Staffordshire Moorlands District Council

2025 Annual Status Report

June 2025

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STAFFORDSHIRE moorlands DISTRICT COUNCIL

ACHIEVING · EXCELLENCE

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: June 2025

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Report Reference Number	2025 Annual Status Report
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Local Responsibilities and Commitment

This ASR was prepared by the Bureau Veritas on behalf of Staffordshire Moorlands District Council with the support and agreement of the following officers and departments:

- Environmental Health
- Communities and Climate Change
- Asset Management
- Service Commissioning
- Staffordshire County Council, sustainable Transport team, Highways and Public Health

This ASR has been approved by:

- Alicia Patterson – Head of Environmental Health

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

If you have any comments on this ASR please send them to Dr Daniel McCrory at:

Environmental Health

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Endorsement from the Director of Health & Care, Staffordshire County Council

Staffordshire County Council (SCC) is committed to working with partners to ensure that Staffordshire Moorlands District Council 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 Staffordshire Moorlands District Council s 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 Staffordshire Moorlands District Councils 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 Staffordshire Moorlands District Councils activities to reduce NO_2 also can reduce particulates. To this end Staffordshire Moorlands District Council 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. The programme focuses on reducing levels of NO and PM, which are monitored at key locations.

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

Executive Summary: Air Quality in Our Area

Air Quality in Staffordshire Moorlands District 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 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.

Staffordshire Moorlands District Council (SMDC) is one of the nine district and local authorities that make up the county of Staffordshire. SMDC is located in the northeast of the region covering an area of 222 square miles or about a fifth of the county (the second biggest district in Staffordshire after Stafford Borough). Over 31% of the district is rural.

The population size has decreased by 1.3%, from around 97,100 in 2011 to 95,800 in 2021[1].

The main source of air pollution within SMDC is road traffic emissions from the major roads that cross the borough (the A50, A52, A53, A520 and A523), as well as the local roads that connect the borough's main population centres (Leek, Cheadle and Biddulph) to these key travel routes and within towns. Residential exposure to the increased pollutant concentrations caused by these emissions is the primary concern as there are a number of properties located within close proximity to the road network.

SMDC currently has two Air Quality Management Areas (AQMAs), all declared due to exceedances of the 40µg/m^3 annual mean objective for nitrogen dioxide (NO_2):

- **AQMA No.1: Leek**, declared in July 2019. The area encompasses the main travel routes through leek and incorporates the following sections of roads; A523; from the A523 Macclesfield Rd/ Grace Rd Junction, through to A523 Ashbourne Road / Springfield Rd Junction. A53; from the A53 Broad Street / Junction Rd, junction through to A53 Buxton Rd / Springfield Road Junction. Springfield Road and A520; from A520 St Edward Street /A523 Stockwell Street junction through to the A520 / Compton Road Junction; and
- **AQMA No.2: Cellarhead**, declared in July 2019. The area encompasses the area known locally as the Cellarhead crossroads, which is a busy junction between the A52 and the A520. The AQMA extends 250m (A520) North, 230m South (A520), 480m East (A52)and 210m West (A52) of the junction.

In 2024, SMDC monitored NO_2 using passive diffusion tubes installed at 50 locations within the district, both inside and outside of AQMAs. SMDC established six (6) new non-automatic monitoring sites in 2024 and decommissioned two (2) non-automatic monitoring sites.

Across existing monitoring sites within the AQMAs, an average decrease of 2.8µg/m^3 was observed in 2024 when compared to 2023 data. All sites observed a decrease in concentration in comparison with 2023. All sites within SMDC, inclusive of those within

[1] Office for National Statistics. 2021. Census 2021.

the Leek and Cellarhead AQMAs, reported concentrations below 10% of the AQO (36µg/m^3).

Outside of the AQMAs, 2024 concentrations decreased on average 2.4µg/m^3 compared with 2023. The maximum concentration was 27.2µg/m^3 at Site 52, which reported a decrease of 5.1µg/m^3 compared to the previous year. Concentrations across existing sites were lower than those reported in 2020, 2021, 2022 and 2023.

No sites within SMDC reported an NO_2 concentration in excess of 60µg/m^3 in 2024 which indicates that there have been no instances of 1-hour NO_2 concentrations greater than 200µg/m^3. Therefore, the 1-hour NO_2 objective was not exceeded in 2024.

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.

During 2024, SMDC have progressed the following measures:

Air Quality Action Plan Update - An updated version of AQAP is due to be submitted to Defra imminently and outlines the actions that are or will be undertaken will take to improve air quality in the designated AQMA's and the District as a whole between 2025 – 2030. Defra made several recommendations to the initial draft report and these have now been addressed. A steering group met in June 2025. Most of the measures from the proposed AQAP were approved. Further details were requested for other measures and a consultation will take place in due course.

It should be noted that due to continued compliance of the AQMA's for the last five years (including 2020 and 2021). The authority will be looking to revoke both AQMA's in 2025, subject to members approval. The measures identified in the AQAP will continue to be adopted / explored.

Installation of New Indicative Continuous Air Quality Monitors - In December 2024, three (3) new indicative continuous air quality monitors were deployed, two (2) in AQMA No.1: Leek and one in AQMA No.2: Cellarhead. The data from the new continuous monitors will be reported in next year's ASR appendices as these are indicative monitors.

- In AQMA 1: Leek, a new Zephyr® indicative ambient air quality monitor, which provides an indicative measure of NO_2, NO, O_3, PM_{10}, $PM_{2.5}$ and PM_1, was installed at St Marys School, West Bound side of Broad Street, Leek (Grid Reference X:398111, Y: 356161). Additionally, an Osiris Airborne Particle Monitor, which provides an indicative measure of PM_{10}, $PM_{2.5}$ and PM_1, was installed at Moorlands House, WB side of Stockwell Street (Grid Reference X: 398485, Y:356634).
- In AQMA 2: Cellarhead, a new Zephyr® indicative ambient air quality monitor, which provides an indicative measure of NO_2, NO, O_3, PM_{10}, $PM_{2.5}$ and PM_1, was installed at the East bound side of the Cellarhead crossroads, (Grid Reference, X: 395732; Y: 347578).

SMDC also took park in several promotional Campaigns during 2024:

- Promotion of Clean Air Day, via social media and website
  - Raise awareness of air pollution.
  - Information that shows air pollution can also affect the brain and mental health, leading to depression, anxiety and dementia
  - Letting local and national decision makers know what would make it easier for you to walk more and have clean air in your community.
- Promotion of Wood burning Burn better via social media and website

We are further working with the climate change team to develop Youth Climate Schools Conference with support from local partners, that will incorporate air quality.

Conclusions and Priorities

The priorities for SMDC in addressing and managing air quality within their local areas in the coming year includes:

- SMDC & Staffordshire County Council (SCC) Highways to undertake a Transport study of key roads and junctions in Leek;
- Anti-idling initiatives in educational settings; and
- Installation of on street EV charge points at resident accessible locations across the district y.

How to get Involved

The public can engage with Staffordshire Moorlands District Council via the air quality website which contains further local information on the following:

- Air quality monitoring;
- Declared AQMAs;
- Smoke control areas; and
- Wood burning stoves.

The public can also report any concerns about air quality via the Council's website.

As the main source of air pollution within the district is road traffic, SMDC encourages consideration of alternative modes of transport by promoting sustainable transport choices. Further information can be found on the Staffordshire County Council website, which contains information about:

- Electric Vehicles;
- Public transport; and
- Active travel (Cycling and Walking).

In addition, SMDC is currently involved in the Air Aware project in collaboration with neighbouring Staffordshire authorities, contributing to the Air Aware website which provides downloadable materials and further information on:

- Funding;
- Volunteering;
- Small actions that can make a big difference, such as:
    - Turning your car off;
    - Car sharing;
    - Getting on your bike (or scooter);
    - Walking;
    - Getting your car serviced;
    - Working smarter;
    - Using public transport;
    - Zero and low carbon vehicles; and renewable home energy sources.

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1 Local Air Quality Management

This report provides an overview of air quality in Staffordshire Moorlands District Council (SMDC) 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 SMDC 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

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 AQAP within 18 months. The AQAP should specify how air quality targets will be achieved and maintained and provide dates by which measures will be carried out.

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

- NO_2 annual mean.

An updated version of AQAP is due to be submitted to Defra imminently and outlines the actions that are or will be undertaken to improve air quality in the designated AQMA's and the District as a whole between 2025 – 2030. Defra made several recommendations to the initial draft report and these have now been addressed. A steering group met in June 2025. Most of the measures from the proposed AQAP were approved. Further details were requested for other measures and a consultation will be in place in due course.

It should be noted that due to continued compliance of the AQMA's for the last five years (including 2020 and 2021), the authority will be looking to revoke both AQMA's in 2025, subject to members approval. Due to the impact of the COVID-19 pandemic restrictions on traffic volumes in 2020 and 2021, those years are not considered representative of long-term trends in pollutant concentrations. Therefore only the past three years are deemed to be representative of long-term trends in pollutant concentrations. The measures identified in the AQAP will continue to be adopted / explored.

Table 2.1 – Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Number of Years Compliant with Air Quality Objective	Name and Date of AQAP Publication	Web Link to AQAP
SMDC AQMA No.1: Leek	30/07/2019	NO_2 Annual Mean	The area encompasses the main travel routes through leek and incorporates the following sections of roads; A523; from the A523 Macclesfield Rd/ Grace Rd Junction, through to A523 Ashbourne Road / Springfield Rd Junction. A53; from the A53 Broad Street / Junction Rd, junction through to A53 Buxton Rd / Springfield Road Junction. Springfield Road. A520; from A520 St Edward Street /A523 Stockwell Street junction through to the A520 / Condlyffe Road Junction	NO	45.3 µg/m^3	32.2 µg/m^3	5 years*	Ongoing, provisional measure and progress provided in Section 2.2	https://uk-air.defra.gov.uk/aqma/details?aqma_ref=3359
SMDC AQMA No. 2: Cellarhead	30/07/2019	NO_2 Annual Mean	The area encompasses the area known locally as the Cellarhead crossroads, which is a busy junction between the A52 and the A520. The AQMA extends 250m (A520) North, 230m South (A520), 480m East (A52) and 210m West (A52) of the junction	NO	51.1 µg/m^3	30.9 µg/m^3	5 years*	Ongoing, provisional measure and progress provided in Section 2.2	https://uk-air.defra.gov.uk/aqma/details?aqma_ref=3360

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

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

*Including 2020 and 2021, which are likely anomalous due to the impact of COVID-19 and national lockdown restrictions on emissions

Progress and Impact of Measures to address Air Quality in SMDC

Defra's appraisal of last year's ASR concluded that *"the report is well structured, detailed, and provides the information specified in the Guidance".*

The following comments were made to help inform future reports:

1. *Overall, SMDC have produced a high quality ASR with a large amount of detail and sufficient monitoring and analysis of trends and only a few minor errors which require correction prior to publication:*
    a. *In the Executive Summary, it is stated that the maximum concentration reported was 33.5 µg/m^3 at site 39A, 39B. This is incorrect, site 39A, 39B reported a concentration of 33.4 µg/m^3 according to Tables A.2 and B.1 whilst site 68 reported the maximum concentration of 33.5 µg/m^3.*
    b. *The Executive Summary states there are 11 diffusion tubes located in the Leek AQMA, Table A.2 shows there are only 10 located within this AQMA.*
2. *SMDC are reviewing their current monitoring network and amending it in response to public queries as well as increasing the range of monitoring undertaken with the two Zephyr monitors. This is encouraging to see and SMDC should continue this, in the next ASR, SMDC could report the Zephyr monitoring data as an additional appendix if these sensors are operational within the next reporting year. Refer to FAQ 140 for further information on their use.*
3. *This ASR contains a detailed section focussing on $PM_{2.5}$ including information about particulate matter and the relevant targets, the $PM_{2.5}$ levels in the wider area, $PM_{2.5}$ and mortality in the wider area and a large table detailing measures being undertaken to address $PM_{2.5}$ measures. This is welcomed and should continue in future ASRs.*
4. *Table 2.1 does not match the excel template. The current levels of exceedance differ between the report and the excel template. SMDC should ensure that there is consistency throughout the report and associated documents.*
5. *SMDC have included and responded to comments from last year's ASR, this is welcomed.*

6. *Clear figures have been provided to show both the trends in monitoring data across all monitoring sites, split up by geographical location, as well as maps showing the locations of all diffusion tube monitoring sites and the AQMA boundaries.*

The errors from the previous ASR were corrected prior to publication. It is noted that the indicative monitoring results should be included in the appendix when available. Extra precautions were taken to ensure consistency throughout the report and associated documents.

SMDC 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. Three measures are included within Table 2.2, with the type of measure and the progress SMDC have made during the reporting year of 2024 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.2.

As mentioned above, after three representative consecutive years of compliance, the authority will be looking to revoke both AQMA's in 2025. The measures identified in the AQAP will continue to be adopted / explored.

Table 2.2 – Progress on Measures to Improve Air Quality

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated/ Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant/ Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
1	AQMA No.1: Leek; SCC Highways to undertake a Transport study of key roads and junctions in Leek	Traffic Management	Control systems, Congestion management, traffic reduction Urban Traffic	2023	2025/26	SCC/SMDC	SCC Capital Highways Programme	Part Funded	£50k - £100k	Implementation	0.5-1 µg/m³	Reduction in traffic congestion & NO2 levels at relevant receptors	The initial feasibility study for Leek has been completed focusing on St Edward Street and options for re-routing traffic and improving the pedestrian environment. This will deliver a dedicated pedestrian crossing facility on St Edward Street	SCC have indicated that there are no current resources allocated for further data collection or junction modifications in Leek or the development of a traffic model. SCC are committed to undertake an analysis of travel patterns in Leek during 2025/26 to determine the most appropriate measures to reduce transport-related air pollution issue
2	Anti-idling initiatives in educational settings	Public Information	Other	2018/ 2019	Operational	SMDC/ SCC	SCC/ SMDC/Defra Grant	Funded	< £10k	Completed	<0.5 µg/m³	No of Signs / Anti idling pledges	Anti Idling Signage has been developed for deployment at all schools across Staffordshire moorlands in 2025.	https://www.staffordshire.gov.uk/DoingOurBit/Get-Inspired/Clean-green-and-safe/Air-aware/Air-aware.aspx
3	Installation of on street EV charge points at resident accessible locations across the district	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2025	2025/26	SCC/SMDC/ Midlands Connect	LEVI Fund	Funded	> £500k	Planning	<0.5 µg/m³	Number of EV charge points installed	LEVI Phase 1 (on street residential parking) is due to go to tender in early 2025 .	
4	AQMA No.2: SCC to Investigate traffic signal / junction improvements at Cellarhead Crossroads	Traffic Management	Control systems, Congestion management, traffic reduction Urban Traffic	2023	2025/26	SCC/SMDC	SCC Capital Highways Programme	Part Funded	£50k - £100k	Implementation	0.5-1 µg/m³	Reduction in traffic congestion & NO2 levels at relevant receptors	Further work from the SCCs signals team in 2023-2024 also could not identified any deliverable modifications based on the available data and are considering a specialist traffic signal modelling consultant to take a more in-depth study of the junction.	SCC considered that multi-lane approaches would be required to achieve an improvement but the existing geometry and proximity to housing constrains this option. There is currently no stacking space for right turning vehicles. The junction is operated under MOVA and was last validated in 2023 with the report indicating that right turning vehicles cause queuing issues during peak periods.

