2026 Air Quality Annual Status Report (ASR)

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

Date: 30th June 2026

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Local Responsibilities and Commitment

This Annual Status Report (ASR) was prepared by the Environmental Protection Team of Newcastle-under-Lyme Borough Council with the support and agreement of the following departments:

- Regulatory Services
- Planning and Development Services
- Staffordshire County Council Public Health and Highways Departments

This ASR has been approved by:

- Councillor Vanessa Renshaw – Portfolio Holder for Housing & Public Protection

This ASR has been endorsed by the County Council`s Director of Health and Care, Dr Richard Harling.

If you have any comments regarding this ASR, please send them to:

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Newcastle-under-Lyme Borough Council

Annual Status Report (ASR) 2026 - Air Quality

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

Poor air quality continues to be a significant public health concern, contributing to a range of health conditions and reduced life expectancy. Local authorities have an important role in identifying areas of exceedance and implementing measures to improve air quality and protect communities.

I welcome this 2026 Annual Status Report from Newcastle-under-Lyme Borough Council, which demonstrates the Council's ongoing commitment to improving air quality across the borough. The report outlines the progress made in monitoring air pollution and delivering targeted interventions to reduce emissions of nitrogen dioxide (NO_2) and fine particulate matter (PM2.5).0

The Council continues to work effectively in partnership with Staffordshire County Council and other stakeholders to deliver a coordinated approach. This includes contributions to countywide initiatives such as the Air Aware programme, promotion of sustainable and active travel, support for electric vehicle infrastructure, and wider transport and climate change strategies.

The requirements of the Environment Act 2021, particularly in relation to PM2.5, further reinforce the importance of sustained local action. Measures to reduce emissions will not only improve air quality but also deliver wider health and environmental benefits.

I endorse this report and support the continued collaborative approach to improving air quality and protecting the health of residents in Newcastle-under-Lyme

Dr Richard Harling MBE, FFPH, MBBS, MSc

Director of Health and Care
Staffordshire County Council
29th June 2026

N.B. this endorsement reflects the views and policies of Staffordshire County Council and the inclusion does not constitute an endorsement of those policies by Newcastle-under-Lyme Borough Council.

Executive Summary: Air Quality in Our Area

Air Quality in Newcastle-under-Lyme

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

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

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

Table ES 1 - Description of Key Pollutants

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

The Borough of Newcastle-under-Lyme is in North Staffordshire, with the town of Newcastle-under-Lyme being the major urban area, together with the smaller town of

Kidsgrove. Covering an area of 21,096 hectares (81 square miles) the Borough has a population of 128157. The Borough is in a strategic location between roads running north/south between London and Carlisle, and east/west between Nottingham and Chester.

The main pollutants of concern in Newcastle-under-Lyme, as in most areas of the UK, are Nitrogen dioxide (NO_2) and Particulate Matter (PM). These pollutants are predominantly associated with road traffic emissions, but can also occur from other sources such as emissions to air from both domestic and industrial processes

Several major roads pass through the Borough or converge on the two main towns of Newcastle-under-Lyme and Kidsgrove. These roads are described below:

- The M6, which, passes through the borough running north/south.
- The A500, a major road which links Newcastle-under-Lyme and Stoke on Trent with junctions 15 and 16 of the M6.
- The A34, A52, A525, A523 and A53, which pass through Newcastle-under-Lyme.
- The A50, A5011 and A34, which pass through Kidsgrove.

In 2025, Newcastle-under-Lyme Borough Council used diffusion tubes and an air quality monitoring station to measure pollutants, namely nitrogen dioxide. Maps illustrating the locations of all the monitoring locations used in 2025 can be found in Appendix D.

The diffusion tubes were deployed to 78 locations across the district during 2025. These are small tubes that are attached to fixed positions (e.g. a lamp post). Diffusion tubes take Nitrogen dioxide samples over a one-month period, are collected and sent off to a laboratory for analysis. Diffusion Tubes are exchanged every month. They are widely used for indicative monitoring across the UK to highlight areas that may have air quality issues.

A continuous (automatic) air quality monitoring station was located adjacent to the Queens Gardens upon Barracks Road, but this was not operational during 2025.

Previous years monitoring results highlighted areas of concern within the district because of emissions from road traffic vehicles. An air quality objective requires nitrogen dioxide levels to be below an annual average of 40µg/m^3. To improve air quality in areas where legal limits were likely to be exceeded, four Air Quality Management Areas (AQMAs) were originally declared in January 2015 in relation to high nitrogen dioxide (NO_2) concentrations. These were:

- AQMA 1: Kidsgrove (the A50 corridor through the centre of Kidsgrove). This AQMA was revoked on 20th August 2025, with the revocation order sealed on 27th February 2026.
- **AQMA 2: Newcastle-under-Lyme Town Centre (the town Centre ring road and A53 to Basford Bank)**
- AQMA 3: Maybank-Wolstanton-Porthill (Porthill Bank and Wolstanton & May Bank High Streets). This AQMA was revoked on 20th August 2025, with the revocation order sealed on 27th February 2026.
- AQMA 4: Little Madeley (a single property immediately adjacent to the M6). This AQMA was revoked on the 6th September 2023 with the revocation order sealed on 1st April 2025.

Maps showing the location and boundaries of these AQMAs are provided within Appendix D.

While Newcastle-under-Lyme Borough Council does not actively monitor, or measure, particulate matter concentrations, the Council and its partners do actively work towards minimising, and reducing, concentrations of particulate matter within the borough.

While road traffic is the most significant source of pollution to the Borough, other sources including industrial and domestic emissions, will contribute to air quality. Certain industries (Permitted Processes) are statutorily regulated by the Borough Council in accordance with

the Environmental Permitting (England and Wales) Regulations 2016 [1]. Currently there are 39 Part B and 3 Part A2 processes within the Borough. Further information regarding these activities can be obtained from environmental_health@newcastle-staffs.gov.uk.

In addition, the Environment Agency is statutorily responsible for the regulation of Part A1 processes, also under the Environmental Permitting (England and Wales) Regulations 2016. One of these, Walleys Quarry landfill, has given rise to significant concern to residents of the borough. Work has been carried out by the Borough in conjunction with the Environment Agency, UK Health Security Agency, and Staffordshire County Council Public Health, to investigate complaints concerning emissions from this landfill, which is situated approximately 1.3 kilometres to the West of AQMA 2: Newcastle-under-Lyme (town centre).[2] The Environmental Permits for other activities regulated by the Environment Agency can be found upon their Public Register [3].

Complaints relating to emissions from this landfill have been received from properties across the Borough. Although methane is the primary component of landfill gas, a number of other compounds, including nitric oxides are associated with the breakdown of waste substances.

Four mobile monitoring stations were deployed to continuously monitor air quality in the proximity of the landfill. Two of these were withdrawn prior to the 2025 monitoring period. A third, situated at the sewage pumping station upon Silverdale Road was withdrawn on the 1st July 2025. Mobile Monitoring Facilities (MMF's) were deployed to Galingale View and to the south of Maries Way operated throughout the 2025 monitoring period. These have the capability to monitor some of the pollutants which are relevant to Local Air Quality Management, notably NO_2, SO_2, PM_{10}, $PM_{2.5}$ and benzene. The monitoring stations are managed and operated by the Environment Agency national air quality team

[1] The Environmental Permitting (England and Wales) Regulations 2016 (legislation.gov.uk)

[2] https://consult.environment-agency.gov.uk/west-midlands/walleys-quarry-landfill-sliverdale/

[3] Public registers (data.gov.uk)

and the data from these stations is available via a dedicated Air Quality webpage. Information upon this page states that *the monitoring results for particulate matter, nitrogen dioxide and sulphur dioxide were below UK air quality objectives. Levels of benzene, toluene, ethylbenzene and xylene were below health-based guidance values.*

The landfill has been mentioned here as, due to the significant concern locally, there is likely to be an expectation from the public that the report refers to emissions from it. Regular updates regarding the landfill are provided upon Newcastle-under-Lyme Borough Council`s website.

Actions to Improve Air Quality

Whilst air quality has improved significantly in recent decades, and monitoring within Newcastle-under-Lyme indicated that there was compliance with the air quality objectives in 2025, continued action is needed maintain the reductions achieved and to protect people and the environment from the effects of air pollution and to enable the AQMA 2 – Newcastle-under-Lyme Town Centre to be eventually revoked.

This will be achieved through a combination of actions from national and local government. Some key national plans and strategies relating to national targets and measures are described below. Relevant plans and strategies relating to local measures are described elsewhere in this report.

The current Reform UK administration will be reviewing inherited measures against statutory duties, evidence, affordability, operational practicality and value for money. The Council will not pursue non-statutory Net Zero targets or mandate particular vehicle or heating technologies unless required by law.

Defra's Environmental Improvement Plan[4] sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term targets for fine particulate matter ($PM_{2.5}$), the pollutant of most harm to human health. The Air Quality Strategy[5] provides more information on local authorities' responsibilities to work towards these new targets and reduce fine particulate matter in their areas.

The Road to Zero[6] details the Government's approach to reduce exhaust emissions from road transport, in balance with the needs of the local community. This is important given that most Air Quality Management Areas (AQMAs) are designated due to elevated pollutant concentrations related to transport emissions.

In Staffordshire there are currently two tiers of local government comprising of Staffordshire County Council and Newcastle-under-Lyme Borough Council. Staffordshire County Council are responsible for highways and transport related matters and so the measures described in this report which reduce air pollution arising from road transport are typically owned and delivered by them.

Where this report refers to Staffordshire County Council sustainability, Net Zero or decarbonisation activity, it should be noted that this is partner-led activity and not Borough Council policy. Such activity may have associated local air-quality benefits, but inclusion in this ASR does not create a future Borough Council commitment to those wider policies.

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

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

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

The partner led work described in this report may provide wider benefits for Newcastle-under-Lyme, its residents and businesses, including improved connectivity, reduced congestion, more attractive infrastructure and better bus services. These initiatives are presented as additional voluntary travel choices where they are practical, affordable and suitable for individuals and businesses. The Council recognises that private vehicles remain essential for many residents and journeys across the Borough.

Newcastle-under-Lyme Borough Council has a significant role to play in improving local air quality including through control of the built environment through the planning regime, regulation and control of local emissions sources and by management of emissions from its own activities. The Borough Council also works closely with the County Council to help achieve common aims.

The measures and actions described within this report are those which were carried out, approved, or materially progressed within the 2025 reporting period. Following local elections in May 2026, leadership and control of Newcastle-under-Lyme Borough Council changed to Reform UK. The current administration is reviewing inherited measures against statutory air-quality duties, evidence, affordability, operational practicality and value for money. The Council will not pursue non-statutory Net Zero targets or mandate particular vehicle or heating technologies unless required by law. Future local action will focus on maintaining legal air-quality standards, protecting residents' health, robust monitoring, proportionate intervention where required, and delivering value for money.

Some key local actions to improve air quality already taken in 2025 are described within table 1.1, below:

Table 1.1 - Local actions to improve air quality achieved in 2025.

PROJECT	ACTION	OUTCOME/ IMPACT
Ministerial Direction number 2. Mandating compliance with the EU's NO_2 annual mean limit value (which applies to the majority of areas which are publicly accessible) in the shortest possible time for the A53 from Basford Bank to Victoria Street 	An options appraisal to achieve compliance with the EU's NO_2 annual mean limit value identified that a traffic management scheme involving bus gate restrictions at peak times of the day would achieve compliance in the shortest possible time when compared to a benchmark Clean Air Zone. This has been further reviewed to identify non traffic related alternative schemes with measures in the neighbouring city of Stoke on Trent form the basis of the North Staffordshire Local Air Quality Plan	An assessment of an alternative scheme to the originally proposed bus gate is in the process of being reviewed for effectiveness to comply with the Ministerial Direction. A full business case has was approved by the Council and has been submitted to DEFRA`s Joint Air Quality Unit (JAQU). Discussions are ongoing and, once a scheme is agreed, a timetable for implementation will be developed.
Promotion of active travel and use of low emission vehicles.	Various projects are being delivered by Staffordshire County Council with the support	

PROJECT	ACTION	OUTCOME/ IMPACT
	of District Councils to promote cycling, walking, use of public transport, car sharing and the use of low emission vehicles. **NB these are partner-led or historical initiatives, are voluntary, and do not create a future Borough Council commitment** These include: • campaigns to tackle vehicle idling near schools where banners, megaphones and leaflets are supplied to schools and children engage drivers directly. • promotion of active school travel plans where schools are provided with information and guidance to enable them to educate pupils and parents and change their mode of travel. The school has the ability to gain accreditation to the modeshift stars scheme. • Social prescribing programme (INTO) where those not confident with walking or cycling are taken on led walks or	These partner-led or historical initiatives are voluntary and do not create a future Borough Council commitment. They provide additional choices where appropriate, while recognising that many residents rely on private vehicles. Lower pollution arising from vehicle emissions near to schools. Reduction of vehicle idling near to schools, promotion of walking and cycling and the reduction of vehicles using the school run. Promotion of active travel to more vulnerable residents to reduce the use of vehicles.

PROJECT	ACTION	OUTCOME/ IMPACT
	given cycling lessons or given 1 to 1 sessions to facilitate active travel. • Wow outreach program to promote safer streets and walking routes to enable active travel.	Promotion of active travel and reduction in the use of vehicles. For further, detailed information see table 2.5.
Reduction of Emission Arising from Borough Council Activities.	During 2025, under the previous administration, the Council trialled electric RCVs, sweepers and vans. Electric HGV procurement has now ceased. Future fleet decisions will be technology-neutral and based on reliability, service resilience, safety, operational need, legal standards, whole-life cost, affordability, available infrastructure and value for money. The Council's previous administration had made a commitment to the installation and use	Reduced emissions of NO_2 and $PM^{2.5}$ within and adjacent to AQMA 2 – Newcastle-under-Lyme Town Centre. Note: The Jubilee 2 site is located within AQMA 2 – Newcastle-under-Lyme Town Centre. The depot at Knutton lane is located just outside the AQMA and many of the vehicles based there will pass through it when in use.

PROJECT	ACTION	OUTCOME/ IMPACT
	of air source heat pumps at the Jubilee 2 Leisure Centre; however, the current administration has decided not to proceed with this inherited scheme.	

Conclusions and Priorities

In 2025, no annual mean NO_2 concentration was found to be greater than 60µg/m^3, which indicates that no exceedance of the 1-hour mean objective was likely at any monitoring location. Furthermore, there were no exceedances of the NO_2 annual mean objective of 40 µg/m^3, and no monitoring location was found to have been within 10% of the objective (i.e. exceeded 36µg/m^3) within 2025. The report does not attribute this improving position to any single measure, nor does it suggest that every inherited policy is necessary to maintain compliance. The focus remains robust monitoring, proportionate action where required, and achieving the earliest lawful revocation of AQMA 2 once the evidence allows.

AQMA 1 Kidsgrove and AQMA 3 Maybank, Wolstanton & Porthill were both revoked during 2025, leaving AQMA 2 – Newcastle-under-Lyme Town Centre as the only active AQMA within Newcastle-under-Lyme.

The two locations, identified in 2024 as being in exceedance of the NO_2 annual mean objective or within 10% of the annual mean objective, namely DT102 (Belong, Lower Street) and DT104 (7 King Street), both fell to well below 10% of the annual mean objective in 2025 .

With the exception of DT76 (11 Brunswick Street), DT102 (Belong, Lower Street) and DT104 (7 King Street), all monitoring locations within AQMA 2 have been consistently below 36ug/ m^3 over the last 5 years. However, as these three locations are dispersed across the AQMA, there is no plan to amend the area of AQMA 2 at present.

Whilst the 2025 monitoring year identified no exceedances within 2025, and studies carried out to support the development of the air quality action plan showed that the natural year of compliance would be 2026, AQMA 2 –Town Centre cannot be revoked until

there have been three, or more years of continuous compliance and there is confidence that that compliance will be sustained over the long term, with continued efforts.

The NO_2 concentrations, and five year trends, at the monitoring sites across the borough indicated that there was no need to propose any new AQMAs.

With regards to general trends, an increase in NO_2 annual mean concentration was observed from 2021 to 2022, in some locations this continued until 2023, as traffic flows returned to normal following the Covid-19 pandemic; but, since then there is a general trend of reduction of NO_2 concentrations across virtually all monitoring locations since 2021. However, the rate of reduction appears to have slowed at many monitoring locations in 2025 and concentrations as some monitoring locations are consistent with those found in 2024.

The slight increases in both urban background sites, DTUB1 (Hartington Street, Wolstanton) and DTUB2 (4 Sneyd Crescent, Westlands), observed within 2024 have not been seen in 2025 with both locations showing concentrations broadly similar to those found in 2024.

No monitoring data was obtained for location DT100 during 2024 as the site was not accessible due to construction works. These works have now been completed, and diffusion tubes have been deployed to the location during 2025.

The automatic monitoring carried out at CM1 (Queens Gardens) was discontinued at the end of the 2024 monitoring period for the reasons described within appendix C and no automatic monitoring data was obtained during 2025.

At present, no changes to the monitoring regime are proposed for the 2026 monitoring period. However, due to building usage changes, it has been identified that the location of some diffusion tubes no longer meet the recommendations for site selection given within

`Diffusion Tubes for Ambient NO2 Monitoring: Practical Guidance`. Relocation of these monitoring locations is therefore being considered.

The Council intends to publish a revised Air Quality Action Plan by, October 2026. The recommendations made by DEFRA within their appraisal report (Ref AQAP24-249) have been actioned and details of air quality studies relating to the development plan are summarised within this report. AQMAs 1 and 3 were revoked within the reporting period and so the revised AQAP will relate solely to AQMA2.

This ASR does not propose or support a Clean Air Zone, ULEZ-style charging, road-user charging, workplace parking levies or similar restrictions on ordinary motorists.

The 3 outstanding actions of the current AQAP are:

- K1 Redevelopment of Kidsgrove Railway station and surrounding areas to create transport interchange
- MD2 Ministerial directive to reduce NO_2 at Basford Bank
- BW9 Review appropriate, voluntary and technology-neutral initiatives that may support legal air-quality compliance.

Newcastle-under-Lyme's priorities for the coming year are:

- Priority 1: Maintaining nitrogen dioxide concentrations below the statutory limit;
- Priority 2: Securing sustained compliance to enable the eventual revocation of AQMA 2;
- Priority 3: Addressing identifiable sources of pollution through proportionate measures;
- Priority 4: Enforcing environmental permits and investigating legitimate complaints; and

- Priority 5: Working with relevant partners where action is practical, effective and represents value for money.
- Priority 6: to complete and submit an updated AQAP 2026-2030 during 2026.

No new development which is anticipated to result in any exceedances has been proposed, or commenced, within Newcastle-under-Lyme in 2025.

Newcastle-under-Lyme Borough Council will continue to work with partners, such as Staffordshire County Council, to ensure ongoing compliance with the Air Quality Objectives and to improve air quality in the area as far as possible.

How to get Involved

Everyone has the ability to consider practical steps that may improve the quality of the air they breathe. The options below are voluntary and should be considered only where they are practical, affordable and suitable for the individual, household or business. The Council recognises that private vehicles remain essential for many residents and journeys across the Borough. Practical steps such as avoiding unnecessary idling and keeping vehicles properly maintained remain useful.

Things to consider, and sources of further information, are given below:

When Commuting

- Where practical, affordable and suitable, consider leaving the car at home for some journeys.
- Turn off engines when the vehicle is idling.
- Consider car sharing your journey - further guidance can be found at Liftshare
- When replacing a vehicle, consider the most suitable efficient technology for your needs, budget and journeys.
- Maintain and service vehicles to keep them running efficiently
- Use a travel planning app to identify the best time to travel and to avoid congestion,

- Work from home, or avoid travelling at peak times, where this is practical and suitable.
- Use public transport where it is practical, affordable and suitable.

Walk and Cycle

- Where practical, affordable and suitable, walking or cycling may be an option for some shorter journeys.
- Get help to take up walking and cycling with free coaching and free walking and cycling sessions by joining INTO.

On the School Run

- Take turns with friends, neighbours, or family to drive or walk the children to school.
- Check whether your school has a travel plan and whether there is a park & Stride scheme in operation.
- Where practical, affordable and suitable, families may consider walking, cycling or scooting to school. Learn to ride safely with Bikeability and check if there is walking bus
- Further guidance can be obtained from Active and Sustainable School Travel

Workplace energy, transport and infrastructure

Bespoke workplace travel plans are available to support employees and employers use alternative methods of travel into work and use of vehicles for work that may improve air quality. For further information visit Staffordshire County Council`s Active travel and air quality in the workplace webpages.

Office for Low Emission Vehicles

Grants may be available to support your business in purchasing alternative vehicles and further information can be found from the following organisations as well as your energy supplier.

- The Office for zero emission vehicles
- The Energy Saving Trust

energy saving trust

- The Staffordshire and Business Network

Reducing Emissions from Your Home

- Seek advice on support that may be available for insulation, heating efficiency or reducing energy costs where appropriate to your home and circumstances.
- Keep solid fuel burning stoves and fireplaces well maintained, make sure that wood burners are exempt for use in smoke control areas and that you follow the manufacturer`s instructions when using them.
- Visit burnbetter for advice regarding the use of solid fuel burning appliances.
- Where you can burn wood legally, use ready to burn wood from a Woodsure Certified Supplier. This will make any appliance more efficient, will reduce emissions of particulate matter, will reduce damage to your stove and chimney and will reduce the risk of a chimney fire.

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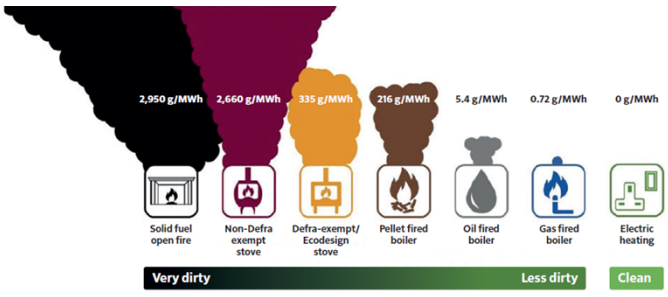

Note: The air pollution emissions will also depend on the age of the appliance, how it is maintained and used and the fuel burned (for example, dry or wet wood).

The following definitions were used: *Solid fuel open fire*: wood burned in an open fire. *Non-Defra-exempt stove*: wood in a conventional stove. *Defra-exempt/Ecodesign stove*: wood in an advanced/ecolabelled stove. *Pellet fired boiler*: wood in pellet stoves and boilers. *Oil fired boiler*: fuel oil in a medium (>50KWth <1MWth) boiler. *Gas fired boiler*: natural gas in a small (≤50kWth) boiler.

Source: Emission factors taken from EMEP 2019 Guidebook[12] (1A4 small combustion tables). Adapted from the Clean Air Strategy[13] with updated data

- Do not burn waste and treated wood (e.g. old furniture) as it can emit harmful emissions.

- Your energy supplier may offer grants to insulate your home. Staffordshire County Council currently offers grants tYour energy supplier may offer grants to insulate your home. Staffordshire County Council currently offers grants to make you home warmer and help reduce heating costs, visit for more information. for more information.
- Avoid using bonfires to dispose of waste and never burn household waste, especially plastics, rubber and treated timber.

Know About Air Quality in Your Area.

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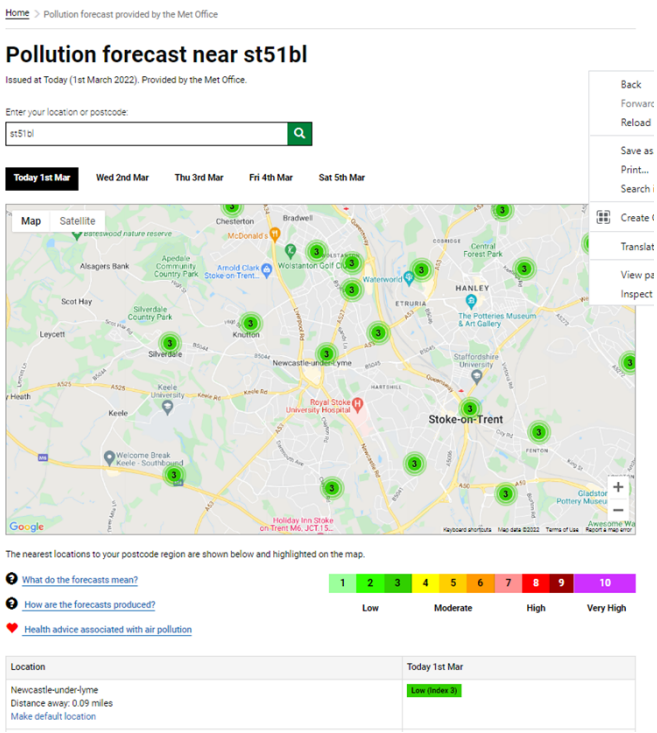
- General information and air quality forecasts can be obtained from DEFRAs via Uk-Air.

  The forecasting gives information short term air levels in a localised area, and supplements this with health advice and air pollution alerts for ‘at risk individuals’ and the general public. You can use this to identify times to avoid doing things outside or areas to avoid as certain times of the day.



Improve Air Quality at Home

- Use water-based or low solvent paints, glues, varnishes and wood preservatives, look for brands with a low VOC content.
- Make sure your home is well ventilated especially during DIY or cleaning.
- Have your gas cooker and central heating system checked regularly to avoid risking exposure to toxic carbon monoxide. Make sure you use a Gas Safe Registered engineer.

Have your Say

- Newcastle-under-Lyme Borough Council and Staffordshire County Council consult the public in relation to proposed changes to policies, plans and action plans relating to air quality and transport. Monitor the Council`s websites and social media pages and make comments to help to improve the outcome of the consultation and the delivery of improvements.

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Figures

Tables

1 Local Air Quality Management

This report provides an overview of air quality in Newcastle-under-Lyme during 2025. 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 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 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 Newcastle-under-Lyme to improve air quality and any progress that has been made.

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

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

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

A summary of AQMAs declared by Newcastle-under-Lyme can be found in Table 2.1. The table gives a description of the **single** AQMA that is currently designated within Newcastle-under-Lyme.

Appendix D provides maps showing the location and extent of the AQMA and the locations where monitoring is carried out. Appendix D also shows the location and extent of three former AQMAs which existed within Newcastle-under-Lyme.

All of the AQMAs within Newcastle-under-Lyme were designated in relation to exceedance of the NO_2 annual mean air quality objective. This objective was finally met within AQMA 2 – Newcastle-under-Lyme Town Centre in 2025; but was exceeded each year prior to that. The objective has been consistently met elsewhere within Newcastle-under-Lyme for over five years.

AQMA 4 – Little Madeley was formally revoked on the 6th of September 2023, with the order sealed on the 1st April 2025 after an extended period of compliance with the air quality objectives. AQMA 1 – Kidsgrove, and AQMA 3 – 'Maybank, Wolstanton and Porthill' were revoked on the 20th of August 2025, with the orders sealed on the 27th February 2026.

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?	Highest Concentration: Declaration	Highest Concentration: Current Year	Number of Years Compliant with Air Quality Objective	Name and Date of AQAP Publication	Web Link to AQAP
AQMA 2: Newcastle-under-Lyme Town Centre	15/01/2015	NO2 Annual Mean	Exceedance of the NO_2 annual mean objective. Covers Newcastle-under-Lyme Town Centre including the ring road A53, King Street, George Street and London Road to the boundary with the City of Stoke on Trent AQMA	YES	58.8	34.8	1	Newcastle-under-Lyme Air Quality Action Plan 2019 – 2024	AIR QUALITY ACTION PLAN 2019-24

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

☒ **Newcastle-under-Lyme Borough Council confirm that all current AQAPs have been submitted to Defra .**

The current Air Quality Action Plan (2019-2024) is available at AIR QUALITY ACTION PLAN. An updated Air Quality Action Plan, proposing actions to be taken to improve air quality between 2024 and 2029 was submitted to DEFRA for approval in November 2024. The subsequent appraisal report, reference AQAP24-2497, received by the Council made several recommendations for further work to be carried out. These recommendations have now been completed, and a draft Air Quality Action Plan (2026-2030) has been prepared. The assessments and findings carried out as part of the development of the AQAP are described within appendix C.

The draft AQAP has yet to undergo formal consultation and to be approved by the Licensing & Public Protection Committee. Once approved, it is anticipated that the revised AQAP will be submitted to DEFRA later in 2026.

Work carried out to support the development of the AQAP predicted the expected year of natural compliance (i.e. the year that compliance with the target level would be achieved without including the measures in the Air Quality Action Plan) to be 2026 (although monitoring shows that compliance was achieved in 2025).

Newcastle-under-Lyme Borough Council do not currently propose to declare any new AQMA's, or to amend, or revoke AQMA 2. It is anticipated that AQMA 2 will be revoked within the lifetime of the AQAP once three years of continuous compliance have been achieved and suitable evidence is available to suggest that exceedances will not occur in the future.

Action to improve local air quality is being delivered through several plans in conjunction with partners (particularly Staffordshire County Council (SCC)) as outlined below. These initiatives help deliver compliance with relevant air quality objectives and provider far wider benefits to the Borough, its residents, business and visitors to the area.

Staffordshire County Council`s Local Transport Plan 2026, approved in December 2025, considers the practical actions that can be taken to improve connectivity within the Borough and across Staffordshire. It aims to increase the number of travel options available to residents and businesses and make it easier for people to walk, cycle, and use public transport. However, it does recognise the need for, and importance of, private cars. The plan aims to deliver cheaper, safer and more environmentally aligned options for people and businesses within the area. It also aims to increase levels of digital connectivity within the county to enable people to access certain jobs and services without the need to physically travel, helping roads flow more smoothly, with less congestion. It promotes children walking, wheeling and cycling to school and aims to create transport infrastructure which connects people to jobs, and businesses to markets resulting in a prosperous area which is a vibrant place to live, work, and visit.

Staffordshire County Council`s Bus Service Improvement Plan 2024-2050 (BSIP) aims to provide a bus services which is accessible for the mobility impaired; cheaper than car travel, which takes people where they want to go at a time that is right for them, providing early morning and late evening services for the shift worker; accessible vehicles for the mobility impaired and a modern bus fleet (with access to Wi-Fi) for the person who wants to work during their commute.

