $PM_{2.5}$) for Staffordshire Authorities 2019 to 2023[2]

	2019			2020			2021			2022			2023		
District/County	Deaths - all causes persons 30+	%*	Estimated attributable deaths	Deaths - all causes persons 30+	%*	Estimated attributable deaths	Deaths - all causes persons 30+	%*	Estimated attributable deaths	Deaths - all causes persons 30+	%*	Estimated attributable deaths	Deaths - all causes persons 30+	%*	Estimated attributable deaths
Newcastle- under-Lyme	1282	6.8	90	1548	4.7	70	1409	5	70	1402	5.1	70	1417	4.9	70
Stafford	1315	6.8	90	1565	4.5	70	1432	4.8	70	1433	5.0	70	1518	4.7	70
East Staffordshire	1128	7.3	80	1355	5.1	70	1287	5.1	70	1141	5.6	60	1129	5.3	60
South Staffordshire	1212	7.0	90	1418	4.9	70	1333	5.1	70	1297	5.3	70	1317	4.8	60
Lichfield	1093	7.2	80	1272	5.2	70	1129	5.1	60	1155	5.5	60	1170	5.2	60
Staffordshire Moorlands	1080	6.6	70	1276	4.5	60	1133	4.7	50	1186	4.9	60	1221	4.8	60
Cannock Chase	908	7.2	70	1046	5.1	50	1089	5.2	60	1038	5.4	60	1037	5.1	50
Tamworth	678	7.7	50	752	5.6	40	730	5.4	40	734	5.7	40	707	5.4	40
Stoke on Trent	2490	7.2	180	3034	5.0	150	2790	5.2	150	2569	5.3	140	2691	5.4	140
Staffordshire	8692	7.0	610	10227	4.9	500	9539	5	480	9380	5.3	500	9511	5.0	480

2.3.3 Actions being taken within Tamworth/Staffordshire to reduce $PM_{2.5}$

Since the update of the Environment Act 2021 there is now a statutory duty imposed on Local Authorities in England to reduce $PM_{2.5}$, a number of the measures are complementary with those being used to reduce NO_x.

Tamworth Borough Council is taking the following measures as outlined in Table 2.4 and in conjunction with our partners at the county council and other partners identified in the table to address $PM_{2.5}$ as well as those in Table 2.2.

We are particularly concentrating efforts on actions 1,2,&3 from Table 2.2.

Smoke Control areas

Tamworth Borough Council declared the whole of the borough to be a smoke control area in the late 1970s.
Changes to the Environment Act 2021 has enabled councils to now issue fines with respect to dark persistent smoke coming from household chimneys, were as before this change this was difficult to address, as household chimneys were exempt from being a statutory nuisance.
This change should enable Tamworth Borough Council to address the incorrect use of log burners even if they are Defra exempt.
In 2024 our communications team put information on social media with respect to the National Clean Air Night in January 2024

Table 2.4 – Actions being taken within Staffordshire to reduce $PM_{2.5}$

Measures category	Measure Classification	Actions undertaken by Tamworth Borough Council or via SCC affecting Tamworth
Traffic Management	Urban Traffic Control systems, Congestion management, traffic reduction	UTC in Tamworth Town Centre a t Ventura Park
	Reduction of speed limits, 20mph zones	Under consideration as part of emerging Town Centre Masterplan
	Anti-idling enforcement	Anti Idling Campaign toolkits available to schools for pupil run campaign.
Promoting Travel Alternatives	Workplace Travel Planning	Where developers are required to produce and implement Workplace Travel Plans as part of the planning process,, SCC review and monitor the outcomes.-
	Encourage / Facilitate home-working	Homeworking policy adopted 2022
	School Travel Plans	Where School Travel Plans are required as part of the planning process SCC review and monitor the outcomes Residential developers are required to make S106 contributions where appropriate to fund active travel measures and initiatives carried out within schools. School Travel Plans are written and produced by the Active School Travel Team for any school in Staffordshire wishing to take part in the accredited Modeshift STARS with support of resources, toolkits, assemblies, campaigns and lesson plans to encourage behaviour change
	Promotion of cycling	https://www.staffordshire.gov.uk/Transport/Cycling/Cycling-and-active-travel.aspx Benefits of cycling promoted through the Travel Plan Process Gov Cycle to work scheme promoted and encouraged via the Travel Plan Process. Bikeability is promoted and delivered in most schools in Staffordshire in line with Active Travel England's target of 80% of all year 6 pupils to receive Bikeability training by 2025. Staffordshire is on target to achieve this figure. (Link to Bikeability Page)
	Promotion of walking	https://www.staffordshire.gov.uk/Transport/Cycling/Cycling-and-active-travel.aspx Walk to school campaign resources offered free to all Staffordshire schools including railing banner, posters, digital toolkit and reward bookmarks for pupils (LINK HERE) Benefits of Walking promoted through the Travel Plan process Walks and Country Trails - Staffordshire County Council Good Life Health & Wellbeing in the Community