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated/ Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant/ Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
5	Development of SMDC Electric Vehicle strategy	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022	2024/25	SMDC	SMDC	Funded	£100k - £500k	Implementation	<0.5 µg/m³	Number of EV charge points installed	Strategy has been adopted	Strategy is being reviewed to ensure it compliments new SCC strategy and available funding sources (LEVI). 4 EV charge points at the main council office car park Moorlands House, Leek have been installed with further public installations a at Moorlands House Stockwell Street car park, Leek and South Moorlands Leisure Centre in Cheadle are due to be complete in early 2025 .
6	Installation of EV charge points at Council owned Car Parks	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2024/25	2025/26	SMDC	SMDC / Office for Zero Emission Vehicles	Part Funded	£10k - £50k	Planning	<0.5 µg/m³	Number of EV charge points installed	LEVI Phase 2 proposal was agreed to by OZEV. The proposal is to use 10% of LEVI funding to procure EV infrastructure in up to 40 T2 car parks (across Staffordshire). Public installations a at Moorlands House Stockwell Street car park, Leek and South Moorlands Leisure Centre in Cheadle are due to be complete in early 2025	Awaiting clarification of LEVI funded sites before selecting further locations (and available funding)
7	Installation of EV charge points at Council Offices	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2024/25	2025/26	SMDC	SMDC / Office for Zero Emission Vehicles	Internal funding Secured	£10k - £50k	Planning	<0.5 µg/m³	Number of EV charge points installed	4 EV charge points at the main council office car park Moorlands House, Leek have been installed	Awaiting clarification of LEVI funded sites before selecting further locations (and available funding)

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated/ Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant/ Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
8	Refresh of Bus Service Improvement Plan (BSIP) in partnership with local bus operators, and other stakeholders to develop proposals to enhance bus services and improve fleet efficiency in Leek	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2024/25	2025/26	SCC / SMDC	SCC / BSIP Government Fund	Part Funded	£500k - £1m	Planning	0.5-1 µg/m³	Number of low emission buses	Not yet progressed	Staffordshire's new Bus Service Improvement Plan (BSIP) was published in 2024. . One of the goals (objective 8) of the new BSIP is that buses are accessible, zero emission, with high quality on-board environments. Leek is prioritised in this role out, along with proposed improvements to the bus station and associated bus stops to encourage bus use e.g. • Secure funding to purchase electric buses on the busiest corridors that also run through Air Quality Management Areas. Priority routes are in Burton, Leek and Newcastle. • Refurbish Leek Bus Station to support Staffordshire Moorlands District Council's £17 million Levelling Up Fund award.
9	Improved Freight Performance	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	2019	Operational	SCC / Staffordshire Freight and Communities Forum	SCC	Funded	£100k - £500k	Planning	<0.5 µg/m³	TBC	Not yet progressed	The Staffordshire Freight Strategy will be reviewed as part of the LTP4 development work. The Staffordshire Freight and Communities Forum continues to consider and address local, regional and national freight issues affecting Staffordshire. Engagement with SCC / Staffordshire Freight and Communities Forum yet to commence

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated/ Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant/ Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
10	Promotion of Fleet advice and recognition schemes across Staffordshire Moorlands.	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	2015	Operational	SMDC / Eco Stars	SMDC	Funded	£100k - £500k	Implementation	<0.5 µg/m³	Reduced fuel consumption	Quantitative appraisal is on-going	www.ecostars-uk.com
11	Support the reintroduction of the railway line from Cauldon Lowe Quarries to Stoke-on-Trent to facilitate increased use of rail for transporting freight from quarries	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022	Not yet known	SMDC/SCC/Stoke-on-Trent CC / Network Rail	Restoring Your Railways fund in 2021 / Central Government (HS2)	Funding no longer available	£1m - £10m	Planning	<0.5 µg/m³	Implementation / planning	Feasibility Study Complete but project unlikely to be progressed	In 2024, the government announced that the proposes funding stream through Network North funding and the Restoring Your Railway Programme, would no longer be available no longer being available. The scheme is thus unlikely to progress further at this stage.

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated/ Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant/ Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
12	Support the reintroduction of Leek Rail connections	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022	Not yet known	SMDC/SCC/Stoke-on-Trent CC / Network Rail	Restoring Your Railways fund in 2021 / Central Government (HS2)	Not Funded	£1m - £10m	Planning	1-2 µg/m³	Implementation	Feasibility Study Complete Planning application for the Reinstatement of railway track at Cornhill approved	In 2024, the government announced that the proposes funding stream through Network North funding and the Restoring Your Railway Programme, would no longer be available no longer being available. However, part of the scheme was to extend the heritage railway into Leek, therefore part of the scheme may continue
13	Consider the development of a mobility hub at the proposed Leek Railway Station	Promoting Travel Alternatives	Other	TBC	TBC	SMDC/SCC	TBC /Rural mobility fund	TBC	£1m - £10m	Aspirational	1-2 µg/m³	TBC	Aspirational	Allocation for a new railway station is included in Planning permission Leek Railway Station
14	Expansion of Staffordshire's Local Cycling and Walking Infrastructure Plan (LCWIP) to include Leek.	Promoting Travel Alternatives	Promotion of cycling	2024	2025/26	SCC	SCC / DfT	Funded	£100k - £500k	Planning	<0.5 µg/m³	Completion of LWIP infrastructure	Implementation	A further iteration of the Local Walking and Infrastructure Plan (LCWIP) commenced in 2023, which will includes audit and analysis of Leek, Biddulph and a rural study areas across the district, not previously not covered by the original document. The early results of the review in Leek indicate that focus should be on walking and wheeling rather than cycling due to topographical issues. It is understood that the updated new LCWIP is expected to be published later this year (2025) which will include the findings from the rural research, the audits for Leek and a list of schemes that shall be incorporated to a scheme pipeline for future delivery as and when funding opportunities become available.
15	Development of Active Travel Plan for Leek	Promoting Travel Alternatives	Promotion of active travel	TBC	TBC	SMDC/SCC	TBC /Active Travel England/ Capability fund	TBC	£50k - £100k	Aspirational	<0.5 µg/m³	TBC	Aspirational	Support the goals of the SMDC Move More Strategy and Climate change action plan. A review of LCWIP for Leek could be used to inform the plan.

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16	Encourage Car Sharing	Promoting Travel Alternatives	Car and lift sharing schemes	2018/ 2019	Operational	SMDC/ SCC	SCC/ SMDC/Defra Grant	Funded	£10k - £50k	Implementation	<0.5 µg/m³	No of users registered	Quantitative appraisal is on-going	https://share-a-lift.co.uk/
17	Reduce emissions from Council Fleet	Vehicle Fleet Efficiency	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2019	On going	SMDC/ AES	SMDC	Funded	£10k – £50k	Implementation	<0.5 µg/m³	Number of LEV in the fleet	The Energy Saving Trust has assessed the councils fleet vehicles. The majority of the fleet comply with are highest EURO emission standard the remainder will be tendered for during 2025	Progress reported in Annual climate change report -
18	Reduce emissions from Council Grey Fleet	Vehicle Fleet Efficiency	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022	Ongoing	SMDC	SMDC	Funded	£10k – £50k	Planning	<0.5 µg/m³	Number of LEV in the grey fleet	Initial assessment to be implemented, 4 EV charge points installed at Council offices to help transition.	Progress reported in Annual climate change report
19	Incentivise Council Staff to switch to Low emission vehicles	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022	Ongoing	SMDC	SMDC	Funded	£50k - £100k	Implementation	<0.5 µg/m³	Number of staff switching to LEV	Council EV Salary Sacrifice Scheme launched and 4 EV charge points installed at Council Offices	Progress reported in Annual climate change report
20	Promote and support active Travel for Council Staff	Promoting Travel Alternatives	Promoting Active Travel	2022	Ongoing	SMDC	SMDC	Funded	£10k - £50k	Implementation	<0.5 µg/m³	Number of Staff engaged in active travel	Cycle to work launched and agile working policy adopted	Progress reported in Annual climate change report
21	Revise Councils procurement policy to embed sustainability and low carbon and emissions considerations into decision making	Policy Guidance and Development Control	Other policy	2022	2022	SMDC	SMDC	Funded	£10k - £50k	Implementation	<0.5 µg/m³	Number of procurement exercises using toolbox	Policy is being reviewed with the intention of adopting a toolbox to aid uptake	Progress reported in Annual climate change report

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22	Review the potential for providing improved access to electrical power supplies to established outdoor event areas to reduce the need for the use of diesel generators by traders	Policy Guidance and Development Control	Other	TBC	TBC	SMDC/SCC	TBC /Levelling up fund	TBC	£10k - £50k	TBC	<0.5 µg/m³	TBC	Aspirational	facilitate the reduction of localised generator emissions by making more electrical sockets available
23	Use of the planning regime to minimise impact of new developments in AQMAs and wider district	Policy Guidance and Development Control	Other policy	2005	Operational	SMDC	Developer Contributions	N/A	< £10k	Implementation	<0.5 µg/m³	TBC	The Council adopted a new Developer Contributions SPD in 2023 that's makes specific reference to contributions to mitigate air quality impacts.	Implementation is on-going
24	Continue to promote and increase the installation of EV charging points through development control processes	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2015	Operational	SMDC	Developer Contributions	N/A	< £10k	Implementation	<0.5 µg/m³	increased installation of EV charging points	EV charging points are conditioned through the planning process, this is to be strengthened by the implementation of Air Quality supplementary planning document	Implementation is on-going
25	Review of SMDC Local Plan to include specific policies on air quality	Policy Guidance and Development Control	Other policy	2020	2024	SMDC	SMDC	Funded	< £10k	Planning	<0.5 µg/m³	No of Policies specific to Air Quality	A Review of Adopted Local Plan is due to take place in 2025	https://www.staffsmoorlands.gov.uk/media/2923/Local-Development-Scheme/pdf/s3SM_Local_Development_Scheme_2025.pdf?m=1740758185180incorporating Local Plan Timetable has been published sets out the documents, which the Council will use when exercising its planning functions
26	Develop a Supplementary Planning Document for Air Quality	Policy Guidance and Development Control	Other policy	2020	2024/25	SMDC	SMDC	Funded	£50k - £100k	Implementation	<0.5 µg/m³	No of developments using SPD	AQ Guidance has been produced, looking to get adopted as a formal SPD	Guidance is constantly being revised/. Likely to be unable to be formally adopted as an SPD until Review of the local plan completed

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27	Review of Staffordshire County Council Local Transport Policy (LTP4)	Policy Guidance and Development Control	Other policy	2024	2025/26	SCC	SCC	Funded	TBC	planned	<0.5 µg/m³	No of Policies specific to Air Quality	Implementation is on- going	Final Consultations to take place in summer of 2025 with a view to it being issued at the end of 2025
28	Review of Taxi Licencing Policy to encourage taxis licensed by the Council to comply with vehicle emission limits	Policy Guidance and Development Control	Other policy	2022	2023/24	SMDC	SMDC	Funded	< £10k	Implementation	<0.5 µg/m³	Number of LEV Taxis in the fleet. All licensed taxis should meet minimum emission standard	First phase of Policy adopted with all new or renewed Taxies required to be either Euro 6 (diesel) or Euro 4 compliant.	https://democracy.highpeak.gov.uk/documents/b7626/Taxi%20Licensing%20Policy%20Review%20and%20consultation%2001st-Apr-2022%2010.00%20Licensing%20Regulatory%20Committee.pdf?T=9
29	Review of Street Trading Policy to encourage trader licensed by the Council to comply with emission limits	Policy Guidance and Development Control	Other policy	2024	2024/25	SMDC	SMDC	Funded	< £10k	Planning	<0.5 µg/m³	No of LEV operating as street traders	First phase of Policy adopted with all new or renewed Street Trading Vehicles required to be either Euro 6 (diesel) or Euro 4 compliant.	https://democracy.staffsmoorlands.gov.uk/documents/s43226/Street%20Trading%20Policy.pdf Further proposed changes to street trading licenses needs approval from Council members
30	Anti-idling Enforcement on council owned land	Vehicle Fleet Efficiency	Other	2024/25	2025/26	SMDC	SMDC	Not Funded	£10k - £50k	Planning	<0.5 µg/m³	No of Car Parks with signage / enforcement	Not yet implemented	Proposed enforcement needs signage to be in place and approval from Council members currently no funding available for this project
31	Smoke Control Enforcement	Other	Other	Ongoing	Operational	SMDC	SMDC	Defra Funded	< £10k	Completed	<0.5 µg/m³	Fines Issued/ complaints received	On going	This is statutory work completed by the Environmental Health team
32	Introduction of New Smoke Control Zones	Policy Guidance and Development Control	Other policy	2024/25	2025/26	SMDC	SMDC	No	< £10k	Planning	<0.5 µg/m³	Area Covered by new smoke control order	On-going	Consultation on new smoke control areas delayed during 2024, hoped to be initiated toward the end of 2025. The extent of the proposed changes to smoke control areas needs agreement from Council members
33	Inspect under the Environmental Permit regime	Environmental Permits	Introduction/increase of environment charges through permit systems and economic instruments	Completed	Continual	SMDC	SMDC	TBC	< £10k	Completed	<0.5 µg/m³	Installations adhering to permits and enforcement / penalties for breaches	On-going	This is statutory work completed by the Environmental Health team

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34	Anti-idling promotion and introduction of Anti-idling signage at key locations in AQMAs and across the district	Public Information	Other	2024	2025/2026	SMDC/ SCC	SMDC	Part Funded	< £10k	Planning	<0.5 µg/m³	No of Signs / Anti idling pledges	Anti Idling Signage has been developed for deployment at all schools across Staffordshire moorlands in 2025. This design will form the bases of further signage to be installed at other key locations.	https://sben.co.uk/2023/03/air-aware-anti-idling-campaign/
35	School Based educational activities	Promoting Travel Alternatives / Public Information	Other	2018/ 2019	Operational	SMDC/ SCC	SCC/ SMDC/Defra Grant	Funded	< £10k	Implementation	<0.5 µg/m³	No of schools engaged	Air Aware lessons and activities have been delivered at 5 schools in the academic year 2024/25 including assemblies, lessons and activities that promote the awareness of air pollution to school communities and pupils. 6 schools in the district are the process of setting up a Walking Bus with the intent of laughing them in 2025	https://www.staffordshire.gov.uk/DoingOurBit/Get-Inspired/Clean-green-and- safe/Air-aware/Air-aware.aspx
36	School Travel Planning	Promoting Travel Alternatives	School Travel Plans	2018/ 2019	Operational	SMDC/ SCC	SCC/ SMDC/Defra Grant	Funded	< £10k	Implementation	<0.5 µg/m³	No of Schools Travel Plans approved & adopted	8 schools in the district have accredited travel plans, including one school in Leek (Woodcroft Academy), which has reached the highest possible accreditation status on Modeshift STARS.	https://www.staffordshire.gov.uk/DoingOurBit/Get-Inspired/Clean-green-and- safe/Air-aware/Air-aware.aspx
37	Business Travel Planning	Promoting Travel Alternatives	Workplace Travel Plans	2018/ 2019	Operational	SMDC/ SCC	SCC/ SMDC/Defra Grant	Funded	< £10k	Implementation	<0.5 µg/m³	No of Business travel Plans approved & adopted	Quantitative appraisal is on-going	https://www.staffordshire.gov.uk/DoingOurBit/Get-Inspired/Clean-green-and- safe/Air-aware/Air-aware.aspx

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38	Raise awareness of impacts of coal and wood burning	Public Information	Other	2022	Operational	SMDC	SCC/ SMDC/Defra Grant	Funded	< £10k	TBC	<0.5 µg/m³	Through public awareness / web site use	Quantitative appraisal is on-going	https://www.staffsmoorlands.gov.uk/article/1093/Smoke-control-areas
39	Improve Air Quality web page and develop an Air Quality Portal showing real time pollution levels across the AQMAs and wider district.	Public Information	Other	2024/25	2025/26	SMDC	SMDC/Developer Contribution & possible Defra Grant	Not Funded	£10k - £50k	planning	<0.5 µg/m³	Through public awareness / web site use	Aspirational	Requires the initial installation continuous monitors across the AQMAs / district (see action 42)
40	Develop Air Quality Awareness and Promotion events in conjunction with other relevant partners	Public Information	Other	2017/18	Operational	SCC / SMDC	SCC / SMDC/Defra Grant	Funded	< £10k	Implementation	<0.5 µg/m³	Through public awareness / web site use	Implementation is on- going	https://www.staffordshire.gov.uk/DoingOurBit/Get-Inspired/Clean-green-and- safe/Air-aware/Air-aware.aspx
41	Continue to support and contribute to the Staffordshire Air Quality Forum and related projects	Policy Guidance and Development Control	Regional Groups Co-ordinating programmes to develop Area wide Strategies to reduce emissions and improve air quality	On-going	On-going	SCC / Districts / Public Health and other stakeholders	SMDC	Funded	< £10k	Implementation	<0.5 µg/m³	Full engagement across the group / regular meetings	On-going	On-going
42	Install continuous Air Quality Monitors in AQMAs	Public Information	Other	2024	Ongoing	SMDC	SMDC / Defra / Developer Contributions	Part Funded	£10k - £50k	Implementation	<0.5 µg/m³	No of units installed	3 new continuous air quality monitors were deployed across the district, two in AQMA 1: Leek and one in AQMA 2: Cellarhead.	Implementation is on-going

2.1 $PM_{2.5}$ – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy[2], local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter ($PM_{2.5}$)). There is clear evidence that $PM_{2.5}$ (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

In December 2024, three (3) new indicative continuous air quality monitors were deployed, two in AQMA No.1: Leek and one (1) in AQMA No.2: Cellarhead:

- In AQMA 1: Leek, a new Zephyr® indicative ambient air quality monitor, which provides an indicative measure of NO_2, NO, O_3, PM_{10}, $PM_{2.5}$ and PM_1, was installed at St Marys School, West Bound side of Broad Street, Leek (Grid Reference X:398111, Y: 356161). Additionally, an Osiris Airborne Particle Monitor, which provides an indicative measure of PM_{10}, $PM_{2.5}$ and PM_1, was installed at Moorlands House, WB side of Stockwell Street (Grid Reference X: 398485, Y:356634).
- In AQMA 2: Cellarhead, a new Zephyr® indicative ambient air quality monitor, which provides an indicative measure of NO_2, NO, O_3, PM_{10}, $PM_{2.5}$ and PM_1, was installed at the East bound side of the Cellarhead crossroads, (Grid Reference, X: 395732; Y: 347578).