It aims to ensure that bus journeys are expeditious and run on-time, fares which are simple to understand and cheaper than car travel, that service information is widely available and accessible to all users, that bus infrastructure is accessible, safe and well-maintained and that buses are accessible, with high-quality on-board environments.

By encouraging bus use, the BSIP supports the Staffordshire Health and Wellbeing Strategy: 2022-2027 and improves the health and quality of life of residents by improving local air quality and increasing physical activity levels (as the first and last leg of bus travel generally requires the user to walk or cycle).

The BSIP also supports the Staffordshire Visitor Economy Action Plan: 2022-2025 by enabling visitors to visit the area and encouraging visitors to stay longer. Is also links in with the Local Staffordshire Walking and Cycling Infrastructure Plan: 2021-2031 as every journey on a bus, tends to start and end in a walk or cycle.

Staffordshire County Council`s Local Cycling and Walking Infrastructure Plan 2021-2031 aims to remove barriers to uptake of walking and cycling, provide appropriate infrastructure to increase connectivity to employment, education and leisure sites to increase the number of safe and reliable options available for making short journeys. It aims to provide attractive, comfortable, direct, safe, coherent routes and enable positive changes in modal shift towards walking and cycling, reducing potential travel costs to residents and delivering inherent health benefits.

2.2 Progress and Impact of Measures to address Air Quality in Newcastle-under-Lyme

The main comments contained within DEFRA's appraisal of last year's ASR, reference ASR25-2775, are below:

DEFRA Comment	Action Taken by NULBC
1. Some minor formatting errors including consistently not subscripting for terms like 'NO2' and 'µg/m3'. This is a minor issue but should be rectified next year.	Formatting errors have been addressed prior to inclusion of this information within the 2026 ASR.
2. The discussion around the revocation of AQMA 1 and 3 is commended and the justification provided is sufficient to conclude that both AQMAs should be revoked.	AQMAs 1 and 3 were revoked within the reporting period.
3. The response to last year's comment on calculating a local bias factor is welcomed. However, as the national bias factor was used a screenshot of the national bias adjustment factor spreadsheet would also be welcomed.	A screenshot of the national bias adjustment factor spreadsheet has been provided within the 2026 ASR.

4. No tubes were deployed between February and May due to staffing shortages. Whilst this is not ideal, the correct QA/QC procedures were conducted with the annualisation of the data.	Resource was redirected to ensure that diffusion tubes were exchanged each month throughout 2025. This has ensured that data capture across all monitoring locations was greater than 75% and that annualisation of the data was not required.
5. Clear trend graphs have been included which is commended	Similar trend graphs have been included within the 2026 ASR.
6. NULBC's involvement in the AIR PT scheme showcases their continued commitment to QA/QC. One comment would be to include an appendix showing figures with the AIR PT data	AIR PT data has been included within the 2026 ASR.

Newcastle-under-Lyme Borough Council, and its partners delivered a number of measures during the current reporting year of 2025 in pursuit of improving local air quality. More detail on these measures can be found in the current Air Quality Action Plan (2019-2024).

Details of actions within the existing AQAP which have been completed, are in progress or are planned are set out in Table 2.2. with the type of measure and the progress Newcastle-under-Lyme Borough Council have made during the reporting year of 2025. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.2.

Key completed measures are:

- K2 The Kidsgrove Local Transport Package.
- N3 Wayfinding strategy in Newcastle-under-Lyme.
- N7 Ring-road enhanced signage and subway.
- MD 1 Bus retrofit scheme for public bus service between Sandy Lane and A500/A53.
- W1 Improvements to Wolstanton and Porthill Junctions on A500.
- W2 Improvements to Wolstanton and Porthill Junctions on A500 to reduce congestion
- W3 Evaluation of the Etruria valley link road and the provision of appropriate mitigation
- BW4 & BW5 Roll out of the Staffordshire and Stoke on Trent Eco-stars scheme
- BW6 Development of the green travel plan for the Civic Hub development in the town centre
- BW10 Licensing policy review to reduce tail pipe emissions from hackney carriages and private hire vehicles.

N.B. The Licensing policy is currently being reviewed and the requirement for all taxis to have zero emissions by 2035 will be removed.

The following measures have been aborted, or were not taken forwards:

- K3 Review of location of bus stops to facilitate traffic flow around Liverpool Road and The Avenue
- M2 Introduction of hard shoulder running and smart motorway between junctions 15 and 16 of the M6
- BW7 Voluntary quality network partnership with bus operators

- BW8 Development of policies to promote EV charging infrastructure and support alternative vehicle fuelling charges
- HS2 phase 2a route Ensuring that emissions associated with construction and operation do not exceed objectives or limit values
- M1 Consultation on, and Committee approval of the Revocation of AQMA 4 Little Madeley in 2023
- BW11 Transition of Council owned vehicle fleet to zero and low emission vehicles technology (implementation)

The following measures are still in the planning stage or are being implemented

- K1 Redevelopment of Kidsgrove Railway station and surrounding areas to create transport interchange (implementation)
- MD2 Ministerial directive to reduce NO_2 at Basford Bank (planning)
- BW9 Review appropriate, voluntary and technology-neutral initiatives that may support legal air-quality compliance (implementation)
- N9 Subsidised bus travel and green travel plans required for new large scale multioccupancy residential schemes (implementation)
- BW1 Production of a Borough Wide Air Quality Strategy (planning)
- BW2 Production of Air Quality Planning Guidance (planning)
- BW3 Inclusion of air quality related policies within the Newcastle-under-Lyme Local Plan (implementation)

Newcastle-under-Lyme Borough Council worked to implement these measures in partnership with the following stakeholders during 2025:

- Stoke on Trent City Council.
- Staffordshire County Council
- East Midland Railway
- Network Rail

The outstanding, or ongoing, measures which Newcastle-under-Lyme Borough Council's priorities for the coming year:

- K1 Redevelopment of Kidsgrove Railway station and surrounding areas to create transport interchange
- MD2 Ministerial directive to reduce NO_2 at Basford Bank
- BW9 Review appropriate, voluntary and technology-neutral initiatives that may support legal air-quality compliance

The leadership of Newcastle-under-Lyme Borough Council changed to Reform UK following the local elections in May 2026. This may affect the delivery of actions agreed by the previous leadership where those actions do not align with the priorities and direction of the current administration. Any inherited measures will be reviewed against statutory duties, evidence, affordability, operational practicality and value for money.

In particular, BW11 Transition of Council owned vehicle fleet to zero and low emission vehicles technology was being implemented through the Council`s Sustainable Environment Strategy & Delivery Plan (SESDP) 2024. Under the previous administration Newcastle-under-Lyme Borough Council had procured a number of electric vehicles and can use hydrogenated vegetable oil as fuel for vehicles rather than diesel, when economically viable to do so. The Council’s new administration has decided that the inherited plan for the future procurement of electric HGV will now not continue. Future vehicle procurement should instead be technology neutral and based on operational suitability, reliability, whole-life cost, affordability, available infrastructure and demonstrable environmental benefit.

Progress on the following measures has been slower than expected:

K1 – Kidsgrove Railway Station Transport hub including parking and improved bus/rail interchange. Delivery of this redevelopment has been delayed as poor ground conditions arising from historic land use may result in additional costs of £2 million. Additional

sources of funding for this have not been available. Therefore, the project, as originally envisaged, could not be delivered and the plan has needed to be revised.

The existing station is now to be retained and refurnished. The car park is to receive a small extension and a revised layout. Network Rail is currently reviewing the outline plans and East Midland Railway are progressing to the detailed design state. On-site works at the station are expected to commence in 2027.

The redevelopment will also include introduction of one-way systems upon Market Street, Station Road and The Meadows, highway improvements at Gloucester Road and Newchapel Road, improvements at Heathcote Street car park and the building of enterprise units and parking upon Meadows Road.

The works, funded through the Kidsgrove Town Deal, aim to make the town centre more attractive, easier to use and better connected and will take place during summer and autumn 2026. The programme aims to address long-standing issues raised by residents and businesses including parking, traffic flow and the appearance of key town centre areas.

MD2 – Compliance with Ministerial directions to Improve air quality at Basford Bank. Ministerial Directions were served upon Newcastle-under-Lyme Borough Council and Stoke City Council requiring further evaluation of measures to achieve compliance with the Ambient Air Quality Directive requirements for Nitrogen Dioxide in the shortest possible time. This is for a short section of the A53 at Basford Bank, on the border of Newcastle-under-Lyme and Stoke-on-Trent. Delivery of this measure has been delayed, originally by the impact of the Covid 19 pandemic and then further to allow several options to be considered. An assessment of an alternative scheme has been submitted to DEFRA`s Joint Air Quality Unit for approval. Once a scheme is agreed, a timetable for implementation will be developed.

BW1 Development of a Borough Wide Air Quality Strategy - this measure has not progressed due to limited resources being available within the Environmental Protection Team. The resource issues have now eased, and this measure can now be progressed,

however, it will be subject to separate member approval, with appropriate scrutiny for discretionary measures.

BW2 and BW3 - Newcastle-under-Lyme Borough Council`s Local Plan 2020-2040. The local Plan is the master guide determining exactly where new homes, businesses, and infrastructure should be located and for determining all planning applications. The Local Plan includes policy SE1 which relates to air quality. The Plan also includes a number of allocations to support the delivery of the Plan vision and objectives (as described within table 2.5). The Plan was adopted at Full Council on 8th July 2026. The measures associated with the local plan BW1, BW2 and BW3 described within tables 2.2 and 2.4 will therefore be developed.

Newcastle-under-Lyme anticipates that the measures stated above and in Table 2.2 will enable ongoing compliance in AQMA 2 – Newcastle-under-Lyme Town Centre. Compliance was achieved in 2025 but must now be maintained for three consecutive years to enable revocation of AQMA 2

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
K1	Redevelop Kidsgrove Railway Station and surrounding area to create transport interchange and improve walking, cycling and public transport access.	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	2015	2028	Kidsgrove Town Deal Board & East Midlands Trains	Developers & highway infrastructure funding	Partially Funded	£1 million - £10 million	Planning	Has potential to increase patronage / increased use of public transport	Delivery of measure	Delayed.	Poor ground conditions may result in additional costs of £2 million. Funding not available and the original project was undeliverable. The plan has been revised with elements being commenced in mid 2026. Estimated completion date revised to 2028.
MD 2	Comply with Ministerial Direction to reduce NO_2 in Basford Bank Area served on NULBC in the soonest possible timeframe	Traffic Management	Other	2019	Currently unknown	National Highways / Staffs County Council / Stoke on Trent City Council and Newcastle-under-Lyme Borough Council Environmental Health	DEFRA grant (100%)	Funded	£1 million - £10 million	Planning	EU NO_2 Annual mean achieved in shortest possible timescale	Compliance with EU NO_2 limit value	Covid 19 has affected initial compliance date. Several options appraisal undertaken, and preferred option of non-traffic management solution was submitted to DEFRA -JAQU for approval at the end of 2024. Once a scheme is agreed, a timetable for implementation will be developed.	Alternatives to use of a clean air zone or bus gate have been identified but need to be agreed with JAQU
BW 9	Review appropriate, voluntary and technology-neutral initiatives that may support legal air-quality compliance	Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	2016	Ongoing	Newcastle-under-Lyme Borough Council, Staffordshire Districts and Staffordshire County Council	OLEV, National Highways & 3rd party funded	Funded	£500k - £1 million	Underway	Reduction in emissions	Details of technologies and initiatives	Electric vehicle charging now provided upon carparks within the Borough	
K2	Traffic light optimisation to reduce congestion along Liverpool Road and prevention of right turn into Heathcote Street from A50	Traffic Management	UTC, Congestion management, traffic reduction	2016	2021	Staffordshire County Council	Staffordshire CC	Funded	£50k - £100k	Completed	Reduced vehicle emissions	Delivery of measure	Completed	Community support / Funding. Scheme to be revised from original proposal to allow right turn.
K3	Review location of bus stops to facilitate traffic flow around Liverpool Road / The Avenue	Traffic Management	UTC, Congestion management, traffic reduction	2018	2020	Staffordshire County Council	Staffordshire County Council	Funded	£10k - 50k	Aborted	Reduced vehicle emissions	Delivery of measure	Postponed pending review of monitoring results	Community support Objection from a resident has caused the scheme to be withdrawn for time being. We will monitor the impact of the

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
														Heathcote Street scheme on air quality, before we decide whether we need to pursue delivery of this proposal
N3	Wayfinding strategy Newcastle-under-Lyme Town Centre and outlying areas for walking and cycling	Promoting Travel Alternatives	Promotion of walking	2016	2025	Lead by Newcastle-under-Lyme Borough Council with support from Staffordshire County Council, Sustrans and Town Centre Business Improvement District	Future High Street Fund	Funded	£50k - £100k	Completed	Not quantified	Delivery of strategy	Cycling corridor from Stoke Station to Keele University delivered	
N7	Ring-Road enhanced signage & subway improvements	Traffic Management	Other	2016	2021	Lead by Newcastle-under-Lyme Borough Council with support from Staffordshire County Council, Sustrans and Town Centre Business Improvement District	Staffordshire CC	Funded	£10k - 50k	Completed	Reduced vehicle emissions	Delivery of strategy	Strategy and plans still under development. Improvements in air quality and congestion considered as a priority along with walking cycling and public transport connectivity.	Completed signage and partial subway enhancements
N9	RTPI and subsidised bus travel / green travel plans sought for large-scale multi occupancy residential accommodation. Town centre expected to accommodate 3000 students for local universities	Policy Guidance and Development Control	Other policy	2016	ongoing	Staffordshire County Council with support via conditions on planning applications for inclusion in high occupancy student / keyworker accommodation	Staffordshire County Council through Section 106 contributions and Future High Street Fund	Partially Funded	£100k - £500k	Implementation	Increased bus journeys from stops	Reduced vehicle emissions	A number of developments within the town centre are capitalising on proximity to public transport links, cycling infrastructure improvement on development and in network sought through planning. Travel planning sought via planning and monitored via county highways. Reduced rate bus passes for university students promoted.	Financial viability of development schemes to support required S106 / Resistance from developers.
MD 1	Ministerial Direction to implement bus retrofit scheme for public bus service using A53 between Sandy Lane and A500/A53 Roundabout at latest by 2021 and in the soonest possible timeframe	Promoting Low Emission Transport	Other	2018	2020	NULBC / First PMT / JAQU	DEFRA grant (100%)	Funded	£100k - £500k	Completed	EU NO_2 Annual mean exceedance non-compliance reduced by 1 year.	23 Buses retrofitted by end of 2020	Completed	
W1	Improvements to Wolstanton and Porthill Junctions on A500 to reduce congestion	Traffic Management	UTC, Congestion management, traffic reduction	2016	2021	National Highways	Highways Agency	Funded	> £10 million	Completed	Reduction in congestion / improved journey times	Modelling of air quality impacts and monitoring	Completed in 2021	Funding identified by HE. Project flagged as high risk for air quality along A500 due to exceedance of EU action level

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
W2	Short term routing strategy to mitigate impact of congestion associated with works to A500	Traffic Management	UTC, Congestion management, traffic reduction	2019	2021	National Highways / Staffs County Council / Stoke on Trent City Council and NULBC Environmental Health	Highways Agency	Funded	£100k - £500k	Completed	Potential short term negative impact during build	Modelling of air quality impacts and monitoring	No negative impacts identified during build	Negative impacts not identified through monitoring or congestion impacts
W3	Evaluate the impact of the Etruria Valley Link Road in the May Bank, Porthill, Wolstanton area and provide appropriate mitigation	Traffic Management	Strategic highway improvements,	2010	2022	Lead by Stoke on Trent City Council with planning application to Newcastle-under-Lyme Borough Council/ Staffordshire County Council involved	Stoke on Trent City Council scheme	Partially Funded	£10k - 50k	Completed	unclear	Modelling of air quality impacts and monitoring	Minor adverse impact predicted but no exceedances identified since completion of the road	Potential negative effects on Maybank Porthill, Wolstanton AQMA. Potential to improve AQ in Stoke on Trent at Basford Bank where hourly mean NO_2 is being exceeded. Scheme has the potential to add a positive contribution to mitigation measures in this area Monitoring will continue in both areas for at least 5 years post opening to evaluate success.
M1	Continue to monitor NO2at relevant location in Little Madeley	Other	Other	2010	2023	Newcastle-under-Lyme Borough Council Environmental Health	Newcastle-under-Lyme Borough Council	Funded	< £10k	Completed	As per reported results	Monitoring	Compliance demonstrated since 2016. Consultation on the AMQA revocation is complete and the Revocation Order drafted.	Nil
M2	Engage with National Highways concerning proposals to introduce smart managed motorway / hard shoulder running in Madeley area between junctions 15 and 16 of the M6 motorway	Traffic Management	Other	2010	2032	Lead by National Highways	National Highways	Not Funded	< £10k	Not taken forward	Has potential to reduce congestion and vehicle emissions	Project delivered	Not yet commenced	Scheme not yet identified. Sections either side of junctions 15 and 16 of the M6 are being smart managed with hard shoulder running. Local geography is an issue to identifying appropriate solutions
BW 1	Borough Wide Air Quality Strategy	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2019	2028	Newcastle-under-Lyme Borough Council Environmental Health	Newcastle-under-Lyme Borough Council	Not Funded	< £10k	Planning	Reduction in emissions	Strategy in place	Funding secured, planning phase	Resource issues within the Environmental Protection Team have resulted in delay. This issue has been addressed and the measure can now be progressed.
BW 2	Air Quality Planning Guidance	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2016	2028	Newcastle-under-Lyme Borough Council Environmental Health	Newcastle-under-Lyme Borough Council	Not Funded	< £10k	Postponed	Reduction in emissions	Strategy in place	Not yet commenced	The Council has decided to develop its own Local Plan and the planning guidance will sit alongside this as a material document.

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
BW 3	Inclusion of air quality related policies in the Newcastle-under-Lyme Local Plan	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2016	2028	Newcastle-under-Lyme Borough Council Environmental Health and Planning	Newcastle-under-Lyme Borough Council	Not Funded	< £10k	Plan under development	Reduction in emissions	Policies in JLP	Plan completed but not yet adopted	The Council has decided to develop its own Local Plan and relevant policy (SE1) has been included.
BW 4	Staffordshire and Stoke on Trent Eco-Stars	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	2015	2020	Staffordshire Local Authorities	Staffordshire LA's	Funded	£500k - £1 million	Completed	Reduction in emissions	Reduced vehicle emissions	Scheme has come to an end in Staffordshire. Several local and national operators including LA's have been appraised under the initiative	Slow take up by operators across County
BW 5	Eco Stars award for Council Street-Scene and Waste fleet	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	2015	2019	Newcastle-under-Lyme Borough Council Street Scene Division	Staffordshire LA's	Funded	£500k - £1 million	Completed	Reduced vehicle emissions	Fleet achieves 5* rating	Implementation on-going	4* Ecostars award with action plan to move to 5*
BW 6	Green Travel Plan for new Civic Hub development in Town Centre	Promoting Travel Alternatives	Workplace Travel Planning	2015	2017	Lead by Staffordshire County Council as building owner in conjunction with Borough Council, Police, Library Service, Social Services, Aspire Housing	Newcastle-under-Lyme Borough Council	Not Funded	< £10k	Completed	Reduced vehicle emissions	Completed	Completed 2019.	Now in monitoring phase
BW 7	Voluntary Quality Network Partnership with bus operators	Alternatives to private vehicle use	Other	2016	2019	Staffordshire County Council / Stoke on Trent City Council/ Local Bus Companies	Staffordshire County Council as Highways Authority	Not Funded	£50k - £100k	Aborted	Reduced vehicle emissions /	Voluntary quality network operative across area	Aborted	Requires commitment from bus operators and councils. Decline in bus passenger numbers and services affects financial viability for improvements. Local operators use older fleet vehicles across area.
BW 8	Develop policies to promote EV charging infrastructure and support alternative vehicle fuelling technologies	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2019	NA	Newcastle-under-Lyme Borough Council / Staffordshire County Council	Newcastle-under-Lyme Borough Council	Not Funded	< £10k	Aborted	Reduction in emissions	Planning Related EV policies in place	Policy drafted	Superseded by changes to Building Regulations in May 2022
HS2 Phase 2a route	Ensure that emissions associated with construction and operation including off network effects do not cause exceedances of objectives or limit values	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	2017	2032	HS2 and contractors / Newcastle-under-Lyme Borough Council	HS2 and contractors	Funded	£1 million - £10 million	Aborted	Emissions do not breach objectives or limit values	Emissions do not breach objectives or limit values	Discussion to date have identified that HS2 and contractors have assessed air quality impacts and have Environmental Minimum Standards, Construction Plans and monitoring plans in place	Advance works to commenced in 2021 with route construction anticipated to commence by 2026 and coming into operation by 2033

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

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy[7], 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. As shown in table 2.3 below, it is estimated that in Newcastle-under-Lyme between 2020 and 2024, 4.9% of all deaths of those aged over 30 can be attributed to exposure to $PM_{2.5}$, compared to 5.5% across England. As shown in table 2.4, it is estimated that 70 deaths in in people over 30 years old were attributable to $PM_{2.5}$ 2024 (equivalent to 5% of the total for that year)

Overall, the estimated cost to individuals and society is more than £20 billion annually for the UK.

Table 2.3 Estimated average number of deaths by local authority area attributable to $PM_{2.5}$ within Staffordshire for adults over 30 between 2020 to 2024

District/County	Percentage
Newcastle-under-Lyme	4.9%
Stafford	4.8%
East Staffordshire	5.2%
South Staffordshire	5.0%
Lichfield	5.2%
Staffordshire Moorlands	4.8%
Cannock Chase	5.2%
Tamworth	5.5%
Stoke on Trent	5.6%
Staffordshire County	5.1%
England	5.5%

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

Table 2.4 Public Health Outcomes Framework Indicator 3.01- Fraction of annual all cause adult mortality attributable to anthropogenic (human made) particulate air pollution (measured as fine particulate matter, $PM_{2.5}$) for Staffordshire Authorities 2020 to 2024

	2020			2021			2022			2023			2024		
District/County	Deaths - all causes persons 30+	%*	Estimated attributable deaths	Deaths - all causes persons 30+	%*	Estimated attributable deaths	Deaths - all causes persons 30+	%*	Estimated attributable deaths	Deaths - all causes persons 30+	%*	Estimated attributable deaths	Deaths - all causes persons 30+	%*	Estimated attributable deaths
Newcastle-under-Lyme	1548	4.7	70	1409	5	70	1402	5.1	70	1417	4.9	70	1383	5	70
Stafford	1565	4.5	70	1432	4.8	70	1433	5.0	70	1518	4.7	70	1469	4.9	70
East Staffordshire	1355	5.1	70	1287	5.1	70	1141	5.6	60	1129	5.3	60	1203	5	60
South Staffordshire	1418	4.9	70	1333	5.1	70	1297	5.3	70	1317	4.8	60	1354	5.1	70
Lichfield	1272	5.2	70	1129	5.1	60	1155	5.5	60	1170	5.2	60	1133	5.2	60
Staffordshire Moorlands	1276	4.5	60	1133	4.7	50	1186	4.9	60	1221	4.8	60	1169	4.8	60
Cannock Chase	1046	5.1	50	1089	5.2	60	1038	5.4	60	1037	5.1	50	1131	5.3	60
Tamworth	752	5.6	40	730	5.4	40	734	5.7	40	707	5.4	40	660	5.5	40
Stoke on Trent	3034	5.0	150	2790	5.2	150	2569	5.3	140	2691	5.4	140	2663	5.3	140
Staffordshire	10227	4.9	500	9539	5	480	9380	5.3	500	9511	5.0	480	9497	5.1	480

Both Particulate Matter and the precursor pollutants that can form it can travel large distances in the atmosphere. A small proportion of the concentrations of PM that people in the UK are exposed to come from naturally occurring sources such as pollen and sea spray (approximately 15 per cent). Another third is transported to the UK from other European countries and international shipping. However, around half of UK concentrations of PM comes from anthropogenic sources in the UK such as domestic wood burning and tyre and brake wear from vehicles

Particulate Matter ($PM_{2.5}$) Levels in Staffordshire and Stoke-on-Trent

Newcastle-under-Lyme Borough does not monitor $PM_{2.5}$ or PM_{10}. Currently the nearest AURN station to Newcastle-under-Lyme is in the centre of Stoke on Trent.

From background maps produced by DEFRA, Newcastle-under-Lyme Borough Council has determined that the highest background $PM_{2.5}$ concentration in 2025 was 8.2 µg/m^3, located in the 1km grid square which is adjacent to the M6 motorway at Keele. The lowest $PM_{2.5}$ concentration is 5.3 µg/m^3, located in the rural part of the Borough near Hales.

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

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

The percentage estimated number of deaths attributable to $PM_{2.5}$ in adults over 30 has been translated into the estimated number of attributable deaths for each local authority area within Staffordshire and are shown in table 2.4 above. The data presented to 2024 is the latest data available at time of publication of this report. Approximately 5.1% of deaths of adults over 30 between 2020 to 2024 within the County can be attributed to $PM_{2.5}$.

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

Staffordshire Authorities are currently implementing measures to reduce levels of NO_2 within their areas, which are detailed elsewhere in this report. Whilst there is currently no statutory duty imposed on Local Authorities in England to reduce $PM_{2.5}$, many of the measures are complementary, reducing not just NO_2 but also other pollutants including particulate matter.

Table 2.5 outlines various measures that Newcastle-under-Lyme Borough Council and Staffordshire County Council are taking to address $PM_{2.5.}$ As shown within the table 2.5, the measures taken to reduce concentrations of $PM_{2.5}$ will also have the effect of reducing concentrations of NO_2 and particulate matter.

During 2025, Newcastle-under-Lyme Borough Council took a number of direct measures to address $PM_{2.5}$.
Where relevant, planning applicants were required to submit a Construction Management Plan (CMP), including controls for dust emissions. These CMPs are reviewed by the Environmental Protection Team to ensure that the risk of dust emissions was properly considered and that appropriate mitigation measures were applied.

In addition, the potential for emission of particulate matter was controlled through inspection and regulation of activities under Environmental Permits, such as concrete batching plants, mineral processing sites and ceramic factories.

The major conurbations within the borough are designated as smoke control areas. In 2025, forty-one complaints were received regarding smoke. No enforcement activity, in the form of formal warning letters or financial penalties, was carried out in relation to smoke control area contraventions during 2025 as relevant matters were addressed informally. The Council will consider the use of its enforcement powers where appropriate, necessary and proportionate.

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$PM_{2.5}$ in Staffordshire & Stoke-on-Trent

As $PM_{2.5}$ is an issue requiring collaboration between the district, county and city authorities within Staffordshire. The following actions are proposed in addition to those outlined in the Action Plan. Progress on these and the action plan will be detailed in the 2026 ASR.

- To maintain compliance with the 2020 EU limit value of 25µg/m^3.
- To include Public Health Outcome Framework Indicator D01 in the Staffordshire and District Authority and City Council Joint Strategic Needs Assessment onwards and to report progress to the relevant Health and Wellbeing Boards.
- To continue to identify risks affecting $PM_{2.5}$ which need to be addressed at a national and local level.
- Review appropriate, voluntary and technology-neutral initiatives that may support legal air-quality compliance

Table 2.5 Measures being undertaken within Newcastle-under-Lyme to $PM_{2.5}$

Category	Measure Classification	Effect on reducing NOx and PM_{10} emissions	Reduce $PM_{2.5}$ emissions	Existing Measure	Measure in Newcastle-under-Lyme
Traffic Management	Urban Traffic Control systems, Congestion management, traffic reduction	low	✓	✓	UTC SCOOT software has been used to Coordinate Road traffic signals in areas of the AQMA 2 Newcastle-under-Lyme (Town Centre) and AQMA 1 Kidsgrove with live labs monitoring work in relation to congestion in Newcastle-under-Lyme.
	Anti-idling Enforcement	low	✓	✓	Ant-idling Campaign Toolkits have been developed and are available to schools for pupil run campaign
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 them and monitor the outcomes.
	Encourage / Facilitate homeworking	low	✓	✓	A home working policy has been adopted by the Council
	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 to Modeshift STARS. Resources, toolkits, assemblies, campaigns and lesson plans to encourage behaviour change are provided.
	Promotion of cycling	low	✓	✓	The local cycling and walking infrastructure plans have been reviewed to include additional areas Further information regarding Cycling and active travel is available at active travel schemes INTO Walking and Cycling Social Prescribing is providing coach-led walks, bike rides, training and one-to-one sessions. Further information is available from INTO The benefits of Cycling and the government`s cycle to work scheme are being promoted through the Travel Plan Process Bikeability is being promoted and delivered in most schools in Staffordshire and, in line with Active Travel England`s target, 80% of all year 6 pupils were to receive Bikeability training by 2025.
	Promotion of walking	low	✓	✓	The local cycling and walking infrastructure plans have been reviewed to include additional areas Further information regarding Cycling and active travel is available at Cycle & active travel

					INTO Walking and Cycling Social Prescribing is providing coach-led walks, bike rides, training and one-to-one sessions. Further information is available from INTO Walk to school campaign resources are offered free to all Staffordshire schools including railing banner, posters, digital toolkit and reward bookmarks for pupils. Further information is available at Active and Sustainable School Travel The benefits of Walking are promoted through the Travel Plan process to promote good health and wellbeing in the community. Walking routes and trails are promoted at Walks and Country Trails
	Promote use of rail and inland waterways	medium	✓	✓	North Staffordshire Community Rail Partnership, operating along the North Staffordshire Line and including Kidsgrove station, works with the community to promote rail transport. Further information is available at from the North Staffordshire Community Rail Partnership Kidsgrove station is being redeveloped to be fully accessible through the Town Deal.
	Car Share		✓	✓	Car Share schemes are promoted within the travel plan process.
Transport Planning & Infrastructure	Local Transport Plans and District Strategies	high	✓	✓	The transport strategy for Newcastle-under-Lyme has been developed to help prioritise the County Council's expenditure on transport improvements and secure potential resources to allow delivery, including developer contributions and Government funding. Plans for improving transport in each Staffordshire district, including walking, cycling public transport and roads are delivered through District integrated transport strategies

					Barriers to use of infrastructure have been investigated (District Data Reports - Let`s Talk Transport) Further information is available at Local Transport Plan
	Public transport improvements- interchanges stations and services	low	✓	✓	Kidsgrove Station interchange plans are intended to be multi-modal and will improve connectivity between Kidsgrove and the wider area. This will be funded through the Town Deal Funding and further information is available at Kidsgrove Town Deal project
	Active Travel Fund	low	✓	✓	Active Travel Fund 2 measures have been developed to encourage walking and cycling linking Newcastle-under-Lyme Town Centre, Newcastle Greenway, Keele University, and Stoke-on-Trent. Active Travel Fund 5 scheme providing a new crossing upon Lower Milehouse Lane to connect the cycleway. Further (CATF) schemes are planned to provide a new parallel crossing upon Pool Dam and improved cycle connection at Hassell Street. Further information is available at Active travel Newcastle - Staffordshire County Council
	Cycle Network	low	✓	✓	Staffordshire`s cycle maps are currently awaiting audit and review and a review of the cycle network is being currently being conducted.