Measures category	Measure Classification	Actions undertaken by Tamworth Borough Council or via SCC affecting Tamworth
Transport Planning & Infrastructure	Local Transport Plans/ District Strategies	District integrated transport strategies - Staffordshire County Council District Data Reports https://letstalk.staffordshire.gov.uk/let-s-talk-transport#folder-102240-12179
	Public transport improvements- interchanges stations and services	Planned improvements at Tamworth station
	Cycle network	Microsoft Word - LCWIP final report 2021 (Oct update) Staffordshire cycle maps currently awaiting audit and review
	Bus route improvements	As a result of BSIP & BSIP+ funding consideration is being given to bus route improvements where feasible
	Active Travel Fund	ATF 3 and 4 measures to encourage walking and cycling
	Levelling Up Fund 2	Schemes will improve a number of major roads around the county, reduce journey times, put greener, cleaner buses on main roads, improve walking and cycling routes and reduce the impact of housing and commercial developments. Approximately £4.2 million to introduce either the latest generation Euro VI diesels, or electric-powered buses on certain busy routes, as well as improving bus stops and changing priority at junctions.
Policy Guidance and Development Control	Planning applications to require assessment of exposure / emissions for development requiring air quality impact assessment	Local & National Validation requirements: http://www.tamworth.gov.uk/sites/default/files/planning_docs/National-and-Local-Validation-requirements- 2017.pdf
	Air Quality Strategy	2022-2027 Air Quality Strategy
	Planning Guidance for developers	https://www.tamworth.gov.uk/sites/default/files/planning_docs/Tamworth_Design_SPD_July_2019_v1-0.pdf
		New Highway Design Code to be published shortly

Measures category	Measure Classification	Actions undertaken by Tamworth Borough Council or via SCC affecting Tamworth
	Planning Policies	Planning Policies
	Route Plans/ Strategic routing strategy for HGV's	https://www.staffordshire.gov.uk/Transport/transportplanning/localtransportplan/home.aspx This should be considered as part of planning applications where new proposals come forward.
	Procuring infrastructure to promote Low Emission Vehicles, EV recharging	Looking at charging hubs using Levi funding.
	Priority parking for LEV's	EV charging spaces being investigated.
	Taxi Licensing conditions	Looking at introducing Euro VI Standard.
	EV Strategy	Staffordshire EV Charging Infrastructure Strategy https://www.staffordshire.gov.uk/Transport/Sustainable-travel/Electric-vehicles/02-SCC-Public-EV-Charging-Strategy-V3-3.pdf
	Adoption of SCC EV Strategy	Adopted SCC EV Strategy Apr 2023 Currently drafting a local EV strategy
	Measures to reduce pollution through IPPC Permits going beyond BAT	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211863/env-permitting- general-guidance-a.pdf (Chapter 15)
Other measures	Smoky Diesel Hotline	https://www.gov.uk/report-smoky-vehicle
	Domestic Smoke Control advice and Enforcement	Fines policy for issue of persistent dark smoke from domestic chimneys in force.
	Garden Bonfires - Advice and nuisance enforcement	http://www.tamworth.gov.uk/air-quality
	Commercial burning advice and enforcement	http://www.tamworth.gov.uk/air-quality

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

This section sets out the monitoring undertaken within 2024 by Tamworth 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 Automatic Monitoring Sites

Tamworth Borough Council does not operate any automatic (continuous) monitors.