Although low-cost sensors cannot be used to show compliance with national AQOs at present, they can be used to indicate general levels and trends. The monitors will measure PM_{10} and $PM_{2.,5}$ as well as NO_2, so these monitors will enable the Council to gain a better understanding of $PM_{2.5}$ levels within AQMAs. Data from the new continuous monitors will be included and discussed in next year's ASR appendix.

Air Quality monitors at St Marys Broad Street, Leek (left), Stockwell Street, Leek (middle) and East bound side of the Cellarhead crossroads

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



2.1.1 Fine Particulate Matter ($PM_{2.5}$) Levels in Staffordshire Moorlands

As SMDC does not monitor either $PM_{2.5}$ nor PM_{10}, the area of maximum background annual mean $PM_{2.5}$ concentrations and the area of minimum background annual mean $PM_{2.5}$ has been derived from the Defra Background maps.

The Defra 2024 background maps for SMDC (2021 reference year)[3] show that all background concentrations of $PM_{2.5}$ are far below the annual mean target of 20µg/m^3 for $PM_{2.5}$. The 2024 average $PM_{2.5}$ background concentration for SMDC was 5.7µg/m^3. The highest background concentration was estimated to be 8.4µg/m^3 within the 1 x 1km grid square with the centroid grid reference of 390500, 357500. This grid square is located south of Biddulph Moor.

The background maps also provide a breakdown of sources. For the highest background concentration grid square, the majority of the estimated $PM_{2.5}$ concentration (3.8µg/m^3) is attributed to secondary $PM_{2.5}$ formation, where $PM_{2.5}$ is formed from the chemical reactions of other gaseous atmospheric pollutants such as sulphur dioxide (SO_2) and nitrogen oxides (NO_x, NO and NO_2). There was also a substantial contriubution from industry within the square (2.4µg/m^3), indicating that local industrial activity, for example from Selectus Ltd (Textiles, clothing, leather & footwear), are impacting $PM_{2.,5}$ concentrations in this area.

[3] Defra Background Mapping data for local authorities (2021-based), available online at https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021

2.1.2 $PM_{2.5}$ and Mortality in Derbyshire

The Public Health Outcomes Framework data tool[4] compiled by Public Heath England quantifies the mortality burden of $PM_{2.5}$ within England on a county and local authority scale. The 2023 fraction of mortality attributable to particle air pollution (indicator D01) in Staffordshire Moorlands is compared with other areas in Table 2.3 below. The mortality burden in Staffordshire Moorlands is 4.8%, which is lower than the average for Staffordshire (5.0%) and England (5.2%). The 2023 estimates of the fraction of mortality attributable to $PM_{2.5}$ pollution range from 3.3% in the Isles of Scilly to 7.4% in the City of London.

Table 2.3 – Estimated average number of deaths by local authority area attributable to $PM_{2.5}$ within Staffordshire for adults over 30

District/County	Percentage(%)
Staffordshire Moorlands	**4.8**
Staffordshire Moorlands	4.8
Tamworth	5.4
East Staffordshire	5.3
Lichfield	5.2
Cannock Chase	5.1
Newcastle-under-Lyme	4.9
South Staffordshire	4.8
Stafford	4.7
Staffordshire Average	**5**
England Average	**5.2**

[4] Public Health Outcomes Framework, Public Health England. data tool available online at https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/3/gid/1000043/pat/502/ati/501/are/E07000037/iid/93861/age/230/sex/4/cat/-1/ctp/-1/yrr/1/cid/4/tbm/1/page-options/car-ao-0_car-do-0

2.1.3 Actions being taken within SMDC to reduce $PM_{2.5}$

Efforts within Staffordshire Moorlands are being concentrated on monitoring NO_2 levels, with a particular focus on the established AQMAs. As road traffic is often the primary source of emissions of both NO_2 and particulates, measures implemented to reduce road traffic emissions within the borough will also reduce levels of PM_{10} and $PM_{2.5}$. These measures are summarised in Table 2.4.

SMDC is working towards introducing new Smoke Control Zones in 2027, which will help reduce $PM_{2.5}$ levels once established. Staffordshire Moorlands Brough Council currently has Smoke Control Orders covering the majority of Leek, Biddulph, Cheadle and Brown edge. Whilst it is recognised that improvements in the regulation of these zones will likely improve air quality within these areas, it will not significantly affect the impacts of domestic burning outside of these established zones. It has therefore, been proposed that extending the current smoke control zones across the brough, in addition to the improvements in their regulation, could significantly improve emissions from domestic burning.

The consultation on the implementation of new smoke control areas was delayed in 2024, due to resourcing issues. This has now been addressed and it is hoped that the consultation will be launched before the end of 2024. The extent of the proposed changes to smoke control varies from the entire district to the restricting of the more populous towns currently not included, not included, such as, Blythe Bridge, Endon and Werrington. The extent of the smoke control will be being determined by members after consultation with relevant stakeholders and the public.

SMDC have continued to promote improved behavioural change with regard to the use of woodburning stoves, though its website and social media posts.

Table 2.4 – Actions being taken within Staffordshire Moorlands to reduce PM2.5

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions (low, medium, high)	Reduces PM2.5 emissions	Local Authority							
				Staffordshire Moorlands DC	Newcastle under - Lyme BC	Cannock Chase	Stafford BC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
Traffic Management	**Urban Traffic Control systems, Congestion management, traffic reduction**	low		UTC in Leek Town Centre	UTC SCOOT in areas of Newcastle Town Centre AQMA and Kidsgrove AQMA. Live labs monitoring work linked to congestion in Newcastle.	UTC in Cannock Town Centre	UTC in Stafford Town Centre	Traffic signal reconfiguration within the Wellington Street/Derby Street/Borough Road gyratory to help improve traffic flow and reduce congestion within AQMA 1 to be delivered in 2024-25	Liaising with Midlands Connect to increase usage of M6 Toll to reduce congestion on A5 & lobbying for upgrade of A38 & A5. Junction improvements at Muckley Corner. UTC in Lichfield Town Centre.		UTC in Tamworth Town Centre at Ventura Park
	Reduction of speed limits, 20mph zones	low		20mph zones near some schools in residential areas			20mph zones near some schools in residential areas	20 mph zones near some schools in residential areas	.	20mph zones in Trysull, Bradley, Kinver and Bilbrook	Under consideration as part of emerging Town Centre Masterplan
	Road User Charging / Congestion charging	low		No					M6 Toll	M6 Toll	
	Anti-idling enforcement	low		Anti Idling Campaign toolkits available to schools for pupil run campaign.	Anti Idling Campaign toolkits available to schools for pupil run campaign.	Anti Idling Campaign toolkits available to schools for pupil run campaign.	Anti Idling Campaign toolkits available to schools for pupil run campaign.	Anti Idling Campaign toolkits available to schools for pupil run campaign.	Anti Idling Campaign toolkits available to schools for pupil run campaign.	Anti Idling Campaign toolkits available to schools for pupil run campaign.	Anti Idling Campaign toolkits available to schools for pupil run campaign.
	Other			Live Public Facing portal linked to Zephyr air quality monitor for $PM_{2.5}$ with district modelling.				Live Public Facing portal linked to Zephyr air quality monitor for PM2.5 with district modelling.			

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions (low, medium, high)	Reduces PM2.5 emissions	Local Authority							
				Staffordshire Moorlands DC	Newcastle under - Lyme BC	Cannock Chase	Stafford BC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
Promoting Travel Alternatives	**Workplace Travel Planning**	low		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	low		Agile working policy applied	Homeworking Policy adopted	Homeworking Policy adopted	Homeworking Policy adopted	Homeworking Policy adopted	Homeworking policy adopted	Agile working policy adopted	Homeworking policy adopted
	School Travel Plans	low		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	low		https://www.staffordshire.gov.uk/Transport/Cycling/Cycling-and-active-travel.aspx Review of LCWIP will include additional areas such as Biddulph and Rugeley - a rural study has also been commissioned to include all areas of the county not covered by the original document or the additional settlements INTO Walking and Cycling Social Prescribing Specific to Newcastle-under-Lyme www.staffordshire.gov.uk/walkingandcycling (just newcastle) Benefits of cycling promoted through the Travel Plan Process (all) 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	low		https://www.staffordshire.gov.uk/Transport/Cycling/Cycling-and-active-travel.aspx Review of LCWIP will include additional areas such as Biddulph and Rugeley– walking audits in additional settlements have been conducted by Sustrans INTO Walking and Cycling Social Prescribing Specific to Newcastle-under-Lyme www.staffordshire.gov.uk/walkingandcycling (just newcastle) 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 (all) Walks and Country Trails - Staffordshire County Council Good Life Health & Wellbeing in the Community Same as other Staffs authorities							

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions (low, medium, high)	Reduces PM2.5 emissions	Local Authority							
				Staffordshire Moorlands DC	Newcastle under - Lyme BC	Cannock Chase	Stafford BC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
	Car Share			Car Share promoted via Travel Plan process.							
	Promote use of rail and inland waterways	medium		North Staffordshire Community Rail Partnership operating along the North Staffordshire Line includes Blythe Bridge station.	North Staffordshire Community Rail Partnership operating along the North Staffordshire Line. Kidsgrove Station to be fully accessible and regenerated through Town Deal.		Redevelopment of Stafford Station into a gateway associated with HS2 works. North Staffordshire Community Rail Partnership operating along the Stafford to Stoke route includes Stone station.	Burton Forecourt improvements completed in 2021 with segregated bus lanes/stops to help improve flow. North Staffordshire Community Rail Partnership operating along the North Staffordshire Line includes Uttoxeter station.	Lichfield Trent Valley access for all works recently completed including lifts.	Improved access/ park facilities at Codsall Station.	
Transport Planning & Infrastructure	**Local Transport Plans/ District Strategies**	high		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	low		improvements at Leek Bus Station as part of BSIP. Some local bus stops will have solar powered Real Time Information screens relaying live service information.	Kidsgrove will be multi-modal through Town Deal funding.		New services with S106 funding provided in Stone to new estates in Walton and Yarnfield. Stafford Gateway will be multi-modal		Alternative location for bus station currently under consideration	Construction on the West Midlands interchange has started.	Planned improvements at Tamworth station
	Public cycle hire scheme	low					e-scooter trials completed	Working with local cycle firms to establish an affordable bike rental			

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions (low, medium, high)	Reduces PM2.5 emissions	Local Authority							
				Staffordshire Moorlands DC	Newcastle under - Lyme BC	Cannock Chase	Stafford BC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
								scheme to increase uptake of sustainable travel in Burton.			
	Cycle network	low			Microsoft Word - LCWIP final report 2021 (Oct update) Staffordshire cycle maps currently awaiting audit and review						
	Bus route improvements	high		As a result of BSIP & BSIP+ funding consideration is being given to bus route improvements where feasible. New 95 route from Audley to Biddulph introduced.	As a result of BSIP & BSIP+ funding consideration is being given to bus route improvements where feasible. New 95 route from Audley to Biddulph introduced, and new service K from Keele University to Chesterton.	As a result of BSIP & BSIP+ funding consideration is being given to bus route improvements where feasible	As a result of BSIP & BSIP+ funding consideration is being given to bus route improvements where feasible	Defra air quality bid to fund procurement of electric buses & associated infrastructure along services 8 & 9 through Burton secured from Feb 2024. Scheme to be delivered 2024 with funding from the Defra Air Quality grant and Level up Funding 2. New 63 service through Abbots Bromley and Uttoxeter introduced.	As a result of BSIP & BSIP+ funding consideration is being given to bus route improvements where feasible. New 63 service through Armitage and Hill Ridware introduced.	As a result of BSIP & BSIP+ funding consideration is being given to bus route improvements where feasible. Revised 878 route introduced between Stafford, Penkridge and Wolverhampton.	As a result of BSIP & BSIP+ funding consideration is being given to bus route improvements where feasible
	Active Travel Fund	low		Move More Staffordshire Moorlands a collaborative strategy that will see partners working together. ATF5 scheme to provide a new pedestrian crossing on St Edward Street.	ATF 2 measures to encourage walking and cycling. ATF5 scheme to provide new crossing on Lower Milehouse Lane to connect the cycleway.	ATF2 measures to encourage walking and cycling. ATF4e Rugeley – improving town centre accessibility	ATF 2 measures to encourage walking and cycling. ATF5 scheme to improve cycle parking in Stafford Town Centre.	ATF 2, 3 & 4 measures to encourage walking/ cycling. Footway widening with segregated cycle & pedestrian routes along Station St to the railway station completed late 2023. Further pedestrian & cycle improvements within the AQMA & across Burton planned 2024 - 2026	ATF4e scheme to improve access to Erasmus Darwin Academy in Chasetown.		ATF 3 and 4 measures to encourage walking and cycling

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions (low, medium, high)	Reduces PM2.5 emissions	Local Authority							
				Staffordshire Moorlands DC	Newcastle under - Lyme BC	Cannock Chase	Stafford BC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
	Levelling Up Fund 2	medium		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. They will benefit East Staffordshire, Cannock Chase and Stafford Borough. Total package cost circa £20m. ▪ Circa £6 million at the A38/A5121 Branston Interchange, near Burton, to complete the work at junction and open up for large scale housing and business development. Staffordshire County Council is adding additional money to walking and cycling schemes in the area for non-motorists to cross the A38 safely. ▪ More than £9 million for work at either end of the A34 between Cannock and Stafford. In Cannock there will be walking and cycling routes to complement the planned town centre regeneration and link to the train station. In Stafford there will be the creation and maintenance of walking and cycling routes along from Radford Bank to the town centre. ▪ 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. Bus routes benefiting from the new investment include the #8 and #9 services in Burton, run by Midland Classic; the #74 between Stafford and Cannock, run by Chaserider; and the #875 from Stafford to Cannock, via Penkridge, run by Select Buses.							
Alternatives to private vehicle use	**Bus based Park & Ride**	medium									
Policy Guidance and Development Control	**Planning applications to require assessment of exposure / emissions for development requiring air quality impact assessment**	high		https://www.staffsmoorlands.gov.uk/media/6155/Adopted-Local-Plan/pdf/Adopted_Local_Plan.pdf?m=1601645140880	Included as part of Local Validation List Adoption of SCC EV Strategy		http://www.staffordbc..gov.uk/planning/planning-policy/local-plan-2012-2031	https://www.eaststaffsbc.gov.uk/planning/planning-policy/local-plan-2012-2031	https://www.lichfielddc.gov.uk/Council/Planning/The-local-plan-and-planning-policy/Planning-policy.aspx	Adopted South Staffordshire Local Plan, Local Plan, Planning Framework (sstaffs.gov.uk)	Local & National Validation requirements: http://www.tamworth.gov.uk/sites/default/files/planning_docs/National-and-Local-Validation-requirements-2017.pdf
	Air Quality Strategy			Draft Air Quality Action Plan 2024-2029 submitted to Defra awaiting feedback.	Revised Air Quality Action Plan due in 2024 will include requirements for $PM_{2.5}$		2019-2023 Air Quality Strategy	Revised Air Quality Action Plan & overarching Air Quality Strategy has been drafted & approved internally & submitted to Defra for approval. Going for public consultation/ formal adoption 2024		In development	2022-2027 Air Quality Strategy