					Further information is available within the Local Cycling and Walking Infrastructure Plan
	Bus route improvements	high	✓	✓	As a result of Bus Service Improvement Plans (BSIP) & BSIP+ funding, consideration is being given to bus route improvements where feasible. A new 95 route from Audley to Biddulph has been introduced along with a new service K from Keele University to Chesterton.
Policy Guidance and Development Control	Planning applications to require assessment of exposure / emissions for development requiring air quality impact assessment	high	✓	✓	A Local Validation list has been implemented which draws attention to need to submit appropriate assessments of air quality impacts as part of the planning application process.
	Air Quality Action Plan		✓	✓	The revised Air Quality Action Plan relating to AQMA2 – town centre is now expected to be submitted to DEFRA, during 2026.
	Planning Guidance for developers		✓	✓	Guidance for developers will be developed alongside the Borough Council`s new Local Plan

					The Highway Design Code is currently under review and will be published shortly.
	Developer Contributions based on damage cost calculation		✓	✓	The introduction of damage costs assessments associated with new developments will be considered alongside the development of planning guidance and the local plan.
	Planning Policies		✓	✓	Various planning policies have been implemented to minimise impacts or developments. The new Local Plan, includes a number of policies relating to pollution and air quality (SE1). The Plan also includes a number of allocations to support the delivery of the Plan vision and objectives.
Vehicle Fleet Efficiency	Route plans & strategic routing for HGVs	high	✓	✓	Route planning of HGVs is considered as part of planning applications where new proposals come forward. Routing will be in accordance with the Local Transport Plan.
	Fleet efficiency & recognition schemes	medium	✓	✓	In line with Staffordshire County Council environment strategy and the Local Transport Plan, Staffordshire County Council, through Fleetcare, is progressing fleet efficiency and emissions reduction by rolling out telematics across all new operational fleet vehicles to capture data on mileage, fuel consumption, idling, speed, driving behaviours and vehicle utilisation. Fleetcare has also engaged with

					the Midlands Net Zero Hub and Cenex to undertake a fleet analysis assessing the power demand, charging infrastructure requirements, costs and emissions associated with transitioning to battery electric vehicles. A new fleet management database has been procured to integrate live telematics data, enabling improved understanding of vehicle use and driver behaviour and supporting ongoing fleet efficiency improvements and decarbonisation planning.
Promoting low emission transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	high	✓	✓	The Newcastle-under-Lyme towns deal includes expansion of the EV charging infrastructure Electric Vehicle charging infrastructure is being expanded in residential off-street car parks through the Low Emission Vehicle Infrastructure
	Adoption of SCC EV Strategy	high	✓	✓	Staffordshire County Council`s EV charging Strategy has been adopted, see item 8 of the agenda of the cabinet meeting at Agenda of Cabinet Meeting of 10 January, 2023

Environmental permits	Introduction/increase of environment charges through permit systems and economic instruments (Permit fees set centrally)	medium	✓	✓	Annual subsistence fees payable by holders of environmental permits are dependent upon the risk posed by the activity. Poorly performing operators and higher risk activities are subject to higher fees and so this acts as a driver towards compliance and control of emissions. Regulation of industrial processes to prevent, or minimise, emissions. Further information regarding the regulation of industrial activities can be found at Local Authorities General Permitting General Guidance Manual & Environmental Permitting Core Guidance
	Measures to reduce pollution through Environmental Permits going beyond Best available techniques (BAT)	medium	✓	✓	Regulation of industrial processes to prevent, or minimise, emissions. Where an activity has the potential to contribute to an air quality issue, conditions can be applied to require controls which are more stringent than are typical for a given industrial sector. Further information regarding the regulation of industrial activities can be found at Local Authorities General Permitting General Guidance Manual & Environmental Permitting Core Guidance
	Large Combustion Plant Permits & National	high	✓	✓	Regulation of industrial processes to prevent, or minimise, emissions. Further information regarding the regulation of large combustion plants can be found at Environmental Permitting Guidance on the Large-Combustion-Plants Directive

	Plans going beyond BAT				
Other Measures	Smoky Diesel Hotline		✓	✓	Tackle smoking exhausts by encouraging people to report buses and lorries to the Driver and Vehicle Standards Agency at Report a smoky vehicle or to the Police in the case of other vehicles

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

This section sets out the monitoring undertaken within 2025 by Newcastle-under-Lyme Borough Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2021 and 2025 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Newcastle-under-Lyme Borough Council has previously operated a single continuous monitoring station located within AQMA 2 – Town Centre at CM1 (Queens Gardens). Although the instrument is still in situ, no data was collected during the 2025 monitoring period and, for the reasons below, the Council is in the process of permanently removing the automatic monitoring station.

As shown within table A.5 within appendix A, no NO_2 hourly mean concentration exceeded the hourly mean air quality objective of 200µg/$m^{3,}$ during 2024 which was consistent with previous years.

As shown within figure A-0 within appendix A, the annual mean concentration at CM1 during 2024 was 21.2 ug/ m3. this low level was consistent with previous years with a slight downward trend being observed overall between 2020 and 2024.

Local bias adjustment factors determined from co-location studies for each year from 2021 to 2024 showed increasing deviation from the national bias adjustment factors and the

Council was not satisfied that the calculated local bias correction could be used with confidence.

For these reasons, it is considered that that there is no benefit to continuing to operate the automatic monitoring station at this location.

Maps showing the location of the monitoring site (CM1) are provided in Appendix D.

3.1.2 Non-Automatic Monitoring Sites

Newcastle-under-Lyme Borough Council undertook non- automatic (i.e. passive) monitoring of NO_2 at 78 locations during 2025. Table A.2 in Appendix A presents the details of the non-automatic sites.

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

3.2 Individual Pollutants

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

3.2.1 Nitrogen Dioxide (NO_2)

The automatic monitoring site was not operational during the 2025 monitoring period. The results within table A.3 are presented as evidence for the justification of the decision not to continue automatic monitoring within the current location CM1. Table A.3 and Table A.4 within Appendix A compare the ratified and adjusted monitored NO_2 annual mean

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

For diffusion tubes, the full 2025 dataset of monthly mean values is provided in Appendix B. Note that the concentration data presented in Table B.1 includes distance corrected values, only where relevant.

Figures A1 to A7 within appendix A show trends in NO_2 annual mean concentrations between years 2021 to 2025, as identified during the non-automatic monitoring. Trends are presented separately for each individual AQMA/former AQMA (and any monitoring locations which are in close proximity to such areas) and also for each geographical area outside of an AQMA/former AQMA. Any exceedances, trends or other relevant factors are discussed, and key issues are summarised below:

Former AQMA 1 Kidsgrove.

The predominant source of pollution within the former AQMA 1 is road traffic upon the A50 as it passes through Kidsgrove and terraced buildings at the roadside inhibit dispersion. Figure A.1 presents NO_2 annual mean concentrations for sites within former AQMA1 - Kidsgrove with the monitoring locations being shown within figure D2.

An increase in NO_2 annual mean concentration was observed from 2021 to 2025 as traffic flows returned to normal following the Covid-19 pandemic but since then there is general trend of reduction is observed across the sites.

In 2025, there were no exceedances of the NO_2 annual mean objective, and no monitoring location was found to be within 10% of the air quality objective.

The annual mean concentration at DT94 (116 Liverpool Road) however increased slightly within 2025 to 32.4 ug/ m^3. This location can be seen to have been within 10% of the air quality objective during 2021, 2022 and 2023 before falling to 31.2 ug/ m^3 in 2024. The monitoring location is not a relevant location and distance correction calculations predicted the concentration at the façade of the nearest relevant receptor to be below 36ug/ m^3 for each year (33.0 ug/ m^3 being predicted at the façade in 2023 which was the year with the highest measurement at 37.7 ug/ m^3).

AQMA 2 Newcastle-under-Lyme

The predominant source of pollution within AQMA 2 is road traffic upon the A34, ring road and A53 as it passes through the town centre or uses the A53 which links the town to Stoke on Trent. There are several roundabout and pedestrian crossings which affect traffic flow and, in places, terraced buildings at the roadside inhibit dispersion.

Figure A.2 presents NO_2 annual mean concentrations for sites within AQMA 2 – Newcastle and the monitoring locations are shown within figure D9 and figure D10. It should be noted that DT107 (Knutton Lane), DT108 (24A Clayton Road) and DT130 (St Georges Church, Brampton) are not actually within the AQMA itself but are just outside the boundary and will be influenced by the same traffic as it enters and leaves the town.

In 2025, there were no exceedances of the NO_2 annual mean objective and concentrations were below 10% of the NO_2 annual mean objective all monitoring locations.

No monitoring data was obtained for location DT100 (Sainsburys Car Park) during 2024 as the site was not accessible due to construction works but, following completion of these works, monitoring was carried out throughout 2025 and found to be well below the NO_2 annual mean objective at 16.2 ug/ m^3.

Within AQMA 2 and the nearby areas, a general increase in concentration was observed from 2021 to 2022 as traffic flows returned to normal following the Covid-19 pandemic (with a further increase being observed during 2023 at several locations). However, with

the exception of locations DT76 (11 Brunswick Street), DT102 (Belong, Lower Street) and DT104 (7 King Street) there has been a general trend of reduction year on year since 2021.

During the 2025 monitoring period, a significant increase from 28.5 ug/ m^3 to 34.8 ug/ m^3 was observed at DT74 (39 London Road). Very high results were observed in November and December at 91.9 ug/ $m^3$and 98.0 ug/ m^3respectively. It is unclear why these results are elevated as they have not been observed previously, and the same trend was not observed at DTK1 (A34 Holy Trinity) which is nearby and affected by the same traffic upon the same stretch of road. The diffusion tube at DT74 (39 London Road) is currently positioned in a recess between two bay windows and it may be appropriate to relocate it to a more suitable monitoring position where there is free circulation of air. Newcastle-under-Lyme Borough Council continue to monitor at DT74 (39 London Road) at present.

Annual mean NO_2 concentrations at DT84 (102 King Street), DT107 (Knutton Lane) and DT129 (Ebenezer House) remained consistent with the concentrations observed within 2024. DT86 (Hassell Street CP School) slight increased to 18.5 ug/ m^3 from 16.7 ug/ m^3 in 2024.

Since 2021, only three locations have shown exceedance of the air quality objective or have shown concentrations within 10% of it (DT76 (11 Brunswick Street), DT102 (Belong, Lower Street) and DT104 (7 King Street)).

At DT76 (11 Brunswick Street), an exceedance of the annual mean objective was reported during 2023, but this fell to 28.0 ug/ m^3 in 2024. A slight increase, to 29.9 ug/ m^3, was observed at this location during the 2025 monitoring period but several sets of road works and lane closures are known to have taken place at this location cause disruption to the traffic flow there.

At DT102 (Belong, Lower Street), an exceedance of the annual mean objective was observed in 2024, where a concentration of 40.6 ug/ m^3 was reported. This was significant increase upon previous years, and no corresponding increase was observed at nearby monitoring locations upon the same stretch of road (DT88 (27 Lower Street)). The concentration fell significantly in 2025, to 28.7 ug/ m^3. DT102 is located at a relevant location where relevant receptors are located.

At DT104 (7 King Street), an exceedance was reported during 2023 (at 40.4 ug/ m^3) and concentrations remained within 10% of the air quality objective during 2024 (at 38.9 ug/ m^3). In 2025, the concentration was observed to have fallen significantly to 31.8 ug/ m^3 . DT104 is not deployed to a relevant location but there are relevant receptors within the same row of terraced buildings which are equidistant from the road,

DT102 and DT104 are both located upon terraced facades, upon slight inclines and just after roundabouts. The high concentrations are therefore attributed to poor dispersion of vehicle exhaust emissions and vehicles accelerate up bank after leaving the roundabouts. Additionally, a combustion plant is located upon the roof immediately above DT102 and DT104 is located in a recess where the building façade step backs so it may be appropriate to reposition these monitoring locations. It is unclear, at present, as to what gave rise to the significant decrease at DT102 and DT104 in 2025.

2025 was the first year of compliance with the NO_2 annual mean objective since the declaration of AQMA 2 in 2015. The reasons for the reduction cannot be attributed to any single measure. Continued monitoring, proportionate intervention where evidence identifies a need, and compliance with statutory requirements will be used to support sustained compliance.

Former AQMA 3 Maybank, Wolstanton & Porthill

Basford Bank and Grange Lane (A527) are busy roads which link the area to neighbouring Stoke on Trent and provide access to the A500.This results in heavy traffic flows within the

former AQMA 3 and the predominant source of pollution within the former AQMA 3 is road traffic. In places terraced buildings at the roadside inhibit dispersion.

Figure A.3 presents NO_2 annual mean concentrations for sites within the former AQMA 3 Maybank, Wolstanton and Porthill and the monitoring locations are shown within figures D6 and D7. DTUB1 (Hartington Street), DT127 (Victoria Public House Maybank) and DT128 (34 Brampton Road) are not within the former AQMA itself but DT127 and DT128 are located upon the A527 adjacent to the former AQMA and DTUB1 provides an urban background measurement nearby.

An increase in concentration was observed from 2021 to 2022 as traffic flows returned to normal following the Covid-19 pandemic but since then there is a general trend of reduction experienced across the sites with the exception of DT24 (26 High Street, May Bank) and DT40 (Banktop Court, Porthill) where a steady increase was observed year on year until 2024. It is unclear as to why concentration increased at DT24 over this period but DT40 has been found to be close to the exhaust of a gas boiler and it may be appropriate to locate this diffusion tube. However, the concentrations reported at both monitoring locations are substantially lower than the NO_2 annual mean objective at these locations and fell during the 2025 monitoring period.

A slight increase was observed at DTUB1 it 2024 but there was no further increase during the 2025 monitoring period. This location is an urban background site.

In 2025, there were no exceedances of the annual mean objective, and no monitoring location was within 10% of the air quality objective.

Kidsgrove (outside the former AQMA 1)

Figure A.4 presents NO_2 annual mean concentrations for sites within parts of Kidsgrove which are outside of AQMA 1*, and* monitoring locations are shown within figures D3 and

D4. These monitoring locations, are to the East and West of the former AQMA 1, being situated upon the A34 and the A50 and being influenced by emission from road traffic vehicles using these roads.

An increase in concentration was observed from 2021 to 2022/23 as traffic flows returned to normal following the Covid-19 pandemic but since then there is a general trend of reduction experienced across the sites. Although slight increases were observed at DT122 (Aldi Bus stop) and DT123 (skate park) during the 2025 monitoring period.

In 2025, there were no exceedances of the annual mean objective, and no monitoring location was within 10% of the air quality objective.

Chesterton Talke and Bradwell

Figure A.5 presents NO_2 annual mean concentrations for sites adjacent to the A34 within Chesterton, Talke and with the monitoring locations being shown within figures D5.

An increase in concentration was observed from 2021 to 2022/23 as traffic flows returned to normal following the Covid-19 pandemic but since then there is a general trend of reduction experienced across the sites between 2021 and 2025.

Although a substantial increase was observed at DT111 (Talke Road, A34 Bradwell) within 2024, concentrations have fallen from 29.7 ug/ m^3 in 2024 to 22.2 ug/ m^3 in 2025.

The only monitoring location in this area where an exceedance has been measured between 2021 and 2025 is DT145 (Entrance to Beata Road). The high concentrations previously observed at this location have continued to reduce from a peak of 40.5ug/ m^3 in 2022 to 34.7ug/ m^3 in 2025. This location is some distance for a relevant location as so there was no requirement to declare an air quality management area previously.

There were no exceedances of the annual mean objective in 2025, and no location was observed to be within 10% of the objective

Silverdale, Knutton and Cross Heath

Monitoring is carried within Silverdale, Knutton and Cross Heath along the route between the A525 to the A34.

Figure A.6 presents NO_2 annual mean concentrations for sites within Silverdale, Knutton and Cross Heath and the monitoring locations are shown within figure D8 and D6.

An increase in concentration was observed from 2021 to 2023 as traffic flows returned to normal following the Covid-19 pandemic but since then there is a general trend of reduction experienced across the sites. Although DT138 (Post Office Depot) concentrations remained fairly consistent with those found in the previous reporting year, up to 18.3 ug/ m^3 in 2025 from 17.6 ug/ m^3 in 2024.

There are no exceedances of the annual mean objective in 2025, and no location was observed to be within 10% of the objective.

Thistleberry, Clayton & Seabridge.

Monitoring is carried out along the A53 and A519 which are major routes into the town centre and are influenced by traffic using junction 15 of the M6. Figure A.7 presents NO_2 annual mean concentrations for sites within Thistleberry, Clayton and Seabridge and the monitoring locations are shown within figures D11 and D12.

An increase in concentration was observed from 2021 to 2022/23 as traffic flows returned to normal following the Covid-19 pandemic but since then there is a general trend of reduction experienced across the sites.

A slight increase was observed at DTUB2 in 2024 but there was no further increase in 2025. This is an urban background site and the concentrations are very low.

There are no exceedances of the annual mean objective in 2025, and no location was observed to be within 10% of the objective

Summary

In 2025, no annual mean NO_2 concentration was found to be greater than 60µg/m^3, which indicates that no exceedance of the 1-hour mean objective was likely at any monitoring location. Furthermore, there were no exceedances of the NO_2 annual mean objective of 40 µg/m^3, and no monitoring location was found to have been within 10% of the objection (i.e. exceeded 36ug/ m^3) within 2025.

AQMA 1 Kidsgrove and AQMA 3 Maybank, Wolstanton & Porthill were both revoked during 2025 as the annual mean concentration had been consistently below 36ug/ m^3 for over 5 consecutive years. This left AQMA 2 as the only active AQMA within Newcastle-under-Lyme .

In 2024, only one monitoring location was identified as being in exceedance of the annual mean objective, DT102 (Belong, Lower Street) and only one monitoring loction was identified as being within 10% of the annual mean objective DT104 (7 King Street). Both DT102 and DT104 are located within AQMA 2 – Town Centre. In 2025, NO2 concentrations at both locations fell to well below 10% of the annual mean objective.

With the exception of DT76 (11 Brunswick Street), DT102 (Belong, Lower Street) and DT104 (7 King Street), all monitoring locations within AQMA 2 have been consistently below 36ug/ m^3 over the last 5 years. However, as these three locations are dispersed across the AQMA, there is no plan to amend the area of AQMA 2 at present.

The NO_2 concentrations, and five year trends, at the monitoring sites across the borough indicated that there was no need to propose any new AQMAs.

With regards to general trends, an increase in NO_2 annual mean concentration was observed from 2021 to 2022, in some locations this continued until 2023, as traffic flows returned to normal following the Covid-19 pandemic; but, since then there is a general trend of reduction of NO_2 concentrations across virtually all monitoring locations since 2021. However, the rate of reduction appears to have slowed at many monitoring locations in 2025 and concentrations at many monitoring locations are consistent with those found in 2024.

The slight increases in both urban background sites, DTUB1 (Hartington Street, Wolstanton) and DTUB2 (4 Sneyd Crescent, Westlands), observed within 2024 have not been seen in 2025 with both locations showing concentrations broadly similar to those found in 2024.

No monitoring data was obtained for location DT100 during 2024 as the site was not accessible due to construction works. These works have now been completed, and diffusion tubes have been deployed to the location during 2025.

The automatic monitoring carried out at CM1 (Queens Gardens) was discontinued at the end of the 2024 monitoring period for the reasons described within appendix C and no automatic monitoring data was obtained during 2025.

At present, no changes to the monitoring regime have been made for the 2026 monitoring period as yet. However, the appropriateness of several monitoring locations is being considered and changes may be made later in the year.

3.2.2 Particulate Matter (PM_{10})

Particulate matter is not monitored by Newcastle-under-Lyme Borough Council

3.2.3 Particulate Matter ($PM_{2.5}$)

Particulate matter is not monitored by Newcastle-under-Lyme Borough Council

3.2.4 Sulphur Dioxide (SO_2)

Sulphur dioxide is not monitored by NULBC.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Monitoring Technique	Distance to Relevant Exposure (m)	Distance to kerb of nearest road (m)	Inlet Height (m)
CM1	Newcastle-under-Lyme Queen's Gardens	Roadside	385054	346134	NO_2	YES. AQMA 2	Chemiluminescent	10	8	1.8

Notes:

The automatic monitoring site was not operational during the 2025 monitoring period. The results within table A.3 are presented as evidence for the justification of the decision not to continue automatic monitoring within the current location CM1

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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m)	Distance to Kerb of Nearest Road (m)	Tube Co-located with a Continuous Analyser	Height (m)
DTK1	A34 Holy Trinity	Roadside	385051	345726	NO2	YES - AQMA 2:	1.0	3.0	No	2.5

						Newcastle-under-Lyme Town Centre				
DTK2	76 King St, N/C	Roadside	385469	346362	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	3.0	No	2.5
DTUB1	Wolstanton, Hartington St	Urban Background	384739	348326	NO2	No	7.0	2.0	No	2.5
DTUB2	Westlands, 4 Sneyd Crescent	Urban Background	383916	345059	NO2	No	10.0	2.0	No	2.5
DT6	106 Liverpool Rd	Roadside	384014	354429	NO2	No	0.2	4.0	No	2.5
DT9	32 Porthill Bank	Roadside	385519	349055	NO2	No	0.2	6.0	No	2.5
DT11	34 London Road, N/C	Roadside	385112	345636	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	3.0	No	2.5
DT24	26 High St, May Bank	Roadside	385574	347530	NO2	No	0.2	3.0	No	2.5
DT34	15 Barracks Road	Roadside	385059	345840	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	4.0	No	2.2
DT39	4/6 Liverpool Road, Kidsgrove	Roadside	383560	354739	NO2	No	0.2	2.0	No	2.5

DT40	Banktop Court, Porthill	Roadside	385128	348811	NO2	No	0.2	11.0	No	2.5
DT46	1 London Road (Trinity Court)	Roadside	385073	345685	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	4.0	No	2.5
DT47	1 London Rd (Brook La)	Urban Centre	385023	345678	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	8.0	No	2.5
DT49	2 Vale View, Porthill	Urban Centre	385595	349129	NO2	No	0.3	5.0	No	2.5
DT64	Kidsgrove Carpets 57 - 59 Liverpool Road	Urban Centre	383950	354445	NO2	No	0.2	2.0	No	2.5
DT72	134 High Street Newcastle	Roadside	384981	345750	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	3.0	3.0	No	2.5
DT73	21 London Road Newcastle	Roadside	385070	345738	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	4.0	No	2.5
DT74	39 London Road Newcastle	Roadside	385132	345640	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	4.0	No	2.5

DT76	11 Brunswick Street Newcastle	Roadside	385226	346156	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	2.0	No	2.5
DT84	102 King Street Newcastle	Roadside	385548	346400	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	4.0	No	2.5
DT85	106 King Street Newcastle	Roadside	385575	346413	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	4.0	No	2.5
DT86	Hassell C.P. School Barracks Road N/C	Roadside	385075	345910	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	7.0	No	2.5
DT87	1 King Street Newcastle	Urban Centre	385105	346225	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	5.0	No	2.5
DT88	27 Lower Street Newcastle	Urban Centre	384709	345881	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	5.0	No	2.5
DT89A, DT90, DT91	Queens Gardens, Newcastle	Urban Centre	385054	346134	NO2	YES - AQMA 2: Newcastle-	10.0	8.0	Yes	1.8

						under-Lyme Town Centre				
DT92	41/43 Liverpool Road Kidsgrove	Urban Centre	383890	354461	NO2	No	0.2	2.0	No	2.5
DT93	118 Liverpool Road Kidsgrove	Roadside	384056	354393	NO2	No	0.2	3.0	No	2.5
DT94	116 Liverpool Road Kidsgrove	Roadside	384030	354416	NO2	No	2.0	2.0	No	2.5
DT95	76 London Road Newcastle	Roadside	385171	345539	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	2.0	No	2.5
DT96	On Lamppost Next JJ Design London Road Newcastle	Roadside	385131	345601	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	2.0	No	2.5
DT97	Blackfriars/ Lower Street	Urban Centre	384795	345796	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	27.0	1.0	No	2.5
DT98	Newcastle Taxis Brunswick Street	Urban Centre	385327	346148	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	2.0	No	2.5
DT100	Carpark Ryecroft	Urban Centre	384689	346284	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	37.0	2.0	No	2.5

DT101	Blackburn House Lower Street Newcastle	Urban Centre	384806	345842	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	10.0	2.0	No	2.3
DT102	Belong Lower Street Newcastle	Urban Centre	384609	346007	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	6.0	No	2.5
DT103	Grange Lange/High Street Wolstanton	Roadside	385682	347909	NO2	No	6.0	2.0	No	2.5
DT104	7 King Street Newcastle	Roadside	385213	346270	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	0.2	2.0	No	2.5
DT105	The Avenue Kidsgrove	Roadside	383991	354418	NO2	No	12.0	1.0	No	2.5
N107a, N107b, N107C	Knutton Lane	Roadside	384495	346298	NO2	No	6.0	2.0	No	2.5
N108a, N108b, N108C	24A Clayton Road, Newcastle	Roadside	384961	345346	NO2	No	7.0	1.0	No	2.5
N109a, N109b, N109c	Clayton Road (Opp Nuffield)	Roadside	385190	343318	NO2	No	16.0	1.0	No	2.5
N110a, N110b, N110c	Holiday Inn Layby	Roadside	385110	342314	NO2	No	39.0	2.0	No	2.5

N111a, N111b, N111c	Talke Road, A34 Bradwell	Roadside	383882	349558	NO2	No	20.0	4.0	No	2.5
N112a, N112b, N112c	A53 Whitmore Road	Roadside	382286	341956	NO2	No	120.0	2.0	No	2.5
N113a, N113b, N113c	A53 Whitmore Road/ Seabridge Lane	Roadside	383052	343666	NO2	No	107.0	2.0	No	2.5
N114a, N114b, N114c	11 Sneyd Avenue	Roadside	383953	344832	NO2	No	13.0	2.0	No	2.5
N115a, N115b, N115c	Newcastle Community School Layby	Roadside	383545	345195	NO2	No	20.0	1.0	No	2.5
N116a, N116b, N116c	Gallowstree Lane	Roadside	383157	345431	NO2	No	50.0	2.0	No	2.5
N117a, N117b, N117c	Clough Hall Drive	Roadside	383199	352740	NO2	No	15.0	2.0	No	2.5
N118a, N118b, N118c	156 Newcastle Road	Roadside	382934	353388	NO2	No	20.0	2.0	No	2.5
N119a, N119b, N119c	Butt Lane Primary School	Roadside	382600	354062	NO2	No	15.0	2.0	No	2.5
N120a, N120b, N120c	Pets and Pastimes, Butt Lane	Urban Centre	382707	354305	NO2	No	2.0	2.0	No	2.5
N121a, N121b, N121c	One-Sure Insurance, Butt Lane	Urban Centre	382736	354385	NO2	No	10.0	2.0	No	2.5

N122a, N122b, N122c	Aldi Bus Stop, Liverpool Road, Kidsgrove	Roadside	384261	354207	NO2	No	10.0	3.0	No	2.5
N123a, N123b, N123c	Skate Park, Liverpool Road, Kidsgrove	Roadside	384638	354133	NO2	No	20.0	2.0	No	2.5
N124a, N124b, N124c	51 Kidsgrove Bank	Roadside	385019	353832	NO2	No	14.0	2.0	No	2.5
N125a, N125b, N125c	Adlington House Care Home, Wolstanton	Roadside	385387	348389	NO2	No	7.0	2.0	No	2.5
N126a, N126b, N126c	Morris Square, Wolstanton	Urban Centre	385556	348224	NO2	No	20.0	2.0	No	2.5
N127a, N127b, N127c	Victoria Public House, May Bank	Roadside	385416	347424	NO2	No	10.0	0.2	No	2.5
N128a, N128b, N128c	36 Brampton Road	Roadside	385512	347373	NO2	No	6.0	2.0	No	2.5
N129a, N129b, N129c	Ebenezer House, Newcastle	Roadside	384968	346228	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	30.0	1.0	No	2.5
N130a, N130b, N130c	St Georges Church, Brampton	Roadside	385098	346395	NO2	No	20.0	1.0	No	2.7
N131a, N131b, N131c	27 King Street, Newcastle	Roadside	385463	346374	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	5.0	0.5	No	2.5

N132a, N132b, N132c	603 Etruria Road	Roadside	385612	346436	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	5.0	2.0	No	2.5
N133a, N133b, N133c	Charlotte House, Etruria Road	Roadside	385926	346580	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	5.0	2.0	No	2.5
N134a, N134b, N134c	528 Etruria Road, Basford	Roadside	386009	346600	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	9.0	2.0	No	2.5
N135a, N135b, N135c	Andrew Place	Roadside	385518	346128	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	20.0	2.0	No	2.5
N136a, N136b, N136c	No 1 London Road Trinity Court on Road Sign	Roadside	385078	345687	NO2	YES - AQMA 2: Newcastle-under-Lyme Town Centre	3.0	2.0	No	2.5
N137a, N137b, N137c	Old Garage site, Cemetery Road	Roadside	382795	346011	NO2	No	187.0	2.0	No	2.5
N138a, N138b, N138c	Post Office Depot, Church Lane	Roadside	383113	346592	NO2	No	20.0	2.0	No	2.5
N139a, N139b, N139c	Church Lane/ Acacia Gardens	Roadside	383302	346727	NO2	No	16.0	1.0	No	2.5