3.1.2 Non-Automatic Monitoring Sites

Tamworth Borough Council undertook non- automatic (i.e. passive) monitoring of NO_2 at 14 sites during 2024. Table A.2 in Appendix A presents the details of the non-automatic sites. Tamworth Borough Council adhered to the Defra diffusion tube monitoring calendar. Maps showing the location of the monitoring sites are provided in figure D.1 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.4 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 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.

There are no exceedances of the annual mean Air Quality Objective for Nitrogen Dioxide for 2024. There is no need, therefore, to consider declaring an AQMA in the Tamworth Borough Council area. The level of nitrogen dioxide measured by all diffusion tubes in Tamworth Borough have decreased (14 diffusion tubes) since 2023, and all tube readings are lower than those for 2019(except Q1&Q4 which weren`t being measured then).

Apendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites
Tamworth does not have any Automatic monitoring sites.

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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
N10	47 Upper Gungate	Roadside	420760	304560	NO2	No	5.0	2.2	No	3.0
N3	34 Claremont Rd	Urban Background	420040	305690	NO2	No	6.0	2.1	No	3.0
Q1	114 Overwoods	Roadside	423105	300367	NO2	No	4.0	2.1	No	3.0
Q2	50 Lakeland Drive	Roadside	423430	301280	NO2	No	39.0	1.7	No	3.0
Q3	14 High Broom Court	Roadside	420350	303480	NO2	No	6.0	1.8	No	3.0
Q4	60 High St Dosthill	Roadside	421452	300082	NO2	No	2.5	2.1	No	3.0
Q6S	Dosthill Rd Two Gates	Roadside	421588	301526	NO2	No	12.0	1.8	No	3.0
Q6W	Watling St Two Gates Club	Roadside	421560	301605	NO2	No	17.0	2.8	No	3.0
Q6N	Tamworth Rd Two Gates	Roadside	421580	301630	NO2	No	15	2.6	No	3.0
Q6EX	118 Highcliffe Rd	Roadside	421600	301600	NO2	No	6	15	No	3.0
Q7	253 Glascote Rd	Roadside	422110	303420	NO2	No	3	2	No	3.0
Q8	1 Arkall Close	Roadside	421380	305450	NO2	No	9	2.1	No	3.0
Q9	Opp 101 Gungate Comberford Rd	Kerbside	420823	304899	NO2	No	26	1	No	3.0
Q10	251 Tamworth Rd Ammington	Kerbside	4223090	304300	NO2	No	7	1.1	No	3.0

Notes:

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

(2) N/A if not applicable.

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

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2020	2021	2022	2023	2024
N10	420760	304560	Roadside	100.0	100.0	20.4	25.4	25.2	23.1	21.7
N3	420040	305690	Urban Background	84.6	84.6	14.3	13.8	13.4	12.8	12.2
Q1	423105	300367	Roadside	100.0	100.0	19.8	20.3	20.9	19.4	17.9
Q2	423430	301280	Roadside	100.0	100.0	17.3	18.5	18.2	16.7	14.7
Q3	420350	303480	Roadside	100.0	100.0	18.1	18.7	20.6	19.1	16.8
Q4	421452	300082	Roadside	100.0	100.0	20.7	21.3	21.6	20.7	20.5
Q6S	421588	301526	Roadside	92.3	92.3	23.3	28.6	28.6	25.3	23.4
Q6W	421560	301605	Roadside	100.0	100.0	22.2	26.1	26.1	24.5	23.1
Q6N	421580	301630	Roadside	100.0	100.0	26.1	26.7	28.8	26.5	24.6
Q6EX	421600	301600	Roadside	100.0	100.0	20.6	19.9	21.9	19.0	17.2
Q7	422110	303420	Roadside	100.0	100.0	23.7	24.0	23.7	23.8	22.2
Q8	421380	305450	Roadside	100.0	100.0	17.5	16.6	17.7	16.3	15.4
Q9	420823	304899	Kerbside	90.4	90.4	22.1	21.9	24.0	24.0	22.0
Q10	423090	304300	Kerbside	100.0	100.0	17.8	18.9	20.2	18.3	17.2

☒ **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.