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions (low, medium, high)	Reduces PM2.5 emissions	Local Authority							
				Staffordshire Moorlands DC	Newcastle under - Lyme BC	Cannock Chase	Stafford BC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
	Planning Guidance for developers			Air Quality Emissions Mitigation guidance for developers available, being updated with view to be adopted as an official SPD	To be developed alongside New Local Plan HERE		http://www.stafforddc.gov.uk/planning/planning-policy/supplementary-planning-policy-documents	Currently informal guidance in place, but the revised Air Quality Action Plan includes a measure for formal guidance as part of a Supplementary Planning Document (SPD)		Planning Guidance and SPDs (sstaffs.gov.uk)	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							
	Developer Contributions based on damage cost calculation			Damage cost assessment used Developer Contributions SPD has reference to contributions to mitigate air quality impacts.	To be considered as above			Damage cost assessment now required for applicable applications.			
	Planning Policies			https://www.staffsmoorlands.gov.uk/media/6155/Adopted-Local-Plan/pdf/Adopted_Local_Plan.pdf?m=1601645140880	Various policies support alternatives to use of car and increased use of public transport HERE	Local Plan is currently under review https://www.cannockchasedc.gov.uk/residents/planning-and-building-control/planning-policy/cannock-chase-local-plan	http://www.staffordbc.gov.uk/planning/planning-policy/local-plan-2012-2031	Supplementary planning document to be developed as part of revised Air Quality Action Plan	https://www.lichfielddc.gov.uk/Council/Planning/The-local-plan-and-planning-policy/Planning-policy.aspx	Planning Guidance and SPDs (sstaffs.gov.uk)	https://www.tamworth.gov.uk/local-plan
	Low Emissions Strategy	high		Forms part of	In development			Part of Climate Change Action Plan developed in 2022			

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions (low, medium, high)	Reduces PM2.5 emissions	Local Authority							
				Staffordshire Moorlands DC	Newcastle under - Lyme BC	Cannock Chase	Stafford BC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
				Climate change action plan & Climate change action plan part 2				https://www.eaststaffsbc.gov.uk/environmental-health/climate-change/what-we-are-doing-tackle-climate-change			
	Route Plans/ Strategic routing strategy for HGV's	high		https://www.staffordshire.gov.uk/Transport/transportplanning/localtransportplan/home.aspx This should be considered as part of planning applications where new proposals come forward.							
	Delivery and Service plans	medium									
	Promoting low emission public transport	high									
	Vehicle retrofitting programmes	medium		On going / in development Energy Saving Trust have reviewed current fleet and issued recommendations including training.		Cannock Council Ultra low emission vehicle strategy in development. Cannock Council Green Transport Strategy in development.			Retrofitting of old Council owned HGVs and Buses with pollution abatement equipment will be considered by the Council where technically and financially feasible		
	Fleet efficiency & recognition schemes	medium		Staffordshire County Council's Climate Change Action Plan https://www.staffordshire.gov.uk/environment/Documents/Climate-Change-Action-Plan.pdf - Where possible consider and implement a transition plan to full EV vehicles within the SCC fleet							

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions (low, medium, high)	Reduces PM2.5 emissions	Local Authority							
				Staffordshire Moorlands DC	Newcastle under - Lyme BC	Cannock Chase	Stafford BC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	high		Procurement Strategy in development; Climate change action plan			Waste fleet vehicles comply with Euro VI.	Ongoing as part of the climate change agenda, working towards decarbonising the waste fleet by 2030. Currently looking at funding options for feasibility study of waste depot decarbonisation.		Council new vehicles all comply with Euro 6	
	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	high		Majority of fleet comply with highest EURO emission next replacement period in 2028. EV salary Sacrifice Scheme launched for employees			Investigating replacing old vehicles within the fleet with more modern cleaner vehicles, which comply with ht prevailing EURO standard. This will be extended to all Councill owned vehicles.		Vehicles replaced (in addition to normal fleet turnover)	Most council vehicles were replaced last year with new cleaner vehicles	
	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	high		EV strategy on council car parks. hydrated vegetable oil are currently being used by waste fleet	Newcastle towns deal includes EV charging infrastructure.		Procurement of EV on staff carparks partially completed.	EV Strategy adopted 2022. Currently own 1 rapid charger and 2 fast dual charge Electric Vehicle Charging Points (EVCPs) Further EVCPs shortlisted for funding through LEVI .		EV Parking at Council Offices, staff & public car parks	EV Strategy to be adopted 2024 . Looking at charging hubs using Levi funding.
	Priority parking for LEV's	high							LiDC reviewing its car park strategy for the District in pursuit		EV charging spaces being investigated.

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions (low, medium, high)	Reduces PM2.5 emissions	Local Authority							
				Staffordshire Moorlands DC	Newcastle under - Lyme BC	Cannock Chase	Stafford BC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
									of increasing the provision of EV charging Infrastructure.		
	Taxi Licensing conditions	medium		In development		Taxi licensing policy promotes uptake of electric vehicles	Scheduled to promote EV	All taxi vehicles must meet Euro 6 emission standards.			Looking at introducing Euro VI Standard.
	Taxi emission incentives	medium		In development				Viability for incorporation of financial incentives in taxi licensing policy to encourage EV uptake in development			
	EV Strategy	high		Public Electric Vehicle Charging Infrastructure Strategy 2022		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	high		Adoption of SCC EV Strategy February 2023	Adoption of SCC EV Strategy Cabinet 10 January, 2023	Adoption of SCC EV Strategy April 2023	Adoption of SCC EV Strategy Aug/Sept 2023	Adoption of SCC EV Strategy March 2023 Their own local agenda and informative web site: Electric Vehicles and Charging Infrastructure | East Staffordshire Borough Council (eaststaffsbc.gov.uk)		Adoption of SCC EV Strategy July 2023	Adopted SCC EV Strategy Apr 2023 Currently drafting a local EV strategy Adoption of SCC EV strategy:
Environmental permits	**Introduction/increase of charges through permit systems and**	medium							On going Environmental Permits inspection of installation adhering to permits and enforcement/penalties for breaches		

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions (low, medium, high)	Reduces PM2.5 emissions	Local Authority							
				Staffordshire Moorlands DC	Newcastle under - Lyme BC	Cannock Chase	Stafford BC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
	economic instruments										
	Measures to reduce pollution through IPPC Permits going beyond BAT	medium			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							
	A5 and M6 Partnership								Strategy for the A5 2011-2026	Strategy for the A5 2011-2026	
	Domestic Smoke Control advice and Enforcement			SMDC Smoke Control			https://www.staffordbc.gov.uk/environment/smoke-control.cfm	Smoke Control Area in force covering Burton Town As part of the revised Air Quality Action Plan a Smoke Control Policy will be developed in 2024-25 to incorporate the new smoke controls laws and charging regime	https://www.lichfielddc.gov.uk/home-garden/bonfires-barbecues-smoke/1	Smoke Control Areas | South Staffordshire District Council (sstaffs.gov.uk)	Drafting of fines policy for issue of persistent dark smoke from domestic chimneys.
	Garden Bonfires - Advice and nuisance enforcement			SMDC Smoke Nuisance and Bonfires & EPUK leaflet used			http://www.staffordbc.gov.uk/environmental-health/pollution/bonfires	Information provided via the website http://eaststaffsbc.gov.uk/environmental-health/pollution/bonfires	https://www.lichfielddc.gov.uk/home-garden/bonfires-barbecues-smoke/1	Smells, Dust and Fumes | South Staffordshire District Council (sstaffs.gov.uk)	http://www.tamworth.gov.uk/air-quality

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions (low, medium, high)	Reduces PM2.5 emissions	Local Authority							
				Staffordshire Moorlands DC	Newcastle under - Lyme BC	Cannock Chase	Stafford BC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
	Commercial burning advice and enforcement			SMDC Commercial smoke & waste management “its a burning issue” EA leaflet			http://www.staffordbc.gov.uk/environmental-health/pollution/bonfires	Information provided via http://eaststaffsbc.gov.uk/environmental-health/pollution/smoke-control-areas	https://www.lichfielddc.gov.uk/home-garden/bonfires-barbecues-smoke/1	Smells, Dust and Fumes | South Staffordshire District Council (sstaffs.gov.uk)	http://www.tamworth.gov.uk/air-quality
	Multi agency working with Fire Service and Environment Agency for trade burning			Information shared as appropriate. -				Information shared as appropriate	Information shared as appropriate	Information shared as appropriate	Information shared as appropriate
	Multi agency working with Staffordshire Fire Service & Building Control re chimney fires & DIY heating systems			Information shared as appropriate. -				Information shared as appropriate	Information shared as appropriate	Information shared as appropriate	Information shared as appropriate

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

This section sets out the monitoring undertaken within 2024 by SMDC 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

SMDC has no automatic (continuous) monitoring sites within the borough.

3.1.2 Non-Automatic Monitoring Sites

SMDC undertook non-automatic (i.e. passive) monitoring of NO_2 at 50 sites during 2024. Table A.1 in Appendix A presents the details of the non-automatic sites. Six new monitoring sites were established in 2024.

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)

Error! Reference source not found. and Table A.2 in Appendix A compare the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the

air quality objective (AQO) 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 Table B.1. Note that the concentration data presented in Table B.1 includes distance corrected values, only where relevant. No results are provided for March as the diffusion tubes were lost during transit on their return to the laboratory.

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

Leek AQMA

Diffusion tube sites located within the Leek AQMA are presented in Figure A.1. In 2024, one new monitoring site (MS01) was established within Leek AQMA at Meadows Special School as part of Schools Projects.

All monitoring sites recorded annual mean NO_2 concentrations below 36µg/m^3 (i.e. below 10% of the annual mean NO_2 objective). The maximum concentration recorded was 32.2 µg/m^3 at Site 57, which is located at Broad Street South. Concentrations at all existing sites decreased when compared to 2023 data, with an average decrease of 2.9µg/m^3. The greatest decreases were observed at Site 67 and 32, where concentrations fell by 6.1µg/m^3 and 4.9µg/m^3 respectively.

Leek AQMA has been compliant for the past five years reported (2020 to 2024). Due to the impact of the COVID-19 pandemic restrictions on traffic volumes, 2020 and 2021 are not considered representative of long-term trends in pollutant concentrations. The revocation of Leek AQMA is being considered following three consecutive years of compliance i.e. 10% below the relevant objective at the point of exposure.

Cellarhead AQMA

Monitored concentrations within Cellarhead AQMA are compared against the annual AQO in Figure A.2.

All eight (8) monitoring sites recorded annual mean NO_2 concentrations below 36µg/m^3 (i.e. below 10% of the annual mean NO_2 objective). The maximum concentration was 30.9µg/m^3 at Site 39, which is a duplicate site located at Cellarhead Junction.

Concentrations at all existing sites decreased on average by 3.9µg/m^3 compared to 2023 data. Concentrations at all sites also decreased compared to 2020, 2021 and 2022 data.

Cellarhead AQMA has been compliant for the past five years reported (2020 to 2024). Due to the impact of the COVID-19 pandemic restrictions on traffic volumes, 2020 and 2021 are not considered representative of long-term trends in pollutant concentrations. The revocation of Leek AQMA is being considered following three consecutive years of compliance i.e. 10% below the relevant objective at the point of exposure.

Monitoring Outside of Existing AQMAs

During 2024, non-automatic monitoring outside of AQMAs took place at 25 sites, with five new sites established: Sites 71, 72, 73, 74 and SM01. Sites 71-73 were installed to monitor a busy road, Cheadle, which is likely to be impacted by future housing developments. Site 74 was installed to increase coverage in the immediate vicinity of Cellarhead AQMA, and to determine if NO_2 levels decreased further away from the Cellarhead Junction.

In 2024, concentrations decreased at all sites compared to 2023 data. The maximum concentration was 27.2µg/m^3 at Site 52, which shows a decrease of 5.1µg/m^3 compared to the previous year. This site is located at Tape Street, close to the roundabout with Chapel Street.

There were no reported exceedances at any site, nor were any annual mean concentrations within 10% of the AQO. Overall, concentrations across existing sites were lower than those reported in 2020, 2021, 2022 and 2023.

There were no diffusion tube monitoring sites in SMDC with an annual mean greater than 60µg/m^3. As per LAQM.TG(22), an annual mean NO_2 concentration greater than 60µg/m^3 can be used as a proxy to indicate whether there is an exceedance of the NO_2 1-hour mean objective (no more than 18 hourly mean concentrations in exceedance of 200µg/m^3). It is therefore assumed that there have been no exceedances of the 1-hour mean objective of 200µg/m^3

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)
1	Wetley Rocks	Roadside	396535	349111	NO2	No	1.7	1.7	No	3.0
5	Blythe Bridge (Chestnut Crescent)	Roadside	396393	340670	NO2	No	14.0	35.0	No	2.6
6	Tean	Roadside	401095	339425	NO2	No	0.5	2.3	No	2.7
7	Cheadle (Leek Road Rbt_ Central) (*2)	Roadside	400967	343564	NO2	No	0.2	2.2	No	2.7
8	Alton (Chapel)	Roadside	407237	342257	NO2	No	3.0	0.5	No	3.1
10	Leek (Moorlands House)	Roadside	398486	356630	NO2	AQMA 1: Leek	3.5	0.2	No	3.4
11	Leek (Swan Hotel)	Roadside	398295	356587	NO2	AQMA 1: Leek	7.0	0.7	No	2.9
12	Leek (Southlands Close)	Urban Background	397430	356516	NO2	No	13.0	1.6	No	2.7
14	Cheadle (Tape Street)	Roadside	400990	343365	NO2	No	1.0	1.4	No	2.8

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
17	Biddulph (Knypersly, Cross Rds)	Roadside	388027	356755	NO2	No	5.5	0.6	No	2.4
24 (A&B)	Leek (Ball Haye St _ Central) *mean	Roadside	398691	356579	NO2	AQMA 1: Leek	0.2	3.0	No	2.7
25	Leek (Broad Street Jct North_1)	Roadside	398354	356329	NO2	AQMA 1: Leek	0.2	2.3	No	2.7
29	Cheadle (Leek Road Rbt_ North)	Roadside	400968	343579	NO2	No	0.2	2.4	No	2.5
30	Cheadle (Leek Road Rbt _South)	Roadside	400967	343548	NO2	No	0.2	2.6	No	2.8
31	Leek (Ball Haye St _ South)	Roadside	398688	356547	NO2	AQMA 1: Leek	0.2	3.0	No	2.7
32	Leek (Ball Haye St_ North)	Roadside	398693	356616	NO2	AQMA 1: Leek	0.2	3.0	No	2.8
34	Leek (Broad Street Vets_ South 2)	Roadside	398172	356215	NO2	AQMA 1: Leek	1.5	2.5	No	2.9
37 (A&B)	Leek (Broad Street North_3) (*2)	Roadside	398333	356313	NO2	AQMA 1: Leek	0.2	2.7	No	2.5
38 (A&B)	Cellarhead Junction_2 (*2)	Roadside	395702	347548	NO2	AQMA 2: Cellarhead	0.2	1.1	No	2.6
39 (A&B)	Cellarhead Junction_3 (*2)	Roadside	395702	347553	NO2	AQMA 2: Cellarhead	0.2	1.0	No	2.5