N140a, N140b, N140c	Lower Milehouse Lane opposite Morrison's Delivery	Roadside	383930	347273	NO2	No	20.0	1.0	No	2.5
N141a, N141b, N141c	Pelican Crossing Lower Milehouse Lane near to Milehouse Restaurant	Roadside	384337	347534	NO2	No	5.0	2.0	No	2.5
N142a, N142b, N142c	A34 Bus stop by Bakery	Roadside	384207	347915	NO2	No	50.0	2.0	No	2.5
N143a, N143b, N143c	Back of Road Sign near to Rosendale Avenue	Roadside	384021	348925	NO2	No	10.0	1.0	No	2.5
N144a, N144b, N144c	A34 On Traffic Sign near to Parkhouse Industrial West (Screwfix)	Roadside	383764	349912	NO2	No	260.0	1.0	No	2.5
N145a, N145b, N145c	On Entrance to Beta Way on lamp post with Camera Sign.	Roadside	383670	350326	NO2	No	20.0	2.0	No	2.5
N146a, N146b, N146c	On Give way sign exit to High Carr Business Park.	Roadside	383587	350790	NO2	No	80.0	2.0	No	2.5

The automatic monitoring site was not operational during the 2025 monitoring period. The results within table A.3 are presented as evidence for the justification of the decision not to continue automatic monitoring within the current location CM1

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

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2025 (%) (2)	2020	2021	2022	2023	2024	2025
CM1	385054	346134	Roadside	0	0	25.6	18.0	23.2	26.5	21.2	NA

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

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

☒ **Where exceedances of the NO_2 annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2025. (No data was obtained for 2025. This data was included to show justification for the decommissioning of the automatic monitoring site at Queens Gardens).**

Notes:

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

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

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

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

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

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

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

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2025 (%) (2)	2021	2022	2023	2024	2025
DTK1	385051	345726	Roadside	100.0	100.0	31.4	33.5	34.4	27.6	25.7
DTK2	385469	346362	Roadside	100.0	100.0	21.4	24.9	24.5	20.8	20.7
DTUB1	384739	348326	Urban Background	92.3	92.3	13.6	14.3	12.5	13.5	13.2
DTUB2	383916	345059	Urban Background	84.6	84.6	10.8	11.2	9.9	10.2	10.0
DT6	384014	354429	Roadside	100.0	100.0	30.6	31.7	30.1	27.8	26.8
DT9	385519	349055	Roadside	100.0	100.0	26.9	28.4	27.3	24.8	23.7
DT11	385112	345636	Roadside	100.0	100.0	29.6	30.4	25.5	23.2	21.6
DT24	385574	347530	Roadside	100.0	100.0	25.3	26.7	27.1	28.2	22.3
DT34	385059	345840	Roadside	75.0	75.0	25.4	26.3	26.0	21.8	19.9
DT39	383560	354739	Roadside	92.3	92.3	26.9	27.3	28.5	24.3	23.2

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 2025 (%) (2)	2021	2022	2023	2024	2025
DT40	385128	348811	Roadside	100.0	100.0	20.5	20.9	21.1	21.8	17.5
DT46	385073	345685	Roadside	100.0	100.0	21.7	24.2	21.8	20.1	17.9
DT47	385023	345678	Urban Centre	100.0	100.0	23.6	23.0	22.1	20.4	19.1
DT49	385595	349129	Urban Centre	100.0	100.0	25.1	25.7	24.7	21.7	21.2
DT64	383950	354445	Urban Centre	92.3	92.3	28.9	29.8	26.2	26.8	23.4
DT72	384981	345750	Roadside	84.6	84.6	27.4	30.5	28.0	27.2	23.8
DT73	385070	345738	Roadside	75.0	75.0	30.8	31.9	31.3	27.6	25.3
DT74	385132	345640	Roadside	92.3	92.3	27.2	29.3	33.3	28.4	34.8
DT76	385226	346156	Roadside	92.3	92.3	35.0	35.3	**42.2**	28.0	29.9
DT84	385548	346400	Roadside	84.6	84.6	28.5	30.3	28.2	25.1	25.6
DT85	385575	346413	Roadside	82.7	82.7	34.9	34.4	34.4	30.9	28.6
DT86	385075	345910	Roadside	90.4	90.4	22.0	22.3	21.1	16.7	18.5

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 2025 (%) (2)	2021	2022	2023	2024	2025
DT87	385105	346225	Urban Centre	92.3	92.3	32.2	34.9	31.2	27.8	26.0
DT88	384709	345881	Urban Centre	100.0	100.0	23.1	25.0	23.8	21.5	19.8
DT89A, DT90, DT91	385054	346134	Urban Centre	92.3	92.3	24.5	25.7	24.1	25.7	21.0
DT92	383890	354461	Urban Centre	100.0	100.0	26.3	27.8	26.8	24.0	22.8
DT93	384056	354393	Roadside	100.0	100.0	24.7	26.0	25.9	24.1	21.7
DT94	384030	354416	Roadside	82.7	82.7	37.5	36.2	37.7	31.2	32.4
DT95	385171	345539	Roadside	100.0	100.0	27.9	27.9	25.2	23.3	20.5
DT96	385131	345601	Roadside	75.0	75.0	28.1	29.6	27.6	25.3	24.3
DT97	384795	345796	Urban Centre	100.0	100.0	16.9	19.7	19.7	17.3	16.1
DT98	385327	346148	Urban Centre	100.0	100.0	30.1	35.5	30.8	27.1	24.8
DT100	384689	346284	Urban Centre	92.3	92.3	22.8	23.5	22.1		16.2

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 2025 (%) (2)	2021	2022	2023	2024	2025
DT101	384806	345842	Urban Centre	92.3	92.3	26.0	26.6	25.6	24.0	23.7
DT102	384609	346007	Urban Centre	84.6	84.6	32.5	35.3	34.9	**40.5**	28.7
DT103	385682	347909	Roadside	92.3	92.3	16.6	19.5	18.5	15.8	16.6
DT104	385213	346270	Roadside	100.0	100.0	37.8	37.8	**40.4**	38.9	31.8
DT105	383991	354418	Roadside	100.0	100.0	21.2	21.3	22.2	19.3	18.0
N107a, N107b, N107C	384495	346298	Roadside	100.0	100.0	22.3	21.7	19.3	17.0	16.9
N108a, N108b, N108C	384961	345346	Roadside	100.0	100.0	20.9	22.3	21.5	19.0	17.0
N109a, N109b, N109c	385190	343318	Roadside	100.0	100.0	19.6	20.8	20.0	19.1	17.0
N110a, N110b, N110c	385110	342314	Roadside	100.0	100.0	23.5	25.2	21.5	20.3	18.8
N111a, N111b, N111c	383882	349558	Roadside	100.0	100.0	24.3	24.4		29.7	22.2

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 2025 (%) (2)	2021	2022	2023	2024	2025
N112a, N112b, N112c	382286	341956	Roadside	100.0	100.0	16.2	17.1	15.4	14.3	14.0
N113a, N113b, N113c	383052	343666	Roadside	100.0	100.0	17.3	17.6	16.0	15.2	14.8
N114a, N114b, N114c	383953	344832	Roadside	100.0	100.0	17.5	19.3	17.5	16.7	16.5
N115a, N115b, N115c	383545	345195	Roadside	100.0	100.0	11.9	13.4	14.0	11.4	11.0
N116a, N116b, N116c	383157	345431	Roadside	75.0	75.0	17.1	18.5	18.3	16.7	14.1
N117a, N117b, N117c	383199	352740	Roadside	100.0	100.0	27.8	28.8	27.5	25.1	22.0
N118a, N118b, N118c	382934	353388	Roadside	100.0	100.0	20.8	21.4	19.7	17.7	17.2
N119a, N119b, N119c	382600	354062	Roadside	100.0	100.0	20.6	21.6	21.2	19.9	18.3
N120a, N120b, N120c	382707	354305	Urban Centre	100.0	100.0	28.7	29.1	29.0	24.1	23.6

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 2025 (%) (2)	2021	2022	2023	2024	2025
N121a, N121b, N121c	382736	354385	Urban Centre	92.3	92.3	21.4	21.6	21.3	20.7	17.1
N122a, N122b, N122c	384261	354207	Roadside	92.3	92.3	23.0	22.4	23.3	20.4	21.7
N123a, N123b, N123c	384638	354133	Roadside	92.3	92.3	22.1	22.6	24.5	20.0	20.5
N124a, N124b, N124c	385019	353832	Roadside	100.0	100.0	31.7	33.0	33.4	30.7	27.3
N125a, N125b, N125c	385387	348389	Roadside	100.0	100.0	22.9	24.9	23.1	21.0	18.7
N126a, N126b, N126c	385556	348224	Urban Centre	100.0	100.0	19.8	21.5	20.5	19.2	17.8
N127a, N127b, N127c	385416	347424	Roadside	100.0	100.0	19.8	21.6	19.7	18.5	18.5
N128a, N128b, N128c	385512	347373	Roadside	100.0	100.0	24.5	25.8	24.9	21.1	20.5
N129a, N129b, N129c	384968	346228	Roadside	100.0	100.0	23.6	24.8	22.5	20.0	19.9

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 2025 (%) (2)	2021	2022	2023	2024	2025
N130a, N130b, N130c	385098	346395	Roadside	100.0	100.0	27.4	29.6	29.1	24.4	22.8
N131a, N131b, N131c	385463	346374	Roadside	100.0	100.0	28.2	30.4	30.8	27.2	25.9
N132a, N132b, N132c	385612	346436	Roadside	100.0	100.0	27.7	28.8	30.2	25.8	22.4
N133a, N133b, N133c	385926	346580	Roadside	92.3	92.3	29.5	33.0	31.6	28.5	26.6
N134a, N134b, N134c	386009	346600	Roadside	100.0	100.0	25.0	28.1	29.2	22.7	22.7
N135a, N135b, N135c	385518	346128	Roadside	92.3	92.3	25.7	28.1	25.1	22.0	19.5
N136a, N136b, N136c	385078	345687	Roadside	100.0	100.0	25.9	28.4	26.4	24.5	22.1
N137a, N137b, N137c	382795	346011	Roadside	100.0	100.0	17.2	19.8	18.8	17.2	16.6
N138a, N138b, N138c	383113	346592	Roadside	100.0	100.0	19.9	21.0	20.9	17.6	18.3

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 2025 (%) (2)	2021	2022	2023	2024	2025
N139a, N139b, N139c	383302	346727	Roadside	100.0	100.0	13.9	14.7	13.7	13.5	13.0
N140a, N140b, N140c	383930	347273	Roadside	100.0	100.0	23.5	25.2	24.6	22.1	21.9
N141a, N141b, N141c	384337	347534	Roadside	100.0	100.0	28.6	27.5	28.5	26.1	24.1
N142a, N142b, N142c	384207	347915	Roadside	100.0	100.0	21.9	24.9	22.7	20.5	19.9
N143a, N143b, N143c	384021	348925	Roadside	100.0	100.0	33.9	34.6	34.8	32.1	28.4
N144a, N144b, N144c	383764	349912	Roadside	100.0	100.0	17.7	18.3	17.6	15.5	15.6
N145a, N145b, N145c	383670	350326	Roadside	100.0	100.0	38.6	**40.5**	39.5	35.5	34.7
N146a, N146b, N146c	383587	350790	Roadside	100.0	100.0	24.2	25.5	23.5	22.6	20.6

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22 (Annualisation was not required)**

☒ **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%).

Table A.5 – 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2025 (%) (2)	2020	2021	2022	2023	2024	2025
CM1	385054	346134	Roadside	0	0	0	0	0	0	0	NA

Notes:

The automatic monitoring station did not operate during the 2025 monitoring period.

Results for previous monitoring periods are presented as the number of 1-hour periods where concentrations greater than 200µg/m^3 have been recorded. No exceedance of the NO_2 1-hour mean objective was observed in any year.

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

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

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

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

Figure A.1 – Trends in Annual Mean NO_2 Concentrations

Figure A-0) Trends in annual mean NO_2 concentrations 2020 to 2024 – Continuous Monitoring Station (Queens Gardens) (Within AQMA 2).

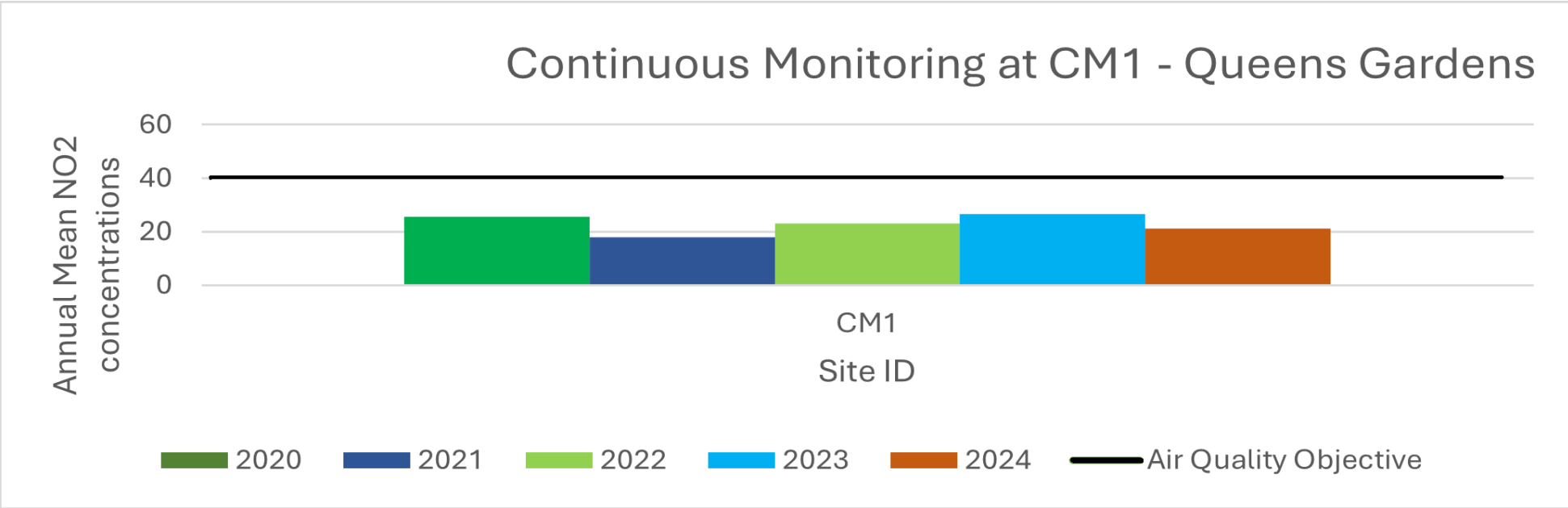

Figure A.0 presents NO_2 annual mean concentrations obtained by the continuous monitoring station within the Queens Gardens, Barracks Road during previous reporting periods. No data was recorded within the 2025 monitoring period. The monitoring location is shown within figure D9.

Figure A-1 Trends in annual mean NO_2 concentrations 2021 to 2025 – Former AQMA 1 Kidsgrove.

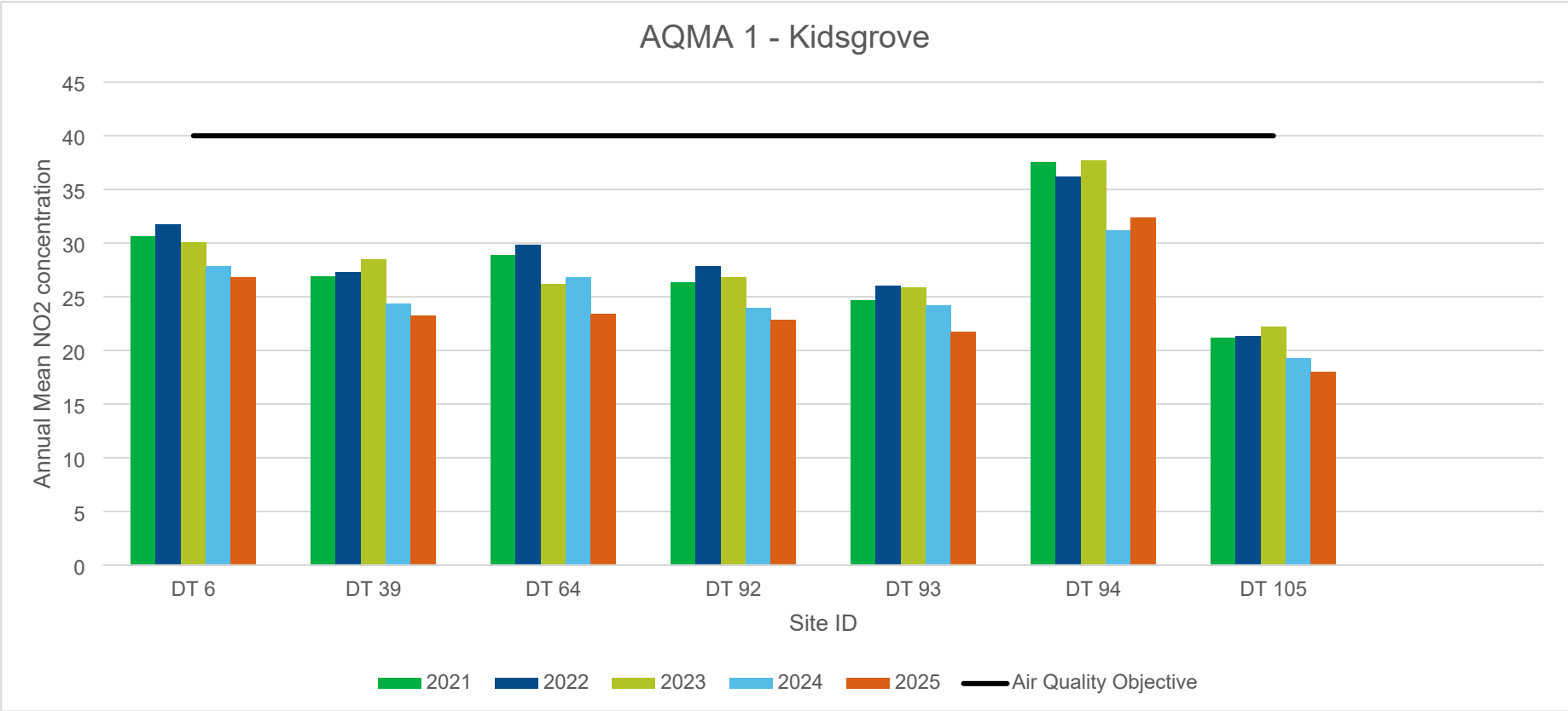

Figure A.1 presents NO_2 annual mean concentrations for sites within AQMA1 - Kidsgrove between years 2021 to 2025. There are no exceedances of the annual mean objective in 2025 and there is a general trend of reduction experienced across the sites. The monitoring locations are shown within figure D2

Figure A-2) Trends in annual mean NO_2 concentrations 2021 to 2025 – AQMA 2 Newcastle-under-Lyme (Town Centre and A53 Corridor) and Adjacent Monitoring Locations

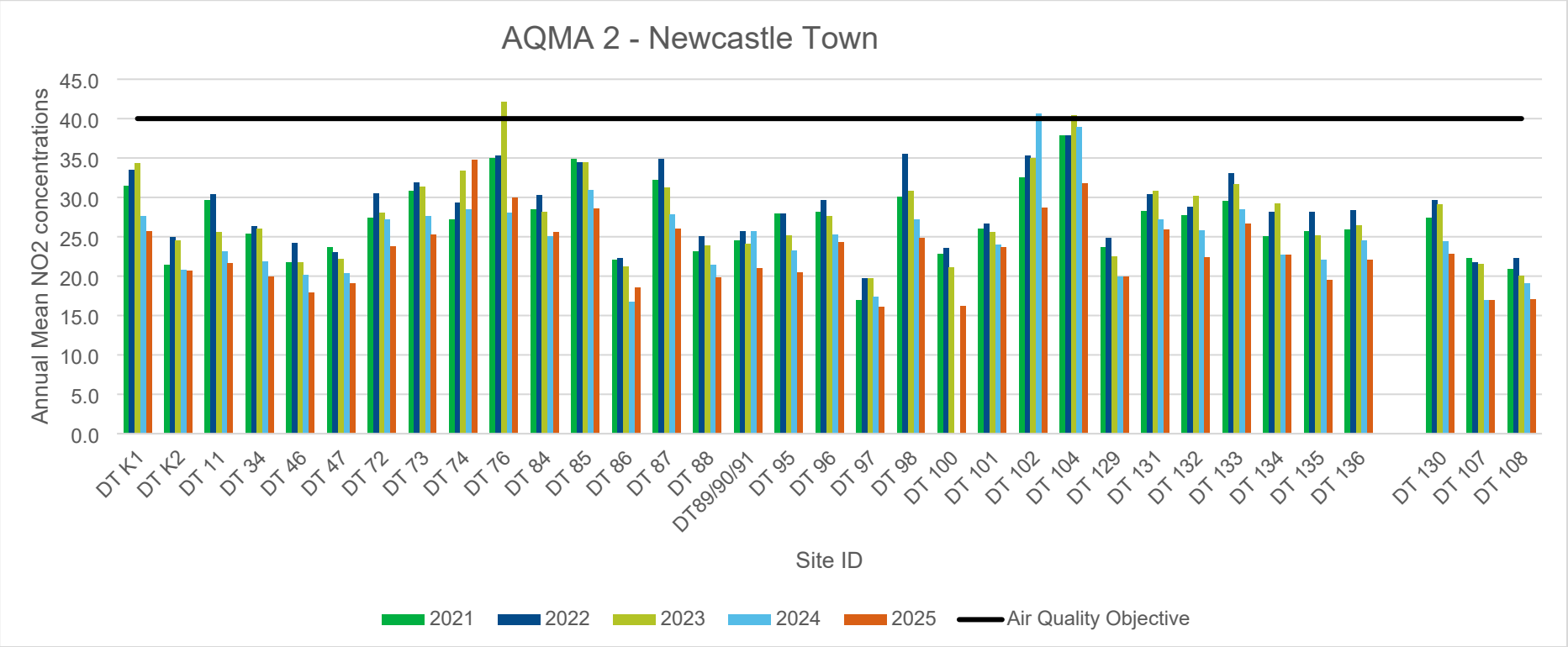

Figure A.2 presents NO_2 annual mean concentrations for sites within AQMA 2 – Newcastle Town between years 2021 to 2025. There are no exceedances of the annual mean objective in 2025 and there is a general trend of reduction experienced across the sites. The monitoring locations are shown within figure D9 and figure D10. Note: DT107, DT108 and DT130 are not located within the AQMA but are in close proximity to it.

Figure A-3) Trends in annual mean NO_2 concentrations 2021 to 2025 – Former AQMA 3 Maybank, Wolstanton & Porthill and Monitoring Locations

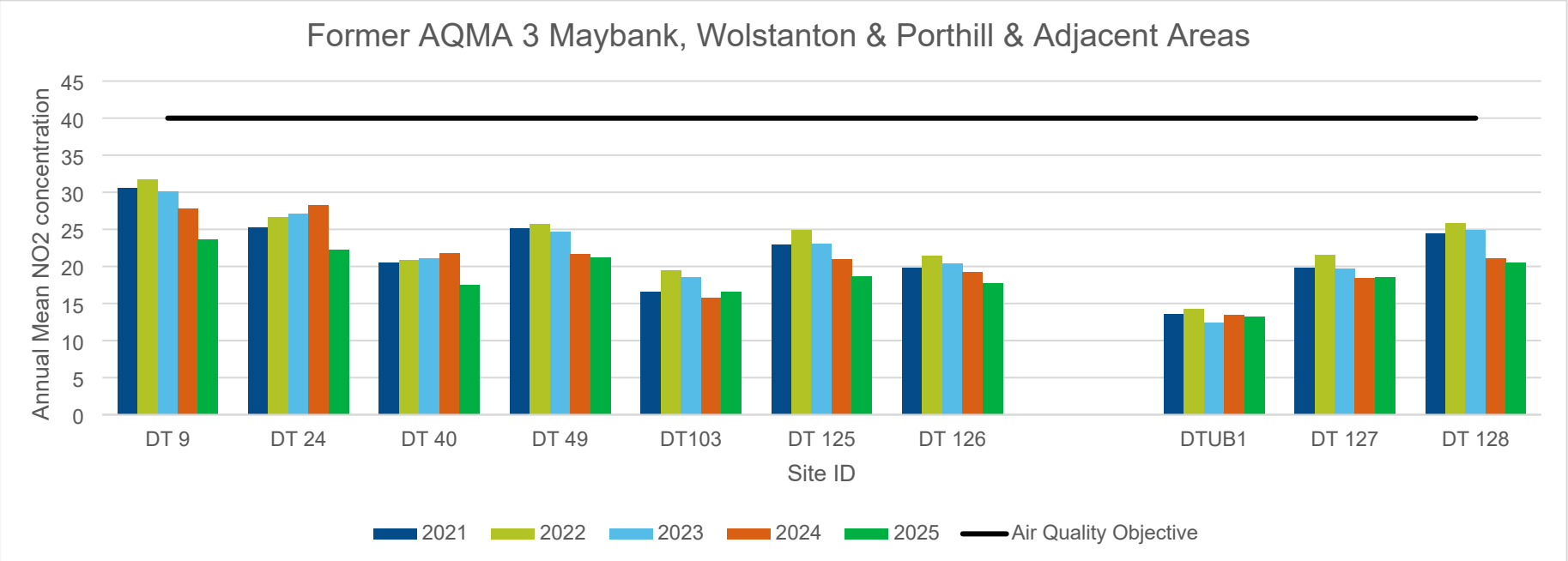

Figure A.3 presents NO_2 annual mean concentrations for sites within AQMA 3 Maybank, Wolstanton and Porthill between years 2020 to 2024. There are no exceedances of the annual mean objective in 2025 and there is a general trend of reduction experienced across the sites. The monitoring locations are shown within figures D6 and D7. Notes: DTUB1, D127 and D128 are not located within AQMA3 but are in close proximity to it.

Figure A-4) Trends in annual mean NO_2 concentrations 2021 to 2025 – Kidsgrove East and West (outside the Former AQMA 1)

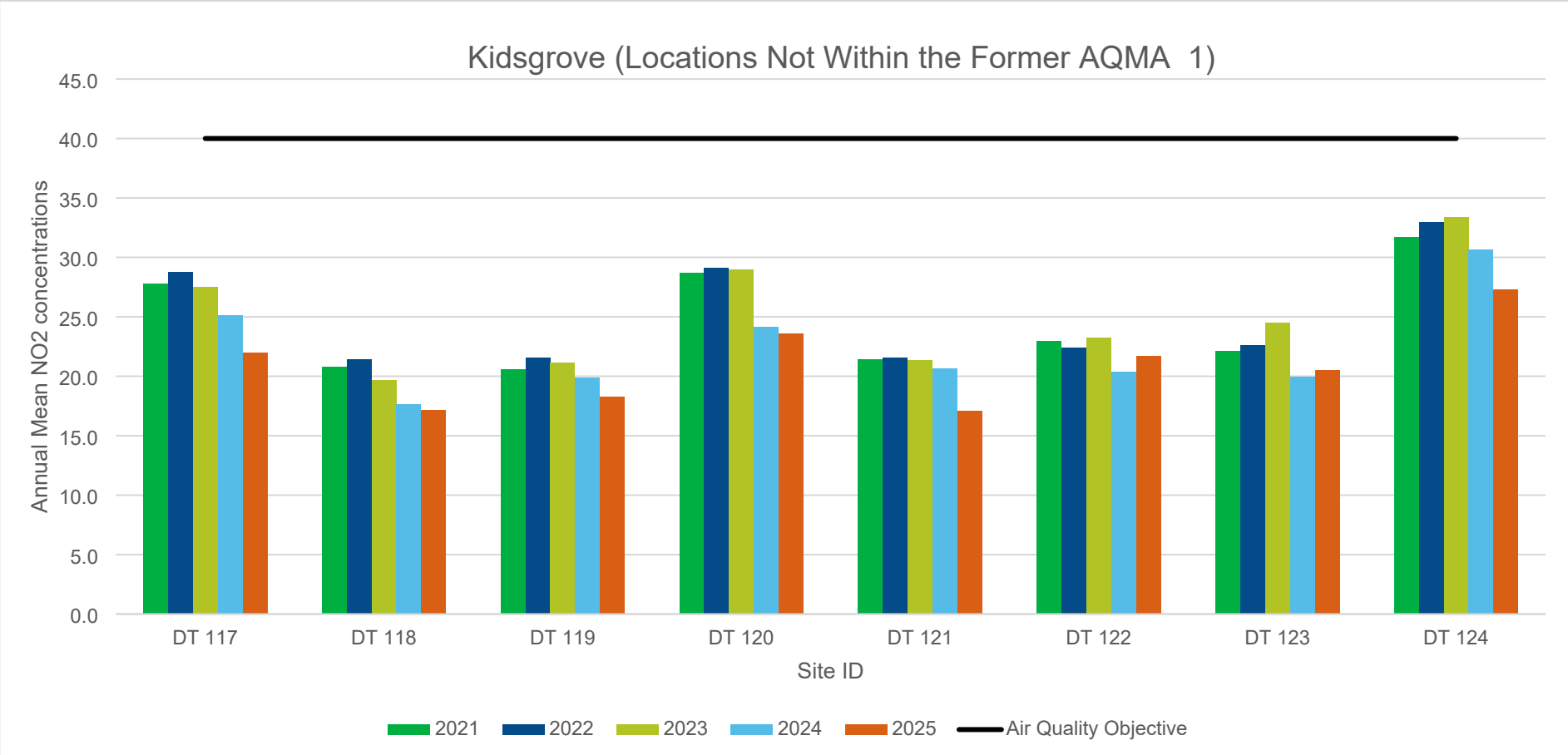

Figure A.4 presents NO_2 annual mean concentrations for sites within areas of Kidsgrove, which are outside of AQMA1, between years 2021 to 2025. There are no exceedances of the annual mean objective in 2025 and there is a general trend of reduction experienced across the sites. The monitoring locations are shown within figures D3 and D4.