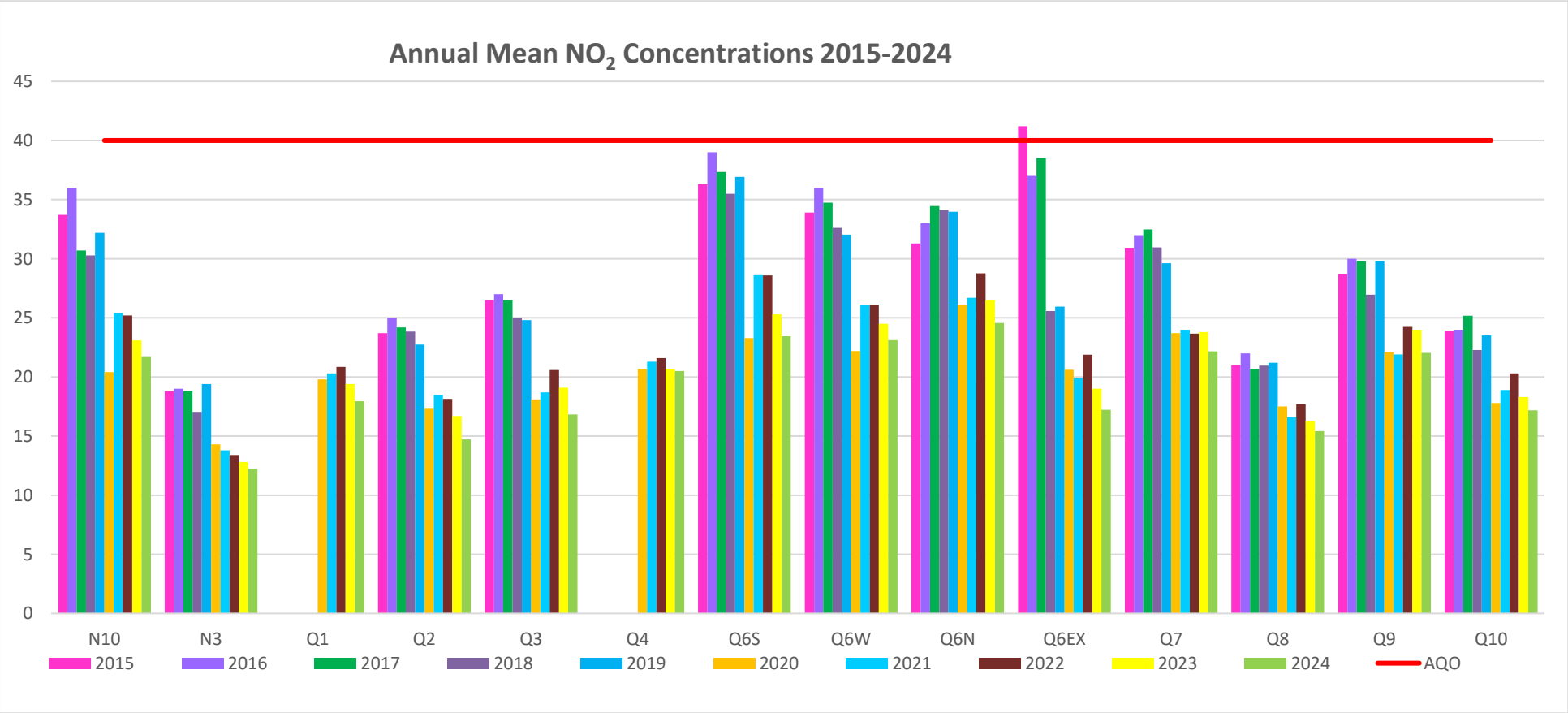
Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