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)
41 (A&B)	Leek (Broad Street Jct North_4) (*2)	Roadside	398323	356306	NO2	AQMA 1: Leek	0.2	3.5	No	2.7
42 (A&B)	Cellar Head Juction 4 (*2)	Roadside	395704	347562	NO2	AQMA 2: Cellarhead	0.2	1.1	No	2.7
47	Broad Street South	Roadside	398245	356232	NO2	AQMA 1: Leek	1.4	1.8	No	2.6
48	Broad Street Junction	Roadside	398397	356322	NO2	AQMA 1: Leek	2.0	2.0	No	3.3
49	Cellar Head Juction 4	Roadside	395811	347530	NO2	No	40.0	2.0	No	2.5
50	Cheadle Tape Street_2	Roadside	401043	342917	NO2	No	80.0	1.6	No	2.5
51	Cheadle Tape St_6	Roadside	401151	343017	NO2	No	1.2	1.4	No	2.7
52	Cheadle Tape St_4	Roadside	401049	343151	NO2	No	2.5	1.0	No	2.4
53	Cellarhead Junction_5	Roadside	395727	347570	NO2	AQMA 2: Cellarhead	0.5	2.0	No	2.7
55	Cellarhead Junction_7	Roadside	395754	347560	NO2	AQMA 2: Cellarhead	8.0	1.9	No	2.6
56	Cellarhead Junction_8	Roadside	395699	347577	NO2	AQMA 2: Cellarhead	3.2	1.7	No	2.7
57	Broad Street South	Roadside	398107	356157	NO2	AQMA 1: Leek	1.0	2.1	No	2.8
58	Blythe Bridge	Roadside	395980	341065	NO2	No	7.0	1.3	No	2.6

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)
59	Biddulph (Knypersly, Cross Rds)_2	Roadside	388054	356808	NO2	No	5.2	3.2	No	2.5
60	Biddulph (Knypersly, Cross Rds)_3	Roadside	387997	356756	NO2	No	5.3	2.7	No	2.6
61	Leek Compton Rd	Roadside	398379	356313	NO2	AQMA 1: Leek	2.7	0.4	No	2.4
62	Cheadle Tape St _5	Roadside	401078	343076	NO2	No	1.4	2.4	No	2.7
63	Leek Town Centre 1	Roadside	398463	356510	NO2	No	3.9	1.6	No	2.7
64	Leek Town Centre 2	Roadside	398447	356502	NO2	No	1.8	1.6	No	2.7
66	Leek Brook Street 1	Roadside	398475	356371	NO2	AQMA 1: Leek	0.2	1.6	No	2.6
67	Leek Brook Street 2	Roadside	398560	356378	NO2	AQMA 1: Leek	0.3	1.5	No	2.4
68 (A&B)	Leek Brook Street 3	Roadside	398500	356362	NO2	AQMA 1: Leek	0.4	1.3	No	2.5
69	Cellarhead Junction 9	Roadside	395712	347594	NO2	AQMA 2: Cellarhead	2.4	0.5	No	2.5
70	Cellarhead Junction 10	Roadside	395719	347565	NO2	AQMA 2: Cellarhead	2.7	2.8	No	2.6
71	Cheadle Queen Street 1	Roadside	401017	343458	NO2	No	100.0	1.1	No	2.5

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)
72	Cheadle Queen Street 2	Roadside	401038	343458	NO2	No	0.2	0.5	No	2.5
73 (A&B)	Cheadle Queen Street 3(*2) (mean)	Roadside	401061	343459	NO2	No	0.5	1.6	No	2.8
74 (A&B)	Cellarhead Junction 11 (*2) (mean)	Roadside	395698	347852	NO2	AQMA 2: Cellarhead	0.2	1.0	No	2.5
SM01	St Marys School	Roadside	398090	356344	NO2	No	0.0	2.1	No	2.6
MS01	Meadows Special School	Roadside	399308	356689	NO2	AQMA 1: Leek	0.0	1.6	No	2.6

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 2024 (%) (2)	2020	2021	2022	2023	2024
1	396535	349111	Roadside	91.7	92.5	19.8	21.6	20.8	20.5	17.1
5	396393	340670	Roadside	100.0	100.0	17.9	17.9	20.0	18.9	15.8
6	401095	339425	Roadside	100.0	100.0	19.7	21.0	21.2	20.1	18.4
7	400967	343564	Roadside	83.3	83.0	27.7	30.7	31.4	30.8	26.8
8	407237	342257	Roadside	100.0	100.0	13.6	17.2	19.2	17.6	15.4
10	398486	356630	Roadside	100.0	100.0	21.1	25.5	23.4	23.8	20.7
11	398295	356587	Roadside	100.0	100.0	24.7	27.1	27.8	27.5	25.0
12	397430	356516	Urban Background	75.0	66.0	8.6	9.4	9.8	8.9	7.7
14	400990	343365	Roadside	100.0	100.0	19.3	21.8	22.4	21.4	19.3
17	388027	356755	Roadside	83.0	83.0	23.1	25.8	23.6	24.1	22.4
24 (A&B)	398691	356579	Roadside	100.0	100.0	28.6	30.9	30.7	30.2	28.0
25	398354	356329	Roadside	100.0	100.0	32.0	35.6	34.3	33.3	29.4

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
29	400968	343579	Roadside	100.0	100.0	27.6	27.3	28.2	26.8	23.3
30	400967	343548	Roadside	100.0	100.0	27.3	30.7	29.8	29.9	26.7
31	398688	356547	Roadside	100.0	100.0	25.7	25.1	25.4	24.6	23.0
32	398693	356616	Roadside	75.0	75.0	26.1	31.0	30.8	30.5	25.6
34	398172	356215	Roadside	92.0	90.6	21.8	23.4	23.8	22.6	21.1
37 (A&B)	398333	356313	Roadside	95.8	100.0	31.5	32.7	32.0	31.2	27.8
38 (A&B)	395702	347548	Roadside	95.8	100.0	32.0	35.6	35.3	32.9	30.2
39 (A&B)	395702	347553	Roadside	95.8	100.0	32.4	35.1	35.0	33.4	30.9
41 (A&B)	398323	356306	Roadside	91.7	100.0	25.5	25.4	25.9	25.0	21.1
42 (A&B)	395704	347562	Roadside	95.8	100.0	30.6	32.8	34.6	32.5	28.5
47	398245	356232	Roadside	91.7	92.5	22.5	24.6	21.7	20.8	17.5
48	398397	356322	Roadside	100.0	100.0	27.0	32.9	28.8	28.1	26.2
49	395811	347530	Roadside	100.0	100.0	18.7	20.0	20.0	21.4	19.1

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
50	401043	342917	Roadside	75.0	75.0	17.6	19.5	20.0	18.2	17.9
51	401151	343017	Roadside	100.0	100.0			19.0	19.8	17.1
52	401049	343151	Roadside	91.7	90.6	28.7	29.9	32.8	32.3	27.2
53	395727	347570	Roadside	91.7	90.6	28.4	30.2	32.0	31.2	26.1
55	395754	347560	Roadside	100.0	100.0	23.6	25.9	27.1	27.1	22.3
56	395699	347577	Roadside	75.0	73.6	27.6	27.3	30.4	32.4	25.1
57	398107	356157	Roadside	75.0	75.0	31.0	32.3	34.4	32.7	32.2
58	395980	341065	Roadside	100.0	100.0	17.2	18.9	19.4	17.6	16.6
59	388054	356808	Roadside	100.0	100.0	23.8	25.7	25.1	25.8	23.1
60	387997	356756	Roadside	91.7	90.6	16.0	17.9	17.0	17.7	15.3
61	398379	356313	Roadside	83.3	81.1	27.9	31.5	32.1	29.7	28.4
62	401078	343076	Roadside	100.0	100.0			24.5	24.0	21.4
63	398463	356510	Roadside	100.0	100.0			20.7	14.7	12.9

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
64	398447	356502	Roadside	25.0	24.5			19.5	15.4	15.1
66	398475	356371	Roadside	91.7	25.0			19.6	29.9	27.0
67	398560	356378	Roadside	100.0	100.0				29.7	23.6
68 (A&B)	398500	356362	Roadside	95.8	100.0				33.5	30.3
69	395712	347594	Roadside	100.0	100.0				24.0	22.2
70	395719	347565	Roadside	83.3	75.5				26.0	23.0
71	401017	343458	Roadside	83.3	75.0					16.4
72	401038	343458	Roadside	83.3	83.0					20.8
73 (A&B)	401061	343459	Roadside	83.3	83.0					19.7
74 (A&B)	395698	347852	Roadside	66.7	75.5					26.0
SM01	398090	356344	Roadside	58.3	75.0					12.5
MS01	399308	356689	Roadside	58.3	58.5					14.2

☒ **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: Leek AQMA

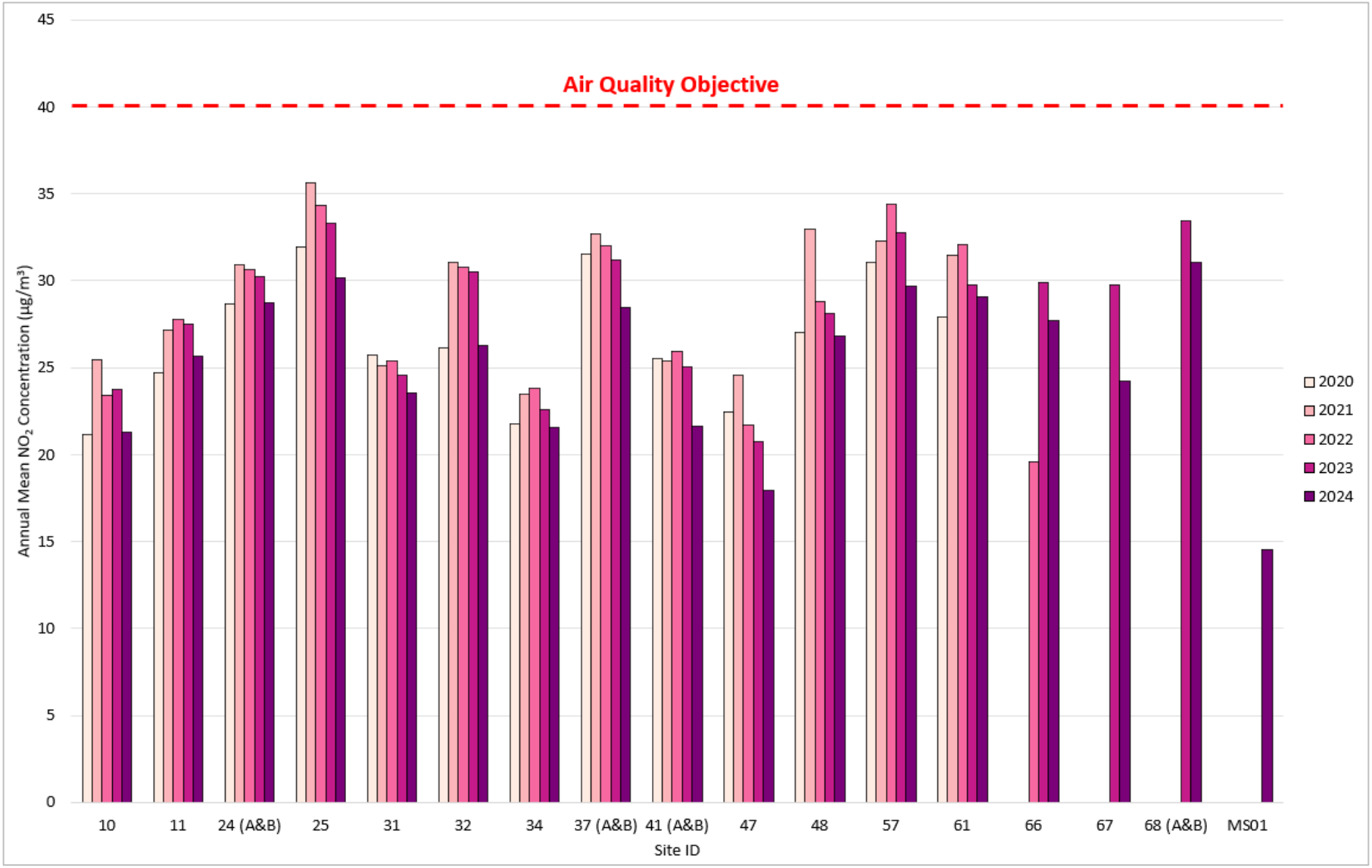
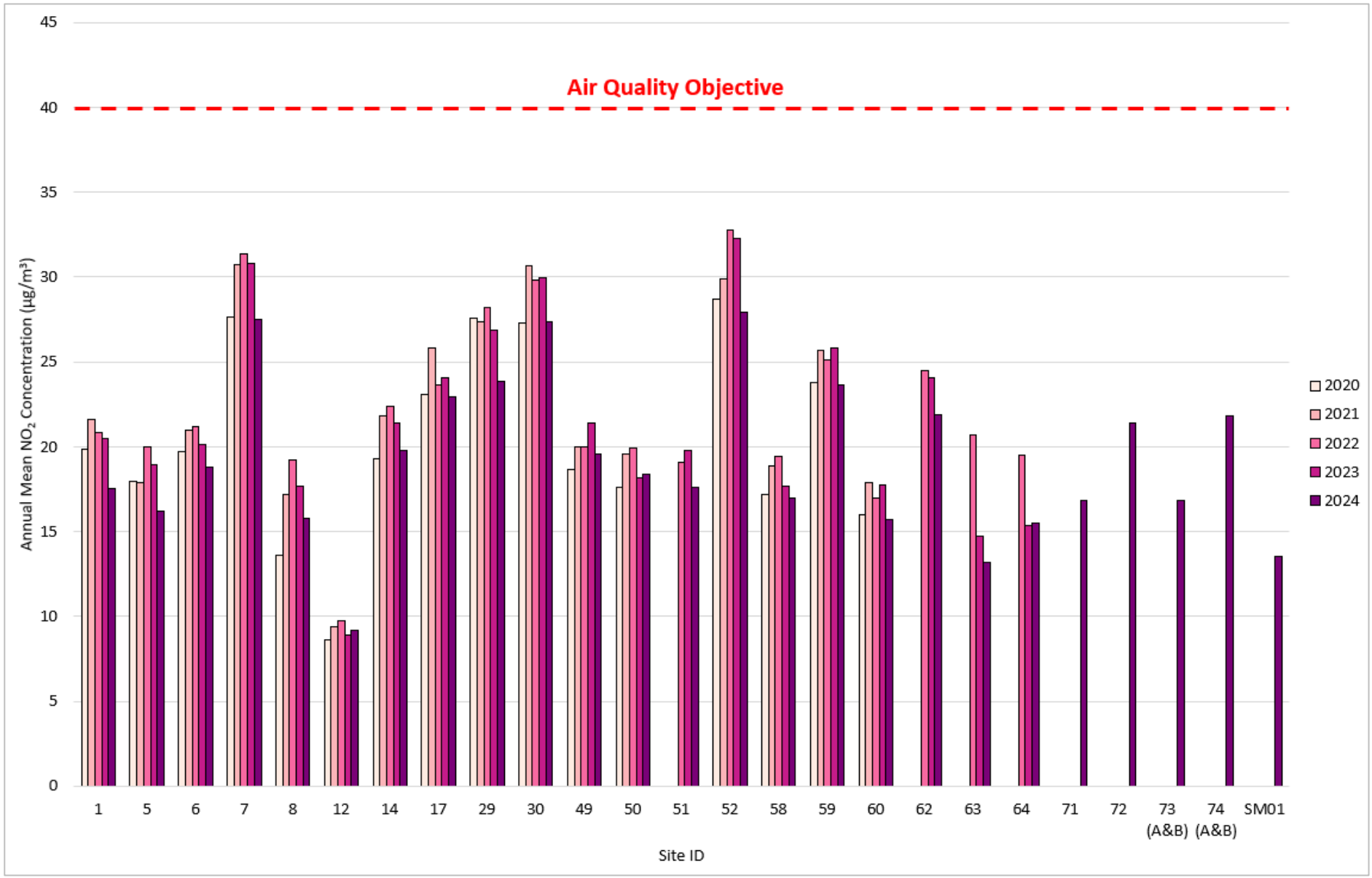