Figure A-5) Trends in annual mean NO_2 concentrations 2021 to 2025 – Chesterton Talke and Bradwell (A34 Corridor)(Not within an AQMA)

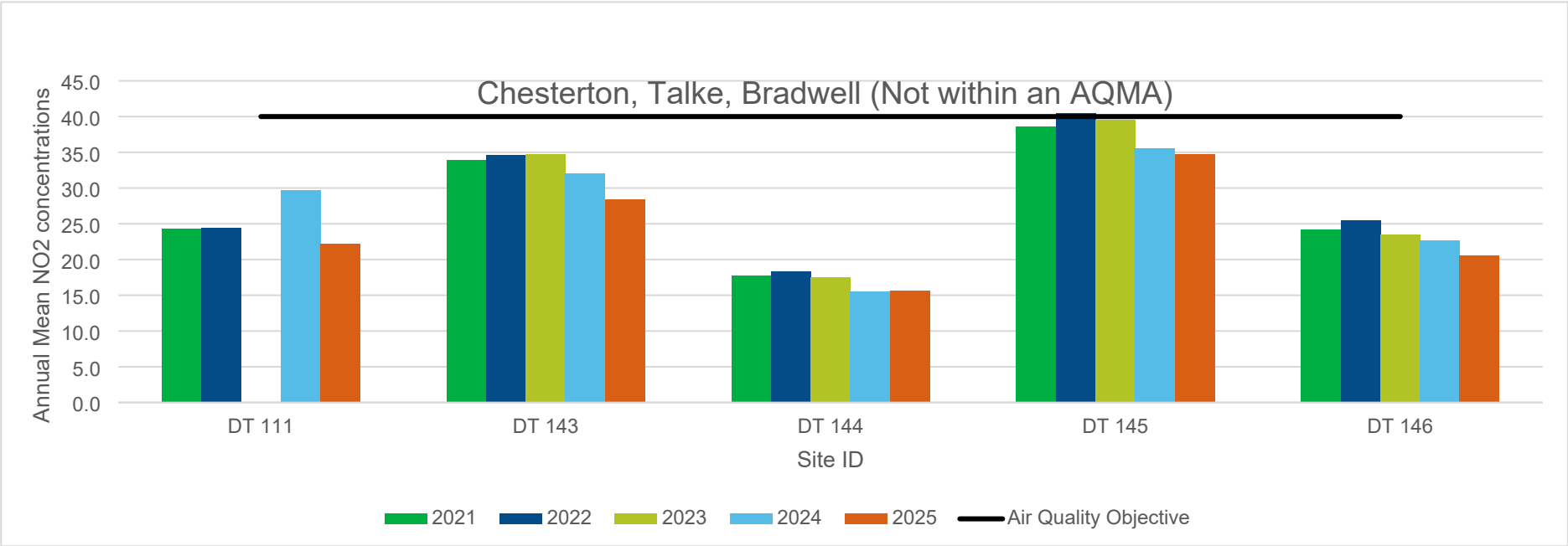

Figure A.5 presents NO_2 annual mean concentrations for sites within Chesterton, Talke and Bradwell between years 2021 to 2025. There are no exceedances of the annual mean objective in 2025 and there is a general trend of reduction experienced across the sites. The monitoring locations are shown within figure D5.

Figure A-6) Trends in annual mean NO_2 concentrations 2021 to 2025 – Silverdale, Knutton and Cross Heath.

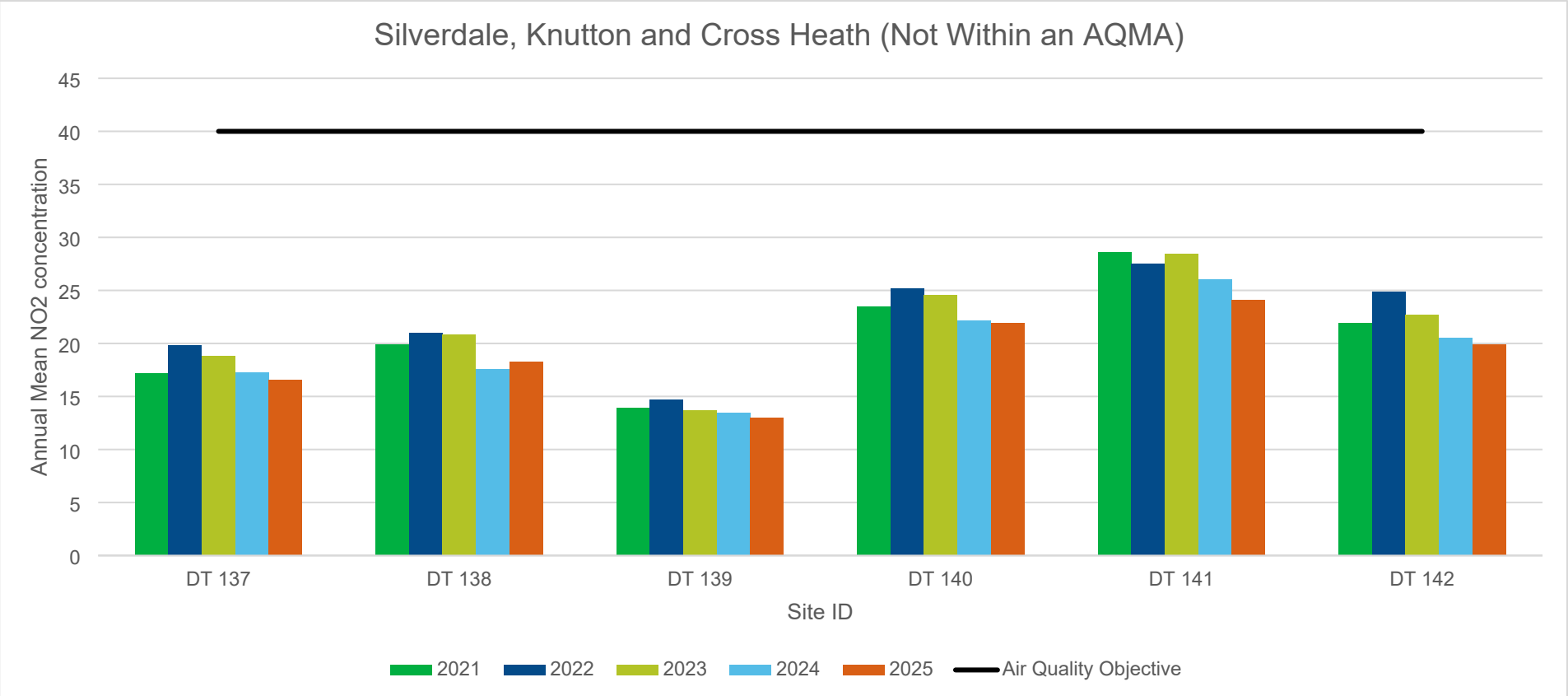

Figure A.6 presents NO_2 annual mean concentrations for sites within Silverdale, Knutton and Cross Heath. There are no exceedances of the annual mean objective in 2025 and there is a general trend of reduction experienced across the sites. The monitoring locations are shown within figure D8.

Figure A-7) Trends in annual mean NO_2 concentrations 2021 to 2025 – Thistleberry, Clayton & Seabridge. (Not within an AQMA)

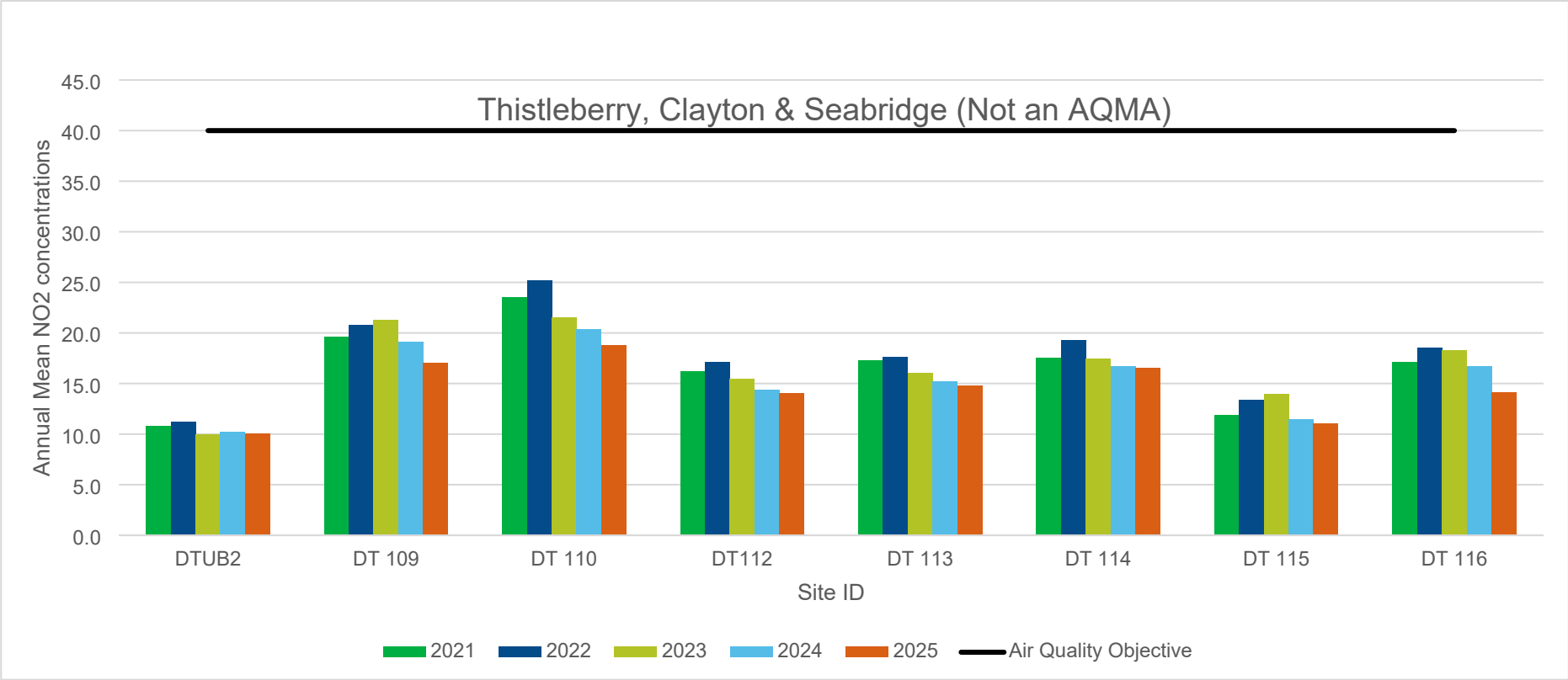

Figure A.7 presents NO_2 annual mean concentrations for sites within Thistleberry, Clayton and Seabridge. There are no exceedances of the annual mean objective in 2025 and there is a general trend of reduction experienced across the sites. The monitoring locations are shown within figures D11 and D12.

Appendix B: Full Monthly Diffusion Tube Results for 2025

Table B.1 – NO_2 2025 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	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DTK1	385051	345726	40.4	38.8	37.1	32.5	24.9	26.1	22.8	29.6	30.0	32.9	26.0	39.3	31.7	25.7	-	
DTK2	385469	346362	35.6	32.0	28.6	31.5	19.9	18.3	15.2	24.8	24.6	24.0	27.8	24.3	25.6	20.7	-	
DTUB1	384739	348326	25.1	18.1		29.1	7.8	9.4	9.9	11.8	14.0	14.4	22.9	16.8	16.3	13.2	-	
DTUB2	383916	345059	20.9	16.4	13.2	11.7	7.4	7.8	7.6		10.7	12.0		15.4	12.3	10.0	-	
DT6	384014	354429	41.9	35.8	40.7	38.5	28.4	28.0	23.1	31.3	31.2	31.1	34.2	32.9	33.1	26.8	-	
DT9	385519	349055	36.5	35.6	30.6	32.7	24.0	24.7	21.6	26.7	27.4	27.2	32.2	31.5	29.2	23.7	-	
DT11	385112	345636	39.2	29.3	28.9	26.9	19.6	19.4	19.1	22.1	25.5	27.3	33.6	29.2	26.7	21.6	-	
DT24	385574	347530	36.5	36.1	30.5	26.4	19.4	22.3	21.1	21.6	28.5	28.7	30.8	27.9	27.5	22.3	-	
DT34	385059	345840	32.8	30.0	28.8			18.5	17.7	23.2	23.5	22.5		23.6	24.5	19.9	-	
DT39	383560	354739		34.8	35.4	34.3	27.2	21.4	21.1	27.5	25.2	28.2	32.5	27.6	28.7	23.2	-	
DT40	385128	348811	30.0	33.3	24.0	25.5	15.1	18.1	13.6	16.7	21.9	20.8	18.8	22.0	21.7	17.5	-	
DT46	385073	345685	30.7	24.0	24.2	21.3	15.5	20.5	17.3	19.0	21.3	23.0	27.0	21.4	22.1	17.9	-	
DT47	385023	345678	31.6	28.8	30.1	29.3	22.6	14.7	15.6	18.3	22.0	18.9	26.3	25.0	23.6	19.1	-	
DT49	385595	349129	32.4	31.7	27.4	25.6	18.6	23.4	20.6	23.4	26.9	26.6	32.1	26.1	26.2	21.2	-	
DT64	383950	354445	39.3	32.4	32.4	31.6	19.9	25.3	21.2	27.7	28.3	27.7	I/S	31.6	28.9	23.4	-	
DT72	384981	345750	37.7	35.2			23.8	24.2	21.6	28.2	32.2	29.4	30.8	30.6	29.4	23.8	-	
DT73	385070	345738	44.9	38.9	36.3	31.9	29.2	21.7	21.8		24.9			31.5	31.2	25.3	-	

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	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT74	385132	345640	42.8	36.5	35.0		44.0	18.3	19.7	23.5	25.7	36.8	91.9	98.0	42.9	34.8	-	
DT76	385226	346156	44.7	36.8	31.4	37.2	25.5	30.1	22.2		75.7	29.3	34.0	39.6	37.0	29.9	-	
DT84	385548	346400	44.2	36.3			27.3	26.3	22.1	30.2	32.4	30.7	34.0	32.7	31.6	25.6	-	
DT85	385575	346413		41.2	39.8	41.4		32.6	28.0	37.4	34.9	34.9	25.9	36.9	35.3	28.6	-	
DT86	385075	345910	33.2	27.2	25.6	21.2	15.5	17.5		16.6	19.4	20.1	32.3	22.7	22.8	18.5	-	
DT87	385105	346225	42.5	34.1	35.8	32.0	29.1		26.7	28.9	31.2	31.6	30.8	31.0	32.2	26.0	-	
DT88	384709	345881	34.6	29.9	28.3	22.3	19.2	20.9	21.5	21.2	23.6	24.4	25.0	22.1	24.4	19.8	-	
DT89A	385054	346134	35.2	30.3		50.7	15.5	17.1	15.3	23.0	22.0	23.2	24.1	26.1	-	-	-	Triplicate Site with DT89A, DT90 and DT91 - Annual data provided for DT91 only
DT90	385054	346134	28.8	34.4		48.7	17.1	15.5	15.5		24.2	22.0	27.5	23.7	-	-	-	Triplicate Site with DT89A, DT90 and DT91 - Annual data provided for DT91 only
DT91	385054	346134	34.4	34.1		47.4	16.7	16.5	15.2		25.6		27.0	28.7	25.9	21.0	-	Triplicate Site with DT89A, DT90 and DT91 - Annual data provided for DT91 only
DT92	383890	354461	39.6	35.3	33.6	28.9	17.5	21.3	17.0	27.4	27.5	24.0	35.2	30.8	28.2	22.8	-	
DT93	384056	354393	34.4	29.6	31.1	27.7	23.6	23.9	21.9	25.7	26.1	25.5	25.4	26.6	26.8	21.7	-	
DT94	384030	354416	49.7	45.8	50.4	44.7	I/S	31.4	28.9	42.3	I/S	34.6	35.3	37.2	40.0	32.4	-	
DT95	385171	345539	35.5	31.3	27.9	22.6	16.3	19.2	20.1	21.5	25.0	26.2	30.4	28.4	25.4	20.5	-	
DT96	385131	345601	32.7	33.2	31.4	29.8	21.0	22.0				31.9	33.1	35.1	30.0	24.3	-	
DT97	384795	345796	31.1	25.8	24.3	17.8	12.9	13.5	14.1	15.5	20.1	19.0	21.9	22.5	19.9	16.1	-	
DT98	385327	346148	41.8	35.9	30.0	32.1	22.2	28.8	18.9	32.1	29.9	30.0	36.3	29.8	30.7	24.8	-	
DT100	384689	346284		23.7	23.9	20.8	13.3	13.5	15.7	15.9	21.5	20.7	28.8	22.2	20.0	16.2	-	
DT101	384806	345842	55.7	33.1	35.8	29.0	26.0	17.5	19.4	25.5	26.6	24.9	I/S	28.3	29.3	23.7	-	

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	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT102	384609	346007	41.8	38.8			30.2	36.1	29.0	35.4	36.5	35.9	35.0	35.9	35.5	28.7	-	
DT103	385682	347909	28.4	27.4	24.0	22.2	12.5		11.2	18.7	19.7	16.0	23.7	21.6	20.5	16.6	-	
DT104	385213	346270	39.3	37.8	30.9	30.8	30.7	25.0	25.6	39.5	39.1	32.6	75.6	64.5	39.3	31.8	-	
DT105	383991	354418	34.4	26.8	23.9	23.2	14.5	17.5	15.9	18.2	21.4	21.7	23.6	24.9	22.2	18.0	-	
N107a	384495	346298	29.1	27.5	25.8	23.5	17.7	12.8	13.0	18.6	17.1	18.6	24.1	21.8	-	-	-	Triplicate Site with N107a, N107b and N107C - Annual data provided for N107C only
N107b	384495	346298	30.2	23.6	26.6	22.8	18.0	13.2	12.6	18.7	18.3	18.5	30.0	22.2	-	-	-	Triplicate Site with N107a, N107b and N107C - Annual data provided for N107C only
N107C	384495	346298	30.9	25.1	24.2	22.1	16.9	12.9	12.1	18.5	18.2	20.0	22.6	21.4	20.8	16.9	-	Triplicate Site with N107a, N107b and N107C - Annual data provided for N107C only
N108a	384961	345346	27.9	24.1	26.9	19.5	14.3	17.4	17.3	19.3	19.7	22.9	24.7	22.8	-	-	-	Triplicate Site with N108a, N108b and N108C - Annual data provided for N108C only
N108b	384961	345346	30.2	24.4	25.4	20.0	14.7	17.5	5.4	19.1	18.6	21.8	24.4	24.5	-	-	-	Triplicate Site with N108a, N108b and N108C - Annual data provided for N108C only
N108C	384961	345346	30.3	26.2	23.8	18.9	14.3	16.6	16.6	20.4	20.9	23.4	20.6	22.6	21.0	17.0	-	Triplicate Site with N108a, N108b and N108C - Annual data provided for N108C only
N109a	385190	343318	30.0	22.9	23.0	20.8	14.3	14.8	12.4	17.1	20.5	20.1	27.0	22.7	-	-	-	Triplicate Site with N109a, N109b and N109c - Annual data provided for N109c only
N109b	385190	343318	34.1	23.8	24.7	22.2	14.9	14.4	16.7	15.9	20.3	19.8	26.0	20.1	-	-	-	Triplicate Site with N109a, N109b and N109c - Annual data provided for N109c only
N109c	385190	343318	35.1	24.0	23.6	19.6	14.6	14.8	16.9	18.0	21.3	21.7	26.1	22.0	21.0	17.0	-	Triplicate Site with N109a, N109b and N109c - Annual data provided for N109c only
N110a	385110	342314	30.4	26.6	22.5	24.7	21.0	21.4	20.9	23.2		24.0	27.6	17.8	-	-	-	Triplicate Site with N110a, N110b and N110c - Annual data provided for N110c only
N110b	385110	342314	31.4	25.2	27.2	24.5	20.3	23.4	21.3	23.9	12.1	24.1	26.2	22.8	-	-	-	Triplicate Site with N110a, N110b and N110c - Annual data provided for N110c only
N110c	385110	342314	30.5	25.9	27.4	25.1	20.0	22.4	21.6	23.6			26.8	22.9	23.2	18.8	-	Triplicate Site with N110a, N110b and N110c - Annual data provided for N110c only
N111a	383882	349558	43.8	29.3	28.3	25.5	18.3	26.1	23.2	22.9	27.4	30.1		26.0	-	-	-	Triplicate Site with N111a, N111b and N111c - Annual data provided for N111c only
N111b	383882	349558	38.2	28.7	28.0	25.5	17.5	26.1	21.4	23.9	27.4	28.8	31.4	28.0	-	-	-	Triplicate Site with N111a, N111b and N111c - Annual data provided for N111c only

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted	Annual Mean: Distance Corrected to Nearest Exposure	Comment
N111c	383882	349558	44.0	28.0	25.5	25.6	17.1	25.6	23.4	24.0	27.7	28.8	29.3	30.0	27.4	22.2	-	Triplicate Site with N111a, N111b and N111c - Annual data provided for N111c only
N112a	382286	341956	27.9	21.5	19.0	20.5	11.5		9.7	15.7	16.6	13.4	19.5	19.0	-	-	-	Triplicate Site with N112a, N112b and N112c - Annual data provided for N112c only
N112b	382286	341956	27.0	21.6	20.7	22.2	11.8	12.7	10.1		17.2	13.4	21.7	15.1	-	-	-	Triplicate Site with N112a, N112b and N112c - Annual data provided for N112c only
N112c	382286	341956	26.2	22.0	20.8	21.8	11.9		10.4	14.3	17.3	13.7	17.8	16.5	17.2	14.0	-	Triplicate Site with N112a, N112b and N112c - Annual data provided for N112c only
N113a	383052	343666	27.0	20.7	19.7	19.7	15.9	16.9	12.5	17.2	21.3	18.5	14.4	14.4	-	-	-	Triplicate Site with N113a, N113b and N113c - Annual data provided for N113c only
N113b	383052	343666	24.0	21.2	18.7	19.5	14.4	14.3	14.0	19.7	20.7	17.1	17.6	18.1	-	-	-	Triplicate Site with N113a, N113b and N113c - Annual data provided for N113c only
N113c	383052	343666	23.7	21.1	19.1	19.3	14.7	16.8	14.3	18.9	21.6	17.7	17.5	15.7	18.3	14.8	-	Triplicate Site with N113a, N113b and N113c - Annual data provided for N113c only
N114a	383953	344832	28.4	25.1	23.0	20.6	13.5	13.2	13.4	15.3		20.5	23.9	24.5	-	-	-	Triplicate Site with N114a, N114b and N114c - Annual data provided for N114c only
N114b	383953	344832	32.2	24.4	23.7	20.6	12.7	13.5	13.3	14.9	18.5	19.9	27.1	25.6	-	-	-	Triplicate Site with N114a, N114b and N114c - Annual data provided for N114c only
N114c	383953	344832	29.6	24.4	23.8	23.4	13.0	13.7	13.6	15.6	19.8	18.3	31.0	19.4	20.3	16.5	-	Triplicate Site with N114a, N114b and N114c - Annual data provided for N114c only
N115a	383545	345195	20.3	17.9	18.2	14.5	10.1	8.5		9.5	12.5	I/S	17.9	14.3	-	-	-	Triplicate Site with N115a, N115b and N115c - Annual data provided for N115c only
N115b	383545	345195	19.8	17.7	19.1	11.2		8.9		10.6	12.6	10.5	17.0	14.8	-	-	-	Triplicate Site with N115a, N115b and N115c - Annual data provided for N115c only
N115c	383545	345195	19.2	17.4	17.9	14.7	7.1	8.3	10.4	12.4		11.3	16.9	14.0	13.6	11.0	-	Triplicate Site with N115a, N115b and N115c - Annual data provided for N115c only
N116a	383157	345431				17.4	15.3	13.9	15.3	14.7		18.9	19.7	16.2	-	-	-	Triplicate Site with N116a, N116b and N116c - Annual data provided for N116c only
N116b	383157	345431		23.3			14.7	14.2	14.6	15.6		17.5	21.5	18.8	-	-	-	Triplicate Site with N116a, N116b and N116c - Annual data provided for N116c only
N116c	383157	345431		23.2		16.4	15.2	14.6	16.4	15.5		19.2	20.4	16.5	17.4	14.1	-	Triplicate Site with N116a, N116b and N116c - Annual data provided for N116c only
N117a	383199	352740	35.0	28.7	26.8	26.1	22.1	23.7	27.0	26.4	30.1	27.0	31.8	26.7	-	-	-	Triplicate Site with N117a, N117b and N117c - Annual data provided for N117c only

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted	Annual Mean: Distance Corrected to Nearest Exposure	Comment
N117b	383199	352740	39.9	28.7	27.4	25.6	21.0	25.1	25.6	25.4	27.4	28.4	32.1	24.9	-	-	-	Triplicate Site with N117a, N117b and N117c - Annual data provided for N117c only
N117c	383199	352740	34.1	25.6	27.4	23.8	21.6	26.6	24.6	24.5	28.6	27.8	28.1	23.8	27.2	22.0	-	Triplicate Site with N117a, N117b and N117c - Annual data provided for N117c only
N118a	382934	353388	28.4	22.8	24.5	22.5	15.1	16.4	17.8	19.8	21.0	20.1	26.6	21.3	-	-	-	Triplicate Site with N118a, N118b and N118c - Annual data provided for N118c only
N118b	382934	353388	30.8	23.8	24.2	22.0	16.0	16.7	17.7	19.3	18.8	20.4	22.8	20.0	-	-	-	Triplicate Site with N118a, N118b and N118c - Annual data provided for N118c only
N118c	382934	353388	28.7	24.0	24.1	23.2	15.9	15.6	18.4	19.5	19.7	19.7	24.2	21.3	21.2	17.2	-	Triplicate Site with N118a, N118b and N118c - Annual data provided for N118c only
N119a	382600	354062	32.3	28.5	24.0	26.0	18.9	14.2	14.0	21.0	23.1	19.7	26.2	22.7	-	-	-	Triplicate Site with N119a, N119b and N119c - Annual data provided for N119c only
N119b	382600	354062	31.0	28.8	28.2	26.9	17.7	14.2	15.0	21.6	22.2	18.5	24.3	24.1	-	-	-	Triplicate Site with N119a, N119b and N119c - Annual data provided for N119c only
N119c	382600	354062	33.5	26.1	26.6	26.3	18.0	13.9	15.0	21.7	22.5	19.6	24.9	22.2	22.6	18.3	-	Triplicate Site with N119a, N119b and N119c - Annual data provided for N119c only
N120a	382707	354305	38.7	31.3	33.4	30.0	22.9	24.5	27.3	25.5	28.9	30.3	27.1	27.5	-	-	-	Triplicate Site with N120a, N120b and N120c - Annual data provided for N120c only
N120b	382707	354305	39.8	33.4	32.1	30.0	24.1	26.9	24.1	26.4	28.9	29.6	31.9	23.6	-	-	-	Triplicate Site with N120a, N120b and N120c - Annual data provided for N120c only
N120c	382707	354305	37.9	30.4	32.6	30.0	24.6	25.6	27.1	25.8	28.6	30.1	33.3	25.7	29.2	23.6	-	Triplicate Site with N120a, N120b and N120c - Annual data provided for N120c only
N121a	382736	354385	25.8	26.5	23.6	18.6	14.9	16.6	18.7		17.8	20.8	21.1	20.5	-	-	-	Triplicate Site with N121a, N121b and N121c - Annual data provided for N121c only
N121b	382736	354385	30.7	25.9	24.2	19.4	16.4	16.6	18.9		18.1	21.0	25.2	22.0	-	-	-	Triplicate Site with N121a, N121b and N121c - Annual data provided for N121c only
N121c	382736	354385	30.4	25.3	24.4	19.9	16.3	17.6	16.8		17.7	19.8	23.4	22.2	21.1	17.1	-	Triplicate Site with N121a, N121b and N121c - Annual data provided for N121c only
N122a	384261	354207	26.2	32.5	35.4	28.9	22.7	17.3	19.6		39.2	17.0	25.2	28.1	-	-	-	Triplicate Site with N122a, N122b and N122c - Annual data provided for N122c only
N122b	384261	354207	31.1	31.3		31.3	22.0	18.1	20.2			21.6	19.8	24.0	-	-	-	Triplicate Site with N122a, N122b and N122c - Annual data provided for N122c only
N122c	384261	354207	32.5	32.1		30.7	23.2	18.2	20.3		40.3	16.6	20.2	28.1	26.8	21.7	-	Triplicate Site with N122a, N122b and N122c - Annual data provided for N122c only