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



Data collection for Q1 & Q4 only started 2020

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	Annual Mean: Distance Corrected to Nearest Exposure	Comment
N10	420760	304560	35.6	29.2	30.7	21.2	19.4	19.2	22.5	22.8	22.2	33.0	34.0	27.4	26.4	21.7		
N3	420040	305690	20.1	19.2	14.9	10.1	11.3	9.8	10.1	10.5	13.5	19.2	23.4	16.8	14.9	12.2		
Q1	423105	300367	28.4	24.6	18.9	17.7	18.2	16.9	missing	16.6	20.6	25.8	31.1	21.9	21.9	17.9		
Q2	423430	301280	21.7	21.1	17.3	13.3	17.8	11.6	13.8	13.5	17.4	21.7	26.4	19.6	17.9	14.7		
Q3	420350	303480	24.8	27.6	22.3	17.6	15.1	16.4	18.6	16.3	16.6	23.4	24.0	23.5	20.5	16.8		
Q4	421452	300082	30.8	29.7	23.0	16.9	22.1	17.8	19.9	29.8	24.9	29.1	30.8	25.2	25.0	20.5		
Q6S	421588	301526	33.4	31.6	28.7	26.4	28.5	19.8	25.6	missing	29.0	29.4	34.7	27.3	28.6	23.4		
Q6W	421560	301605	32.5	28.5	27.6	20.2	28.8	24.0	25.2	23.6	32.5	33.4	34.3	27.6	28.2	23.1		
Q6N	421580	301630	33.9	34.7	32.5	24.6	25.8	24.9	28.2	26.3	27.5	35.2	35.8	30.0	30.0	24.6		
Q6EX	421600	301600	28.2	Dirt on disc	22.1	16.2	16.8	13.1	18.1	15.9	18.7	26.5	31.2	24.2	21.0	17.2		
Q7	422110	303420	28.5	31.5	24.9	19.9	23.4	21.0	22.3	21.5	26.0	41.6	33.6	30.1	27.0	22.2		
Q8	421380	305450	24.5	23.7	16.6	14.0	16.2	12.8	14.7	13.8	19.1	22.9	26.2	21.1	18.8	15.4		
Q9	420823	304899	36.1	32.1	24.4	23.1	20.6	23.0	24.8	22.3	25.2	27.9	34.6	28.3	26.9	22.0		
Q10	423090	304300	26.1	30.1	20.3	14.8	15.6	12.7	15.5	16.3	24.4	24.7	26.5	24.5	21.0	17.2		

☒ **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.**
☒ **Tamworth 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.

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

Diffusion tubes are used to provide a relatively simple and cost-effective method of monitoring for nitrogen dioxide at several locations where nitrogen dioxide levels are likely to be high as identified in previous reviews and assessments, due to the proximity of significant sources (normally traffic).

The tube is a small plastic device, approximately 6 centimetres long, open at one end, with a disc at the other end that reacts to nitrogen dioxide. They are located at sites, typically on lamp posts or other street furniture or on the facades of properties and exposed for a 4–5 week period, in line with the UK national survey.
The tubes contain a mesh which is doped with 20% v/v Triethanolamine (TEA) in Water and are fitted with a cap before and after exposure which is undertaken according to the Defra diffusion tube monitoring calendar.

New or Changed Sources Identified Within Tamworth Borough During 2024

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

Additional Air Quality Works Undertaken by Tamworth Borough Council During 2024

Tamworth Borough Council has not completed any additional works within the reporting year of 2024, other than those reported in Table 2.2. and Table 2.4.

QA/QC of Diffusion Tube Monitoring

The diffusion tubes are supplied and analysed by **Staffordshire Highways Laboratories**, which participates in the *AIR NO_2 Proficiency Testing Scheme* for the analysis the diffusion tubes.

Air PT Scheme

The AIR NO_2 Proficiency Testing Scheme is an independent analytical proficiency-testing (PT) scheme, operated by LGC Standards and supported by the Health and Safety Laboratory (HSL). The AIR PT scheme, started in April 2014, and combines two long running PT schemes: LGC Standards STACKS PT scheme and HSL WASP PT scheme.

Over a rolling five round AIR PT window, one would expect that 95 % of laboratory results should be ≤ ± 2. If this percentage is substantially lower than 95 % for a particular laboratory, within this five round window, it may be concluded that the laboratory in question may have significant systematic sources of bias in their assay.

AIR PT Scheme (LGC)
Results for each round are classified on z-scores for each tube as SATISFACTORY (≤2), QUESTIONABLE (between 2 and <3) and UNSATISFACTORY (>3).