Figure A.2 – Trends in Annual Mean NO_2 Concentrations: Cellarhead AQMA

Figure A.3 – Trends in Annual Mean NO_2 Concentrations Outside of AQMAs



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 (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.80)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
1	396535	349111	27.8	20.0	19.0	19.6	22.3	I/S	19.8	14.8	23.6	20.9	24.7	22.5	21.4	17.1		
5	396393	340670	23.7	20.4	20.9	17.0	19.4	17.1	20.6	18.0	15.6	25.1	21.7	17.3	19.7	15.8		
6	401095	339425	28.9	20.6	21.1	21.9	19.6	21.9	21.1	20.4	22.2	25.6	31.0	21.1	23.0	18.4		
7	400967	343564	I/S	I/S	36.7	32.1	34.0	28.5	33.0	33.6	33.2	40.1	34.7	29.2	33.5	26.8		
8	407237	342257	19.1	15.5	20.0	16.9	22.0	15.9	20.2	19.3	20.7	25.0	21.4	14.5	19.2	15.4		
10	398486	356630	33.2	25.5	24.2	23.3	22.7	25.4	24.6	23.8	24.5	26.6	30.8	26.6	25.9	20.7		
11	398295	356587	40.5	35.2	29.7	27.3	28.7	27.2	30.8	27.0	26.3	33.3	39.2	30.5	31.3	25.0		
12	397430	356516	15.5	10.8	10.5	6.4	7.7	5.6	7.0	6.3	I/S	AV	AV	I/S	8.7	7.7		
14	400990	343365	28.7	24.8	24.3	21.2	23.3	21.1	22.7	19.6	20.5	30.1	30.9	22.3	24.1	19.3		
17	388027	356755	36.1	27.0	23.9	24.6	27.7	24.3	23.9	I/S	I/S	27.5	36.7	28.2	28.0	22.4		
24 (A&B)	398691	356579	40.2	34.2	31.5	33.0	31.5	36.5	37.3	32.5	33.4	35.0	41.5	34.3	35.0	28.0		
25	398354	356329	45.3	35.8	32.5	37.0	35.6	34.5	30.3	31.3	43.6	31.8	46.5	36.8	36.8	29.4		
29	400968	343579	31.4	32.0	29.3	27.6	26.9	26.4	29.0	27.7	23.8	35.4	34.0	25.8	29.1	23.3		
30	400967	343548	36.8	34.9	34.1	30.1	32.1	28.9	32.5	30.9	33.2	33.9	43.5	29.2	33.3	26.7		
31	398688	356547	29.4	30.6	25.5	25.0	24.7	26.4	27.6	26.2	28.2	35.8	38.2	27.2	28.7	23.0		
32	398693	356616	32.5	34.3	32.9	30.3	29.1	33.6	36.8	I/S	I/S	23.8	34.7	I/S	32.0	25.6		
34	398172	356215	35.5	25.4	24.7	21.8	20.7	21.3	23.5	22.5	25.9	I/S	32.7	35.5	26.3	21.1		
37 (A&B)	398333	356313	43.2	31.3	32.2	34.8	33.8	31.4	34.7	28.9	39.5	33.5	38.7	35.0	34.7	27.8		
38 (A&B)	395702	347548	43.7	35.9	35.1	39.4	36.2	44.5	43.6	28.5	34.1	36.7	41.8	33.8	37.7	30.2		
39 (A&B)	395702	347553	41.2	40.0	34.5	38.4	35.3	42.0	40.8	30.0	29.1	37.0	45.2	50.9	38.7	30.9		
41 (A&B)	398323	356306	33.7	26.6	25.3	25.3	25.8	19.9	21.5	21.4	29.1	26.8	33.5	27.4	26.3	21.1		
42 (A&B)	395704	347562	43.0	34.8	33.7	35.8	33.6	39.7	37.3	28.3	29.4	36.7	37.2	37.6	35.6	28.5		
47	398245	356232	I/S	25.9	24.7	16.3	19.2	16.8	21.2	18.8	18.2	27.6	26.3	25.5	21.9	17.5		
48	398397	356322	38.6	31.6	33.5	29.9	32.5	27.5	31.9	27.5	34.0	36.3	42.1	27.5	32.7	26.2		
49	395811	347530	28.3	23.0	21.9	20.4	23.9	25.2	25.1	19.9	23.0	24.8	28.9	21.8	23.9	19.1		
50	401043	342917	27.6	23.2	20.4	18.7	20.1	16.0	I/S	I/S	I/S	24.8	30.4	20.6	22.4	17.9		
51	401151	343017	28.2	23.5	18.2	19.0	19.8	18.6	19.3	16.1	21.3	22.0	28.5	22.6	21.4	17.1		
52	401049	343151	36.7	I/S	34.4	30.5	28.4	35.4	34.6	32.4	29.4	36.6	41.3	34.8	34.0	27.2		
53	395727	347570	34.1	30.2	37.3	27.9	I/S	33.4	32.2	24.5	26.5	39.4	42.2	30.9	32.6	26.1		
55	395754	347560	32.6	25.4	26.1	26.1	29.0	26.2	26.1	22.6	31.0	29.3	35.8	24.5	27.9	22.3		
56	395699	347577	36.4	39.2	33.0	26.5	32.2	28.8	31.2	I/S	I/S	I/S	37.6	26.0	32.3	25.1		
57	398107	356157	44.4	38.9	AV	I/S	I/S	I/S	37.8	33.7	38.8	39.1	45.8	43.2	40.2	32.2		

58	395980	341065	25.3	22.9	23.3	15.7	19.5	13.6	16.0	15.4	21.9	26.5	23.1	25.4	20.7	16.6		
59	388054	356808	34.2	24.6	24.7	23.9	30.6	28.1	29.7	24.1	36.5	29.4	33.9	26.4	28.8	23.1		
60	387997	356756	27.8	19.8	20.0	15.7	17.9	13.3	15.1	13.2	20.1	I/S	26.1	21.7	19.2	15.3		
61	398379	356313	46.3	39.8	36.0	31.3	I/S	23.9	35.1	I/S	33.9	37.4	34.6	36.1	35.4	28.4		
62	401078	343076	33.9	29.8	29.1	23.2	25.4	22.1	23.8	21.1	23.7	32.3	32.4	23.7	26.7	21.4		
63	398463	356510	23.2	15.5	15.6	10.4	12.6	12.9	16.3	13.6	15.0	18.3	22.5	17.1	16.1	12.9		
64	398447	356502	21.5	19.0	16.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.9	15.1		
66	398475	356371	44.4	34.0	35.7	25.9	32.8	27.3	28.4	27.3	34.9	38.7	42.0	I/S	33.8	27.0		
67	398560	356378	39.9	34.1	24.4	24.0	25.7	26.0	25.5	26.0	27.5	32.5	38.3	30.8	29.6	23.6		
68 (A&B)	398500	356362	43.0	41.7	39.7	30.1	34.1	30.9	39.0	35.3	34.2	42.5	47.3	36.5	37.8	30.3		
69	395712	347594	30.6	29.3	29.0	25.7	25.4	25.8	27.5	21.5	24.2	35.4	35.0	24.3	27.8	22.2		
70	395719	347565	32.1	31.0	28.4	26.2	30.2	29.7	31.0	23.0	I/S	AV	AV	27.0	28.7	23.0		
71	401017	343458	N/A	N/A	23.3	19.7	20.0	17.7	19.6	17.9	18.6	20.6	26.7	21.0	20.5	16.4		
72	401038	343458	N/A	N/A	23.9	22.3	28.4	25.7	25.6	23.5	31.5	27.3	28.2	24.1	26.1	20.8		
73 (A&B)	401061	343459	N/A	N/A	27.6	21.3	22.6	21.6	24.0	24.2	22.1	30.0	30.5	23.1	24.7	19.7		
74 (A&B)	395698	347852	N/A	N/A	30.6	32.9	34.9	39.2	40.4	26.9	N/A	32.6	29.9	25.1	32.5	26.0		
SM01	398090	356344	N/A	N/A	N/A	N/A	11.4	2.3	27.4	12.1	14.8	19.1	22.2	N/A	15.6	12.5		
MS01	399308	356689	N/A	N/A	N/A	N/A	13.5	16.1	16.4	13.3	18.2	19.1	20.8	N/A	16.8	14.2		

☒ **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.**

☒ **SMDC 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.

I/S: Missing Tube

AV: Abnormal Value

N/A: Tube not deployed

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

New or Changed Sources Identified Within SMDC During 2024

Several new developments have been progressed in 2024. Table C.1 details the environmental permit that was issued in 2024. Table C.2 provides a list of planning applications for 2024 with its assessment reference and planning reference. If it is a major development SMDC are requesting that an Air Quality Assessment (AQA) or Low Emission Strategy is produced. In accordance the scheme has the potential to increase concentrations of pollutants in the surrounding area, developers are expected to fully mitigate the air quality impacts by providing mitigation measures to offset any identified impacts or by making a financial contribution in accordance with the new SPD.

In 2024 new development near Cellarhead (SMD/2023/0496) made a financial contributed to support air quality monitoring at the location.

Table C.1 – Environmental Permits Issued in 2024

EP Ref	Operator	Installation	Primary activity Section	Directly Associated Section&Sub-Sections	Permit Issue Date	X	Y
EP/AI/3/08	Aggregate Industries UK Limited	Cauldon Low Quarry	3.5 Other mineral activities	6.6 Part B(e) Coating roadstone with tar or bitumen	14/03/2024	407777	348752

Table C.2 – Planning Applications

Assessment date	Assessment reference	Site location	Area	Planning Reference	Planning Proposal
19/04/2024	R3212B-R01-v2	Cauldon Quarry RAP	Cauldon Low	SCC/24/0047/FULL-ES	Application for the importation, processing, reuse and storage of reclaimed bituminous products
13/11/2024	APS_P1251A_A1-1	Tean Leys Farm , Tean Leys , Lower Tean , Staffordshire , ST10 4NS	Tean	SMD/2024/0299	Installation of Biomass Boiler 500kw and all associated works (retrospective)

01/09/2024	T445968-01	Quarry Walk Caravan Park , Coppice Lane , Winnothdale , Staffordshire , ST10 1RQ	Holligton	SMD/2023/0658	Biomass boiler building and fuel hopper
01/06/2024	AQ assessment	The Woodyard Cheadle	Cheadle	SMD/2024/0087	Erect steel portal frame unit for dry wood store and associated machinery. Installation of 4 no. Biomass Boilers (2 no 210kw and 2no 295kw) arranged in pairs, linked to 2 no steel drying skips

Additional Air Quality Works Undertaken by SMDC During 2024

Air Quality Action Plan Update

As previously stated, it should be noted that due to continued compliance of the AQMA's for the last five years (including 2020 and 2021). The authority will be looking to revoke both AQMA's in 2025, subject to members approval. The measures identified in the AQAP will continue to be adopted / explored.

Further actions not undertaken by SMDC directly are summarised in Appendix F.

QA/QC of Diffusion Tube Monitoring

SMDC's diffusion tubes in 2024 were supplied and analysed by Staffordshire Scientific Services, using the 20% Triethanolamine (TEA) in water preparation method. Staffordshire Scientific Services laboratory is UKAS accredited, participating in the AIR-PT Scheme for NO_2 tube analysis and the Annual Field Inter-Comparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO_2 concentrations reported are of a high calibre. The lab follows the procedures set out in the Harmonisation Practical Guidance.

In the 2024 AIR NO_2 PT rounds, AIR-PT AR062 - AR066 (January - October 2024) Staffordshire Scientific Services scored 100%. The percentage score reflects the results deemed to be satisfactory based upon the z-score of < ±2. Additionally, the precision of the NO_2 diffusion tubes (20% TEA in Water) supplied by Staffordshire Scientific Services has been classified as 'good' for all 20 observations in 2024. This precision reflects the laboratory's performance and consistency in preparing and analysing the tubes, as well as the subsequent handling of the tubes in the field. Tubes are considered to have a "good" precision where the coefficient of variation of duplicate or triplicate diffusion tubes for eight or more monitoring periods during a year is less than 20%. Further information on the precision summary results can be found on the LAQM website.

Diffusion Tube Annualisation

Four sites (12, 56, 66 and MS01) required annualisation in 2024 due to annual data capture being between 25% and 75%. Data from two background sites within 50 miles of the sites were obtained from UK Air. The annualisation summary is shown in Table C.3 below.

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

Site ID	Annualisation Factor		Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
	Stoke-on-Trent Centre	Crewe Coppenhall			
12	1.0694	1.1302	1.0998	8.7	9.6
56	0.9800	0.9644	0.9722	32.3	31.4
66	0.9992	0.9997	0.9994	33.8	33.7
MS01	1.0355	1.0777	1.0566	16.8	17.7

Diffusion Tube Bias Adjustment Factors

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

SMDC have applied a national bias adjustment factor of 0.80 to the 2024 monitoring data. A summary of bias adjustment factors used by SMDC over the past five years is presented in Table C.4.

Figure C.1 - National Diffusion Tube Bias Adjustment Factor

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 06/25

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 September 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	UB	Warwick District Council	12	14	13	8.5%	G	**0.92**
Staffordshire County Council	20% TEA in water	2024	R	Warwick District Council	11	29	18	60.0%	G	**0.62**
Staffordshire County Council	20% TEA in water	2024	R	Cannock Chase District Council	12	18	14	26.6%	G	**0.79**
Staffordshire County Council	50% TEA in acetone	2024	R	Tameside Mbc	12	43	30	45.0%	G	**0.69**
Staffordshire County Council	20% TEA in water	2024		**Overall Factor[3] (20 studies)**				**Use**		**0.80**

Table C.4 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	06/25	0.80
2023	National	03/24	0.86
2022	National	06/23	0.86
2021	National	06/22	0.85
2020	National	09/21	0.85

NO_2 Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. Fall-off with distance calculations were not required as all sites reported an annual mean NO_2 concentration below 36µg/m^3.

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

Figure D.1 – Map of Non-Automatic Monitoring Locations Within and Around Leek AQMA

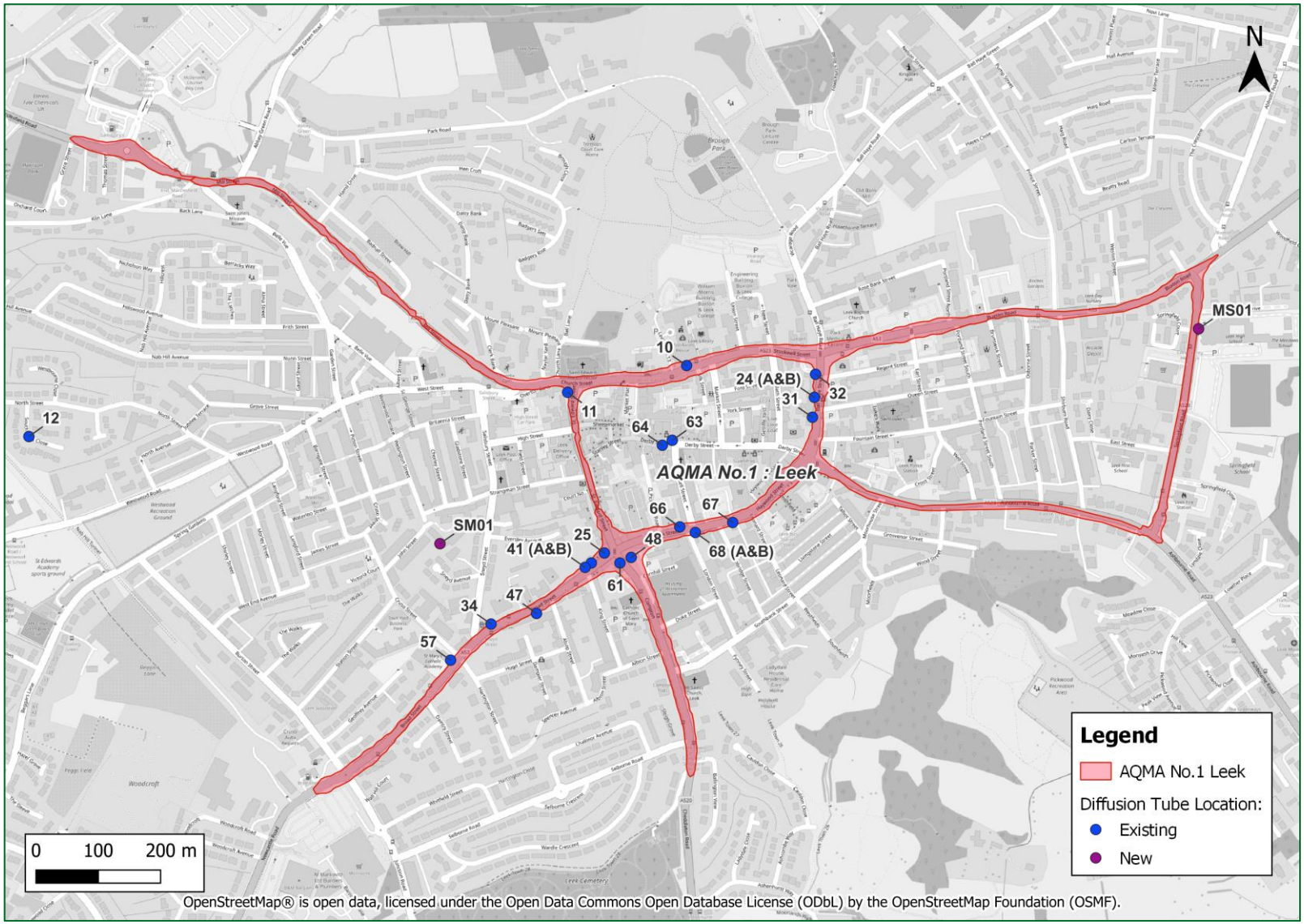


Figure D.2 – Map of Non-Automatic Monitoring Locations Within and Around Cellarhead AQMA