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N123a	384638	354133	37.7	25.4	24.7	24.2	I/S			20.7	24.0	26.2	23.6	27.0	-	-	-	Triplicate Site with N123a, N123b and N123c - Annual data provided for N123c only
N123b	384638	354133	35.9	26.4	26.4	23.2	I/S		31.4	20.3	23.2	23.8	26.1	24.6	-	-	-	Triplicate Site with N123a, N123b and N123c - Annual data provided for N123c only
N123c	384638	354133	37.1	28.0	25.8	23.8	14.7		30.7	22.4	22.4	25.5	27.4	20.6	25.3	20.5	-	Triplicate Site with N123a, N123b and N123c - Annual data provided for N123c only
N124a	385019	353832	48.1	41.7	36.8	33.7	23.4	27.9	28.9	30.1	33.7	31.5	27.5	36.3	-	-	-	Triplicate Site with N124a, N124b and N124c - Annual data provided for N124c only
N124b	385019	353832	48.9	40.9	39.5	33.1	23.6	30.9	30.4	28.1	32.5	34.7	34.4	30.7	-	-	-	Triplicate Site with N124a, N124b and N124c - Annual data provided for N124c only
N124c	385019	353832	42.7	42.2	41.3	35.3	23.4	30.0	28.5	29.9	34.7	35.0	28.3	36.6	33.8	27.3	-	Triplicate Site with N124a, N124b and N124c - Annual data provided for N124c only
N125a	385387	348389	35.3	27.2	26.0	24.2	15.2	20.8	19.2	19.0	22.1	22.7	27.8	19.9	-	-	-	Triplicate Site with N125a, N125b and N125c - Annual data provided for N125c only
N125b	385387	348389	34.9	26.6	26.3	24.1	15.4	18.1	18.9	18.7	25.0	24.2	28.3	25.8	-	-	-	Triplicate Site with N125a, N125b and N125c - Annual data provided for N125c only
N125c	385387	348389	21.4	27.3	25.2	24.1	15.3		14.0	18.6	24.0	23.3	26.4	25.1	23.1	18.7	-	Triplicate Site with N125a, N125b and N125c - Annual data provided for N125c only
N126a	385556	348224	35.9	23.8	24.1	21.4	13.4	16.2	18.0	17.8	21.6	22.0	28.9	24.8	-	-	-	Triplicate Site with N126a, N126b and N126c - Annual data provided for N126c only
N126b	385556	348224	33.4	25.0	25.0	21.4	13.3	16.4	16.8	16.9	20.1	22.6	25.9	23.4	-	-	-	Triplicate Site with N126a, N126b and N126c - Annual data provided for N126c only
N126c	385556	348224	31.6	26.6	23.2	20.4	12.7	16.3	16.8	18.3		20.7	29.2	25.9	22.0	17.8	-	Triplicate Site with N126a, N126b and N126c - Annual data provided for N126c only
N127a	385416	347424	33.9	27.5	24.2	30.3	14.3	13.2	15.7	18.6	20.5	21.4	24.4	47.1	-	-	-	Triplicate Site with N127a, N127b and N127c - Annual data provided for N127c only
N127b	385416	347424	31.5	28.6	23.9	32.3	13.7	14.4	15.4	18.2	20.6	15.1		21.7	-	-	-	Triplicate Site with N127a, N127b and N127c - Annual data provided for N127c only
N127c	385416	347424	32.1	26.6	25.0	30.9	13.7	15.0	15.3	19.2	21.3	19.5	26.7	24.4	22.8	18.5	-	Triplicate Site with N127a, N127b and N127c - Annual data provided for N127c only
N128a	385512	347373	36.3	29.7	29.8	24.3	21.5		18.3	25.2	27.0	22.3	25.4	26.8	-	-	-	Triplicate Site with N128a, N128b and N128c - Annual data provided for N128c only
N128b	385512	347373	38.5	32.5	32.5	24.7	21.8	18.3		24.0		23.5	24.9	21.9	-	-	-	Triplicate Site with N128a, N128b and N128c - Annual data provided for N128c only

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted	Annual Mean: Distance Corrected to Nearest Exposure	Comment
N128c	385512	347373	37.5	26.0	26.7	19.4		19.0	17.7	26.5	28.9	22.7	27.9	25.3	25.4	20.5	-	Triplicate Site with N128a, N128b and N128c - Annual data provided for N128c only
N129a	384968	346228	34.7	32.2	29.3	28.4	18.8	18.1	16.7	17.3	24.2	22.5	27.9	25.1	-	-	-	Triplicate Site with N129a, N129b and N129c - Annual data provided for N129c only
N129b	384968	346228	35.1	31.7	28.6	28.7	17.9	18.0	12.4	19.9	23.5	23.3	28.7	26.3	-	-	-	Triplicate Site with N129a, N129b and N129c - Annual data provided for N129c only
N129c	384968	346228	34.2	30.8	28.2	27.9	17.9	19.2	16.5	19.6	24.0	23.9	25.4	27.3	24.6	19.9	-	Triplicate Site with N129a, N129b and N129c - Annual data provided for N129c only
N130a	385098	346395	38.5	32.9	32.7	33.8	22.4	21.6	19.3	23.8	24.5	26.4	30.0	29.8	-	-	-	Triplicate Site with N130a, N130b and N130c - Annual data provided for N130c only
N130b	385098	346395	37.6	31.8	35.0	33.6	23.3	18.1	17.8	23.2	24.3	28.2	32.1	29.3	-	-	-	Triplicate Site with N130a, N130b and N130c - Annual data provided for N130c only
N130c	385098	346395	39.7	32.9	33.8	33.4	24.1	20.5	18.2	25.5	26.7	25.3	36.4	28.1	28.2	22.8	-	Triplicate Site with N130a, N130b and N130c - Annual data provided for N130c only
N131a	385463	346374	44.4	36.2	33.7	32.6	25.7	26.6	25.8	28.7	28.5	32.9	42.1	32.0	-	-	-	Triplicate Site with N131a, N131b and N131c - Annual data provided for N131c only
N131b	385463	346374	42.6	35.5	37.2	30.5	26.6	25.9	25.3	28.3	28.9	30.5	38.7	33.3	-	-	-	Triplicate Site with N131a, N131b and N131c - Annual data provided for N131c only
N131c	385463	346374	43.1	35.5	36.2	31.3	25.9	26.6	24.7	28.0	30.1	29.7	36.6	30.3	32.0	25.9	-	Triplicate Site with N131a, N131b and N131c - Annual data provided for N131c only
N132a	385612	346436	36.2	31.2	28.3	25.1	20.2	27.3	27.8	24.7	30.5	30.6	I/S	20.1	-	-	-	Triplicate Site with N132a, N132b and N132c - Annual data provided for N132c only
N132b	385612	346436	38.5	32.7	27.6	25.7	21.9	26.8	25.9	23.7	30.1	29.6	29.8	28.0	-	-	-	Triplicate Site with N132a, N132b and N132c - Annual data provided for N132c only
N132c	385612	346436		32.6	30.0	25.5	21.5	28.1	25.9	24.1	27.8	29.3	24.0	20.1	27.7	22.4	-	Triplicate Site with N132a, N132b and N132c - Annual data provided for N132c only
N133a	385926	346580	45.2	38.1	32.8	38.7	23.3	31.1	21.3	30.1	34.8	31.4		35.2	-	-	-	Triplicate Site with N133a, N133b and N133c - Annual data provided for N133c only
N133b	385926	346580	46.4	40.1	36.4	38.9	22.6	29.9	21.6	30.2	35.0	32.2		36.2	-	-	-	Triplicate Site with N133a, N133b and N133c - Annual data provided for N133c only
N133c	385926	346580	46.4	40.8	34.9	39.3	20.8	30.1	22.0	27.4	31.3	33.4		27.6	32.9	26.6	-	Triplicate Site with N133a, N133b and N133c - Annual data provided for N133c only
N134a	386009	346600	36.9	32.2	30.2	28.6	22.9	26.3	21.0	23.7	29.4	29.0	29.9	28.5	-	-	-	Triplicate Site with N134a, N134b and N134c - Annual data provided for N134c only

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N134b	386009	346600	36.9	37.1	30.8	27.3	19.2	26.2	20.4	24.7	31.1	27.2	29.0	29.0	-	-	-	Triplicate Site with N134a, N134b and N134c - Annual data provided for N134c only
N134c	386009	346600	32.9	34.9	29.2	25.2	19.6	26.1	20.1	25.0	29.4	26.3	32.6		28.0	22.7	-	Triplicate Site with N134a, N134b and N134c - Annual data provided for N134c only
N135a	385518	346128		29.3	27.6	26.3	18.1	19.6	25.3	21.3	26.0	23.1	27.1	28.8	-	-	-	Triplicate Site with N135a, N135b and N135c - Annual data provided for N135c only
N135b	385518	346128		28.9	28.5	23.7	17.0	20.8	21.5	20.7	24.7	23.2	25.0	26.7	-	-	-	Triplicate Site with N135a, N135b and N135c - Annual data provided for N135c only
N135c	385518	346128		31.6	23.8	24.0	18.9	20.5	22.4	20.9	24.6	23.7	23.0	28.9	24.1	19.5	-	Triplicate Site with N135a, N135b and N135c - Annual data provided for N135c only
N136a	385078	345687	41.0	31.7	27.5	26.7	18.2	25.1	24.5	22.2	27.2		29.3	29.0	-	-	-	Triplicate Site with N136a, N136b and N136c - Annual data provided for N136c only
N136b	385078	345687	37.5	30.7	28.4	26.0	16.9	24.6	22.6	19.0	28.6	27.1	34.0	25.9	-	-	-	Triplicate Site with N136a, N136b and N136c - Annual data provided for N136c only
N136c	385078	345687	37.1	30.5	27.9	25.7	18.5	24.2	24.0	23.4	25.1	30.5		29.8	27.2	22.1	-	Triplicate Site with N136a, N136b and N136c - Annual data provided for N136c only
N137a	382795	346011	27.1	24.0	24.9	22.0	15.7	13.8	13.2	17.6	18.1	20.1	20.9	16.5	-	-	-	Triplicate Site with N137a, N137b and N137c - Annual data provided for N137c only
N137b	382795	346011	27.6	25.9	23.3	24.7	16.7	14.1	13.9	19.9	18.8	19.4	22.7	20.0	-	-	-	Triplicate Site with N137a, N137b and N137c - Annual data provided for N137c only
N137c	382795	346011	28.8	25.7	25.5	25.3	16.3	15.0	13.7	18.3	19.7	17.4	24.0	25.5	20.4	16.6	-	Triplicate Site with N137a, N137b and N137c - Annual data provided for N137c only
N138a	383113	346592	34.0	27.5	25.4	25.3	14.7	18.8	15.5	22.0	18.3	24.8	19.3	24.1	-	-	-	Triplicate Site with N138a, N138b and N138c - Annual data provided for N138c only
N138b	383113	346592	32.3	28.4	24.4	23.9	12.1	19.0	14.7	21.9	24.0	24.4	20.8	24.7	-	-	-	Triplicate Site with N138a, N138b and N138c - Annual data provided for N138c only
N138c	383113	346592	34.3	28.0	22.1	24.4	14.9	19.0		21.2	23.6	24.3	24.9	23.2	22.6	18.3	-	Triplicate Site with N138a, N138b and N138c - Annual data provided for N138c only
N139a	383302	346727	22.7	21.3	18.6	16.3	10.3	10.2	10.4	13.1	16.6	16.1	19.1	18.4	-	-	-	Triplicate Site with N139a, N139b and N139c - Annual data provided for N139c only
N139b	383302	346727	23.9	21.3	17.1	17.3	9.4	11.7	10.0	13.0	16.9	16.0	17.8	18.4	-	-	-	Triplicate Site with N139a, N139b and N139c - Annual data provided for N139c only
N139c	383302	346727	25.2	21.1	19.0	15.4	10.2	11.0	9.8	12.0	16.5	15.7	18.8	18.5	16.1	13.0	-	Triplicate Site with N139a, N139b and N139c - Annual data provided for N139c only

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N140a	383930	347273	42.4	32.7	29.1	29.4	22.0	19.6	14.6	24.9	27.6	23.4	29.4	28.4	-	-	-	Triplicate Site with N140a, N140b and N140c - Annual data provided for N140c only
N140b	383930	347273	42.4	30.4	29.0	29.4	21.8	19.2	17.8	24.6	27.1	23.8	33.3	29.7	-	-	-	Triplicate Site with N140a, N140b and N140c - Annual data provided for N140c only
N140c	383930	347273	43.9	32.7	29.1	30.2	21.0	15.7	17.1	24.2	27.1	25.8	25.2		27.0	21.9	-	Triplicate Site with N140a, N140b and N140c - Annual data provided for N140c only
N141a	384337	347534	34.1	32.8	35.6	33.7	23.3	22.4	23.3	26.7	30.9	28.7	36.4		-	-	-	Triplicate Site with N141a, N141b and N141c - Annual data provided for N141c only
N141b	384337	347534	35.4	34.3	33.8	35.4	20.9	23.9	23.7	27.1	31.4	28.0	30.9	30.6	-	-	-	Triplicate Site with N141a, N141b and N141c - Annual data provided for N141c only
N141c	384337	347534	34.8	32.4	33.5	33.1	23.1	23.8	23.5	27.4	30.4	31.2	31.8	30.5	29.7	24.1	-	Triplicate Site with N141a, N141b and N141c - Annual data provided for N141c only
N142a	384207	347915	34.6	28.1	29.5	26.2	16.9	19.8	19.2	17.8	24.3	23.8		24.6	-	-	-	Triplicate Site with N142a, N142b and N142c - Annual data provided for N142c only
N142b	384207	347915	34.6	28.3	26.2	22.8	16.7	19.3	19.4	21.9	25.1	22.5	31.2	25.2	-	-	-	Triplicate Site with N142a, N142b and N142c - Annual data provided for N142c only
N142c	384207	347915	34.7	28.7	27.0	24.8	17.2	19.3	18.2	19.9	25.3	23.2	18.0	46.3	24.6	19.9	-	Triplicate Site with N142a, N142b and N142c - Annual data provided for N142c only
N143a	384021	348925	40.5	35.5	39.2	40.2	29.6	31.8	31.0	32.9	36.1	35.3	33.0	33.8	-	-	-	Triplicate Site with N143a, N143b and N143c - Annual data provided for N143c only
N143b	384021	348925	41.7	35.4	40.7	40.8	30.0	31.2	32.2	35.8	35.1	36.1	29.3	31.6	-	-	-	Triplicate Site with N143a, N143b and N143c - Annual data provided for N143c only
N143c	384021	348925	38.7	36.1	42.4	40.4	28.5	31.7	30.8	34.3	34.4	36.6	38.0	32.7	35.1	28.4	-	Triplicate Site with N143a, N143b and N143c - Annual data provided for N143c only
N144a	383764	349912	25.7	24.1	24.4	22.7	14.3	14.0	14.1	16.9	18.8	17.3	19.3	19.3	-	-	-	Triplicate Site with N144a, N144b and N144c - Annual data provided for N144c only
N144b	383764	349912	24.3	25.6	23.0	23.5	16.4	12.8	12.2	18.7	19.6	17.7	20.5	18.2	-	-	-	Triplicate Site with N144a, N144b and N144c - Annual data provided for N144c only
N144c	383764	349912	24.0	23.7	24.1	25.0	15.4	13.5	13.3	19.1	18.5	16.1	16.9	18.9	19.2	15.6	-	Triplicate Site with N144a, N144b and N144c - Annual data provided for N144c only
N145a	383670	350326	37.2	40.0	50.0	43.2	38.2	46.7	36.0	49.1	48.8	36.8	46.5	35.7	-	-	-	Triplicate Site with N145a, N145b and N145c - Annual data provided for N145c only
N145b	383670	350326	44.2	41.1	45.7	49.5	35.8	46.7	33.7	49.5	48.3	39.9	43.2	35.2	-	-	-	Triplicate Site with N145a, N145b and N145c - Annual data provided for N145c only

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted	Annual Mean: Distance Corrected to Nearest Exposure	Comment
N145c	383670	350326	44.2	39.6	48.4	52.9	39.4	45.6	35.0	44.1	47.3	44.8	42.6	37.6	42.8	34.7	-	Triplicate Site with N145a, N145b and N145c - Annual data provided for N145c only
N146a	383587	350790	33.9	25.8	23.9	25.0	18.8	24.7	24.1	23.8	27.7	25.8	30.9	23.3	-	-	-	Triplicate Site with N146a, N146b and N146c - Annual data provided for N146c only
N146b	383587	350790	34.5	26.9	25.2	21.1	19.7	25.5	17.0	23.9	28.5	25.4	31.3	22.0	-	-	-	Triplicate Site with N146a, N146b and N146c - Annual data provided for N146c only
N146c	383587	350790	32.9	24.3	26.1	24.8	19.3	25.5	25.8	23.2	27.6	25.0	27.1	23.6	25.4	20.6	-	Triplicate Site with N146a, N146b and N146c - Annual data provided for N146c only

☒ **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 (no annualisation was necessary).**

☐ **Local bias adjustment factor used (no local bias adjustment factor was determined).**

☒ **National bias adjustment factor used**

☒ **Where applicable, data has been distance corrected for relevant exposure in the final column (no distance correction was necessary).**

☒ **Newcastle-under-Lyme Borough Council confirm that all 2025 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System**.

Notes:

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

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

See Appendix C for details on bias adjustment and annualisation.

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

New or Changed Sources Identified Within Newcastle-under-Lyme During 2025.

Newcastle-under-Lyme Borough Council has not identified any new emission sources relating to air quality within the reporting year of 2025.

Additional Air Quality Works Undertaken by Newcastle-under-Lyme Borough Council During 2025

Additional studies were completed by Ricardo during the reporting year in relation to the development of the revised AQAP. No formal report has been received but a summary of the methodology and findings is given below.

A source apportionment study was carried out using the 2024 monitoring data to identify key contributors to air pollution and emissions at pollution hotspots in Newcastle-under-Lyme.

Source apportionment of NO_X emissions and NO_2 concentrations at these locations was carried out using background mapping data published by Defra[8] and air quality modelling carried out using Ricardo's RapidAir model to estimate contributions from local roads. The study was undertaken in accordance with Defra's Local Air Quality Management Technical Guidance TG (22)[9] and all other appropriate model guidance.

[8] https://uk-air.defra.gov.uk/data/laqm-background-home

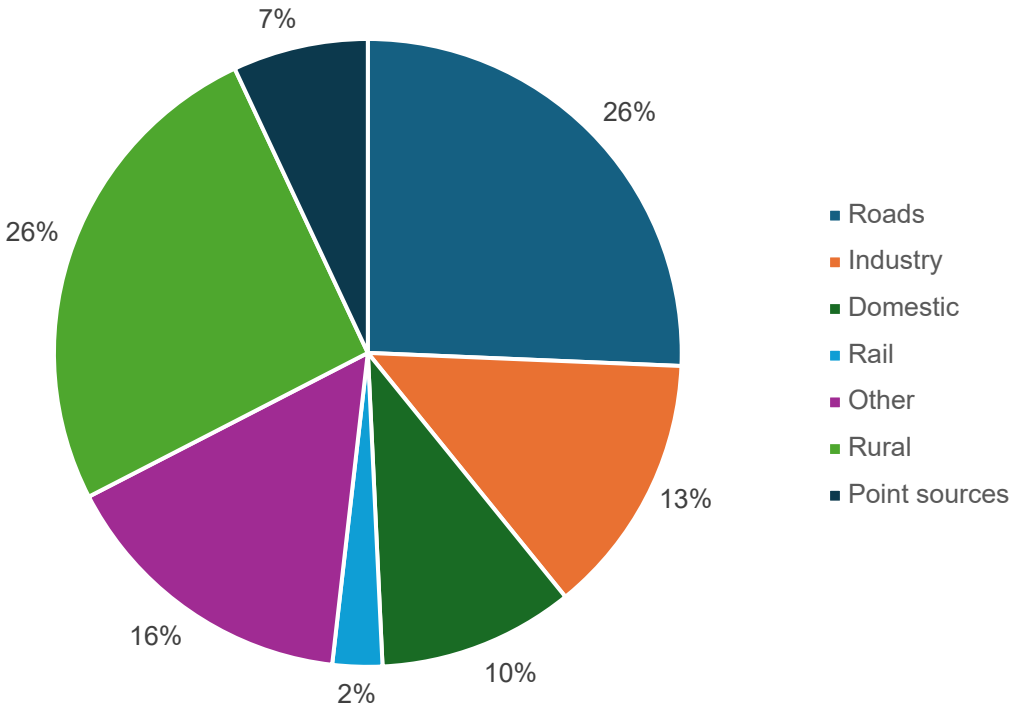
[9] LAQM-TG22-May-25-v2.1.pdf

Meteorological data for 2024 was taken from the Leek Thorncliffe observation station. Road transport activity data was determined using DfT traffic counts. Emissions from road traffic were calculated using the emission factors and vehicle fleet statistics provided in the Emissions Factors Toolkit version 14.1, the latest available version[10].

The study looked at the contribution of emissions sources to NO_2 concentrations at the locations of maximum monitored annual mean NO_2 concentrations in each AQMA:

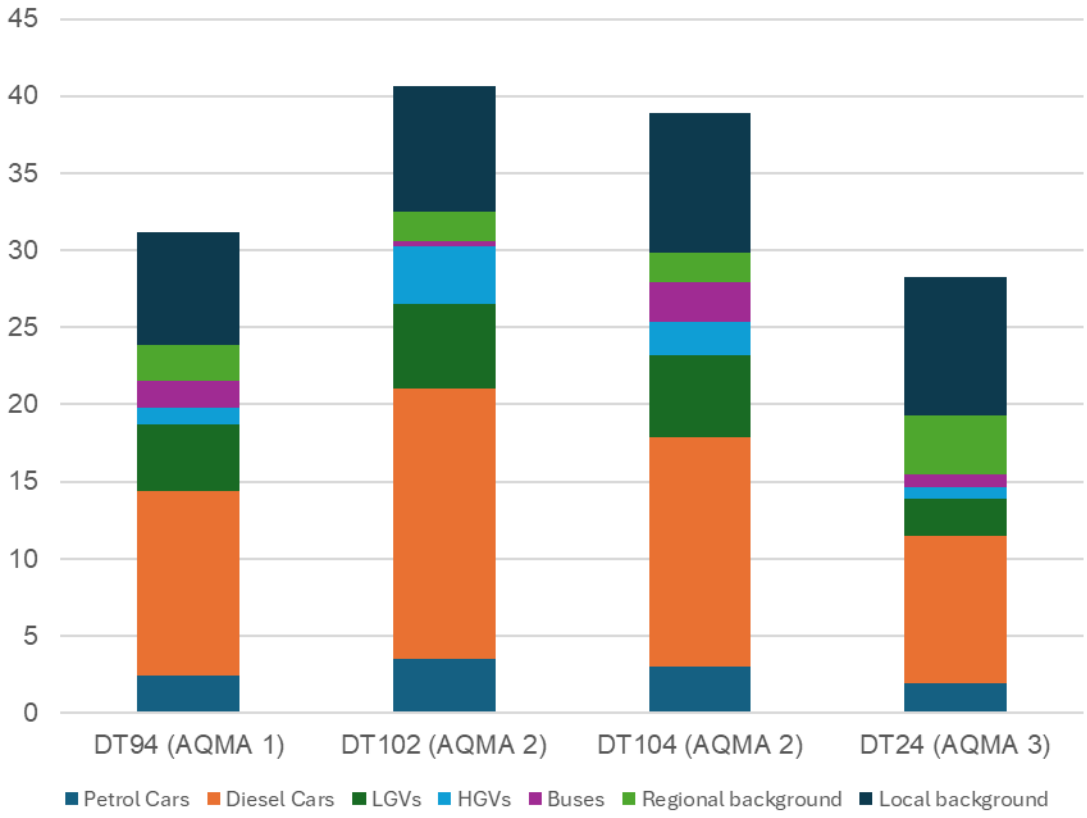
- DT94 (AQMA 1);
- DT102 and DT104 (AQMA 2);
- DT24 (AQMA 3).

Contributions to concentrations away from local sources in AQMA 2 (Newcastle-under-Lyme town centre) were determined from background mapping data and are given below:



[10] https://laqm.defra.gov.uk/air-quality/air-quality-assessment/emissions-factors-toolkit/

Further apportionment of the contribution from local roads to concentrations at NO_2 current and historic hotspots in Newcastle-under-Lyme by vehicle type as shown below:



This source apportionment information was provided in tabular form, below:

Site ID	Location	Petrol Cars	Diesel Cars	LGVs	HGVs	Buses	Regional background	Local background
DT94	AQMA 1	2.4	12.0	4.3	1.1	1.8	2.3	7.3
DT102	AQMA 2	3.5	17.5	5.5	3.8	0.3	1.9	8.1
DT104	AQMA 2	3.0	14.9	5.3	2.2	2.6	1.9	9.0
DT24	AQMA 3	1.9	9.5	2.4	0.7	0.8	3.8	9.0

As seen, the three main contributors to regional NO_X and NO_2 concentrations are emissions from roads, industrial sources, and rural sources. Local contributions to NO_2

concentrations from road transport are dominated by emissions from diesel cars and LGVs.

A simplified method for calculating the required reduction in emissions is contained in Chapter 7 of Technical Guidance LAQM.TG22. This calculation required the worst-case receptor exposure to NO_2 in each of the AQMAs to be determined. This was determined from the annual monitoring data for 2024 which has been published in the council's Annual Status Report.

The total estimated road contribution of nitrogen oxides (NOx) was then calculated at each of the worst-case receptors. This estimated road contribution of NOx to this exposure was determined from the DEFRA NOx to NO_2 calculator (v9.1). This calculator was also used to determine the reduction in the road contribution of NOx which would enable the Air Quality Objective to be met.

The required reduction in emissions in AQMA 2 is summarised below

AQMA	2024 Maximum NO_2 Exposure	2024 Background NO_2	Road NOx Contribution	Road NOx Reduction Required
AQMA 2: Newcastle-under-Lyme Town Centre (DT102)	40.6	10.0	88.2	2.1

Based on the 2024 monitoring data, a reduction of 2.1µg/m^3 of road traffic nitrogen oxides (NOx) would achieve compliance in the AQMA2 – Newcastle town centre.

The expected year of natural compliance (i.e. the year that compliance with the target level would be achieved without including the measures in the Air Quality Action Plan) was assessed through emissions projections and dispersion modelling at DT102, where monitored annual mean NO_2 concentrations exceeded the Air Quality Objective in 2024.

Traffic flows in future years were estimated using the projections from the Trip End Model Presentation Program (TEMPro), published by the Department for Transport. Vehicle fleet projections for future years were taken from the Emissions Factors Toolkit (V14.1), published by Defra. Background concentrations for future years were taken from the Defra background maps[11].

As a result, all locations were expected to reach compliance with the Air Quality Objective for annual mean NO_2 concentrations by 2026. However, as has been stated, the average level has reduced by more than this already and compliance has already been achieved in 2025.

The study considered DEFRA published Supplementary Guidance on Determining the Impact of Air Quality Improvement Measures[12] in September 2024, which sets out how impacts can be quantified using concentration-based or emissions-based assessments.

To quantify the additional reductions that would be achieved through the Action Plan in order to safeguard and bring forward compliance, dispersion modelling was carried out using Ricardo's RapidAir model. The model was used to predict expected impacts of selected measures on hotspot locations within Newcastle-under-Lyme. Modelling was carried out for 2026, the year of natural compliance (i.e. the year that compliance with the target level would be achieved without including the measures in the Air Quality Action Plan).

A summary of the methodology used in the scenario modelling is given below. The measure ID is derived from the list of measures identified within the full draft AQAP.

---

[11] Background Mapping data for local authorities - 2021 - DEFRA UK Air - GOV.UK

[12] https://laqm.defra.gov.uk/air-quality/aqap-guidance/supplementary-guidance-determining-the-impact-of-air-quality-improvement-measures/

Measure ID	Description	Evaluation method and rationale
9	UTC SCOOT in areas of Newcastle Town Centre AQMA and Kidsgrove AQMA	• Improvements in free-flowing traffic speeds in Newcastle Town Centre AQMA • This project is ongoing, so many improvements from this scheme are already seen in baseline concentrations. • Further impacts modelled as a 5% increase in traffic speeds near junctions in these AQMAs.
10, 11	Staffordshire Bus Service Improvement Plan (BSIP); Staffordshire's Local Cycling and Walking Infrastructure Plan (LCWIP)	• These are borough-wide measures. • 2% reduction in private car journeys from modal shift to active travel for short journeys • A further 1% reduction in private car journeys along key bus routes
12, 13, 14	Newcastle-under-Lyme Town Deal measures: Sustainable Public Transport Solutions, Town Centre Permeability, EV infrastructure	• These are borough-wide measures which focus on transport in Newcastle-under-Lyme town centre (AQMA 2). • These measures are designed to support a modal shift from private petrol or diesel cars to electric vehicles or public transport. • Impacts modelled assuming these combined measures give rise to a modal shift of 2% from private cars to electric vehicles or public transport in AQMA 2 (Newcastle-under-Lyme town centre).

The expected further reduction in NO_2 concentrations resulting from measures in the AQAP is given below:

Measures	Predicted further % reduction in NO_2 concentrations in 2026		
	DT102 (AQMA 2)	**DT104 (AQMA 2)**	
9	2.3%	2.2%	
10, 11	1.6%	1.4%	
12, 13, 14	1.0%	0.9%	

As can be seen, measure 9 has the largest impact on concentrations at pollution hotspots compared to the other measures in the action plan. However, this improvement is primarily limited to the vicinity of junctions and is not expected to lead to improvements in air quality across a wider area. The other measures aim to reduce emissions and improve air quality over a wider area.

The study reported that `it is anticipated that AQMA 2 will be revoked within the lifetime of the AQAP once suitable evidence is available to provide confidence that exceedances will not occur in the future`.

QA/QC of Diffusion Tube Monitoring

All diffusion tubes were supplied and analysed by Staffordshire County Council (Staffordshire Highways Laboratory) and used the 20% TEA in water preparation method. The laboratory is UKAS accredited to ISO/IEC 17025:2017 [13] and participates in the AIR-PT scheme run by LGC [14] and the Field Intercomparison Scheme run by NPL.[15]

AIR PT Scheme (LGC)

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

For each round, two sets of tubes are received from LGC, and each analysed by a different member of staff, to aid with QC and training. One set of results is submitted for the AIR PT performance summary on the Defra website. The full results for both sets of tubes are given below.

PT Rounds during 2025

- Round 68 – Feb 2025. 87.5% satisfactory results, 12.5% questionable results
- Round 69 – June 2025. 100% satisfactory results
- Round 71 – Sept 2025. 100% satisfactory results
- Round 72 – Dec 2025. 100% satisfactory results

13 https://www.ukas.com/wp-content/uploads/schedule_uploads/00002/0719Testing-Multiple.pdf

14 https://laqm.defra.gov.uk/diffusion-tubes/qa-qc-framework.html

15 https://laqm.defra.gov.uk/air-quality/air-quality-assessment/precision-and-accuracy/

PT Rounds during 2026

- Round 74 – March 2026. 100% satisfactory results

The table below shows a summary z-score results.

PT Round	Technician	z-scores	Performance
62 – Feb 2024	1	0.84, 0.86, 0.20, -0.10	100% SATISFACTORY
	2	-0.69, 0.22, -0.20, 0.30	
63 – June 2024	1	0.26, 0.13, -0.14, -0.34	100% SATISFACTORY
	2	0.00, 0.13, 0.27, 0.00	
65 – Sept 2024	1	0.33, 0.16, 0.00, -0.04	100% SATISFACTORY
	2	0.33, -0.32, 0.08, 0.37	
66 – Dec 2024	1	0.78, 0.26, -0.06, 0.19	100% SATISFACTORY
	2	0.13, -1.03, -1.04, -0.39	
68 – Feb 2025	1	0.35, 0.89, -0.05, 0.00	87.5% SATISFACTORY, 12.5% QUESTIONABLE
	2	0.70, -2.86, 0.23, 0.28	
69 – June 2025	1	1.22, 1.48, 0.39, 0.32	100% SATISFACTORY
	2	0.97, 1.11, 0.39, 0.13	
71 – Sept 2025	1	0.26, 0.09, 0.00, 0.46	100% SATISFACTORY
	2	0.26, 0.74, 0.64, 0.91	
72 – Dec 2025	1	0.09, 0.57, -0.27, 0.00	100% SATISFACTORY
	2	0.62, 1.14, 0.34, 0.47	
74 – March 2026	1	0.27, 0.27, 0.19, 0.57	100% SATISFACTORY
	2	0.93, 0.38, 1.75, 0.57	

For more information on the AIR PT Scheme and older results see the Defra website:

https://laqm.defra.gov.uk/air-quality/air-quality-assessment/qa-qc-framework/

Field Intercomparison (NPL)

The performance of Staffordshire Highways Laboratory for all Field Intercomparison results of 2025 was classified as 'GOOD' (CoV <20).