Staffordshire Highways Laboratory explanation of their performance in this scheme is given below.

PT Rounds during 2024

- Round 62 – Feb 2024. 100% satisfactory results.
- Round 63 – June 2024. 100% satisfactory results.
- Round 65 – Sept 2024. 100% satisfactory results.
- Round 66 – Dec 2024. 100% satisfactory results

The table below shows a summary of our z-score results.

PT Round	Technician	z-scores	Performance
62 – Feb 2024	1	0.84, 0.86, 0.20, -0.10	100% SATISFACTORY
	2	-0.69, 0.22, -0.20, 0.30	
63 – June 2024	1	0.26, 0.13, -0.14, -0.34	100% SATISFACTORY
	2	0.00, 0.13, 0.27, 0.00	
65 – Sept 2024	1	0.33, 0.16, 0.00, -0.04	100% SATISFACTORY
	2	0.33, -0.32, 0.08, 0.37	
66 – Dec 2024	1	0.78, 0.26, -0.06, 0.19	100% SATISFACTORY
	2	0.13, -1.03, -1.04, -0.39	

Field Intercomparison (NPL)

Staffordshire Highways Laboratory`s performance for all Field Intercomparison results of 2024 was classified as ‘GOOD’ (CoV <20).

Bias factor

The bias adjustment factor spreadsheet on the Defra website was updated in March 2025. The overall bias factor for Staffordshire Highways Laboratory for 2024 (including the Field Intercomparison result and all the co-location results from participating local authorities, total of 16 studies) was 0.82.

Diffusion Tube Annualisation

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

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 NOx/NO2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.
Tamworth Borough Council have applied a national bias adjustment factor of 0.82 to the 2024 monitoring data. A summary of bias adjustment factors used by Tamworth Borough Council over the past nine years is presented in Table C.1.
We use a national bias adjustment factor chosen as opposed to a local factor because we do not use continuous analysers.

Table C.1 – Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	3/25	0.82(16 Studies)
2023	National	03/24	0.86(11 Studies)
2022	National	03/23	0.87 (12 Studies
2021	National	09/22	0.85 (16 studies)
2020	National	09/21	0.85 (15 studies)
2019	National	09/20	0.93 (17 studies)
2018	National	06/19	0.89 (14 studies)
2017	National	09/18	0.88 (11studies)
2016	National	06/17	0.83 (15 studies)

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 should be 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 Tamworth Borough Council required distance correction during 2024.

QA/QC of Automatic Monitoring

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

Table C.2 – Annualisation Summary (concentrations presented in µg/m^3)

Site ID	Annualisation Factor	Annualisation Factor	Annualisation Factor	Annualisation Factor	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean	Comments

No diffusion tubes required annualisation.

Tamworth Borough Council

Bias Adjustment Factor

It is known that there are systematic differences in the performance of different laboratories and preparation methods of diffusion tubes. Table C.3 shows the studies that have been used to compare results from diffusion tubes (analysed by Staffordshire Highways Laboratories) to results of co-located automatic chemiluminesence monitors, where data has been collected for 9 months or more.

From these studies it can be seen that the bias adjustment factor (A) of 0.82 has therefore to be applied (multiplied) to the diffusion tube results for the 2024 data as shown in Table C.3.

Table C.3

Bias Adjustment Factors for Staffordshire Scientific Services 2024

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 03/25

Follow the steps below **in the correct order** to show the results of **relevant** co-location studies

Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods

Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet

This spreadsheet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.