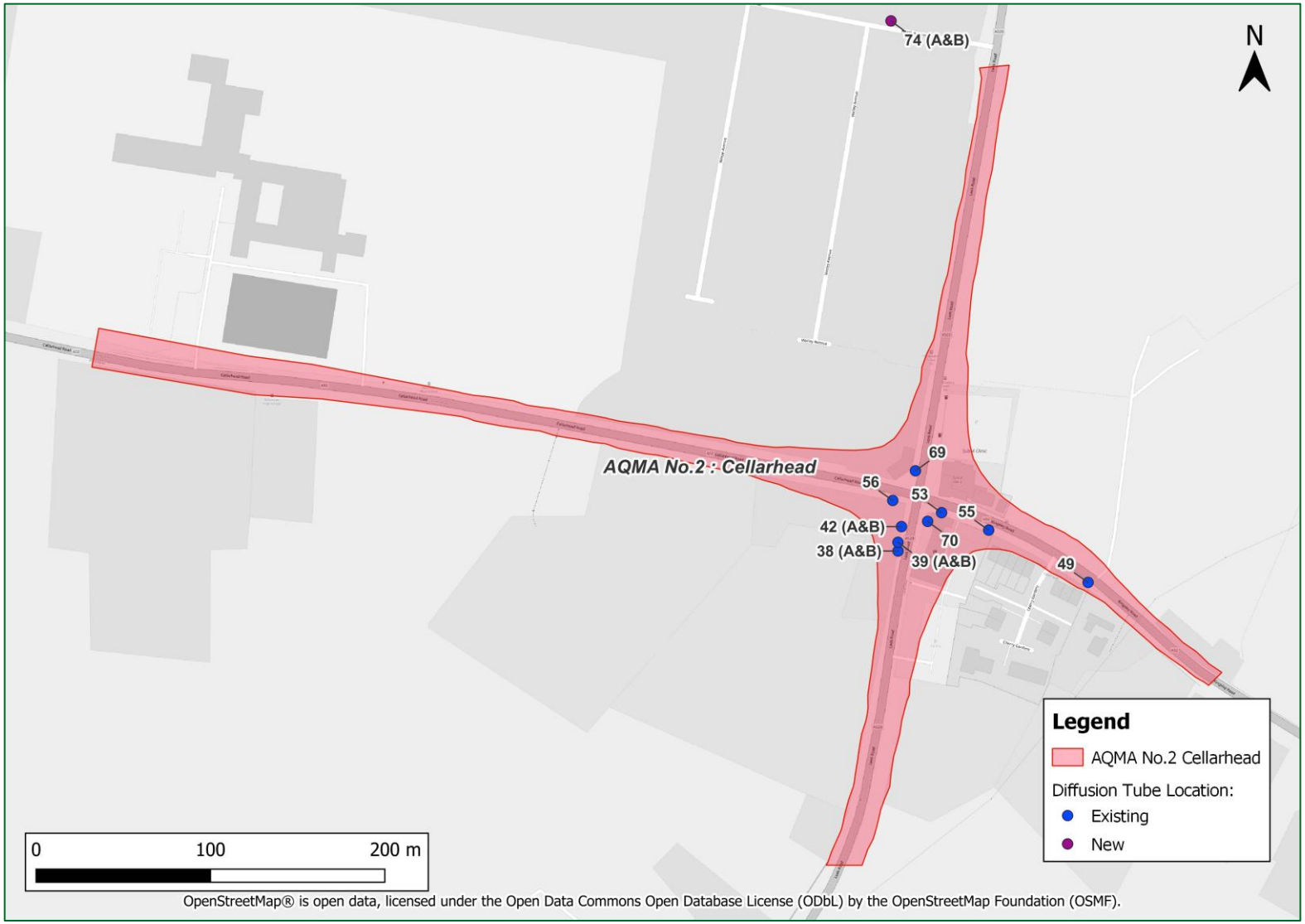


Figure D.3 – Map of Non-Automatic Monitoring Locations outside AQMAs: Alton

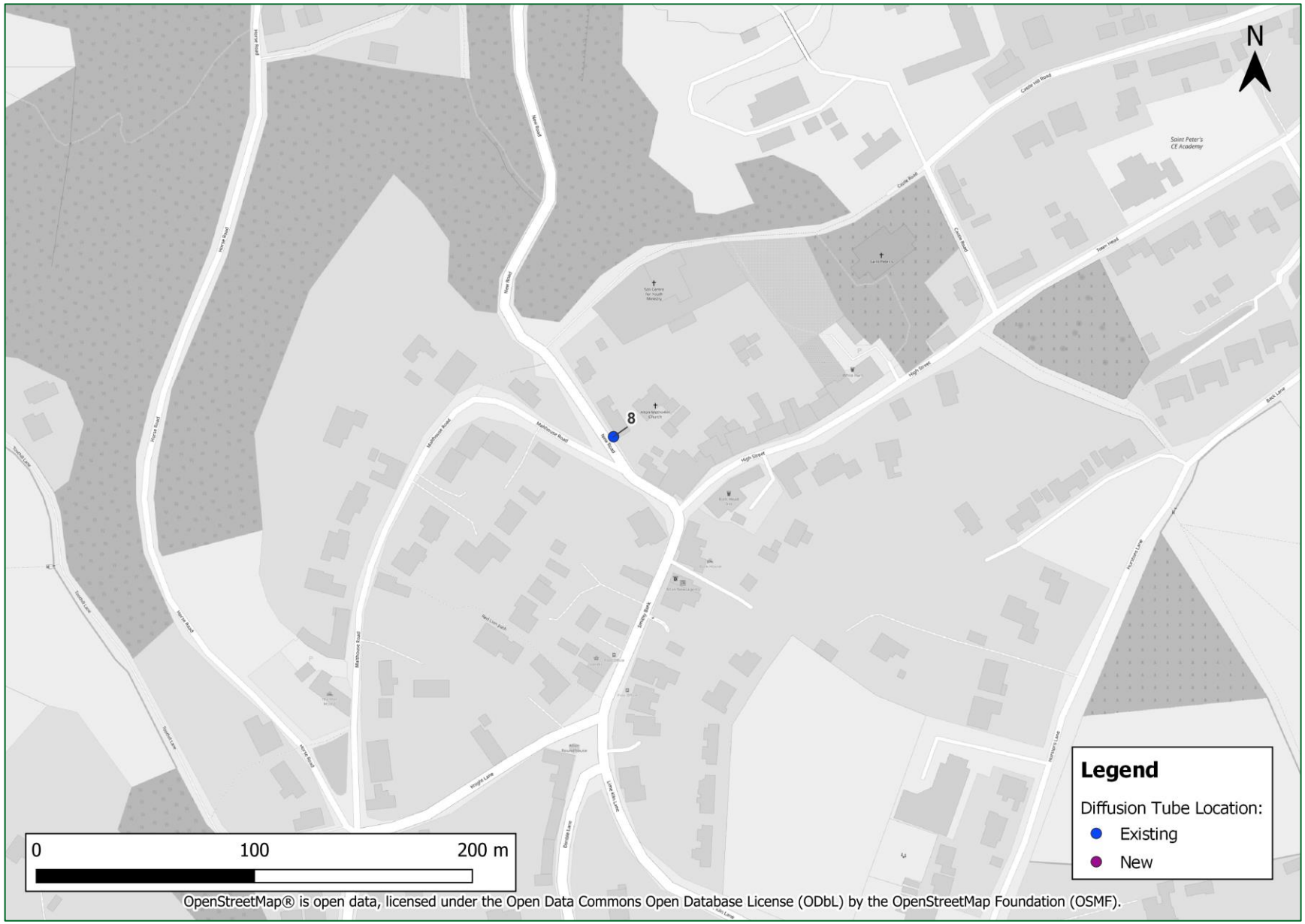


Figure D.4 – Map of Non-Automatic Monitoring Locations Outside of AQMAs: Biddulph

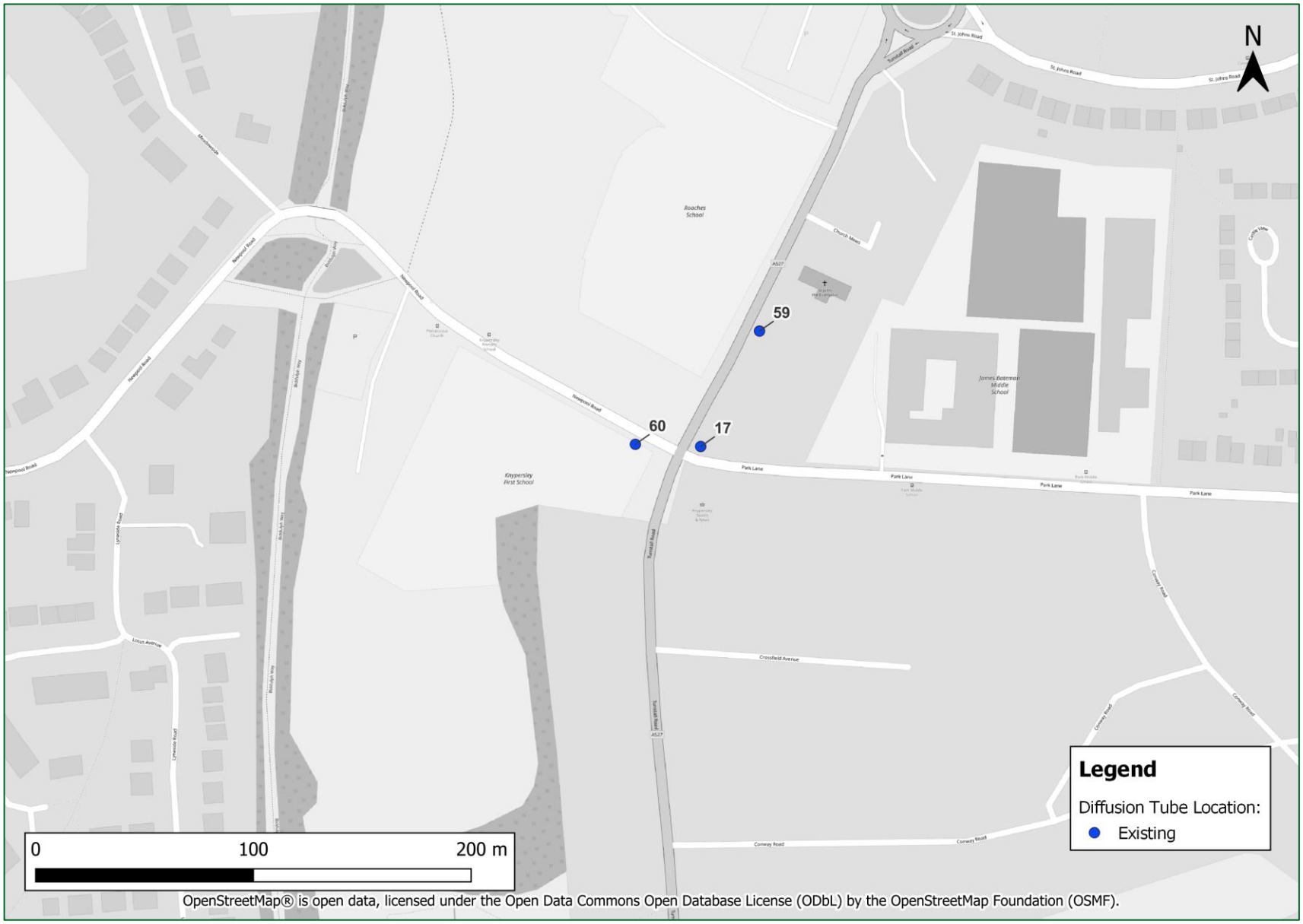


Figure D.5 – Map of Non-Automatic Monitoring Locations Outside of AQMAs: Blythe Bridge

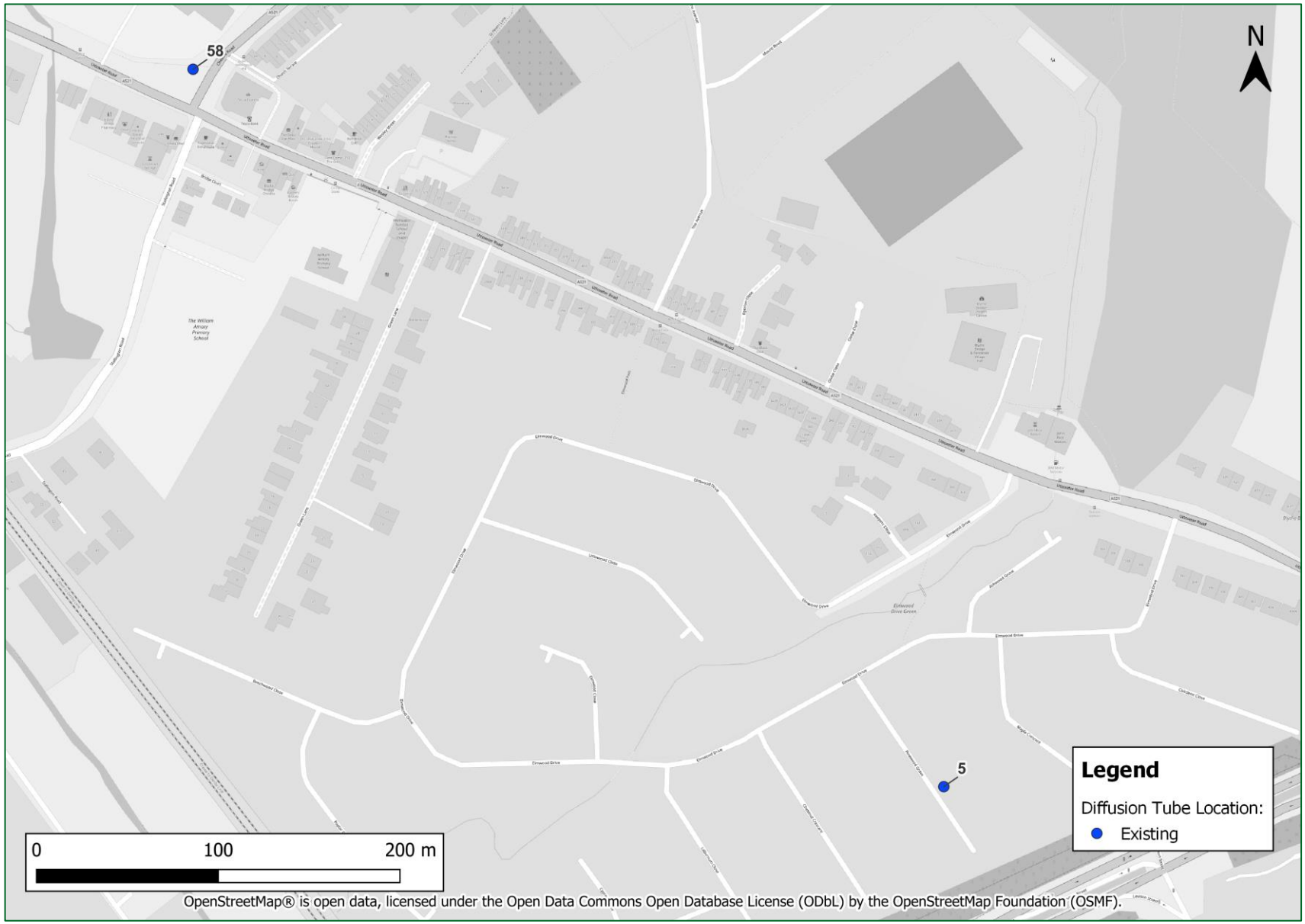


Figure D.6 – Map of Non-Automatic Monitoring Locations Outside of AQMAs: Cheadle

Figure D.7 – Map of Non-Automatic Monitoring Locations Outside of AQMAs: Upper Tean