Bias adjustment factor

The bias adjustment factor spreadsheet on the Defra website was updated in March 2026. The overall bias factor for Staffordshire Highways Laboratory (see Staffordshire County Council) for 2025 (including the Field Intercomparison result and all the co-location results from participating local authorities, total of 14 studies) was **0.81**.

The tube precision for all co-location studies was 'Good'.

Deployment Dates

Diffusion tubes were deployed in accordance with the 2025 Diffusion Tube Calendar, being collected plus or minus two days of the specified date.

The subsequent valid data capture for the whole 2025 monitoring period was 100%

Diffusion Tube Annualisation

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

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2026 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 regarding 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.

Newcastle-under-Lyme Borough Council

Newcastle-under-Lyme have applied a national bias adjustment factor of 0.81 to the 2025 monitoring data. The national bias adjustment factor was taken from the Diffusion Tube Bias Adjustment Factors Spreadsheet released by Defra in June 2026. The factor from Staffordshire County Council for 20% TEA in acetone was applied. A total of 14 studies were used to calculate the bias adjustment factor.

A screenshot of the relevant national diffusion tube bias adjustment factor spreadsheet (0626) is given below:

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 06/26

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 2026
LAQM Helpdesk Website

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

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

Step 1:	Step 2:	Step 3:	Step 4:
Select the Laboratory that Analyses Your Tubes from the Drop-Down List	Select a Preparation Method from the Drop-Down List	Select a Year from the Drop-Down List	Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.
If a laboratory is not shown, we have no data for this laboratory.	If a preparation method is not shown, we have no data for this method at this laboratory.	If a year is not shown, we have no data[2]	If you have your own co-location study then see footnote[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[2] (To undo your selection, choose (All))	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision[4]	Bias Adjustment Factor (A) (Cm/Dm)
Staffordshire County Council	20% TEA in water	2025	KS	Marylebone Road Intercomparison	12	45	31	42.1%	G	**0.70**
Staffordshire County Council	20% TEA in water	2025	UB	Salford City Council	11	20	18	10.1%	G	**0.91**
Staffordshire County Council	20% TEA in water	2025	B	Salford City Council	12	12	10	20.7%	G	**0.83**
Staffordshire County Council	20% TEA in water	2025	R	Salford City Council	12	38	31	22.3%	G	**0.82**
Staffordshire County Council	20% TEA in water	2025	R	Salford City Council	12	42	29	43.9%	G	**0.69**
Staffordshire County Council	20% TEA in water	2025	R	Stoke-on-trent City Council	12	44	31	44.8%	G	**0.69**
Staffordshire County Council	20% TEA in water	2025	R	Stoke-on-trent City Council	12	47	36	29.2%	G	**0.77**
Staffordshire County Council	20% TEA in water	2025	UB	Stoke-on-trent City Council	10	19	15	23.1%	G	**0.81**
Staffordshire County Council	20% TEA in water	2025	R	Bolton Council	11	24	19	24.3%	G	**0.80**
Staffordshire County Council	20% TEA in water	2025	KS	Manchester City Council	11	37	34	10.4%	G	**0.91**
Staffordshire County Council	20% TEA in water	2025	UC	Manchester City Council	12	25	24	5.6%	G	**0.95**
Staffordshire County Council	20% TEA in water	2025	SI	Manchester City Council	10	14	13	12.1%	G	**0.89**
Staffordshire County Council	20% TEA in water	2025	R	Stockport Mbc	12	28	21	29.2%	G	**0.77**
Staffordshire County Council	20% TEA in water	2025	R	Stockport Mbc	12	19	15	23.8%	G	**0.81**
Staffordshire County Council	20% TEA in water	2025		**Overall Factor[3] (14 studies)**				**Use**		**0.81**

A summary of bias adjustment factors used by Newcastle-under-Lyme over the past five years is presented in Table C.1.

Table C.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2025	National	03/26	0.81
2024	National	04/25	0.82
2023	National	06/24	0.86
2022	National	06/23	0.86
2021	National	09/22	0.85

No colocation studies were carried out within Newcastle-under-Lyme in 2025 and so no local bias adjustment factor was calculated for 2025.

NO_2 Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO_2 concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO_2 fall-off with distance calculator available on the LAQM Support website.

No diffusion tube NO_2 monitoring locations within Newcastle-under-Lyme required distance correction during 2025.

QA/QC of Automatic Monitoring

No automatic NO_2 monitoring locations were operational within Newcastle-under-Lyme during 2025.

Summary of Low-Cost Air Quality Sensor Monitoring

No low-cost sensors were used within Newcastle-under-Lyme during 2025.

Appendix D: Maps of Monitoring Locations and AQMAs

Figure D.1 – Overview of Location of AQMAs and Areas where Automatic and Non-Automatic Monitoring are Carried out.

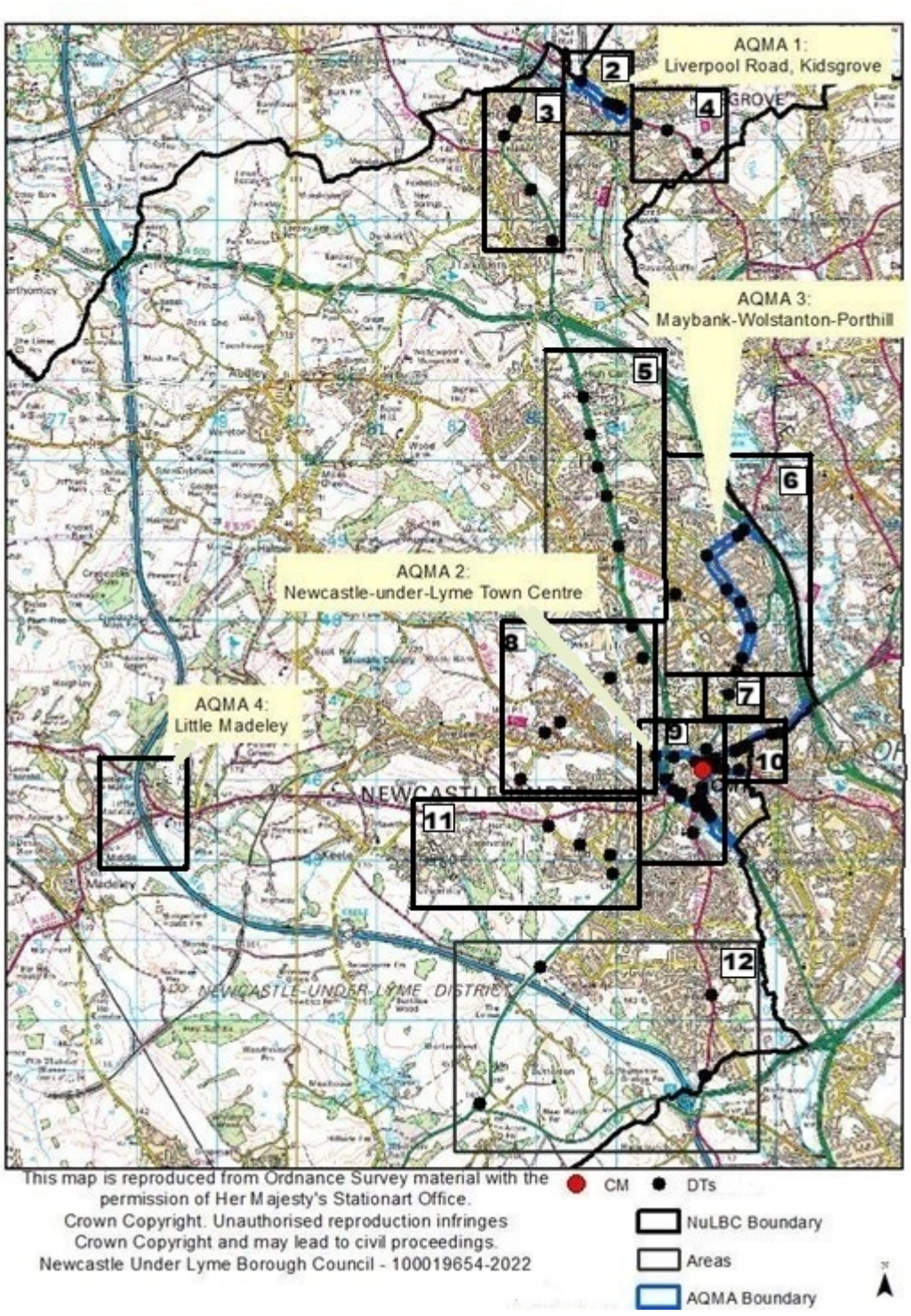


Figure D-2 – Map of Monitoring Area 1 (AQMA 1: Liverpool Road, Kidsgrove)

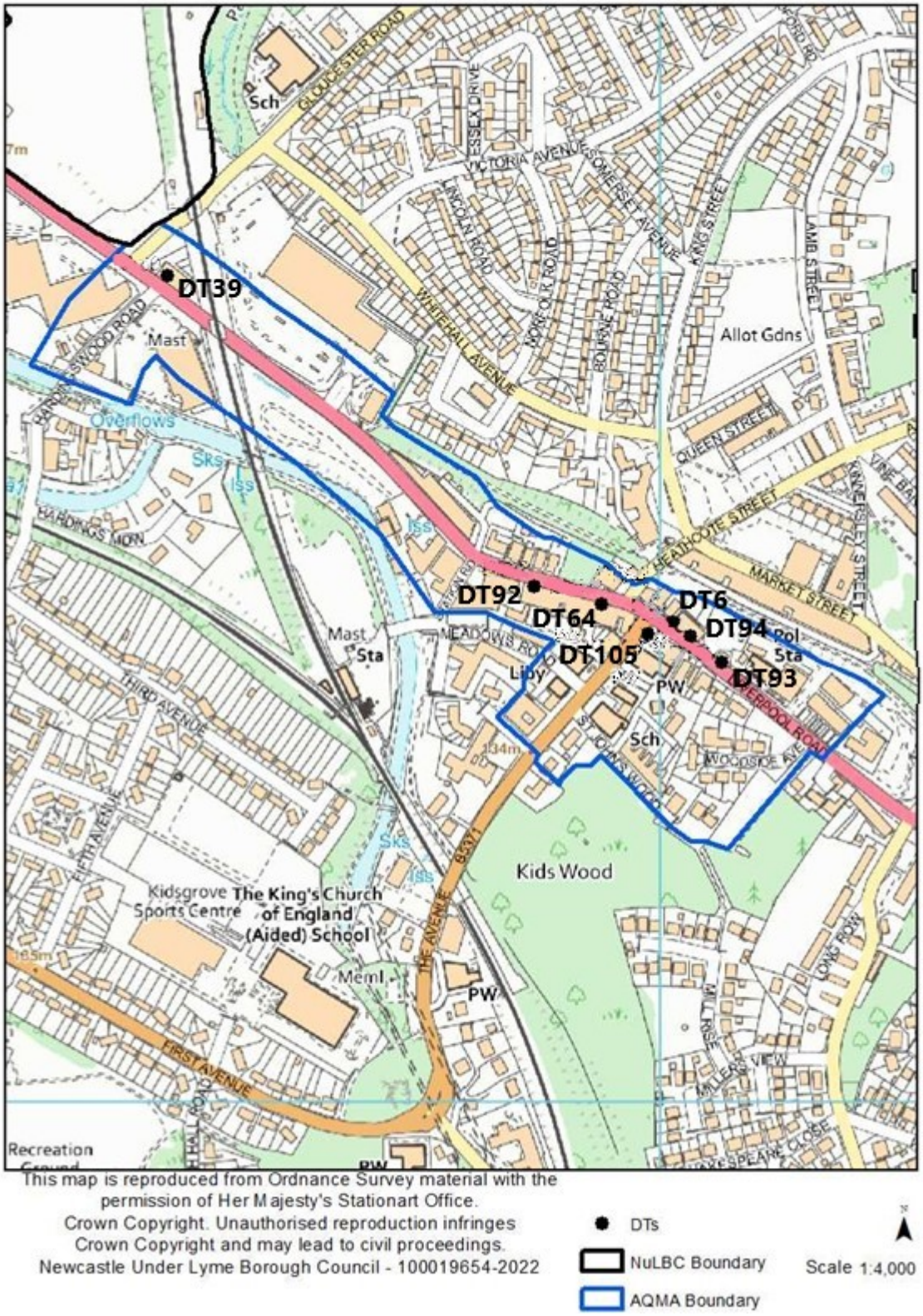
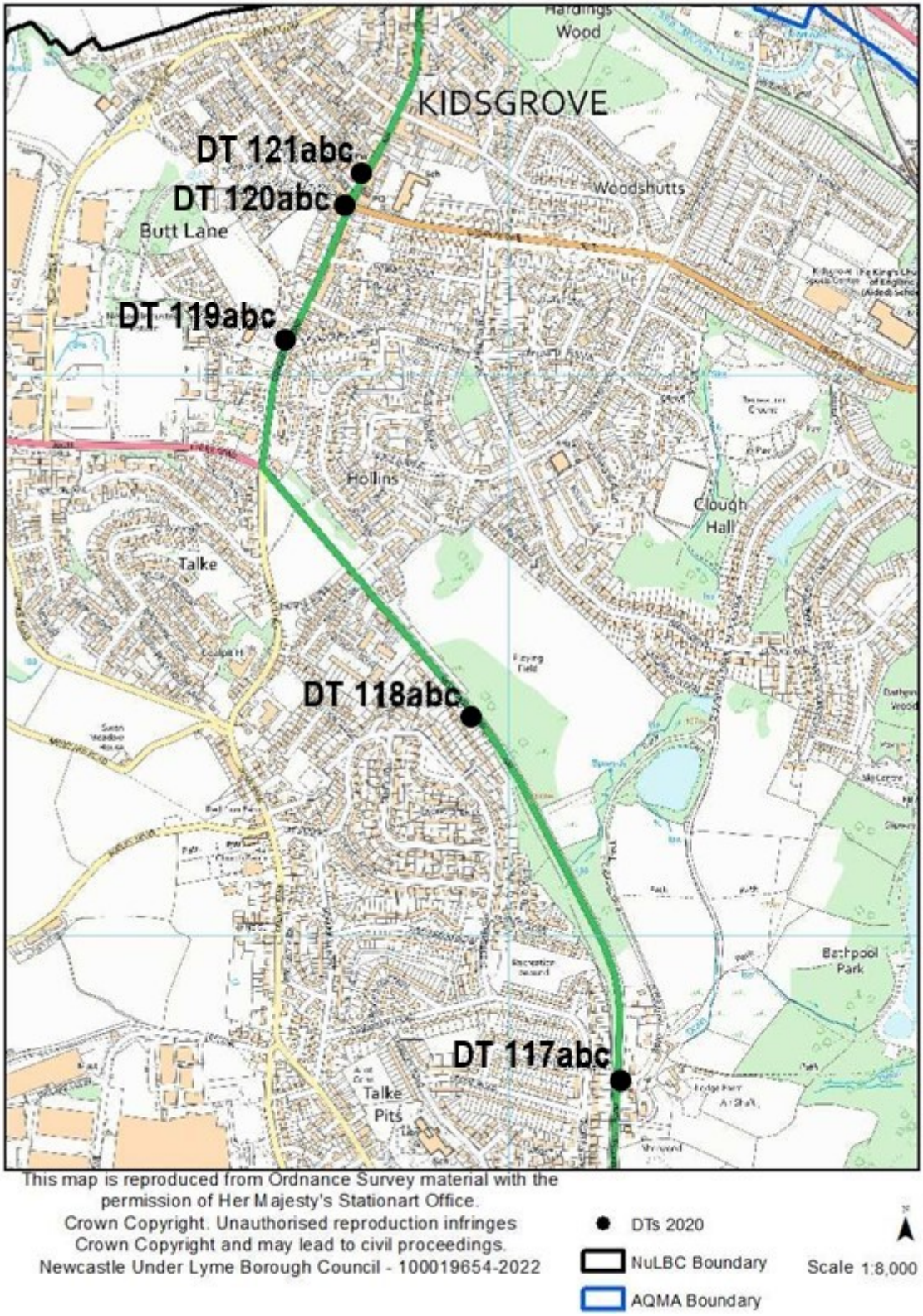


Figure D-3 – Map of monitoring area 2, A34 Kidsgrove West (Outside Kidsgrove


KIDSGROVE
Harding's Wood
DT 121abc
DT 120abc
Butt Lane
Woodshutts
DT 119abc
Hollins
Clough Hall
Talke
DT 118abc
Bathpool Park
DT 117abc
Talke Pits
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Newcastle Under Lyme Borough Council - 100019654-2022
DTs 2020
NuLBC Boundary
AQMA Boundary
Scale 1:8,000

Figure D-4 - Map of monitoring area 3, A50 Kidsgrove East – (Just Outside AQMA1 Kidsgrove AQMA).

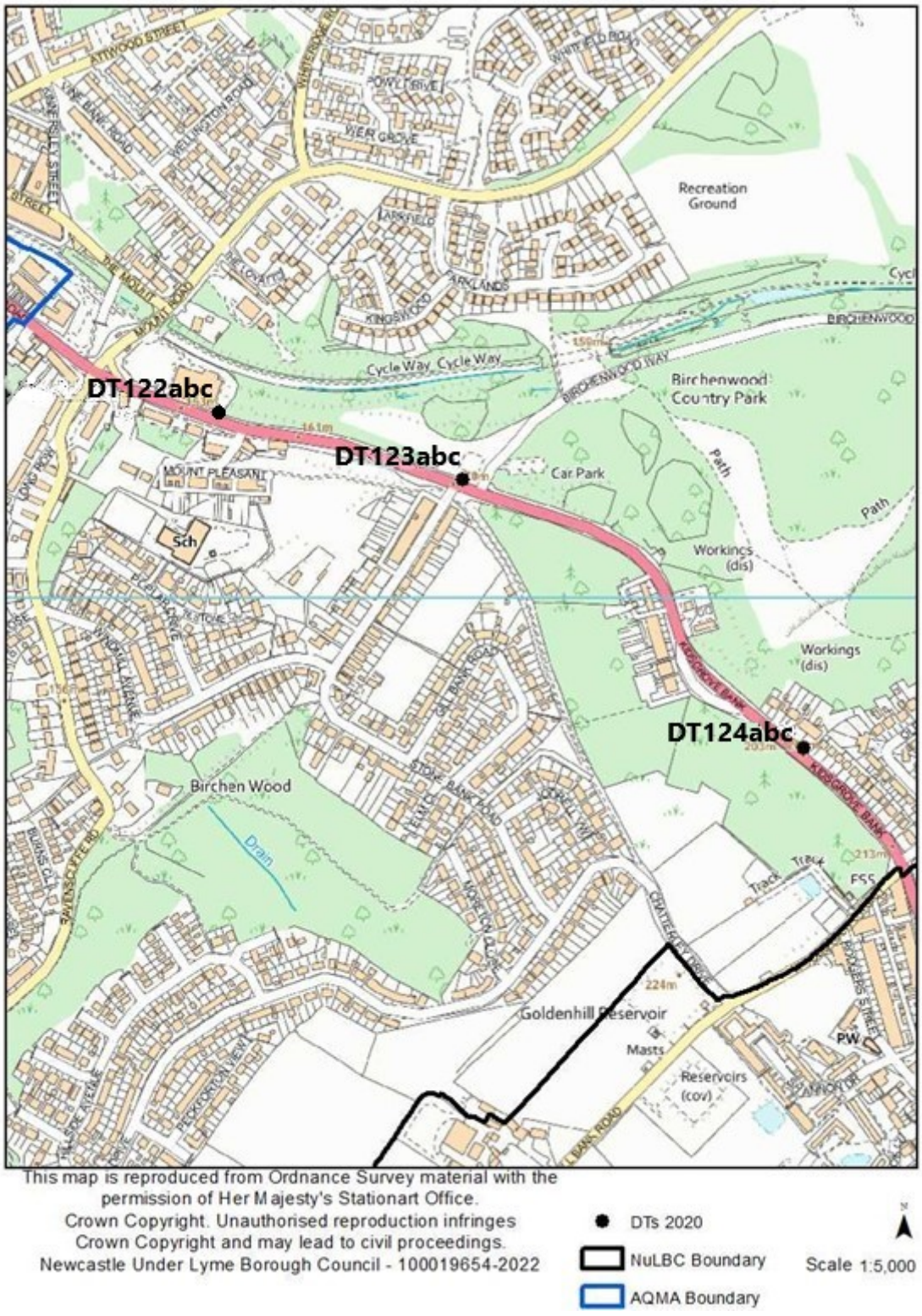


Figure D-5 - Map of monitoring Area 4 – A34 Corridor Through Chesterton (not within an AQMA)

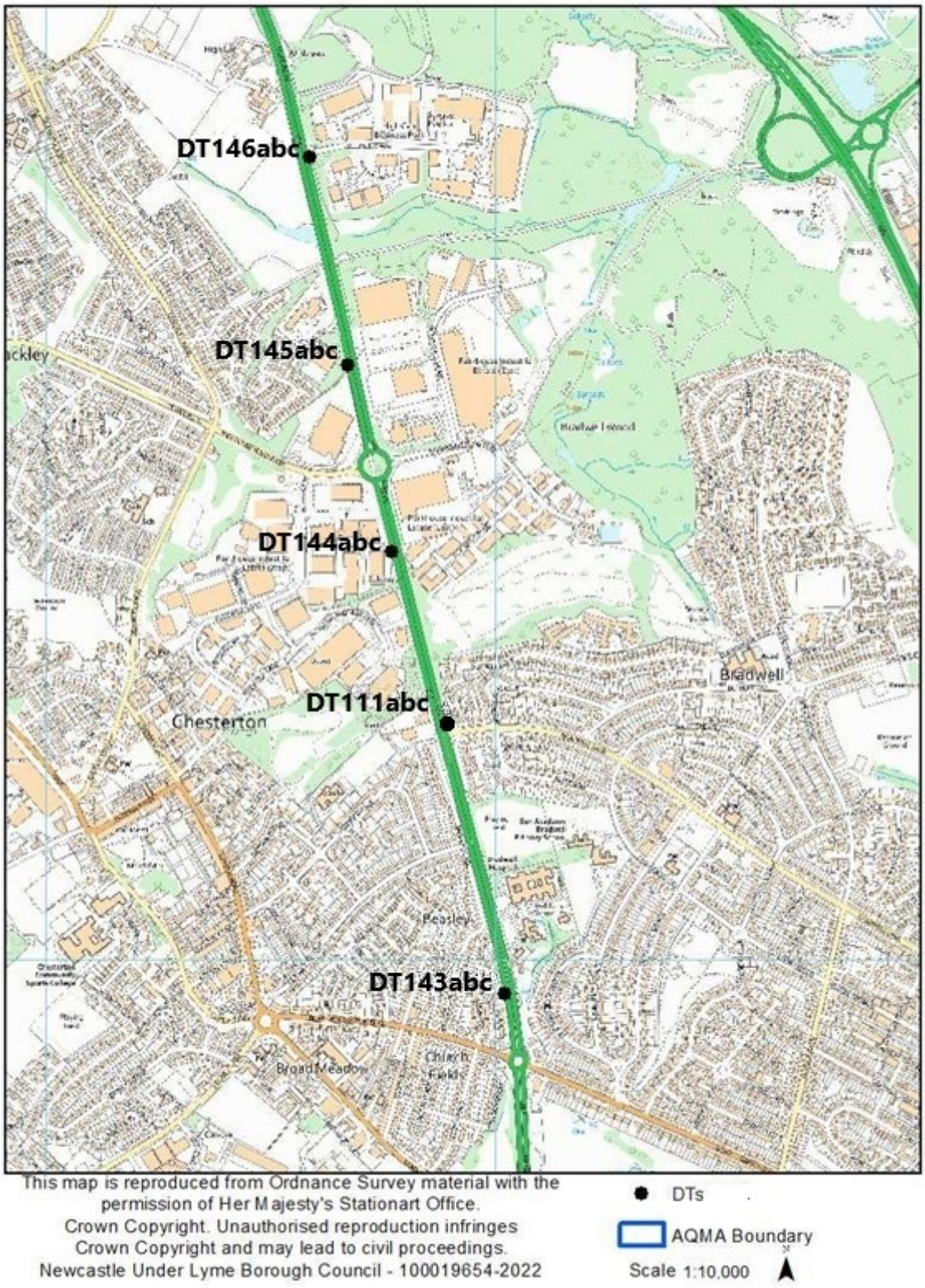


Figure D-6 - Map of monitoring Area 5 – AQMA 3: Maybank-Wolstanton-Porthill

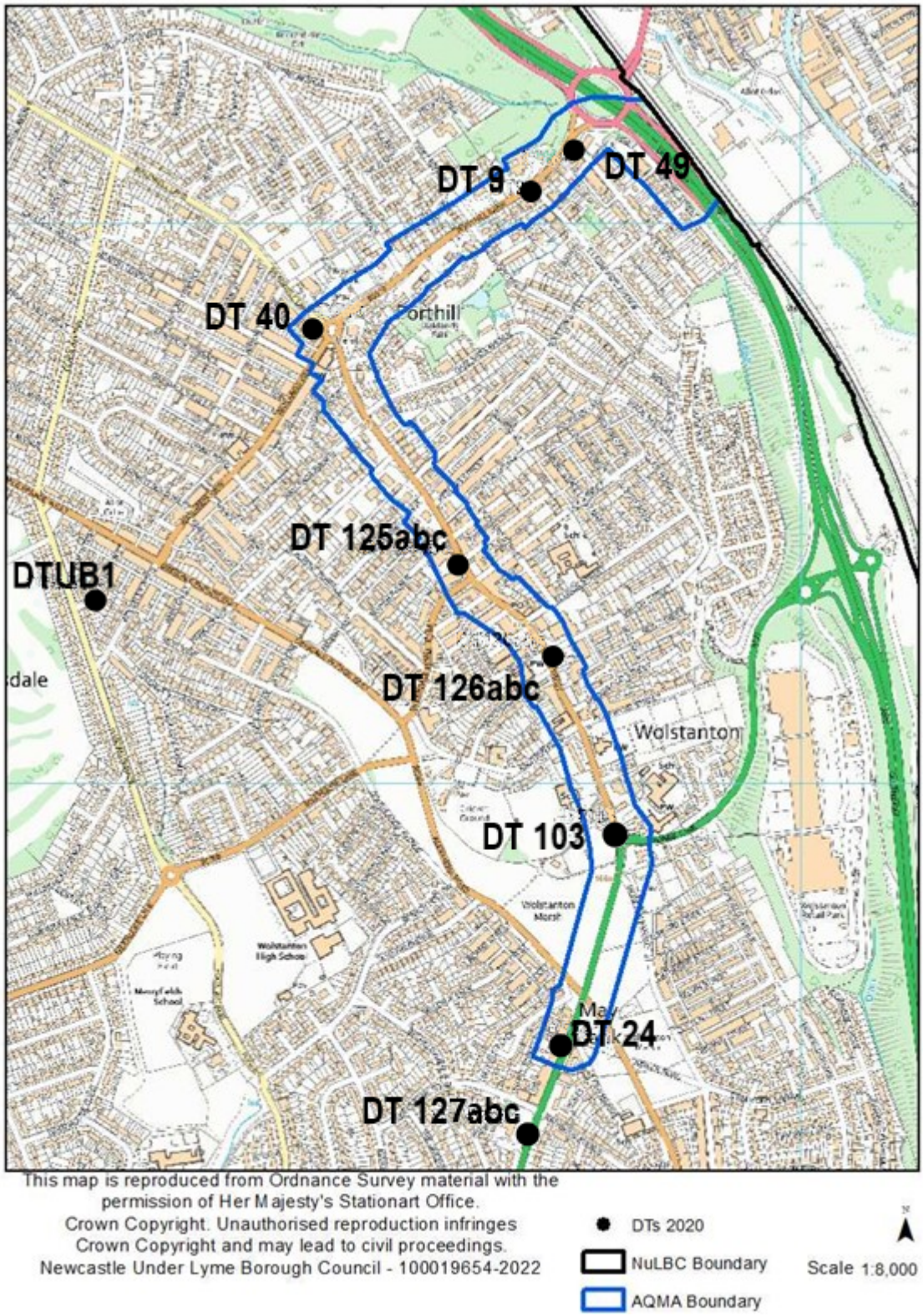


Figure D-7 - Map of monitoring Area 6 – Maybank (Between AQMA 3 and AQMA 2 and not within an AQMA)

Figure D-8 - Map of monitoring Area 7 – Silverdale, Knutton and Cross Heath (not within an AQMA)