This spreadsheet will be updated at the end of June 2025

LAQM Helpdesk Website

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

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

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

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

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

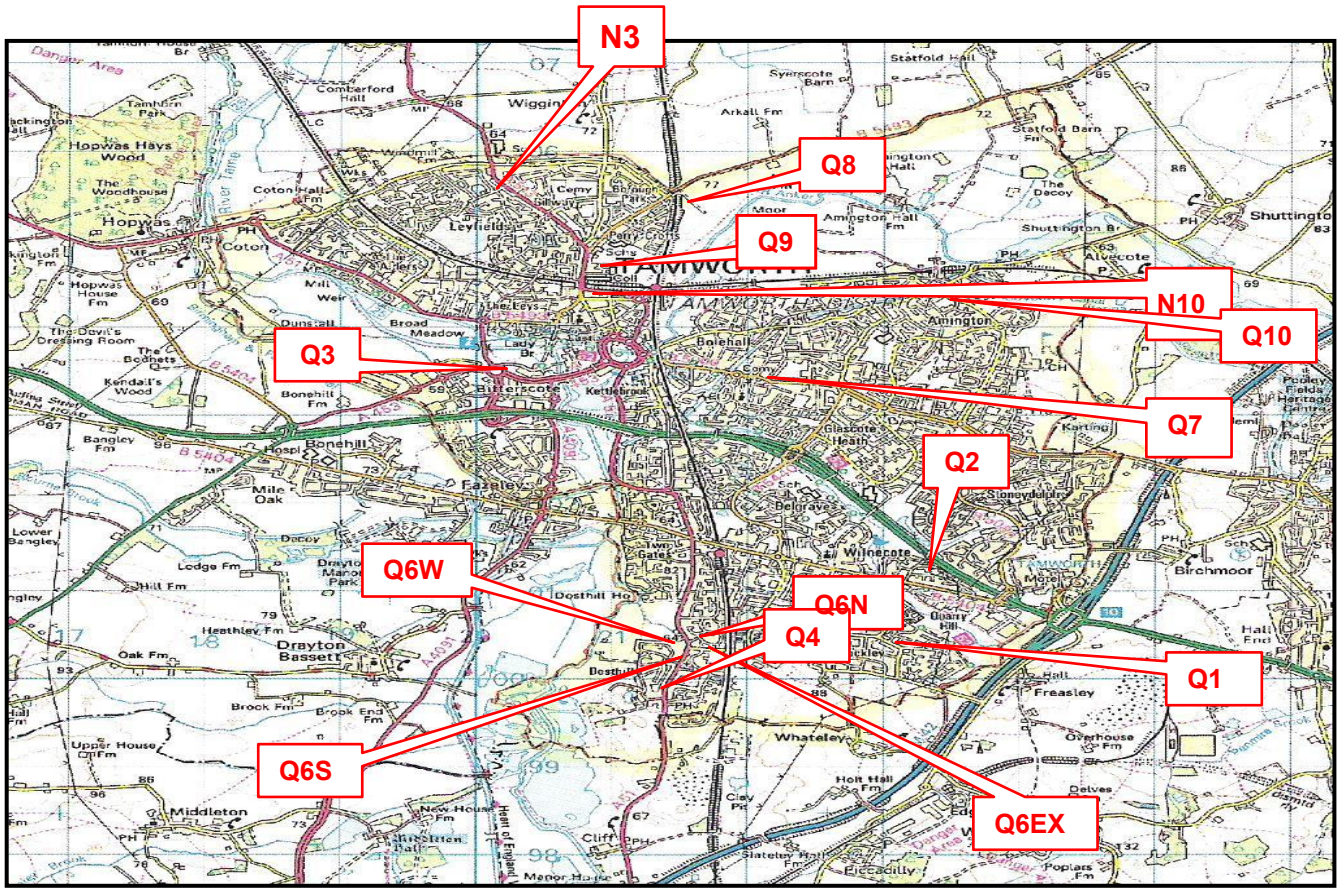
Step 4: Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.