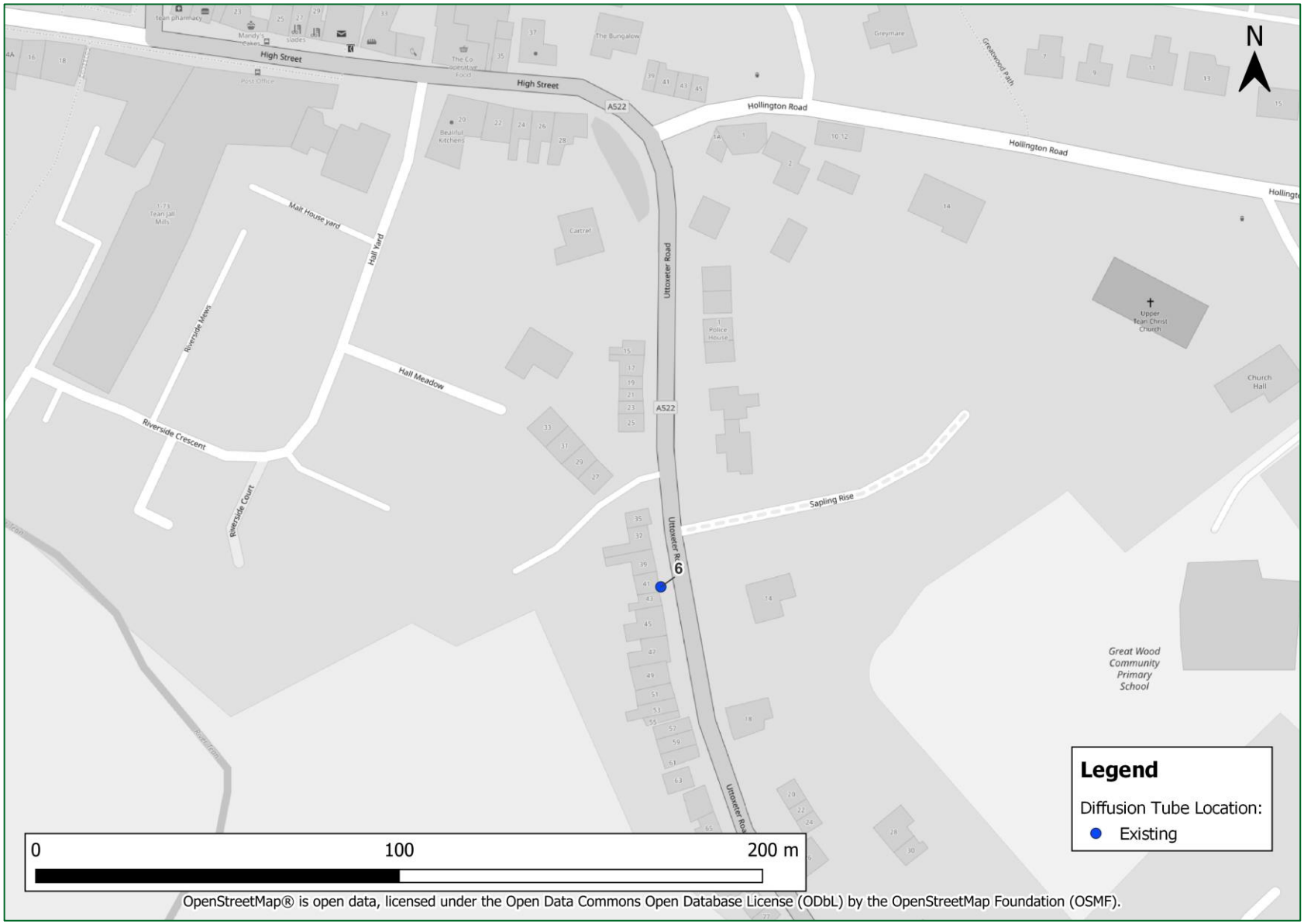
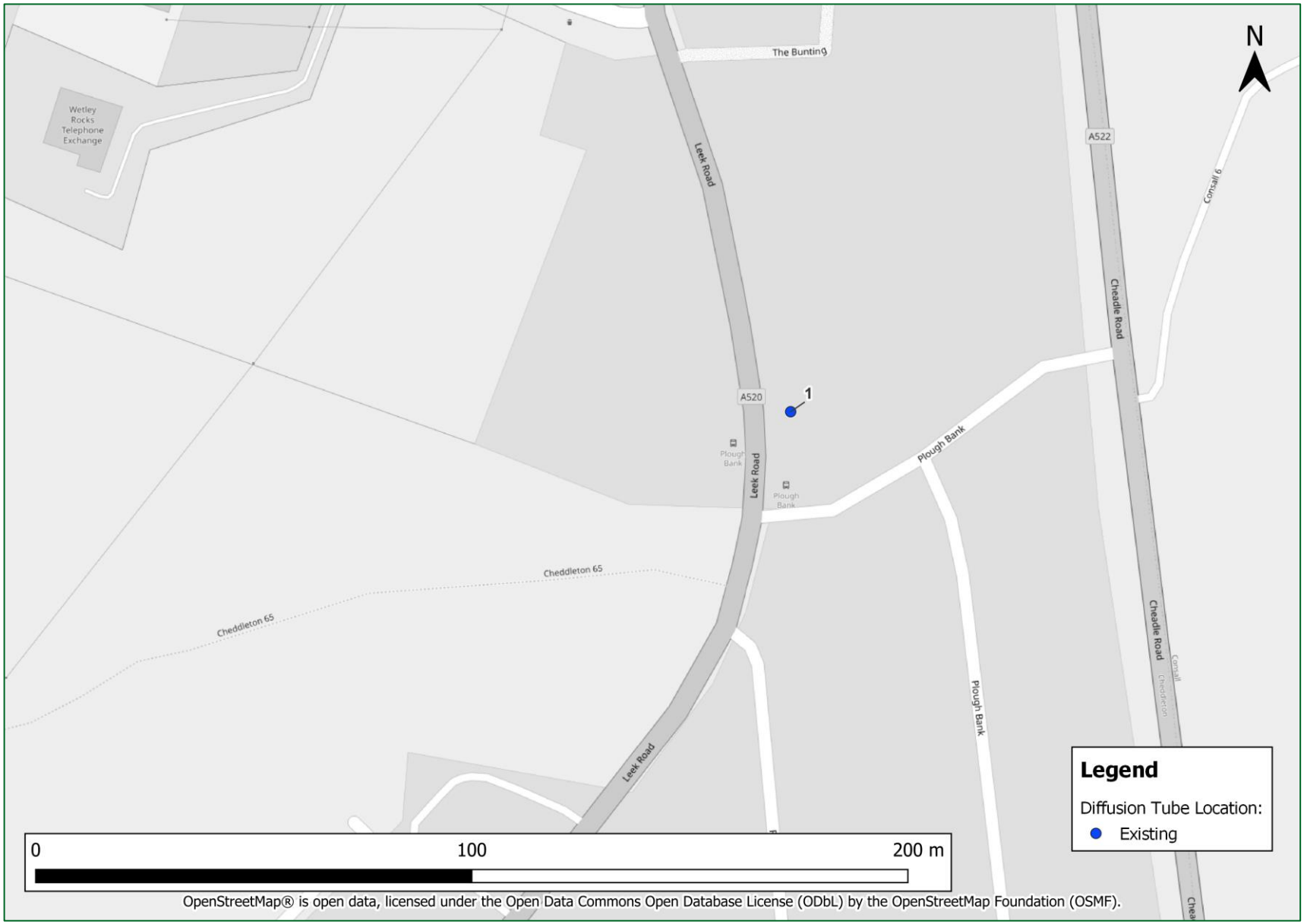


Figure D.8 – Map of Non-Automatic Monitoring Locations Outside of AQMAs: Wetley Rocks



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[5]

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

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

Appendix F: Updates on Additional Works undertaken to improve Air Quality

Transport Update

AQMA No.1: Leek

The initial feasibility study for Leek has been completed focusing on St Edward Street and options for re-routing traffic and improving the pedestrian environment. This will deliver a dedicated pedestrian crossing facility on St Edward Street. SCC have indicated that there are no current resources allocated for further data collection or junction modifications in Leek or the development of a traffic model. However, they are committed to undertake an analysis of travel patterns in Leek during 2025/26 to determine the most appropriate measures to reduce transport-related air pollution issues. This will be implemented utilising TomTom data to produce origin/destination matrices to understand trip patterns and consider possible rerouting options and how these might reduce air quality issues on the network in Leek.

AQMA No.2: Cellarhead crossroads

SCC indicated that the results from the live lab trial carried out at the junction between 2021 and 2023 (reported in previous ASR's) demonstrated no positive evidence that signal modifications could achieve air quality improvements. Further work from the SCCs signals team in 2023-2024 also could not identified any deliverable modifications based on the available data and are considering a specialist traffic signal modelling consultant to take a more in-depth study of the junction. It is considered that multi-lane approaches would be required to achieve an improvement but the existing geometry and proximity to housing constrains this option. There is currently no stacking space for right turning vehicles. The junction is operated under MOVA and was last validated in 2023 with the report indicating that right turning vehicles cause queuing issues during peak periods.

Active \Travel

A further review of the Local Walking and Infrastructure Plan (LCWIP) commenced in 2023, which will includes audit and analysis of Leek, Biddulph and a rural study areas across the district, not previously not covered by the original document.

The early results of the review in Leek indicate that focus should be on walking and wheeling rather than cycling due to topographical issues.

It is understood that the updated new LCWIP is expected to be published later this year (2025) which will include the findings from the rural research, the audits for Leek and a list of schemes that shall be incorporated to a scheme pipeline for future delivery as and when funding opportunities become available.

Bus Service Improvement Plan

Staffordshire's new Bus Service Improvement Plan (BSIP) was published in 2024. The BSIP, along with our emerging Local Transport Plan, puts buses at the heart of our sustainable transport offer and contributes to many of the council's wider objectives. One of the goals (objective 8) of the new BSIP is that buses are accessible, zero emission, with high quality on-board environments. Leek is prioritised in this role out, along with proposed improvements to the bus station and associated bus stops to encourage bus use e.g.

- Secure funding to purchase electric buses on the busiest corridors that also run through Air Quality Management Areas. Priority routes are in Burton, Leek and Newcastle.
- Refurbish Leek Bus Station to support Staffordshire Moorlands District Council's £17 million Levelling Up Fund award.

In House – lead by example measures

- SCC Depots : AMEY Highways depot EV infrastructure procurement is expected to be released for tender in early 2025. This will enable AMEY Highways to further electrify their fleet and operations across Staffordshire.
- SMDC Waste Collection Fleet: The majority of the fleet now comply with are highest EURO emission standard. Further procurement is due in 2025 to complete the fleet.
- Council Grey Fleet: The council launched a salary sacrifice scheme in 2023 for interested staff to move to an electric vehicle. This has now been complemented with the installation of 2 EV charge points at the main council offices (Leek).
- Procurement Policy: The procurement policy to embed sustainability and low carbon and emissions considerations into decision making is being reviewed with the intent that it will be reissued , with a toolkit to help people implement the policy.

Electric Vehicle Infrastructure

LEVI phase 1 (Local Electric Vehicle Infrastructure – which Staffordshire was originally allocated £4.58m), which looks to deliver on street residential parking is expected to go to

tender within February 2025 as part of the Midlands Connect Second Consortium including Nottinghamshire County Council (Lead Authority), Derbyshire County Council, Derby City Centre, Nottingham City Centre. This will bring ~2000 ChargePoint sockets across 600-800 locations throughout Staffordshire.

LEVI Phase 2 proposal was agreed to by OZEV. The proposal is to use 10% of LEVI funding to procure EV infrastructure in up to 40 T2 car parks. Once these priority LEVI SMDC carparks have been determined, the remaining SMDC Car parks will be progressed in accordance with the adopted Once sites have been finalised, delivery of EV charges at the remaining sites identified in SMDC EV strategy will be implemented.

However, the above noted, the implementation of the strategy did begin in 2024 with the installation of 4 EV charge points at the main council office car park Moorlands House, Leek

Further public installations at Moorlands House Stockwell Street car park, Leek and South Moorlands Leisure Centre in Cheadle are due to be complete in early 2025.

Scheme Changes

The proposed re-opening of the Stoke – Leek railway line has not progressed due to the proposed funding stream through Network North funding and the Restoring Your Railway Programme no longer being available.

Schools and Community Engagement

The Air Aware Project was set up in 2019 and is joint project between SMDC and Staffs County Council, initially supported by a Defra grant but now continuing through Council funding.

The goal of the Air Aware project is to raise awareness of air quality issues across the district with a focus on the schools and community (small businesses) engagement. Due to financial considerations in 2024 the Air Aware project primarily focused was on schools but continued to increase engagement locally. The main findings for 2024 were:

- 8 schools in the district have accredited travel plans, including one school in Leek (Woodcroft Academy), which has reached the highest possible accreditation status on Modeshift STARS.
- Air Aware lessons and activities have been delivered at 5 schools in the academic year 2024/25 including assemblies, lessons and activities that promote the awareness of air pollution to school communities and pupils.

Figure F 1 Example of an Air Aware Lesson

- The Relaunch of the Walking Bus campaign took place in 2024, which is designed to encourage traffic to not come to the school but allows parents to drop off at a specific location and time and volunteers walk the pupils to school. 6 schools in the district are the process of setting up a Walking Bus with the intent of laughing them in 2025
- 4 schools in the district are engaged in the new Working Living Streets (WOW) outreach campaign funded by Active Travel England and have seen a significant improvement in the number of pupils walking to school compared to the baseline numbers at the start.
- School Streets project working with Sustrans and the Strategy team is also being investigated, which will close the road immediately outside the school for set periods of the day when pupils are arriving/leaving school.
- A Schools Anti-dialling Campaign was developed in 2024, with the deployment of signage at key locations at all Staffordshire Moorlands Schools.

Figure F 2 Signage to be deployed in 2025

Other Promotions

SMDC took part in several promotional Campaigns:

- *Promotion of Clean Air Day, via social media and website*
  - *Raise awareness of air pollution;*
  - *Information that shows air pollution can also affect the brain and mental health, leading to depression, anxiety and dementia;*
  - *Letting local and national decision makers know what would make it easier for you to walk more and have clean air in your community.*
- *Promotion of Wood burning Burn better via social media and website*

We are further working with the climate change team to develop Youth Climate Schools Conference with support from local partners, that will incorporate air quality

Policy Updates

The Staffordshire Moorlands Local Development Scheme 2025 incorporating Local Plan Timetable has been published sets out the documents, which the Council will use when exercising its planning functions. A Review of Adopted Local Plan is due to take place in 2025.

Glossary of Terms

Abbreviation	Description
AQA	Air Quality Assessment
AQO	Air Quality Objective
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
BSIP	Bus Service Improvement Plan
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
LAQM	Local Air Quality Management
LCWIP	Local Cycling and Walking Infrastructure Plan
LTP4	Local Transport Policy
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
SCC	Staffordshire County Council
SMDC	Staffordshire Moorlands District Council
SO_2	Sulphur Dioxide
TEA	Triethanolamine

References

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- Ozone (O3) Accredited Official Statistics: Updated 30th April 2024. Published by Defra.
- European Environment Agency, Methane, climate change and air quality in Europe: exploring the connections. February 2025.