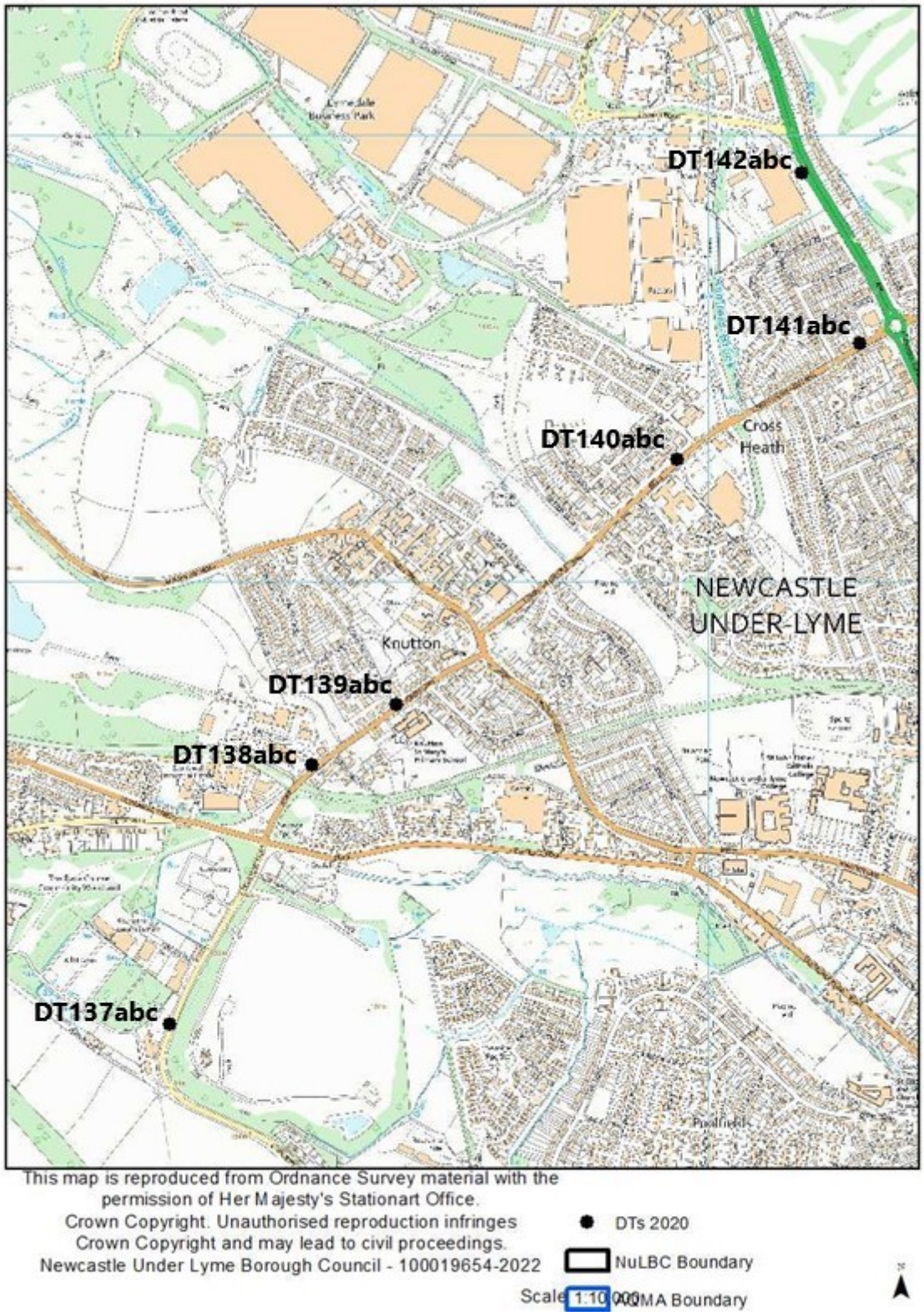


Figure D-9 - Map of monitoring Area 8 - AQMA 2: Newcastle-under-Lyme Town Centre (West)

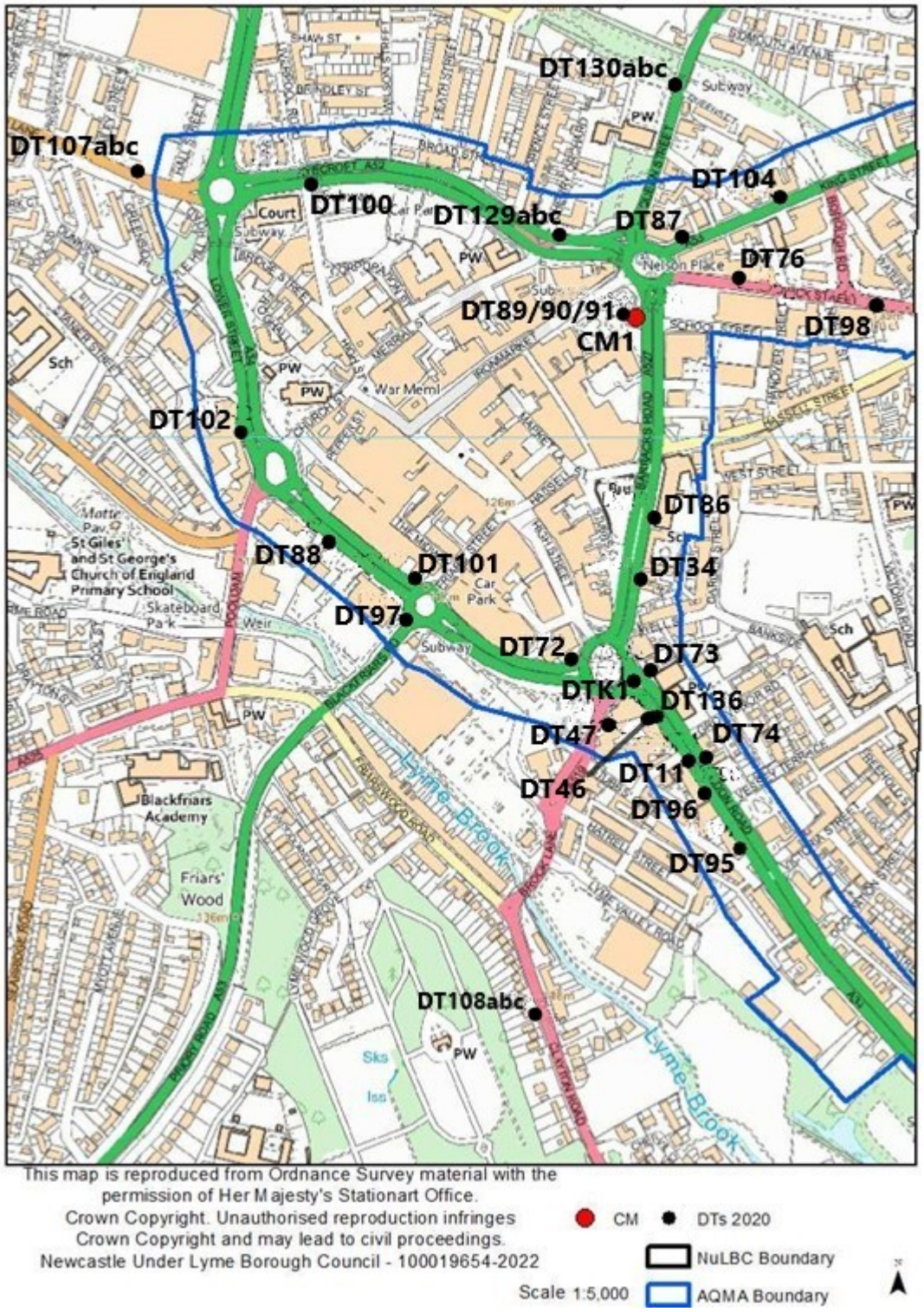


Figure D-10 - Map of monitoring Area 9 - AQMA 2: Newcastle-under-Lyme Town Centre (East) and A53.

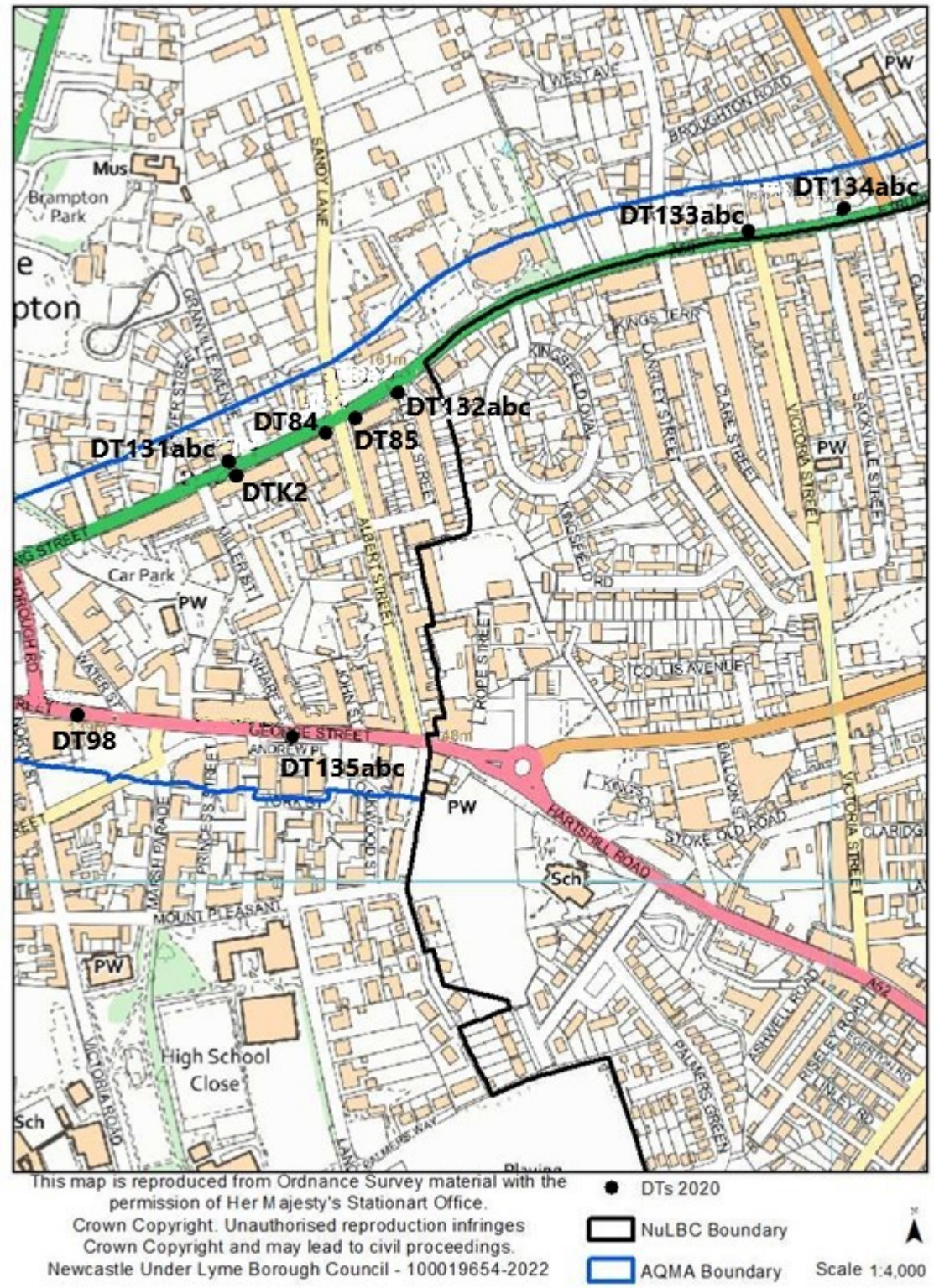


Figure D-11 - Map of monitoring Area 10 – Thistleberry and Westlands (Not within an AQMA)

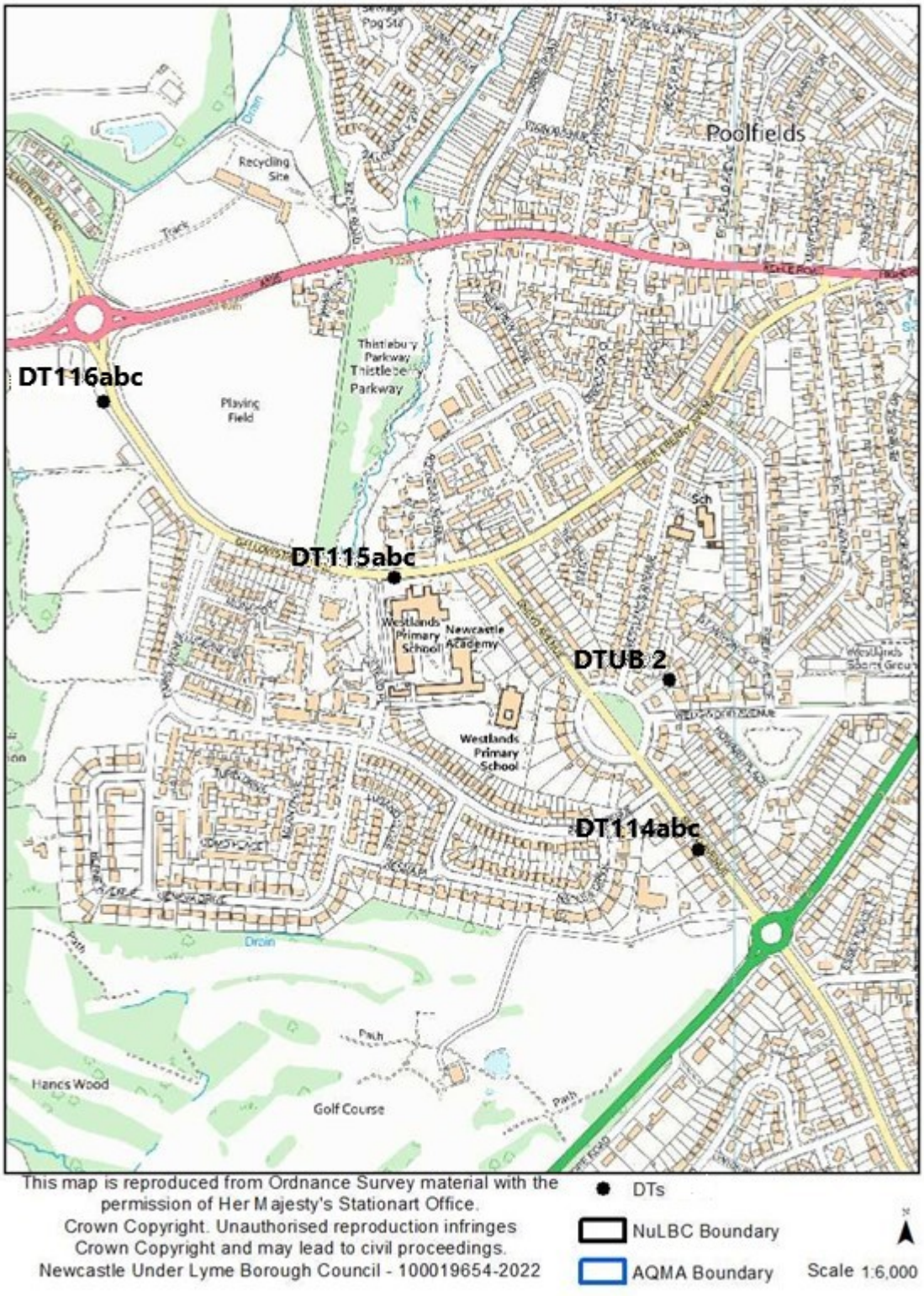


Figure D-12 - Map of monitoring Area 11 – Clayton / Seabridge A53 and A519. (Not within an AQMA)

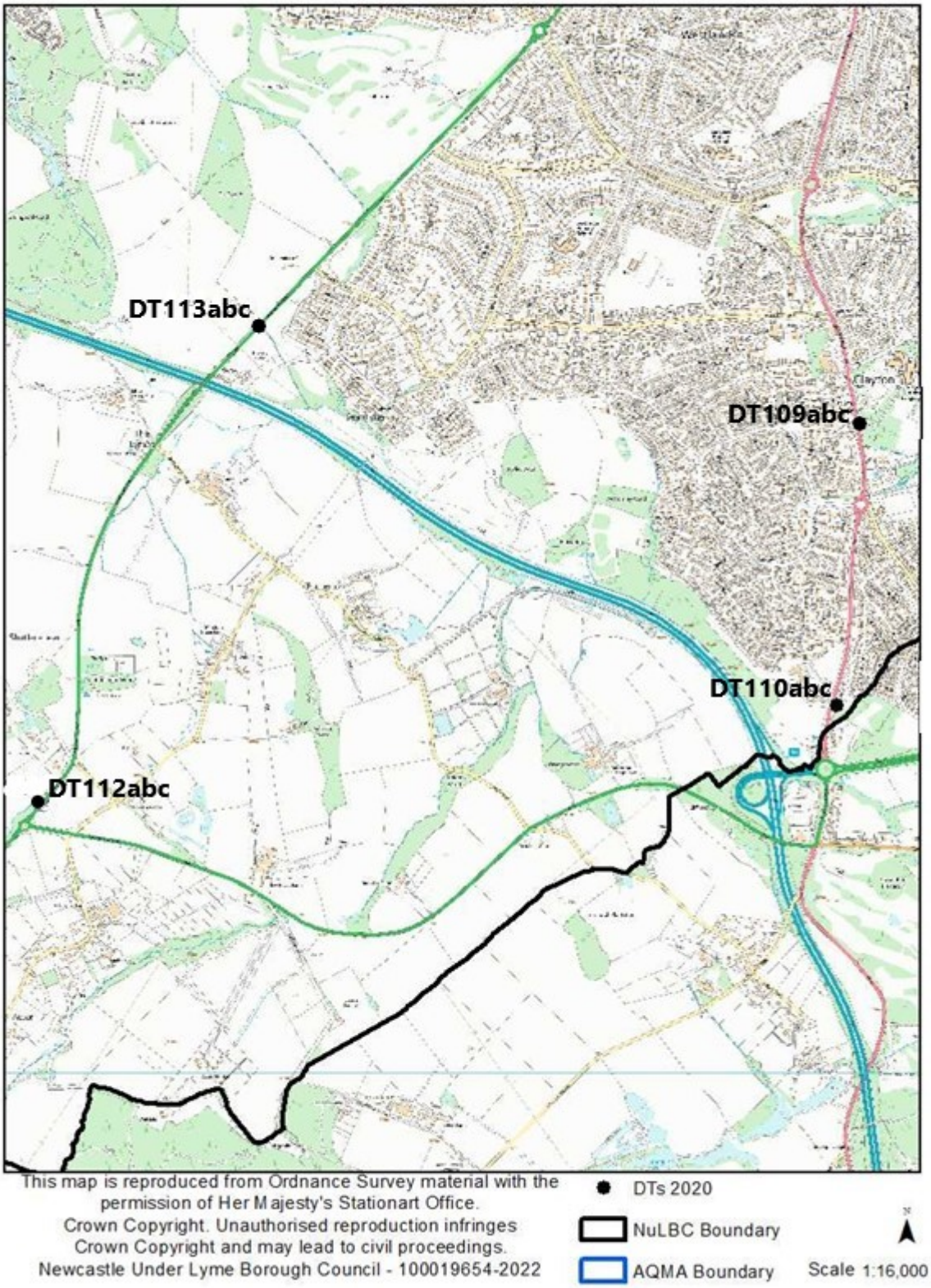


Figure D-13 - Map of Former AQMA 1 – Kidsgrove (now revoked).

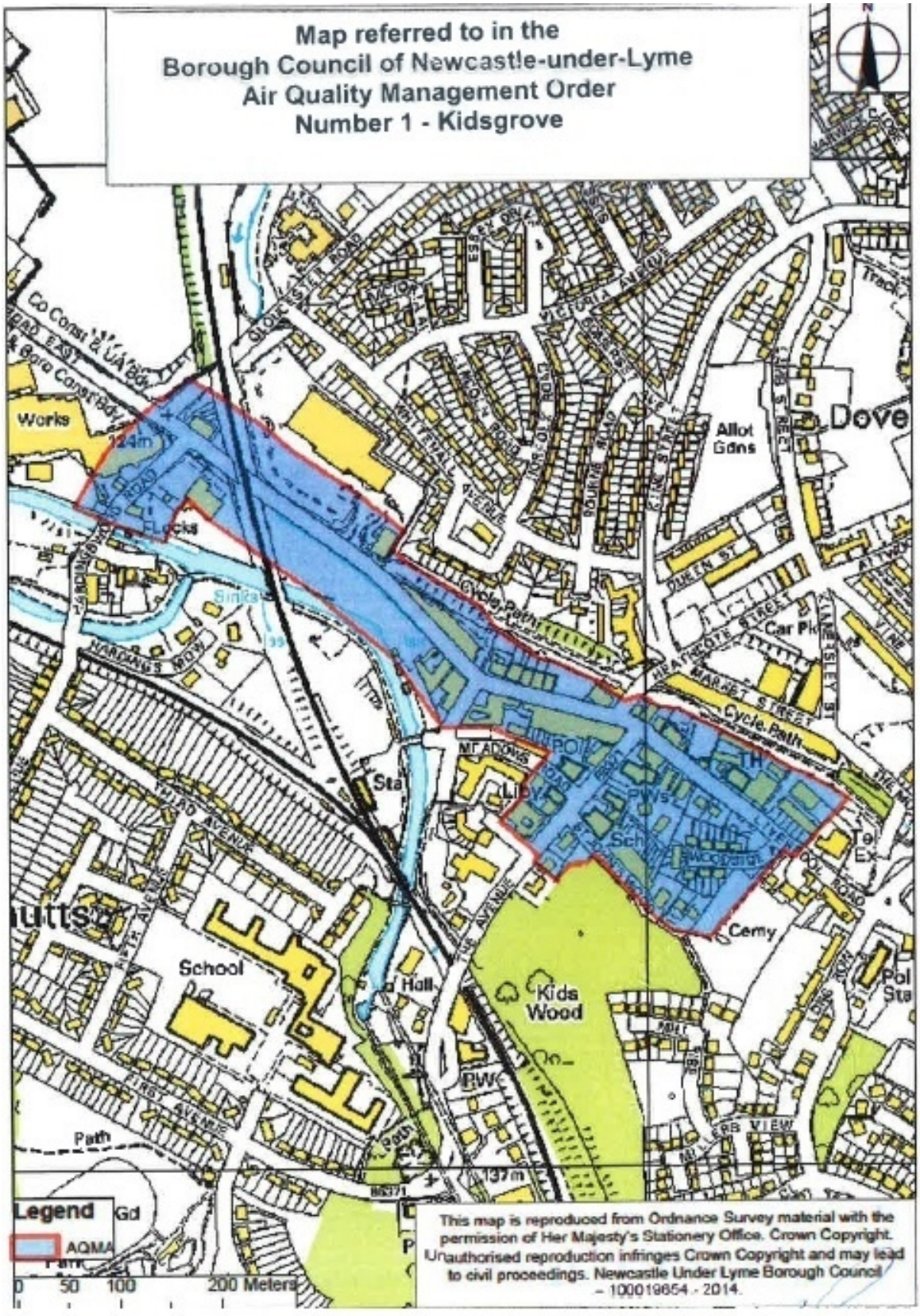


Figure D-14 - Map of AQMA 2 – Newcastle-under-Lyme.

Figure D-15 - Map of former AQMA 3 – Maybank, Wolstanton & Porthill (now revoked).

Classification: NULBC **UNCLASSIFIED**

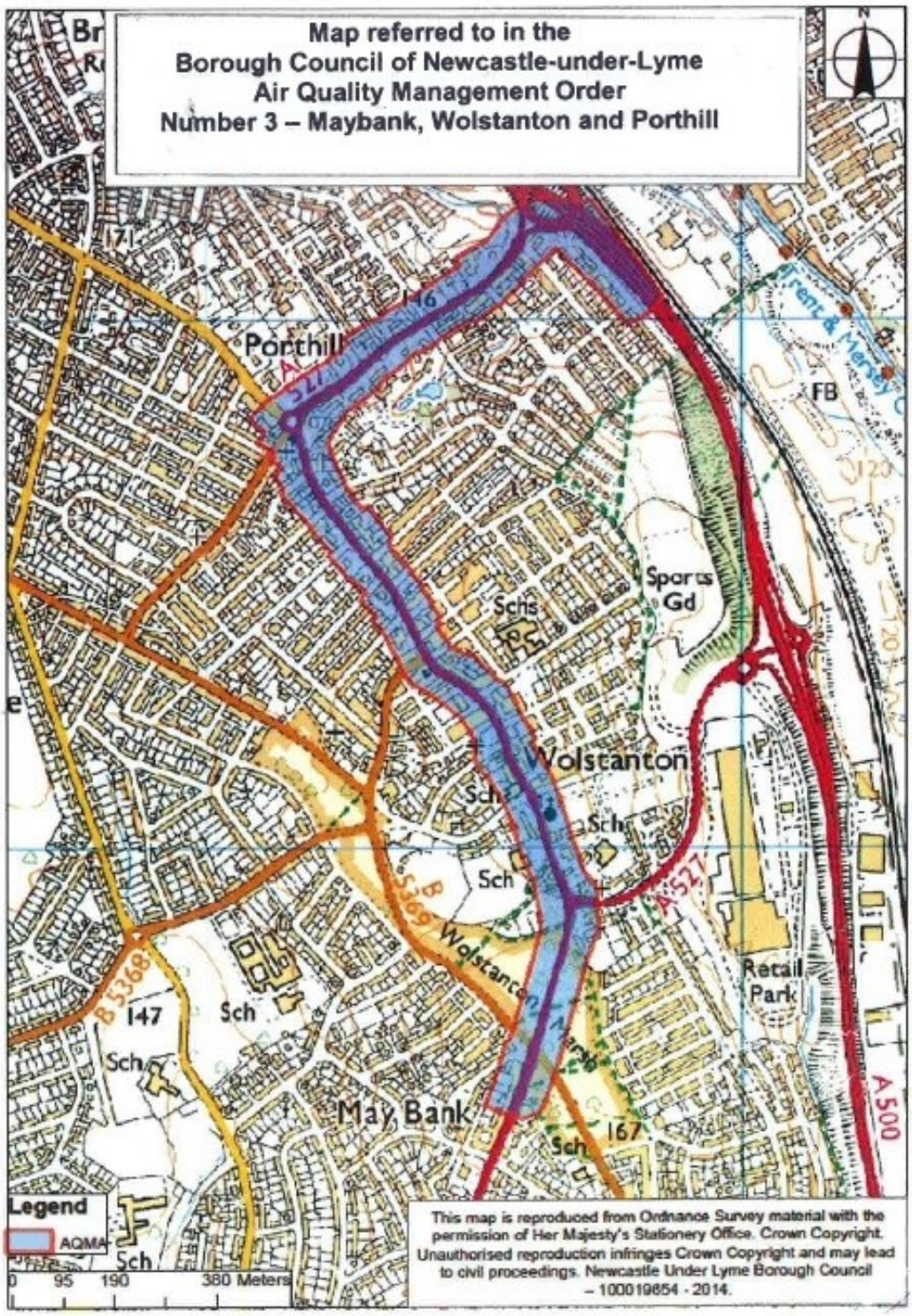
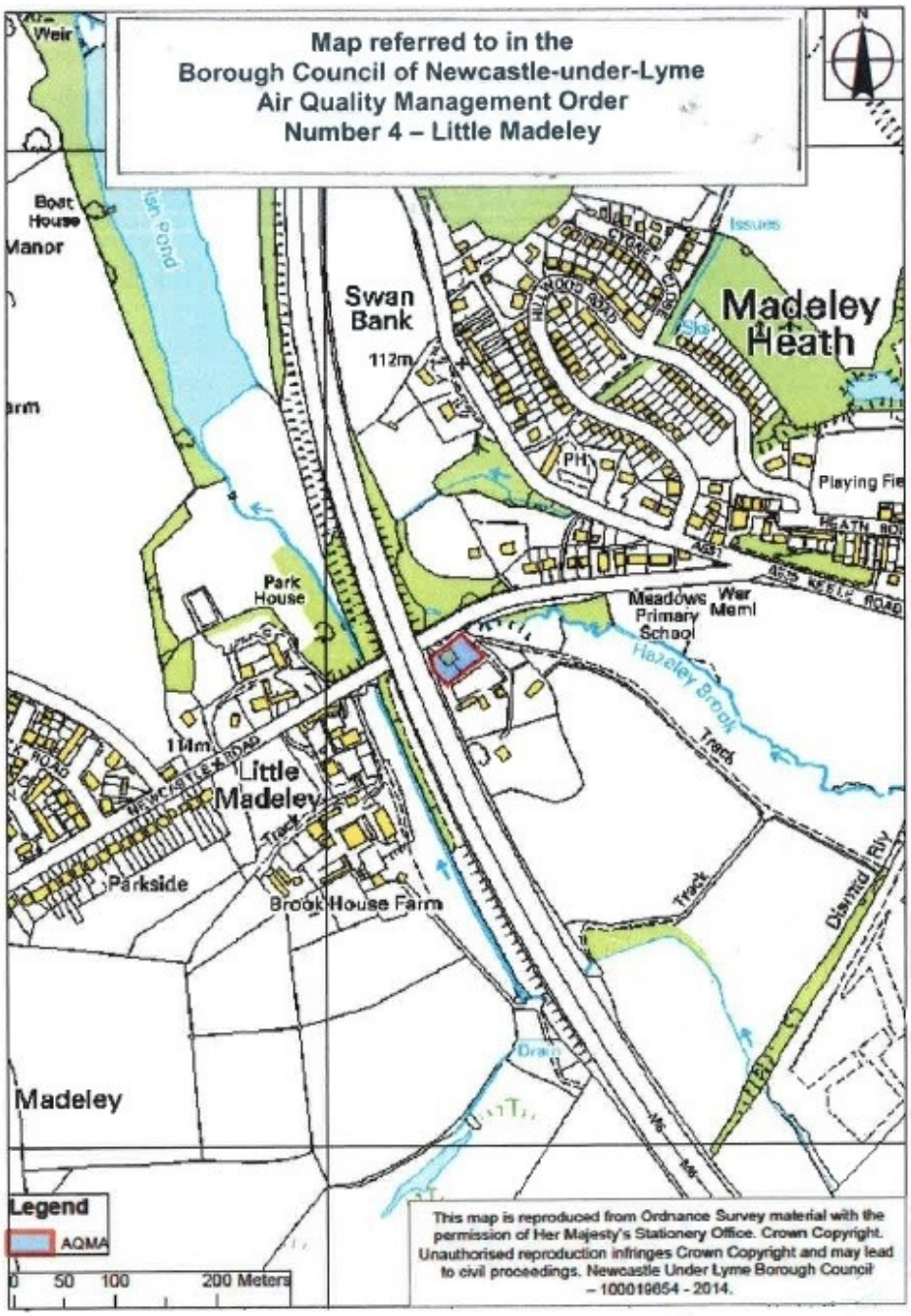


Figure D-16 - Map of AQMA 4 – Little Madeley (Now Revoked).



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[16]

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

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
ASR	Annual Status Report

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

Abbreviation	Description
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
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide

References

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