If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953

Analysed By[1]	Method (To undo your selection, choose (All) from the pop-up list)	Year[5] (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[6]	Bias Adjustment Factor (A) (Cm/Dm)
Staffordshire County Council	20% TEA in water	2024	UB	Salford City Council	11	20	18	10.6%	G	0.90
Staffordshire County Council	20% TEA in water	2024	B	Salford City Council	12	12	11	6.7%	G	0.94
Staffordshire County Council	20% TEA in water	2024	R	Salford City Council	12	37	31	17.9%	G	0.85
Staffordshire County Council	20% TEA in water	2024	R	Salford City Council	12	46	32	43.5%	G	0.70
Staffordshire County Council	20% TEA in water	2024	KS	Marylebone Road Intercomparison	11	45	36	25.6%	G	0.80
Staffordshire County Council	20% TEA in water	2024	R	Oldham Council	11	27	21	29.3%	G	0.77
Staffordshire County Council	20% TEA in water	2024	UC	Manchester City Council	10	32	29	10.7%	G	0.90
Staffordshire County Council	20% TEA in water	2024	SI	Manchester City Council	12	17	15	16.6%	G	0.86
Staffordshire County Council	20% TEA in water	2024	R	Stockport Mbc	12	30	25	18.1%	G	0.85
Staffordshire County Council	20% TEA in water	2024	R	Stockport Mbc	12	20	17	20.5%	G	0.83
Staffordshire County Council	20% TEA in water	2024	R	Stoke-on-trent City Council	12	48	34	39.5%	G	0.72
Staffordshire County Council	20% TEA in water	2024	R	Stoke-on-trent City Council	12	51	38	35.0%	G	0.74
Staffordshire County Council	20% TEA in water	2024	UB	Stoke-on-trent City Council	12	21	18	14.4%	G	0.87
Staffordshire County Council	20% TEA in water	2024	R	Trafford Bc	11	26	20	28.8%	G	0.78
Staffordshire County Council	20% TEA in water	2024	UB	Trafford	11	11	10	11.3%	G	0.90
Staffordshire County Council	20% TEA in water	2024	R	Bolton Council	11	26	20	30.7%	G	0.77
Staffordshire County Council	20% TEA in water	2024		Overall Factor[3] (16 studies)				Use		0.82

Appendix D: Map(s) of Monitoring Locations

Figure D.1 – Map of Non-Automatic Monitoring Site



NB The TAM Q6E site has been moved to 118 Highcliffe Rd and is now called TAM.6QEX

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 meter of air (µg/m^3).

Appendix F: Processes Regulated for Emissions to Air by Tamworth Borough Council under the Environmental Permitting (England & Wales) Regulations 2016 as at August 2024

Ref No	Operator Name	Process Address	Post Code	Process Description
Part A2				
P01	Forterra Building Products Ltd	Wilnecote Brick, Hedging Lane, Wilnecote	B77 5EU	Manufacture of heavy clay goods. (Brickworks)
Part B				
P03	Envirostrip (GB) Ltd	Unit 11, 12 and 12a Hedging Lane Industrial Estate	B77 5HH	Ferrous Metal
P06	Envirostrip (GB) Ltd	Warwick House, Watling Street, Wilnecote	B77 5BH	Metal decontamination by the application of heat
P02	Breedon Southern Ltd	Mica Close, Tamworth,	B77 4DS	Concrete batching plant
P09	Apollo Chemicals Limited	Sandy Way, Amington Industrial Estate	B77 4DS	Manufacture of solvent borne adhesives and solvents
P11	Sainsbury's Supermarkets Ltd	Sainsbury's Supermarkets Ltd, Bitterscote	B78 3HD	Unloading of petrol into stationary storage tanks
P12	William Morrisons Supermarkets Ltd	William Morrison Supermarket Plc, Hilmore Way	B77 2NY	Unloading of petrol into stationary storage tanks
P13	Tamworth Service Station	Tamworth Service Station, Upper Gungate	B79 7NU	Unloading of petrol into stationary storage tanks
P14	Tesco Stores Ltd	Dosthill Service Station, High Street, Dosthill	B77 1LE	Unloading of petrol into stationary storage tanks
P15	Fuel Centre Ltd	Wilnecote Service Station, Watling Street, Wilnecote	B77 5AB	Unloading of petrol into stationary storage tanks
P22/10	Roadside Welcome	78 Glascote Rd, Tamworth,	B77 2AF	Unloading of petrol into stationary storage tanks
P20	Asda Stores Ltd	Ventura Road	B78 3HD	Unloading of petrol into stationary storage tanks
P21	Stormking Plastics Ltd	Amington Point, Sandy Way, Amington	B77 4ED	Processes for the manufacturer of fibre reinforced plastics
P28/24	Envirostrip (GB) Ltd	7E Claymore Tamworth	B77 5DQ	Metal decontamination by the application of heat

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 Highways England
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.